



Bridging the skills gaps in developing countries

A practical guide for private-sector companies

Prepared by DEG – Deutsche Investitions- und Entwicklungsgesellschaft and The Boston Consulting Group
for the Association of European Development Finance Institutions within the Let's Work Partnership



Prepared by DEG – Deutsche Investitions- und Entwicklungsgesellschaft and The Boston Consulting Group (BCG) for the Association of European Development Finance Institutions (EDFI) within the Let's Work Partnership.

January 2016

EDFI is the Association of 15 bilateral institutions operating in developing and reforming economies, mandated by their governments to foster growth in sustainable businesses, help reduce poverty and improve people's lives, and contribute to achieving the Millennium Development Goals by promoting economically, environmentally and socially sustainable development through financing and investing in profitable private sector enterprises.

This work is a product with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of EDFI. EDFI does not guarantee the accuracy of the data included in this work.

EDFI does not necessarily own each component of the content contained within the work. EDFI therefore does not warrant that the use of any third-party-owned individual component or part contained in the work will not infringe on the rights of those third parties. The risk of claims resulting from such infringement rests solely with you. If you wish to reuse a component of the work, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright owner. Examples of components can include, but are not limited to, tables, figures, or images. All queries on rights and licenses should be addressed to EDFI.

Table of Contents

Acknowledgments	3
Foreword	5
Executive summary	6
1. Introduction: Skills gaps and the private sector	11
2. Good practices: How companies have successfully addressed their skills gaps	15
2.1 Good practices for workforce development	15
2.2 Good practices for skills development along the value chain	24
2.3 Good practices for closing skills gaps in the broader community	27
3. Assessing costs and benefits: A hands-on approach to evaluating the business case for investments to bridge skills gaps	31
3.1 Identifying and measuring the costs and benefits of a skills-development initiative	31
3.2 Comparing the costs and benefits	36
3.3 Assessing the social impact of a skills-development initiative	38
4. Company case studies: Learning from others	43
Engro Corporation Ltd. A Pakistani multi-business holding advances its business growth and secures its social license to operate by successfully tackling local skills gaps	44
Hape Holding AG A sustainable toy manufacturer in China fosters youth apprenticeship and develops its suppliers	60
Hospital Sírio Libanês A Brazilian hospital is committed to skills development of its workforce and the community	76
JMS Holdings Ltd. A Bangladeshi garment manufacturer boosts its productivity through workforce development	87
Ohorongo Cement (Pty) Ltd. A cement producer successfully addresses skills gaps for a greenfield project in Namibia	99
5. A guide for practitioners: How to bridge skills gaps step-by-step	113
Step 1: Identify gaps in hard and soft skills through a systematic self-assessment	113
Step 2: Prioritize the skills gaps	115
Step 3: Analyze the root causes of the skills gaps	116
Step 4: Identify potential measures to close the skills gaps	116
Step 5: Conduct a cost-benefit appraisal of planned initiatives	119
Step 6: Implement the selected initiatives	120
6. Conclusion: Private-sector investment in bridging skills gaps – a win-win situation for companies and society	123
Annex	124
A. List of figures	124
B. List of textboxes	126
C. List of abbreviations	127
D. List of references	128



Acknowledgments

This report – “Bridging the skills gaps in developing countries: A practical guide for private-sector companies” – was produced by The Boston Consulting Group (BCG) and the Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG) for the Association of European Development Finance Institutions (EDFI) to serve as a contribution to the Let’s Work Partnership (www.letswork.org). Let’s Work is a global partnership that unites organizations dedicated to providing effective solutions to the global jobs crisis by harnessing the potential of the private sector to help create more and better jobs that are inclusive. The partnership builds on the launch of the International Finance Cooperation’s Jobs Study in January 2013, when 28 IFIs focused on private-sector development agreed to work together to create more and better private-sector jobs, promote the inclusion of vulnerable groups and help the private sector strengthen its value chains. EDFI is a member of the Let’s Work Partnership.

The report was developed under the overall guidance of Christiane Rudolph (Director, DEG Corporate Strategy and Development Policy). The core DEG-working group of the project, led by Ulrike Dangelmaier and Julian Frede, also included Veronika Seibt and Elleke Maliepaard.

The report was written by Fabian Barthel, Sven Witthöft, Alexander Baic and Rainer Strack of The Boston Consulting Group (BCG).

This report and the in-depth case studies in particular could not have been written without the invaluable contributions of Aman ul Haque and Leena Talpur from Engro Corporation Ltd., Peter Handstein, Dennis Gies, Zhaisheng Zhou, Maximilian Willeitner, WeiBing Ji and Feng Qin Zhao from Hape Holding AG, Bruna Infantini and Fabio Patrus Mundim Pena from Hospital SÍrio Libanês, Mahmud Ali, Major S. M. Shameem, M. A. Chowdhury, Faiz Mohammed, Simona Mihai, Mohammed Samiun Hassan, Mozammel Hoque, and Engr. Ashutosh Nath from JMS Holdings Ltd., as well as Rudolf Coetzee, Jens Paulmaier and Hans-Wilhelm Schütte from Ohorongong Cement (Pty) Ltd. Thank you!

The authors also wish to thank the following DEG staff members for their support and contributions: André Aguilar, Houda Baskaya, Roxana Baur, Benjamin Brink, Marco Christ, Anna Maria Erroufi, Katja Friedrichs, Meike Goetze, Bernt Hagenlocher, Hans-Joachim Hebgem, Sonja Hoos, Ricarda Horst, Klaus Helsper, Caroline Kremer, Claudia Makowski, Jelle Pentinga, Peter Peters, Angela Reif-Kerper, Fabian Scheifele, Cordula Theunissen, Isabel Thywissen, Yvonne Veth, Katja Vogel, Christian Voss and Mathias Weskamp. The support and contribution by EDFI’s Development Effectiveness group and EDFI’s Technical Assistance group was also highly appreciated. Last but not least, the authors would like to thank Namita Datta and Cateryn Vucina Banjanin of the Let’s Work Partnership Coordination Unit for their valuable comments.





Foreword

The Association of Development Finance Institutions (EDFI) promotes sustainable development by supporting private sector companies. It is these companies that enable nine out of ten people in developing countries to earn their daily income. Increasing the quantity and quality of these jobs and the related incomes is one of the major pathways to stimulating sustainable development for individuals and communities in developing and emerging countries.

We are well aware that there are millions of young people entering the labor force every year, many of whom will struggle to find a job with the skill set they possess. At the same time, companies are reporting difficulties in finding adequately skilled workers. In developing and emerging countries, these skills gaps – the difference between a worker’s skill set and the skills needed for a certain type of job – represent a considerable constraint on development.

Private companies can and will have to find ways to address the existing skills gaps in their own business, the value chain and the wider community. Not only can such action go a long way in contributing to the implementation of the sustainable development agenda; businesses investing in initiatives addressing skills gaps can reap significant benefits themselves:

Workforce development increases the productivity of employees, boosts product quality, drives innovation levels, improves work safety and enhances the company’s reputation. Value-chain development increases the quality and timeliness of supplies, leads to lower input prices and reduces business risks. Invest-

ment in skills development in the community fosters community relations and civil society and secures the social license to operate, strengthens government relations and enhances a company’s reputation.

EDFI highly appreciates the opportunity to be a member of the Let’s Work Partnership – a global partnership that includes international finance institutions, the private sector, other development partners, academics and think tanks – where we hope to contribute to the agenda of creating more and better jobs. As part of this agenda, DEG – Deutsche Investitions- und Entwicklungsgesellschaft, on behalf of EDFI, set out to identify successful initiatives by the private sector addressing skills gaps, and to demonstrate promising approaches on how implementing companies, their employees, and the local communities can benefit from these initiatives.

In that spirit, DEG collaborated with The Boston Consulting Group to identify and present business case potential for private sector activities addressing skills gaps. The resulting report also provides hands-on guidance on (best practice) activities private sector enterprises can undertake in this regard, and thereby enables development finance institutions like ourselves to better support our clients in their efforts to tackle skills gaps.

We believe that together we will be able to create and secure more and better jobs in developing and emerging countries. As one step towards this goal, let’s join forces to overcome the challenges associated with skills gaps.



Nanno Kleiterp
(Chair of EDFI)



Bruno Wenn
(Chairman DEG)

Executive Summary

One major way of boosting economic development and fighting global poverty is to create productive and sustainable job opportunities. Job-related events – finding or losing a job, or experiencing a substantial change in job-related income – are crucial factors in pushing people into poverty or saving them from it.¹ Worldwide, more than 200 million people of working age are unemployed. Over the next 15 years, on account of population growth and demographic change, 600 million additional jobs need to be created to keep current employment rates stable.²

Nine out of ten jobs in developing countries are provided by private-sector companies. Yet globally, 38% of private-sector employers report difficulties in filling vacant positions owing to the unavailability of adequately trained staff.³ The result is a serious mismatch: on the one hand, all those job vacancies; on the other, vast numbers of job-seekers who do not have the skills (private) employers are looking for. These so-called skills gaps – the difference between the skills needed for a job and those possessed by a worker – represent a major constraint on development.

Since the public education system in many countries is often unable to provide a sufficient number of qualified people and to equip graduates with the skills required by employers, private-sector companies need to step in to bridge the gaps in hard and soft skills. Yet, companies are sometimes reluctant to invest in closing skills gaps, since the costs are tangible and clearly visible, whereas the benefits are often intangible and accrue only over time. In addition, the companies often cannot reap the (full) benefits of their investment, if the newly upskilled workers then leave the company to realize a higher income somewhere else.

It is the aim of the initiative “Let’s Work” to provide effective solutions to the global jobs crisis, by harnessing the potential of the private sector to create more and better jobs in emerging and developing countries. In that spirit, this report – which takes the perspective of practitioners from the private sector – has the following objectives:

- to demonstrate that there can be a business case for private-sector enterprises in emerging and developing countries to tackle skills gaps, and that there can be a win-win situation for companies and society;

- to present good practices, and examples of their application, by and for private-sector companies on three different levels: the current and prospective workforce, along the value chain, and in the local community;
- to present and showcase hands-on methods for assessing the costs and benefits of initiatives to bridge skills gaps;
- to provide concrete recommendations for identifying and addressing skills gaps step-by-step, by means of a practitioners’ guide based on good practices that are applicable in various sectors and regions.

Introduction: Skills gaps and the private sector

Private-sector investment in bridging skills gaps can produce substantial benefits for the company, its employees, its suppliers, its clients, and the local community. The company itself can secure a more qualified, motivated and loyal workforce. The employees can increase their salaries and enhance their career prospects. The suppliers can improve their competitiveness and gain access to international markets. The clients can sell and repair their products more efficiently, thereby increasing revenues and strengthening their market position. And the local community benefits from the increased employability of its residents, leading to higher and more regular incomes for them as well as to an increase in local consumption and tax payments. If well planned and structured, measures to close the skills gaps constitute a win-win situation for companies and society – establishing a business case for the company and mitigating a constraint on development for society as a whole.

Specifically, engagement on all three levels will generate considerable benefits for the implementing company:

- Investment in workforce development increases the productivity of the employees and leads to better production quality and higher levels of innovation. Other positive effects include improved work safety, increased employee satisfaction and motivation, lower attrition rates, and lower operational risks. In addition, workforce development enhances the company’s reputation, and can improve its relations with government and community alike.
- Skills development along the value chain improves the product quality and productivity of suppliers, and enables clients (such as distributors) to sell and repair company products more reliably. It further addresses the reputational risk by improving work safety at suppliers.

All notes at the end of this chapter (Page 10)

- Finally, investment in closing skills gaps in the broader community – often forming part of the Corporate Social Responsibility (CSR) activities of a company – not only leads to better community relations and secures the social license to operate, but also fosters close ties with the (local) government and enhances the company’s reputation. Additionally, investment in schooling supports the long-term supply of qualified employees. As shown in the case studies, these benefits frequently outweigh the costs of the measures – providing a positive business case for the company.

Good practices: How companies have successfully addressed their skills gaps

Companies worldwide have successfully implemented measures to address skills gaps. And while their responses are always specific to their situation, a lot can be learned from them. The study presents three frameworks of good practices – for closing skills gaps in the workforce, in the value chain, and in the community. The frameworks include a total of 59 good practices, which were identified in a bottom-up process from more than 200 company initiatives addressing skills gaps. The good practices are supported by nearly 70 respective examples, illustrating their application in a real-life context and highlighting their practical use.

The first framework for workforce development is structured along the HR value chain, which was established by BCG, and relates to the five typical steps of HR management – plan, recruit, identify and assess, train and develop, and retain and engage – plus the more holistic aspect of optimizing leadership models and systems. The good practices relate to these six HR elements, and are classified into two topics for each element:

- First, in the planning phase, workforce planning – for example, aligning production and capacity planning, strategic workforce planning and succession planning – allows you to detect potential skills gaps as early as possible, and to develop adequate countermeasures. In addition, active demand management – for example, by increased automation – provides an important lever to reduce the demand for certain skills.
- In the second step, recruiting, a sophisticated hiring strategy can attract additional applicants. Developing a positive employer brand is a good practice here. Professional seeking and sorting of applicants – for example, by leveraging employee and alumni networks – increases the number of applicants you can choose from.
- The third step is to identify and assess talents. Talent identification – by ascertaining the competencies and development potential of your employees – is one topic. The other is structured performance assessment – for instance, by defining company-wide performance standards, or collecting structured and transparent feedback.
- The fourth step deals with training and development of the workforce. A professional training environment encompasses,

for instance, clearly defined career paths with aligned training plans. The implemented skills-development measures should be tailored to the needs of the company and the target group.

- The fifth step concerns the retention and engagement of employees. A comprehensive retention strategy involves monitoring the level of employee satisfaction and engagement. A further aid to retention is a positive working environment – for example, through strong personal networks within the company.
- Lastly, the leadership model and systems can also contribute to closing skills gaps. Enhanced systems allow you to integrate HR key performance indicators (KPIs) into the balanced scorecard, and thereby to incentivize managers to address skills development. In addition, cultural adjustments – such as establishing a people-centered HR culture that recognizes and rewards employee performance – will foster engagement and retention.

The second framework for skills development along the value chain groups the good practices into the four typical steps involved in setting up a structured skills-enhancement program:

- The first step is to develop a comprehensive strategy on which all further activities are based. A strategy is crucial for aligning all your supplier and client development activities and thereby maximizing their effect.
- The second step involves selecting suppliers and clients for cooperation. The selection process should be centrally coordinated, and should focus on a few critical suppliers and clients rather than trying to support everyone.
- The third step involves planning the skills-development measures, ideally on the basis of standardized training programs and individual training plans for each client and supplier in the program. Here the focus should be on supporting those areas where your company has its core competences.
- The last step is the implementation of the training measures. A train-the-trainer approach has proved successful in training a large number of people; and external partners, such as local institutes, can bring in the required infrastructure and the latest know-how.

The last framework for closing skills gaps in the broader community is based on BCG’s established CSR approach, and is structured in line with a three-step process:

- First, definition of a strategy: closing skills gaps in the broader community should be embedded into a comprehensive CSR strategy, in which clear guidelines for the selection of projects are set.
- Second, selection of concrete activities: you should focus your support on activities that exploit the core competences of your company, and that maximize the benefits for the community, your company and its employees.
- Third, the administration: it is essential to establish clear responsibilities on your side and on the side of the beneficiary, as well as to secure long-term financing to achieve sustainability.

Assessing costs and benefits: A hands-on approach to evaluating the business case for investments to bridge skills gaps

A thorough analysis of the costs and benefits of an initiative helps to get the buy-in from the management to invest, to secure external financing, to identify problems, shortfalls and lessons learned, and to showcase your success.

Analysing a measure's costs and benefits can be done either before the implementation decision, to ensure that there is a net benefit, or during and after implementation, to evaluate its success. The initiative's costs are often well-documented in accounting data, but the benefits are generally much harder to estimate beforehand. Accordingly, this report introduces an approach for companies to conduct a cost-benefit appraisal of their measures to address skills gaps – in their own workforce, in the value chain and in the local community. Since the report's objective is to provide hands-on solutions for companies, the methods presented here for assessing costs and benefits do not correspond exactly to the discussions on “cost-benefit analyses” in some streams of academic literature.

The report proposes a three-step approach for a cost-benefit appraisal:

- First, identify and quantify the costs and benefits as far as possible. Here the report offers some helpful tools – for instance, a way of assessing benefits along a logical chain of effects, a list of potential KPIs, and the application of driver-trees to put a monetary value on both costs and benefits.
- Second, choose – on the basis of data availability and quality – and apply the most appropriate method to compare the costs and benefits. The methods presented range from capital-budgeting methods, such as Net Present Value (NPV) calculation, to a purely qualitative comparison of costs and benefits. The methods take account of the (often problematic) availability of quantitative cost-and-benefit data as well as their specific advantages and disadvantages. In any case, every quantitative assessment should be supported by a qualitative assessment, as the numerical outcomes can be very sensitive to the choice of input parameters.
- Third, extend the business perspective by measuring the social impact of an initiative. This social impact should be included in a comprehensive cost-benefit appraisal, since knowing the community benefits of your engagement will clarify how and where social actions might indirectly support company objectives – for instance, by enhancing government and community relations, securing the social license to operate, further improving the overall company reputation, and attracting financing from Development Finance Institutions (DFIs) and other socially-oriented investors. Taking these benefits into account can even turn around cost-benefit appraisals. This report suggests establishing a logical-effect chain for key initiatives. To round off the analysis, it is worth undertaking a qualitative assessment of the social impact along a set of potential levers.

Company case studies: Learning from others

The case studies present in detail how five different companies from different sectors in Asia, Latin America and Africa successfully addressed their skills gaps. The measures implemented by these companies range from establishing vocational training centers and employee training courses, to implementing well-structured supplier-development programs and broad-based client-support initiatives, to investing in local primary and secondary schools. An analysis of the costs and benefits indicates that most measures present a positive business case to the company – or could be turned into one when some adaptations are made.

Engro Corporation Ltd. is a Pakistani conglomerate active in the fertilizer, food, energy and chemicals businesses. Located in a district with low education levels, its fertilizer business unit faces skills gaps for properly trained local people, so it has to hire workers from other regions – something that draws criticism from the local population and media. Being one of the few fertilizer producers in the country and constantly growing its business, the company also finds it difficult to recruit experienced production personnel and managers. Moreover, in selling fertilizers and in buying unprocessed rice and milk from small-holder farmers for its food business, the company is directly involved in the agricultural sector, which is plagued by low productivity levels. To address these skills gaps, Engro has implemented several initiatives for its current and prospective workforce (e.g. a technical training college for chemical and mechanical trades) and in its value chain (e.g. training for rural farmers). In order to secure its social license to operate for its sensitive (fertilizer) production, it also fosters education of the local children by adopting local schools and training teachers. For Engro, the initiatives improve community relations, enable it to develop talents internally, improve the quality of its inputs, and increase the demand for its products. Its employees benefit from good internal development opportunities, the livelihood of its suppliers and clients improves substantially, and the community enjoys higher-quality education.

Hape Holding AG, a German wooden-toy manufacturer with production facilities in China and Romania, is facing a skills gap for qualified wood-mechanics with an understanding of wood as a material and the technical ability to handle the increasingly complex machines. As a high-quality producer, the company also depends on the quality of its supplies. To address these gaps and to give back to society, Hape has implemented a number of initiatives for its own workforce (e.g. a vocational training center with a three-year training program for wood-mechanics in China and a cooperative venture with a technical school in Romania), for its suppliers (e.g. a training program for its bamboo-product suppliers), and for people in the community (e.g. running the Hape Experience Center and building a bamboo kindergarten). Through its initiatives, Hape benefits from a better-educated and highly motivated workforce, product inno-

vations, and higher quality of its supplies and final products. Employees have better career opportunities at Hape, with the prospect of higher earnings and an increased “market value”. For suppliers, the initiatives opened up new earning opportunities, and enhanced the safety and efficiency of their production. And finally, the community profits from more and better jobs and access to modern early-childhood education.

Hospital Sírio Libanês (HSL), a private hospital operator in Brazil, has no difficulty in attracting highly qualified doctors and healthcare specialists, but it does struggle to recruit and retain low- to medium-qualified operational workers – those involved in auxiliary medical tasks, nursing work, and technical support functions. HSL invests heavily in systematically assessing training needs and providing employee training. In addition, the hospital has invested in a multi-disciplinary qualification center, which uses simulation techniques to train new hires and existing staff to work effectively in multi-disciplinary teams. To address the relatively high attrition rate among low-skilled auxiliary medical staff, HSL initiated a neighborhood qualification project, which provides three months of training to people from the local area to work in catering, hygiene, or other auxiliary services. These measures enable HSL to maintain its high quality standards, fill positions internally, and bridge its skills gaps. For its employees (especially the low-to-medium-skilled), the initiatives help to improve their career prospects and increase their salaries. By involving employees in its community-development initiative, HSL not only realizes the initiative at low cost, but also instills a sense of pride among the employees. For the community, the neighborhood qualification project boosts employment locally; and the training of healthcare professionals contributes to improving the Brazilian public healthcare system as a whole.

JMS Holdings Ltd. is one of Bangladesh’s leading manufacturers of ready-made garments in the low-to-medium price segment. The company’s particular challenge is a skills gap in production mid-management – i.e. line supervisors and line chiefs who require a deep understanding of modern production layout and techniques, and a technical understanding of the different machines, as well as strong leadership and communication skills. At the level of machine operators, JMS can easily recruit a sufficiently large number of workers, but they must be trained internally to fulfill the efficiency requirements and to comply with health and safety standards. In order to address the gaps, JMS organized training courses for productivity as an integral part of a comprehensive program of production optimization. In this context, JMS introduced a separate training station for providing practical training for new hires and refresher sessions, without hampering the actual production process. JMS also offers practical training at the training station as part of a three-month technical-vocational-education-and-training (TVET) course for sewing-machine operators. In the local community, JMS supports a pre-primary school, as well as a school and a college. JMS’s workforce development has led to a substantial increase in productivity and quality. For employees, the

initiatives also proved to be highly beneficial in leading to higher wages by virtue of higher efficiency. The community, too, benefits: directly, through the provision of education for local children; and indirectly, through the availability of more and better jobs – the majority of which are for women – and through the increased employability of young women from local villages via the TVET course, with substantial secondary benefits on family income, health and education.

Ohorongo Cement (Pty) Ltd. is Namibia’s first and only cement-producing company. When setting up production, Ohorongo’s German mother company Schwenk faced the challenge that cement-specific skills were not available on the Namibian labor market. In particular, the company is reliant on qualified control-room operators (CROs) and foremen to manage the production process of its plant. Well before production started, Namibian CROs and foremen were recruited and sent to Germany for an intensive five-month initial training course combining theory-based and simulation sessions with practical experience. Given the lack of experienced supervisory and management candidates, Ohorongo also develops these skills internally through a comprehensive employee training program for workers and management. Ohorongo strives to retain key employees with a retention strategy involving various financial and non-financial measures. To ensure a sufficient supply and adequate training of CROs in the future, the company is building a CRO training center to train current and prospective staff as well as employees from other manufacturing and mining companies. The business case for the initiative appears to be negative if the center trains only Ohorongo’s own new hires, but it could become positive if the training capacities are fully utilized and the running costs are shared with other companies. Ohorongo’s skills-development initiatives enabled the smooth ramp-up of production, and continue to ensure a sufficient supply of qualified personnel. Ohorongo’s employees benefit from the initiatives through higher skill levels, allowing them to move up the career ladder and earn a higher salary. By training CROs in excess of its own demand, Ohorongo also contributes to the skills development in the country; and by addressing the serious undersupply of qualified CROs in this way, the company reduces the risk that qualified personnel will be enticed away to other companies.

A guide for practitioners: How to bridge skills gaps step-by-step

The report provides a six-step guide for practitioners who are facing skills gaps; the guide makes use of the three good-practice frameworks and the methods for assessing costs and benefits developed in the previous chapters of the report. The guide is concerned mainly with the skills gaps within a company’s own workforce, but is easily transferable and applicable to skills gaps in the value chain or in the local community.

The first step should always be a thorough review to ascertain what the skills gaps actually are – both quantitatively and qualitatively. The report provides self-assessment templates for a structured approach. To identify the main pain-points and to focus your efforts, you should then prioritize the skills gaps identified, using well-established criteria such as the breadth of the gap and its criticality for business success. The next step – before drawing up measures to address the prioritized skills gaps – should be to analyze the underlying causes, i.e. establish exactly why the skills gap is there in the first place. The possible reasons are numerous: the company’s poor reputation as an employer, which lowers the number of applications or an uncompetitive salary scheme, which prompts a high attrition rate among employees – to mention just two.

Once potential measures have been identified, you should conduct an ex-ante assessment of the anticipated costs and benefits. An investment in skills development is no different in essence from any other investment that the company may decide on, such as buying new machinery, expanding production facilities or acquiring a subsidiary company – where a cost-benefit appraisal is a standard requirement for getting management approval. Yet, companies tend to avoid conducting the same rigorous analysis in the case of measures to address skills gaps – perhaps because the benefits are sometimes hard to capture and even harder to quantify. A thorough assessment using one of the methods presented will prove extremely valuable: not only will it enable you to select the most beneficial and cost-effective measures, but it will also indicate ways of designing and refining the measures in order to maximize the benefits and to minimize the costs. Investing in the development of skills does not only benefit companies, but also their employees and the local community. These benefits should also form part of a comprehensive assessment. Showcasing the positive social impact of your engagement helps to foster the company’s reputation and enhance its relations with government and community.

Based on the cost-benefit appraisal, a decision can be taken on which measures to implement to address your company’s skills gaps. Before implementation, you should dedicate some time and effort to carefully plan the initiative. The ideal level of planning depends on the measure’s complexity and riskiness. An analysis of DEG’s portfolio of skills-gap measures identified 16 key success factors for the set-up, implementation and sustainable operation. In the set-up phase of the initiative, for instance, it is essential to get the backing of top management and to establish ownership and clear responsibilities, both within the company and with external partners. In the implementation phase, make sure to publicize early successes to partners and within the organization; this will help in maintaining their support. It is equally important to ensure the buy-in of local authorities – for example, by engaging the relevant education authorities early on to discuss the certification of the training program. For the sustainable operation of the initiative, strive to secure long-term financing, either from internal or from external sources – for instance, by sharing the running costs with partners or training beneficiaries, or by committing funds for several years.

After a given skills-development measure has been implemented, you should then conduct an ex-post analysis to evaluate the outcomes and to identify the lessons learned using the same methods. It turns out that companies often struggle to measure the concrete benefits accurately, however, owing to a lack of adequate data. To avoid that problem, the KPIs should be introduced before implementation, and should be collected throughout and after the time that the measure is under way.



Notes

- ¹ Let’s Work (2014), A global partnership to create more & better private sector jobs.
- ² World Bank (2015), Working together for jobs.
- ³ Manpower Group (2015), Talent Shortage Survey.

1. Introduction

Skills gaps and the private sector

Despite high unemployment rates in many countries, employers struggle to find adequately qualified personnel to fill vacant positions – and a recent study by BCG predicts that the supply-and-demand imbalances are likely to increase over the coming decades.¹ Skills gaps – the difference between the skills needed for a job and those possessed by a worker – represent a major constraint on development at three levels:

- For the individual, skills gaps limit employability and deprive an individual of the opportunity to improve his or her living conditions.
- At the company level, skills gaps limit productivity, which can lead to higher costs and lower quality, and reduce the company's growth prospects.
- At the country level, skills gaps limit the nation's competitiveness and reduce economic and social development potential.

The situation in many developing and emerging economies is aggravated for companies and the country as whole by an increasing willingness of the young workforce to move abroad. Thus, if countries do not succeed in activating young people's potential, they run a rising risk that young people will turn their back on their homeland. According to a BCG study, globally 28% of young employees state they would work abroad to gain access to a better education system.²

Skills gaps are prevalent in many developing and emerging countries, because their public education systems often are not able to equip people with the right skills.³ Despite the significant improvements in basic education and literacy achieved over recent decades, enrollment in secondary and tertiary education remains well below the levels of industrialized countries.⁴ And even graduation from a college or university does not guarantee employability, as students often have not acquired the skills that employers demand. To succeed in the labor market, people need a broad range of both hard skills – such as knowledge of accounting practices or the ability to operate machinery – and soft skills, such as creativity or communication.⁵ The relative importance of hard versus soft skills naturally depends on the job profile.⁶ However, the vast majority of jobs demand a combination of the two kinds. By the same token, the specific types of skills required are determined by the work to be done: for example, wood-mechanics and seamstresses need a high degree of craft skills, whereas finance administrators and controllers need considerable mathematical skills. With regard to soft skills, the former require creativity and visual thinking, whereas the

latter require significant analytical capability – but both groups have to be able to work together with others in a (production) team.

Faced with a shortage of necessary skills, private-sector companies are investing in closing current and future skills gaps. Given the size of the gap and the increasing demand for highly qualified workers, however, much more private-sector investment is required.⁷ Companies can engage the challenge on three different levels:

- Workforce-development initiatives include targeted training and qualification of potential candidates and the existing workforce to ensure an adequate supply of properly qualified workers tailored to company needs.⁸ Examples of typical qualification measures include structured apprenticeship programs, vocational training programs, systematic on-the-job training, and partnerships with universities for management training. With nine out of ten jobs in developing countries being provided by private companies, these training initiatives play a vital role when it comes to matching people's qualifications with private employers' needs. In addition to training and qualification measures, companies can bridge skills gaps by other means – for instance, by increasing retention or reducing labor demand.⁹
- Skills development along the value chain comprises initiatives aimed at raising skills levels along the value chain in an effort to improve the products and productivity of suppliers and to enable clients (such as distributors) to sell and repair company products more reliably.
- Closing skills gaps in the broader community involves initiatives targeting the local population in the immediate neighborhood, and in some cases the wider region and even the entire country that the company operates in.¹⁰

Private-sector companies are a key factor in easing the skills-gap constraint on sustainable development. Therefore, many Development Finance Institutions (DFIs), which finance and support private-sector companies in developing and emerging countries, provide specific technical assistance and financing for measures to address skills gaps. With this report, the European Development Finance Institutions (EDFI) intended to identify successful initiatives by the private sector addressing skills gaps, and to demonstrate that implementing businesses can benefit immensely from these initiatives. The report itself was initiated by the Let's Work Partnership, which brings together 28 institutions that have the shared objective of creating more and better jobs and bridging skills gaps. The hope is that the report will contribute to their efforts in this endeavor.

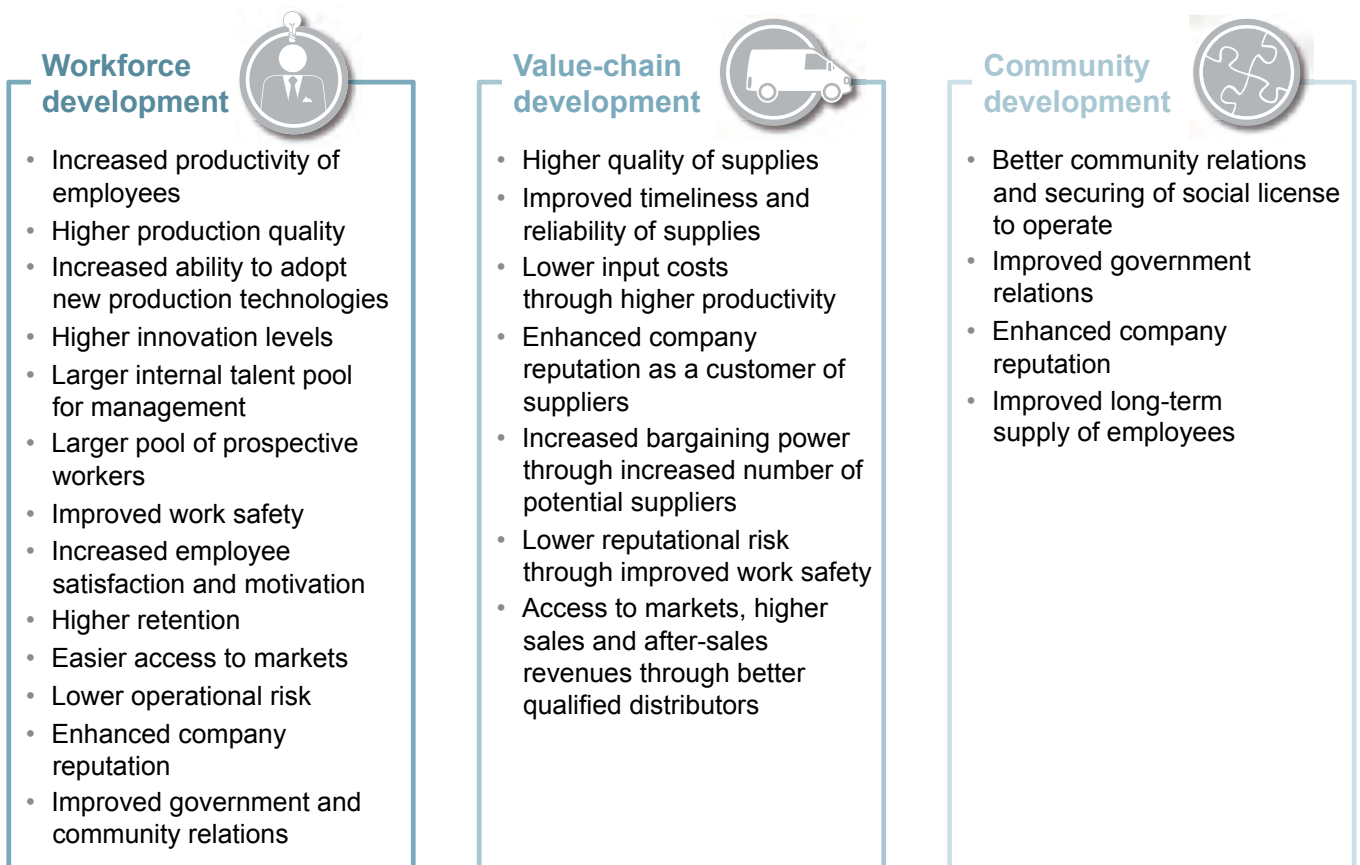
All notes at the end of this chapter (Page 14)

The business rationale for investing in closing skills gaps

Companies are sometimes reluctant to invest in closing their skills gaps, since the costs are tangible and clearly visible, whereas the benefits are often intangible and accrue only over time. In addition, they are often unable to reap the (full) benefits of their investment if the newly upskilled employees then leave the company or if suppliers turn towards competitors. However, by closing skills gaps on all three levels – in their own current and prospective workforce, in the value chain, and in the community – private-sector companies can secure a wide range of benefits (Figure 1):¹¹

- **Workforce development:** Training programs (especially when reinforcing improved production techniques) can increase productivity markedly and help to ensure higher-quality products. Moreover, skilled laborers facilitate the adoption of new technologies, so companies that actively upskill their workforce will generally have higher innovation levels. Training initiatives also tend to improve safety in the workplace, and thereby reduce lost-time incidents. Skills-development measures further increase employee satisfaction and motivation, and that, in turn, will increase retention. Furthermore, companies that adopt training programs tend to acquire an enhanced reputation and to enjoy a competitive advantage when it comes to recruitment.¹² Employees who acquire higher skills and qualifications tend to raise the skill levels of other workers as well thanks to deliberate or inadvertent knowledge transfer. However, other kinds of measures too, not just training initiatives, can provide such benefits: for example, increased automation will not only reduce workforce demand, but can also boost productivity, safety and employee satisfaction (e.g. through a cleaner working environment). Other measures to address the skills gaps, such as a retention strategy, are directly linked to a specific benefit.
- **Skills development along the value chain:** When a company, along its value chain, helps small and medium enterprises (SMEs) to enhance their productivity and expand their business, it often derives direct gains for itself as well.¹³ By training its suppliers or distributors, for example, the company will likely achieve sustainable improvements in timeliness and quality of its supplies, and potentially higher sales of its products.
- **Closing skills gaps in the broader community:** By undertaking skills-development initiatives for the local community, a company not only discharges an important social duty (improving general education or environmental standards, for instance),

Figure 1: Company benefits from investing in closing skills gaps



but also furthers its own business interests: ensuring the long-term supply of employees, enhancing the company's reputation and community relations, and securing the social license to operate effectively and safely within the region. Community engagement often also enhances government relations and secures the goodwill and support of local authorities.

The various benefits are not independent of one another, but can be mutually reinforcing; for example, a training measure can increase retention directly if a retention agreement is signed with the participant, but also indirectly through increased employee satisfaction and motivation.

Closing the literature gap: A practical approach for the private sector to bridge skills gaps in developing countries

This report is obviously not the first to investigate the skills-gap problem – there are numerous publications dealing with the

issue, as shown in the overview of selected reports in Figure 2. However, the recent literature seldom addresses the skills-gap challenge from a private business perspective. Many reports focus on deficient education levels, but few ask what the companies themselves can actually do to close skills gaps, i.e. few of the reports provide concrete solutions and recommendations. Moreover, while the vast majority of reports review skills gaps in the workforce, almost none of them discuss skills gaps in the value chain or at the community level. Only a few of the reports make a serious effort to identify good practices. And very few reports attempt a quantitative assessment of costs and benefits, in the form of a cost-benefit appraisal, to estimate the business benefit of skills-gap initiatives.

This report therefore seeks to complement the existing literature by taking a broad view of measures to close skills gaps – in a company's own workforce, in the value chain, and in the local community – in developing and emerging economies around the globe. The report takes the perspective of practitioners from the private sector, and provides a set of three frameworks with field-tested good practices and respective practical

Figure 2: Overview of recent reports on skills gaps

Year	Title	Developing countries	Emerging countries	Applies across specific target groups	Case studies	Good practices/ key success fact.	Quantitative cost-benefit appraisal	Workforce development	Value Chain development	Community development
2015	Meeting the skills gap: lessons from the private sector – World Business Council for Sustainable Development (WBCSD) and the International Finance Corporation (IFC)	✓	✓	✓	✓	✓	✗	✓	✓	✓
2015	Assessing private sector contributions to job creation and poverty reduction – IFC	✓	✓	✓	✗	✗	✗	✓	✗	✗
2014	Global Workforce Crisis – The Boston Consulting Group (BCG)	✗	✓	✓	✗	✗	✗	✓	✗	✗
2014	Decoding Global Talent – BCG together with The Network	✗	✓	✓	✗	✗	✗	✓	✗	✗
2013	Skills and jobs: Lessons Learned and Options for Collaboration – World Bank	✓	✓	✓	✗	✗	✗	✓	✗	✗
2013	Investing in Women's Employment: Good for business, good for development – IFC	✓	✓	✗	✓	✓	✓	✓	✗	✓
2012	Youth and skills: Putting education to work – UNESCO	✓	✓	✓	✓	✗	✗	✓	✗	✗
2012	Solving the Skills Paradox – Accenture	✗	✗	✓	✗	✓	✗	✓	✗	✗
2012	Talent Mobility Good Practices Collaboration at the Core of Driving Economic Growth – World Economic Forum (WEF)	✓	✓	✓	✓	✓	✗	✓	✗	✗
2012	Creating People Advantage – BCG together with World Federation of People Management Associations (WFPMA)	✓	✓	✓	✗	✓	✗	✓	✗	✗
2011	A Better Measure of Skills Gaps – ACT	✗	✗	✓	✓	✗	✗	✓	✗	✗
2011	Bridging the Skills Gap – Hays	✗	✗	✓	✗	✗	✗	✓	✗	✗
2011	Global Talent Risk – 7 Responses – WEF	✓	✓	✓	✗	✓	✗	✓	✗	✗
2006	Bridging the Skills Gap – American Society for Training & Development (ASTD)	✗	✗	✓	✓	✗	✗	✓	✗	✗
2015	Bridging the Skills Gaps in Developing Countries – BCG for the "Let's Work Partnership" of the European Association of Developing Finance Institutions (EDFI)	✓	✓	✓	✓	✓	✓	✓	✓	✓

examples. In addition, it presents five in-depth case studies – of companies supported by DFIs from different sectors and countries in East and South-East Asia, Latin America, and Africa – to suggest further ways of overcoming the skills-gap challenge. A further aim of the report is to provide guidance on structuring and conducting a cost-benefit appraisal – an exercise that is often neglected by companies – and to show that there is in fact a business case in investing in skills development. Finally, the report presents and showcases methods to assess hands-on costs and benefits of initiatives, and it formulates concrete recommendations in a practitioners’ guide that are applicable across-the-board in various sectors and regions.

Structure of the report

The remainder of this report is structured in five main chapters.

Chapter 2 presents good practices clustered into three analytical frameworks – for skills development in the workforce, the value chain, and the community. The frameworks include a total of 59 good practices, which were identified in a bottom-up process from a collection of more than 200 concrete measures drawn from a wide range of sources: analysis of DEG’s project portfolio, using internal reports and conducting interviews with DEG staff; high-level screening of the portfolios of selected members of the Association of European Development Finance Institutions (EDFI); the comprehensive project experience of BCG in the field of HR and workforce development; a review of existing literature; and a series of interviews and desk research conducted for the five in-depth case studies. Nearly 70 practical examples are presented in this report to illustrate the application of the good practices in a real-life context and to highlight their practical use.

Chapter 3 explains how companies can assess the business case, and presents a social-impact assessment model regarding measures to bridge skills gaps. The chapter offers a detailed and systematic hands-on approach to assessing the costs and benefits of skills-development initiatives. Four different methodologies are described – ranging from quantitative approaches to a purely qualitative assessment – and their prerequisites and applications are discussed. Finally, the chapter offers an approach to evaluating not only the business effects but also the social impact of a skills-development initiative.

Chapter 4 presents five detailed case studies of companies, in different sectors and geographies, that have successfully bridged specific skills gaps by adopting the frameworks, methodologies and approaches introduced in the previous chapters. The chapter derives concrete good practices, and identifies lessons learned from each company that are transferable across industries and regions. The companies are: Engro Corporation Ltd., a Pakistani conglomerate active in the fertilizer, food, chemicals and energy businesses; Hape Holding AG, a German toy manufacturer with production sites in Germany, China and

Romania; Hospital Sírío Libanês, a private hospital operator in Brazil; JMS Holdings Ltd., a local garment producer in Bangladesh, and Ohorongo Cement (Pty) Ltd., the Namibian subsidiary of a German cement producer. The case studies were compiled on the basis of in-depth interviews with key stakeholders in the companies, and through documentation provided by them and DEG. The various skills-development initiatives undertaken by these companies show that many initiatives already present a positive business case for companies, or could do so if adapted somewhat, while also having a positive effect on local and national skills gaps.

Chapter 5 builds on the insights gained from earlier chapters to develop a practitioners’ guide that helps companies to assess and address their own skills gaps. The guide provides a systematic self-assessment approach that is easily applied across sectors, and a systematic step-by-step account of how to identify skills gaps and their root causes. Although the guide focuses on workforce development, it should also prove helpful in addressing skills gaps in the value chain and in the community.

Chapter 6 provides a brief summary of the report by highlighting the need for and benefits of private-sector investment in bridging the skills gaps, and by recapitulating the proposed steps to develop appropriate measures from the practitioners’ guide.

Notes

- ¹ Boston Consulting Group (2014), *The Global Workforce Crisis: \$10 Trillion at Risk*.
- ² Boston Consulting Group and The Network (2014), *Decoding Global Talent*.
- ³ Hanushek, E., Woessmann, L. (2009), *Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation*, NBER Working Paper No. 14633, National Bureau of Economic Research, Cambridge.
- ⁴ World Bank (2015), *Secondary school enrolment; Tertiary school enrolment*.
- ⁵ OECD (2012), *Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies*.
- ⁶ In this report, “skills gaps” refers to both hard and soft skills, as both skill types are highly relevant in a modern working environment, and can greatly increase employment opportunities and optimize production outcomes.
- ⁷ Boston Consulting Group (2014), *The Global Workforce Crisis: \$10 Trillion at Risk*.
- ⁸ In this report, workforce development covers all measures aimed at closing skills gaps, such as measures that increase retention, and is not limited to training measures.
- ⁹ International Finance Corporation (2013), *Assessing private sector contributions to job creation and poverty reduction*.
- ¹⁰ Let’s Work (2015), *Meeting the skills gap: lessons from the private sector*.
- ¹¹ The benefits were identified from BCG project experience, a literature review, and the company case studies conducted for this report. The frameworks, figures and graphs in this report (unless otherwise specified) were developed specifically for the present study.
- ¹² International Finance Corporation (2013), *Investing in Women’s Employment: Good for business, good for development*.
- ¹³ Let’s Work (2015), *Meeting the skills gap: lessons from the private sector*.

2. Good practices

How companies have successfully addressed their skills gaps

Companies should draw on the existing knowledge and experience of other companies that have faced similar skills-gap challenges, as they can gain much valuable guidance thereby in developing their own approach to bridging the gaps. This chapter presents generalized good practices and concrete good-practice examples from various companies that have addressed their skills gaps successfully. The good practices were identified in a bottom-up process from a collection of more than 200 measures implemented by these companies. The measures were drawn from a number of sources: notably, an analysis of DEG's project portfolio, based on internal reports and interviews with DEG staff; the comprehensive project experience of BCG in the field of HR and workforce development; a high-level screening of the portfolios of selected members of the Association of European Development Finance Institutions (EDFI); a review of existing literature; and interviews and desk research undertaken for the five in-depth case studies (Chapter 4). To show how the good practices are applied in a real-life context and to highlight their practical use, this chapter introduces nearly 70 practical examples. The largest number is taken from companies from, or operating in, developing or emerging economies. Some examples, however, are taken from more advanced economies (owing to a bias in the literature and to BCG's greater project experience in industrialized countries), but they have been carefully selected for their relevance and transferability to a developing- or emerging-country context.¹

The good practices are clustered into three analytical frameworks, targeting three different levels: within the company's own current and prospective workforce; along the value chain for suppliers and clients; and in the broader community.

- The first analytical framework, “Good practices for workforce development”, applies to the HR value chain, as developed by BCG, and presents good practices and good-practice examples related to closing the skills gaps in a company's own current and prospective workforce. Usually, the responsibility for addressing skills gaps in one's own company lies with the HR department (Section 2.1).
- The second analytical framework, “Good practices for skills development along the value chain”, deals mainly with the typical process for developing and setting up a supplier-development program, and presents good practices and good-practice examples related to the value chain, including both clients and suppliers. The responsibility for training

them, or developing their skills, typically lies with the sales unit and the purchasing department respectively (Section 2.2).

- The final analytical framework, “Good practices for closing skills gaps in the broader community”, is based on BCG's established Corporate Social Responsibility (CSR) approach, and presents good practices and good-practice examples related to community development. The activities tend to be part of a CSR program, and are often overseen by a dedicated sustainability unit (Section 2.3).

All three analytical frameworks take a comprehensive view of the topic, ranging from a wide strategic perspective to a specific operational focus. Bear in mind, however, that the good practices presented make no claim to being a “plug and play” solution to bridging the skills gaps. Their aim is to provide guidance and ideas for a company to develop its own skills-gap measures, and they need to be selected and adapted carefully to the company's distinctive context and combination of challenges.²

2.1 Good practices for workforce development

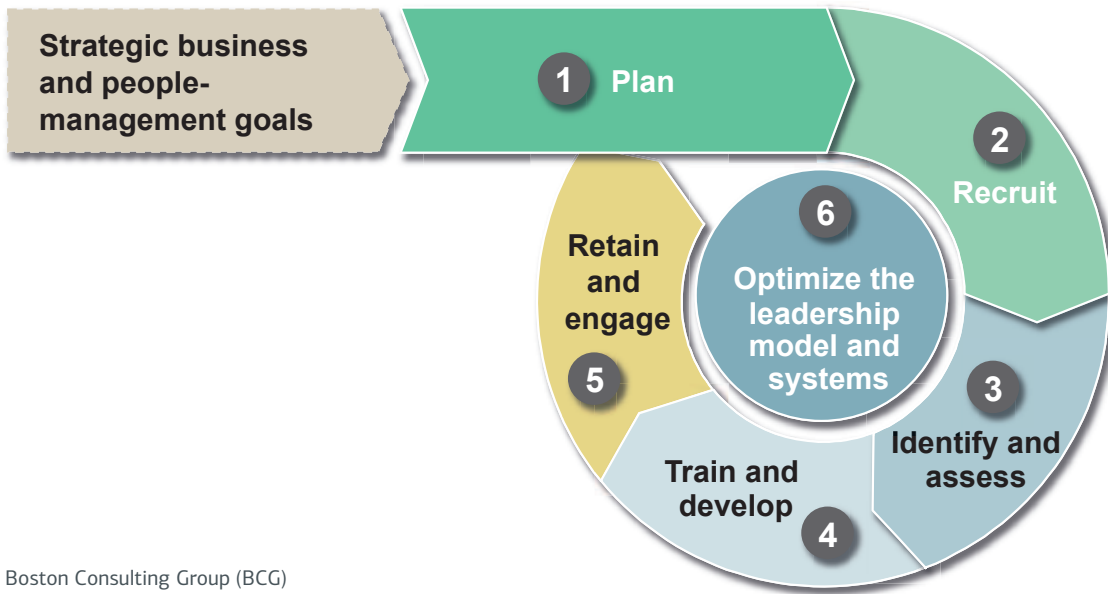
The good practices for closing skills gaps within the workforce occur along the HR value chain, as developed by BCG, which relates to the five typical steps in HR management plus the more holistic aspect of leadership and systems (Figure 3). So the reader is able to trace the good practices along the typical process from workforce planning to retention, but at the same time to concentrate on those areas where the most pressing challenges are known to be (such as recruiting, for instance).

The HR value chain consists of the following consecutive elements:

- 1. Plan.** On the basis of the company's strategic business and people-management goals, which are in turn derived from the company strategy, the HR department needs to plan what types of skills are required, and where, and for how many employees, and by when.
- 2. Recruit.** To fill vacancies, the company has to recruit the right people. This step has several components: devising a hiring strategy and an employer-branding strategy, attracting applications, and seeking and sorting applicants.

All notes at the end of this chapter (Page 29)

Figure 3: The HR value chain



Source: The Boston Consulting Group (BCG)

- 3. Identify and assess.** Performance measurement is the key to elucidating available skills and detecting talent in the workforce. This element involves the design and implementation of a performance-management system, including skills assessment and feedback collection.
- 4. Train and develop.** Training and development ensure that the right skills are available in the company at the right time. This element involves skills development in the narrower sense, and includes the following components: defining career steps, developing training plans, planning and implementing the various training measures, and conducting talent management.
- 5. Retain and engage.** Once the right skills have been developed, the company has to make sure that it can benefit from these skills by retaining qualified employees and maintaining their engagement so that they deliver the best value to the company. This step includes the following components: monitoring employee satisfaction, developing a retention strategy, and designing and implementing a good scheme of incentives and remuneration.
- 6. Optimize the leadership model and system.** This is not a specific step, but rather the basis of HR management and hence the foundation of all the steps just listed. Good leadership starts with a company culture that values and respects the individual and encourages employees to bring their own ideas. Systems provide all the necessary HR data needed for making decisions related to people, whether for recruiting, training, promotion or remuneration.

The good-practice framework for workforce development (Figure 4) is based on a more detailed view on the HR value chain, which splits each of the six elements into two topics, into which the relevant good practices are grouped.

The following section covers all the individual good practices identified in the six elements. Each good practice is discussed briefly and is supported by practical examples from the business world.

1. Plan: Good practices and practical examples related to workforce planning and demand management

- 1.1 Align production and capacity planning.** Integration of production and capacity plans is key to creating insight into workforce requirements. The planning should be detailed enough to link production targets with the job profiles. A helpful example is that of Hospital SÍrio Libanês (HSL), a Brazilian hospital operator, which undertook detailed operational-personnel planning – based on individual competency profiles, occupation rates, and complexity of patients – to reallocate medical staff between departments and thereby increase capacity utilization and reduce the need for recruitment.³
- 1.2 Conduct strategic workforce planning.** Strategic workforce planning models the demand (based on business plans) and supply (based on recruiting, attrition and retention plans) of the workforce over a longer time horizon so as to identify potential gaps early on. By applying this good

Figure 4: Good-practice framework for workforce development

Plan		<i>Workforce planning</i>	1.1 Align production and capacity planning	1.2 Conduct strategic workforce planning	1.3 Establish succession planning for key positions
		<i>Demand management</i>	1.4 Reduce critical-workforce demand through automation	1.5 Offset short-term demand fluctuation to retain staff	1.6 Outsource non-critical jobs in order to relieve specialists
Recruit		<i>Hiring strategy</i>	2.1 Develop a positive employer-brand	2.2 Shift the hiring criterion from "ready-to-use" to "potential"	2.3 Identify and affiliate potential employees as soon as possible
		<i>Seeking and sorting of applicants</i>	2.4 Leverage employee and alumni networks	2.5 Tap into non-traditional workforce pools	2.6 Use new technologies to enhance recruiting experience
Identify and assess		<i>Talent identification</i>	3.1 Gain a clear understanding of available competencies	3.2 Systematically identify development potential	3.3 Identify and manage a top talent pool
		<i>Performance assessment</i>	3.4 Define company-wide performance standards	3.5 Collect structured and transparent feedback	3.6 Provide probational leadership experiences to talented staff
Train and develop		<i>Training environment</i>	4.1 Set up clearly defined career paths with aligned training plans	4.2 Provide incentives for undergoing and approving training	4.3 Collaborate with external partners
		<i>Skills-development measures</i>	4.4 Tailor training to the needs of the company and the target group	4.5 Foster internal knowledge transfer	4.6 Develop fast-track programs for high-potential employees
Retain and engage		<i>Retention strategy</i>	5.1 Align the interests of the company and the employees	5.2 Set up a fair and transparent compensation scheme	5.3 Monitor satisfaction and engagement
		<i>Working-experience enrichment</i>	5.4 Invest in non-financial benefits and a good working environment	5.5 Foster internal personal networks and integration	5.6 Provide a forum for employees to engage more
Optimize leadership model and systems		<i>Enhanced systems</i>	6.1 Integrate workforce data and financial data	6.2 Incorporate HR KPIs into the company scorecard	6.3 Develop systems to measure the benefit of training initiatives
		<i>Cultural adjustments</i>	6.4 Establish a people-centered company culture	6.5 Make HR a top management priority	6.6 Recognize outstanding performance and new ideas

practice, a German car manufacturer was able to detect productivity risks due to demographic change, as a large proportion of employees were aged between 42 and 54. On the basis of this analysis, specific countermeasures could be implemented.

1.3 Establish succession-planning for key positions.

Succession-planning is an important means of reducing risk. It is usually applied to positions in middle or top management or to highly specialized professionals. Ohorongo Cement (Pty) Ltd., a Namibian cement producer with around 300 employees, identified 11 management positions that are critical for business success, then identified potential contingency replacements and long-term successors within the company, and finally devised skills-development plans for them.⁴ This significantly reduced the operational risk for the company.

1.4 Reduce critical-workforce demand through automation. Increased automation is a valuable lever for coping when qualified workers are scarce. But it often means that even higher-qualified employees are required for operating and maintaining the machines, though at least lower numbers of them are needed. Hape Holding AG, a Chinese producer of wooden toys, invested heavily in automating its production process in China, not only to bring down production costs but also to address the low availability of qualified wood-mechanics.⁵ As a consequence, the need for qualified production workers decreased considerably, specifically in those workshops with higher automation.

1.5 Offset short-term demand fluctuation to retain staff.

To avoid the costly training of new employees and to fully utilize the experience of workers, companies with seasonal fluctuations in production should find ways to level out the lows and peaks – for instance, by warehousing production or by switching between internal and external production. To take the example of Hape again: the company arranges its production of wooden toy spare parts in such a way as to employ its trained workforce the whole year round: during the low season, the wooden spare parts are produced in-house and put in storage, whereas they are sourced from suppliers during the high season. This allows Hape to employ its trained and highly experienced workers all year round.

1.6 Outsource non-critical tasks in order to relieve specialists.

Specialists are often a scarce resource on the market. To reduce the demand for them, analyze the activities of the incumbent specialists carefully, and outsource (or transfer to other employees) any of the activities that don't require expert knowledge. For example, an American hospital provider that struggled to recruit registered nurses has started – after a thorough definition of core tasks for each job – to concentrate the highly skilled part of the work into fewer critical jobs, and to delegate minor tasks to licensed vocational nurses and certified nursing assistants.

2. Recruit: Good practices and practical examples for a hiring strategy and for seeking and sorting applicants

2.1 Develop a positive employer brand. Just as a favorable product brand provides a huge advantage in the goods and services markets, a positive employer brand can be invaluable in the recruiting market – particularly in a competitive environment where many employers are trying to attract skilled workers. A German transportation company – with a poor company image that affected its employer brand in a tightening recruiting market – after identifying target groups for recruitment, undertook an online survey to establish what these desirable workers look for in an employer, and developed an employer-branding strategy accordingly.

2.2 Shift the hiring criterion from “ready-to-use” to “potential”. The traditional mindset of HR departments is to hire people with the specific qualifications and skill set needed for a given position. Switching to hiring on the basis of “potential” is a paradigm change – the assessment process is now to find out if a candidate has the potential to acquire the specific skill set, if appropriate training is provided by the company. The initial training program by Ohorongo is a case in point: faced with a lack of control-room operators (CROs) on the Namibian labor market, the company hired people who looked capable of becoming good operators, and sent them on a comprehensive training program in Germany.⁶

2.3 Identify and affiliate potential employees as soon as possible. In competitive recruiting markets, it is becoming increasingly important to build ties with potential employees early on – for instance, while they are still at university. To this end, a British telecommunications provider, which had trouble in identifying the most talented candidates, sponsors research projects at large universities to get in touch with prospective employees, and allows the best-performing candidates to skip the first-round interviews. Similarly, Hape invites engineering and architecture students from Europe to conduct a project at its bamboo research center in China, and on graduating some of them come to work with Hape for a while.

2.4 Leverage employee and alumni networks. The personal networks of current and former employees provide a valuable resource to attract new employees. This resource should be used in a structured and formalized way. A US consulting company, for example, very effectively introduced a “recruit-a-friend” system, whereby current employees can propose new candidates and receive a bonus if the candidate joins the company and stays for at least six months. The amount of bonus varies according to the current recruiting needs and the level of difficulty involved in finding the right candidates.

2.5 Tap into non-traditional workforce pools. Many companies have access to traditional talent pools, and tend to draw their recruits from them. Owing to competition in the recruiting markets, however, or to demographic shifts, these pools can run dry, and it becomes necessary to develop non-traditional pools. An Indian technology company, for example, used to focus on major cities to recruit its male engineers. After experiencing a severe shortage, the company expanded its recruiting efforts to female engineers in second- and third-tier cities. Another example: an Australian mining company, struggling to find workers for its remote mines, developed specific training programs for the local indigenous population, while also taking into account the social impact of the measures.

2.6 Use new technologies to enhance the recruiting experience. For young university graduates in particular, the recruiting experience can be a decisive factor for or against an employer. Companies should pay attention to the following key aspects: a professional and appealing website, a selection of channels through which candidates can apply, a quick application process, and innovative assessment concepts. A South African technology company, for instance, decided to provide an innovative and easy-to-access application channel. The company developed the “ImpressMe” mobile app, enabling the applicants to upload 60-second video pitches of themselves.

3. Identify and assess: Good practices and practical examples for identifying talent and conducting performance assessment

3.1 Gain a clear understanding of available competencies. To set up a structured scheme for talent identification and assessment, the first step is to get a clear picture of the employees’ skill profiles. For example, JMS Holdings Ltd., a Bangladeshi garment producer, during a comprehensive process-optimization program, used a series of standardized tests for all employees, from the workshop to the top management, to assess their skills and specify areas in need of development.⁷

3.2 Systematically identify development potential. Not all employees have the potential to become managers or specialists. To ensure that people work in the right job or get promoted to the job that best suits their interests and abilities, companies need a systematic process for assessing development potential. Hape, for example, classifies all its employees into three performance groups: A, B and C. Workers in A and B are evaluated by all managers to obtain a comprehensive view of their performance. At the same time, these employees are encouraged to get involved in cross-departmental projects in order to extend their personal network within the company. This broad and

standardized assessment enables Hape to identify talent in the company and to develop the appropriate training measures.

3.3 Identify and manage a top talent pool. Top-talent employees are a very valuable resource for any company – and a favored target for poaching activities by other companies. It is important to identify these employees and actively manage their career path so as to keep them in the company and help them make the most of their potential. To that end, a software company in the US introduced a set of quantitative indicators to measure the performance of its software engineers, and found that the top-talent employees performed three times better than the average. At a German chemical company, in the established review process, 95% of employees were rated as strong performers, which made it impossible to identify top talent. So the company introduced a forced statistical distribution of evaluation ratings to ensure proper differentiation.

3.4 Define company-wide performance standards. Large companies, especially those that have sites or sales representatives in more than one location, should harmonize their performance standards in order to identify talent across departments and locations. A German media company, struggling to assess the performance of its employees and to decide on development opportunities for them, introduced two helpful new tools to its personnel-management toolkit: a performance review based on five company-wide performance standards, and a goal-setting review to agree on personal targets.

3.5 Collect structured and transparent feedback. Feedback is the most valuable tool for talent assessment and identification. It should be carefully structured, so as to allow a comparison over time and across individuals. It should also contain specific recommendations for an employee to further his or her own development. A German chemical company noticed how its complicated performance-management system was making it difficult for employees to understand the results, so it introduced a simpler, three-scale performance system instead, with clear indicators to measure performance in relation to targets and peers.

3.6 Provide probational leadership experiences to talented staff. Not everyone who is performing very well in his or her current role has the potential to excel in a more senior role – and especially in a leadership role. After all, management requires very distinct skills, and it can be difficult to fully assess an employee's leadership abilities ex-ante. So companies should consider offering trial leadership experiences, such as a joint leadership position with an experienced manager or a leadership role within the employee's own peer group. A Chinese industrial goods company, which had struggled to identify talented management candidates among its workforce, offered one or other of those opportunities to selected employees in order to assess their leadership skills.

4. Train and develop: Good practices and practical examples related to the training environment and skills-development measures

4.1 Set up clearly defined career paths with aligned training plans. The main benefits of clearly defined career paths are twofold: first, they serve as an important source of motivation for employees, who now have a clear career-development route; second, they give employers a clear idea of potential successors for a specific position. Once the career paths are established, training plans should be made – well aligned with the career paths – in order to prepare employees for promotion and provide the right replacements in time. HSL, for example, has developed a comprehensive set of career paths – covering all positions from unskilled worker to CEO – and publishes them on its intranet. Employees are able to choose a technical, managerial or educational path, and can access the respective competency profiles and job profiles. This transparency provides employees with great motivation and fosters their retention.

4.2 Provide incentives for undergoing and approving training courses. Since training usually takes place during working hours, training time is not directly productive. And because the effects of training are often not immediately visible, and the costs are usually borne by the trainee's unit, both employee and manager are often hesitant to undergo or approve training programs. However, from a company's point of view, training is an essential contributor to the development of the workforce. A US travel company with a comprehensive training catalogue, noting that organizational units were unwilling to send employees on training courses, reassigned the training budgets and responsibilities to the HR department. The effect was that training requests rose immediately, since the training courses no longer represented a budgetary burden on the individual units themselves.

4.3 Collaborate with external partners. By collaborating with suitable external partners to conduct or finance training, companies usually manage to boost training quality and effectiveness: the external partners bring in new perspectives, established training concepts, and the latest knowledge. Of course, potential partners need to be assessed carefully and managed properly.⁸ A vocational training center in the textile industry in Bangladesh shows how the right partners can be identified (Textbox 1). Among the many positive examples of successful collaboration with external partners is the case of Scania, a leading manufacturer of heavy trucks, buses and engines: in partnership with the United Nations Industrial Development Organization (UNIDO), Scania established The Swedish Academy for Training in Iraq, run in collaboration with the Swedish International Development Cooperation Agency (Sida), Education First (EF), and the Kurdistan Regional Government Ministry

Textbox 1: Mapping stakeholders for cooperation






Collaborating with established training institutions and integrating the most important stakeholders are key success factors for companies when setting up a program of technical vocational education and training (TVET). Potential partners should be identified and evaluated on the basis of their likely contribution and relevant expertise. One useful way of securing an overview of potential participants is by means of a stakeholder map: the stakeholders are clustered into groups such as education authorities or NGOs. For each group, its potential contribution is analyzed in several categories, ranging from project management to the certification and evaluation of the program.

This technique for a stakeholder map was used, for example, in setting up a TVET program for the Bangladeshi ready-made-garment (RMG) sector (Figure 5):

Under the auspices of the ILO TVET reform project, vocational education has advanced considerably in Bangladesh, mainly owing to the following factors: the implementation of the national skills-development policy; the development of national training and vocational qualification frameworks that detail the requirements for each qualification level; the introduction of competence-based learning; and the establishment of centers of excellence and registered training organizations. Accordingly, the ILO itself can provide valuable advice on developing a

curriculum, on the accreditation of the training institution and program, and on financial assistance. Bangladesh's education authorities, notably the Ministry of Education and the Technical Education Board, oversee TVET and serve as a knowledge hub for curriculum development, but they also provide financing and certification, and can help to promote the training program. So it is worth consulting them early on in the conception phase of the program. Other important potential partners in setting up a TVET program are: the existing technical training institutes (more than 20 of them) that are consolidated under the Bureau of Manpower, Employment and Training; the newly established Centre of Excellence for Bangladesh Apparel Industries (CEBAI); and the Bangladesh University of Engineering and Technology. All of these institutions can provide training infrastructure, teachers, approved curricula and certified training concepts that could be used directly or adapted to the company's needs. For a joint training program, a company could seek cooperation partners via the Bangladesh Garment Manufacturers and Exporters Association. In return, the burden for program development and financing could then be shared, and the program could be promoted through the Association's channels.

Figure 5: Stakeholder map and contribution for TVET in Bangladesh's RMG sector

	Sample of organizations in Bangladesh	Project management	Financing	Infrastructure	Curriculum	Teachers	Marketing	Certification/evaluation
Education authorities		X	✓	X	✓	X	✓	✓
Educational institutions		X	X	✓	✓	✓	X	✓
Industry partners		X	✓	X	✓	X	✓	X
NGOs		✓	X	X	✓	✓	X	✓
DFIs, development agencies		✓	✓	X	✓	X	X	✓

of Labour and Social Affairs (MoLSA).⁹ The academy aims to train 300 students as heavy-equipment mechanical maintenance personnel. Thanks to the collaboration, industrial investment should no longer be hampered by a lack of skills, and the Iraqi people should derive maximum benefit from the region's developing industries. UNIDO is able to leverage Scania's industry expertise and technology to enhance the program's effectiveness, while Scania's technical input in developing the curriculum ensures the practical relevance of the skills being taught.

4.4 Tailor training to the needs of the company and the target group. To maximize the value of the training for the company and the trainees, the training program and curriculum should be tailored to their specific needs, which have to be identified first.¹⁰ A few examples: HSL introduced dedicated training and development teams in each department to foster skills development specific to that department's needs; JMS introduced a training production line to train seamstresses on the specific type of machines the company is using; and a US industrial goods company founded a corporate university with courses for new employees upon joining, as well as dedicated leadership training for management. The courses are often taught by top-level

executives of the company. Private-sector companies can utilize different types of training and qualification measures to bridge skills gaps (Textbox 2).

4.5 Foster internal knowledge transfer. One key lever for closing skills gaps is to foster the internal exchange of knowledge by providing the requisite platform, resources and incentives to employees. Ohorongo introduced a mentoring system between experts at the mother company in Germany and employees at the local production facility in Namibia. One mentoring pair, for instance, consists of the manager of a quarry in Germany and the manager of the Namibian quarry. They interact on a regular basis to exchange ideas and know-how. Another example is that of Serena Hotels, an East African hotel chain, which successfully offers an employee-rotation program that allows selected members of staff to spend some time at a different Serena Hotel. The program not only serves as an incentive for high-performing employees, but has fostered the exchange of experiences and good practices within the company. A special kind of knowledge transfer occurs if DFI employees assume a board mandate in one of the companies that the DFI invests in (Textbox 3).

Textbox 2: Training and qualification measures for private-sector companies in developing countries

The most direct measures for addressing the skills gaps in your own current or prospective workforce are training initiatives, which are widely applied in companies across countries and sectors. To build technical, mechanical or artisan skills, companies can establish vocational training centers in which current and prospective employees can be trained. Companies like Hape have established a structured training program, which usually runs over 2-3 years and has a detailed curriculum combining theoretical lessons in the school with practical training sessions in the company (dual TVET). These training programs could be tailored to the needs of specific target groups such as women or young people. Another common form of training involves internal or external classroom courses to develop the theoretical skills of the workforce. Less structured, but widely applied and often very effective, is on-the-job training, where supervisors, foremen or experienced colleagues support new hires and less experienced workers to build and enhance the skills required for specific tasks in production and administration. For management positions in particular, a further option is that of mentoring schemes, often applied in order to foster knowledge exchange between senior and junior management and to help prospective leaders to grow into their new roles.

Based on DEG's experience with skills-development projects, a number of key success factors have been identified for the

set-up, implementation and sustainable operation (see Chapter 5 for a comprehensive list of success factors). With regard to project set-up, it is demonstrably important to ensure top-management support for training measures, to establish clear responsibilities for and commit resources to the various measures, and to cooperate with carefully selected external partners, such as training institutes, consultants or universities, to leverage external knowledge. During implementation, the integration of training and work is a promising way to enhance a measure's effectiveness: it not only ensures that the specific skills needed for a job are developed, but also allows the trainee to adapt the new techniques and knowledge in practice. In addition, companies should actively facilitate the exchange of know-how across departments – for example, by introducing job-rotation programs. To ensure sustainable operation of the training measures and a lasting impact, you should consider applying a train-the-trainer-system, particularly if you collaborate with external consultants. This ensures that the knowledge is kept in-house and that the training program is scalable at reasonable costs. Finally, to increase the effect of training measures, they should be embedded into a broader optimization program, since having a motivated workforce with the right skills – together with lean processes and a cutting-edge production technology – can greatly boost productivity and quality.

4.6 Develop fast-track programs for high-potential employees. To affiliate and motivate very promising employees, companies should develop fast-track programs with specific training courses, mentoring, global placements, and fast promotion cycles. For instance, a multinational conglomerate, struggling to find qualified staff for its international growth strategy, devised and implemented a fast-track program combining intensive training with work placements on high-responsibility projects. Another example: a global manufacturing company had problems securing a strong foothold in Africa, so it created a global and continental rotation program to bring its top performers to Africa and also to enable promising African employees to gain experience abroad.

5. Retain and engage: Good practices and practical examples regarding retention strategy and working-environment enrichment

5.1 Align the interests of the company and the employees. Providing incentives for employees to act in the company's interests is an important lever for addressing topics such as attrition and productivity. There are numerous possibilities. Hape, for example, provides free company shares to all its employees who remain employed there for more than ten years – thereby incentivizing people to stay with the company, and boosting the motivation of those who now own shares. Ohorongo makes financial support for training conditional on employee retention to ensure that the benefits fall at least partly to the company itself. The company has also developed a comprehensive retention strategy, which identifies key employees and provides

short-, medium- and long-term measures to retain them. Even though it was introduced only recently, its success has already become apparent.

5.2 Set up a fair and transparent compensation scheme. In developing countries especially, compensation is the key motivator for employees: there is seldom a strong sense of loyalty towards an employer; many workers are willing to leave the company if the salary prospects are better somewhere else. So companies should make sure to design a fair and transparent compensation scheme. In that spirit, when JMS boosted its productivity by introducing new processes and machinery, it gave its employees a share of the benefits by awarding higher bonuses.

5.3 Monitor satisfaction and engagement. It is crucial for companies to gain a clear picture of the satisfaction and engagement levels among employees in order to detect declining levels early and to develop appropriate countermeasures. One common and effective way of gaining this understanding is by conducting a regular survey of employees. Ideally, the survey not only records key performance indicators (KPIs) but also analyzes the root causes of lower satisfaction and engagement levels. HSL conducts such an employee survey every two years: the survey covers more than 75% of the employees, and is evaluated by an independent third party. Results are incorporated into the company's strategic-management agenda.

5.4 Invest in non-financial benefits and a good working environment. Although compensation is certainly the main source of motivation, non-financial benefits and a good working environment also have a role to play: they can significantly improve employees' satisfaction and even

Textbox 3: Skills transfer through board mandates

If a DFI provides equity funding to a private-sector company, DFI staff members often assume a board role in that company. Even though DFI board members act in their personal capacity, their training and experience represent an opportunity to increase the professionalism of the whole board. Their influence might even extend to the governance structure of the company as a whole. Highly qualified board members can make a big difference to small and family-owned businesses in particular, by professionalizing the decision-making processes and board meetings, and by refining the governance structures. For example, in an Egyptian agriculture business, DEG's investment and support through nominees on the board fostered the development of more efficient structures within the group, boosted the professionalism of the board, and thus contributed to growing the business into a multifaceted agro-industrial group of companies and NGOs.

In addition to having staff on a client company's board, some DFIs provide help by assessing the qualifications of prospective board members and matching them with the company's needs in order to equip the board with an appropriately diverse set of soft and hard skills. DFIs can often draw on their networks to find candidates with sector-specific expertise, and can provide specialized advice on strategic decision-making. A case in point is a port operator in Columbia, which planned to build a dedicated oil and gas terminal: thanks to the DFI involved, the ideal candidate was appointed to the board – a former senior manager with deep experience in the oil and gas sector and in large-project management.

productivity – often without involving huge costs. JMS, for example, introduced a bundle of measures of this kind: for its seamstresses, the company provides ergonomic chairs and height-adjustable working tables; for the employees' children, there is a day-care center close to the factory premises; and for their female workers, JMS provides free sanitary napkins – a simple measure that has had the effect of reducing absenteeism considerably.

5.5 Foster internal personal networks and integration.

Personal networks and a feeling of belonging constitute important feel-good factors for employees. The company can actively foster these personal networks by providing platforms for employees to interact, and by supplying the required resources and incentives. Consider the example of Granules, an Indian pharmaceutical company. It introduced a mentoring system, involving even top management, to foster personal networks: from a pool of highly qualified employees, the CEO and Chief Financial Officer (CFO) each picked one mentee to support personally. This model not only served as an additional motivation for Granules' workforce, but also set an example for other senior managers to participate in the mentoring program. Mentoring programs could also work across companies within a holding group: At Engro Corporation Ltd., all managers at tier two and above participate in a centrally managed mentoring system. Group HR matches mentors and mentees across companies in the holding group in order to reduce silo thinking and to broaden the managers' personal networks.¹¹

5.6 Provide a forum for employees to engage more.

If workers have the opportunity to make an impact within the company and if they have the feeling that they are being heard, that can greatly enhance their satisfaction, and can foster their motivation and engagement. Two examples: a US travel and tourism company was facing a high degree of dissatisfaction and disengagement among its employees, so it established regular employee roundtables to discuss problems and generate ideas for improvement. And a US electronics company with similarly disaffected employees set up a series of live and online events worldwide, at which the employees could get to understand and appreciate senior management's strategic vision, and had a chance to propose and discuss ideas of their own.

6. Optimize leadership model and systems: Good practices and practical examples with regard to enhanced systems and cultural adjustments

6.1 Integrate workforce data and financial data. By integrating these two types of data, companies are able to align skills-development investments with business results, and thereby develop data-driven insights into crucial questions, such as: "Why do some employees outperform their peers?" and "How does the productivity of new employees increase

over time?" Ameriprise Financial, a diversified financial services company in the US, was keen to find a way of allocating HR resources to its highest-potential employees; by using integrated data, it was able to accurately predict staff turnover, reduce new-hire failure rates, and manage persistently poor performers.¹²

6.2 Incorporate HR KPIs into the company scorecard.

By giving HR-related KPIs due prominence, a company can achieve closer alignment of HR with the company's strategic goals. HR goals are also more likely to be implemented when they are included in the company's target and incentive system. Neglecting HR goals often leads to dissatisfaction among employees, and could reinforce their perception that the company's sole concern is to maximize profits. Aware of such dangers, Hape introduced a dedicated Balanced Scorecard for its HR department, with specific KPIs aligned with those of the overall company scorecard.

6.3 Develop systems to measure the benefit of training initiatives.

As discussed in Chapter 3, a cost-benefit appraisal will help to identify those skills-development initiatives with the best cost-benefit ratio. A key challenge in conducting such an appraisal is that of measuring the benefits of any training program. Very helpful in this regard is a set of defined KPIs to be applied to different groups of employees over time: the information obtained will help analysts to evaluate any given training measure and identify potential improvements.

6.4 Establish a people-centered company culture.

A company's corporate culture can be a decisive factor in an employee's decision to stay at the company or to leave it. Culture is part of a company's DNA, and cannot be changed easily, so introducing an HR-centered culture is a long-term process, requiring careful and comprehensive change-management processes and a clear commitment by top management. In the case of a British financial institution, the employees showed a clear lack of trust in senior management, following a major organizational transformation. The company duly implemented an ambitious internal communication strategy – including intranet TV-style programs and employee-generated content – to re-engage the staff and reconcile them to the changes.

6.5 Make HR a top management priority. Traditionally, the main impediment to growth has been financial constraints, but in many industries and regions, a more serious factor now is the lack of talent.¹³ Accordingly, HR topics have become a priority for top management. Scarcity of talent also often leads to silo behavior in companies, with department managers hoarding their top-performing people. An American industrial-goods company shifted responsibility for top-talent management to a dedicated executive, who now leads an HR taskforce devoted solely to nurturing group-wide high-potential employees.

6.6 Recognize outstanding performance and new ideas.

A key source of motivation is to have one's own work properly appreciated. That holds true for most employees across all levels – from production workers to top management. By receiving recognition for excellent performance and new ideas, employees are encouraged to think about potential improvements to processes, and to strive for top results. A textile company from Bangladesh introduced three “employee of the month” awards, which are presented by the CEO during workforce assemblies, together with a financial bonus.

2.2 Good practices for skills development along the value chain

In an increasingly specialized economic world, nearly all companies rely on the timely input of high-quality raw material, spare parts or components. Particularly in developing and emerging economies, the quality of local supplies is a major challenge for companies that export to international markets. Skills gaps at the suppliers constitute a leading cause of delays and inadequate quality. Production and service companies often have the appropriate knowledge to support their suppliers in closing these gaps – and have an incentive to do so as they benefit from better input quality and timeliness of supplies. What's more, the development of local supply structures in developing countries not only helps the company and its suppliers, but also has significant benefits for the local communities by providing better and more diversified jobs. This is particularly true for large development programs such as qualification measures in agriculture, which often train several hundred small-scale farmers in each case.

Another aspect of skills development along the value chain is the training of clients. Such training can benefit a company when it enters a new market or introduces a new generation of products, as the sales and maintenance teams on the ground need to have a thorough understanding of the products. Typical measures to bridge skills gaps along the value chain are: training courses conducted or sponsored by the company; and know-how transfer, either through internal experts who visit and work with the company's suppliers and clients, or through company internships for employees of suppliers and clients. Good practices in skills development along the value chain can be classified according to the four steps in Figure 6, ranging from strategy development to the implementation of training measures.

1. Good practices and practical examples regarding a skills-development strategy

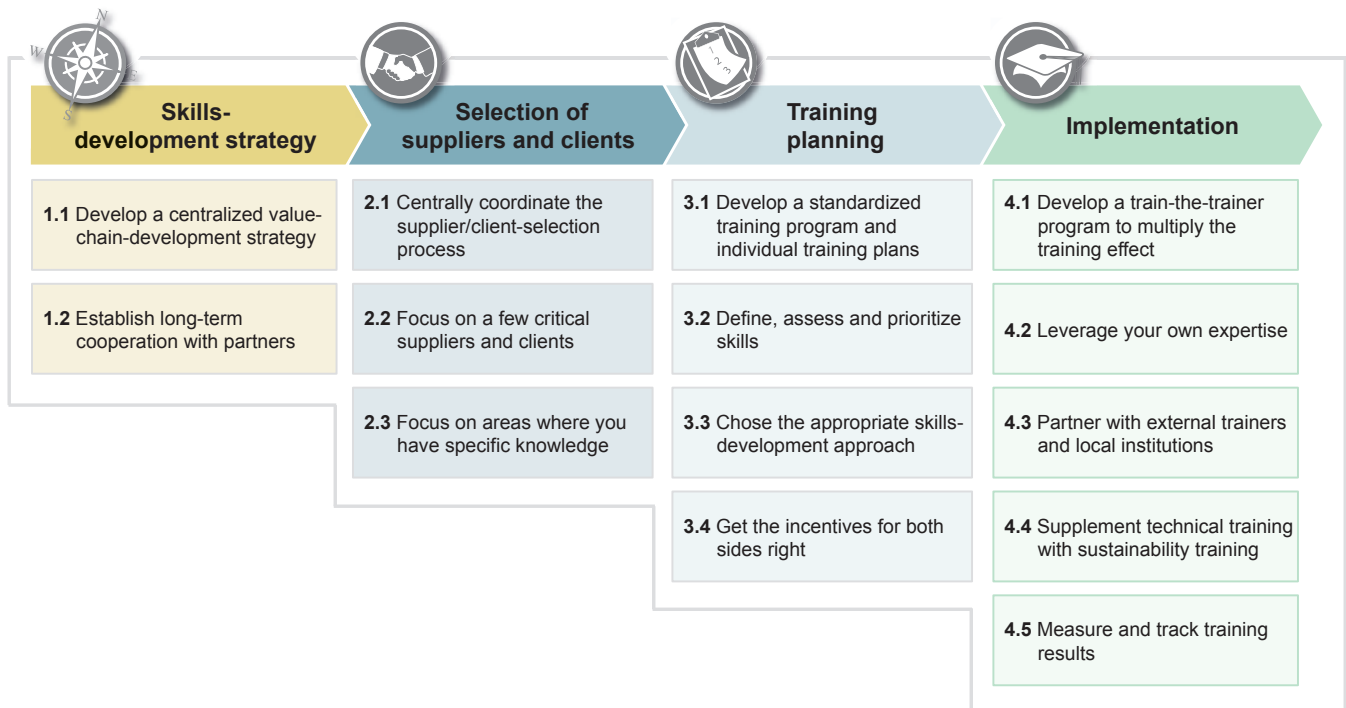
1.1 Develop a centralized strategy for skills development along the value chain. The development of suppliers should follow a well-defined strategy rather than consisting merely of ad-hoc measures. The strategy should define the focus areas for engagement, the prioritization of suppliers to work with and the selection process, and the objectives for the collaboration. An important issue is that of the training programs for clients. An example: Hape's strategy is to focus its development efforts on a small number of key suppliers, and the company has duly built up an integrated supply-chain management system, including dedicated training plans for the suppliers. This strategy has helped enormously to improve the overall quality and timeliness of supplies.

1.2 Establish long-term cooperation with partners. Starting a cooperative relationship or a collaboration with a new partner can be a cumbersome process, as objectives need to be aligned, trust has to be built, and positive results have to be achieved to show the mutual benefits of the partnership. So the company and its partners – whether suppliers, clients or training institutions – should take a long-term approach. One instructive example is that of Heinz International, the global food producer: it formed the Agribusiness Linkages Global Development Alliance with USAID (the United States Agency for International Development) and ACIDI/VOCA (Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance), an economic-development organization, on the basis of a five-and-a-half-year Public-Private Partnership (PPP) agreement to upscale the production of local tomato farmers and processing companies in Egypt by means of extensive training.¹⁴

2. Good practices and practical examples for selecting suppliers and clients for training

2.1 Centrally coordinate the supplier/client-selection process. Decisions on supplier/client selection should be taken centrally, so as to ensure consistency and gain alignment. Other centralized decisions include: the type of development program, the training approach, and the tools to be used. However, decisions on tactical execution should be decentralized, so that local branches can take ownership of the development program and adjust it as needed to the local differences.¹⁵

Figure 6: Good-practice framework for skills development along the value chain



2.2 Focus on a few critical suppliers and clients. It is not possible or practical to offer skills-development to every supplier and client, so it is important to choose the right ones, using well-established criteria to do so. The best candidates among suppliers are the following: those whose inputs are critical to the quality of the finished product; those that provide a large volume of inputs; those that have a serious need for development; and those that have a limited ability to help themselves.¹⁶ As for clients, the focus should be the following: those with the biggest sales potential, and those with the most pressing need for development. Hape for example, sources a broad variety of products from more than 300 local suppliers, but it has provided training programs to just 45 companies in the wood sector instead of working with all 300, and has now established very strong cooperative ties with seven selected suppliers of spare parts and whole products. This selectivity allows Hape to develop focused programs for its suppliers to tackle the skills gaps most in need of bridging.

2.3 Focus on areas where you have specific knowledge. To exploit its own specific knowledge, a company should focus its efforts on suppliers that produce core inputs (client development programmes do not necessitate such a focus). Ohorongo, for example, sources all of its inputs locally in Namibia; however, the company focuses its skills-development activities on a gypsum mine, as this is where Ohorongo has most experience (it operates its own quarry). The support that it offers to other suppliers – of packing equipment and personal-safety equipment, for instance – is financial support only, not skills-development support.

To take another example: the ready-made garment manufacturer JMS focuses its skills-development policy for suppliers on the local producers of fabric, which have significant potential for quality improvement.

3. Good practices and practical examples with regard to planning the training program

3.1 Develop a standardized training program and individual training plans. By standardizing a training program for all suppliers or clients of a specific type, a company can ensure the consistency of the training, and bring down its costs. However, since the various suppliers or clients will usually differ in terms of their skills gaps, the company should adapt the standard program each time, and create individual training plans suited to the recipient’s specific needs. Hape, for example, with the support of DEG, developed a standardized training program for its wood-suppliers that contains a number of separate training modules – ranging from material science, through machine operation, to health and safety topics.

3.2 Define, assess and prioritize skills. Companies should not attempt to fix every problem that they detect in a supplier or client, but should focus on what matters most in terms of quality, costs and timeliness. One essential first step is a structured skills assessment. It should not require external experts, since the company’s own personnel – from the quality, research and development (R&D), and purchasing

functions – will usually have the necessary capabilities. At Hape, a supply-chain-management team is based in close proximity to a cluster of suppliers to conduct the supplier analysis and to design and implement the specific support needed.

3.3 Choose the appropriate skills-development approach.

There are three broad skills-development approaches, each needing different resources. First, the “check in” approach: representatives of the company drop in on target suppliers every 6-12 months for two-three days, to evaluate processes and products, to make recommendations, and to provide training. Second, the “SWAT team” approach¹⁷: suppliers with specific issues will receive a visit every 3-6 months for one or two weeks at a time, and will develop jointly with the team an improvement plan, timeline and audit schedule, and receive support from the team in implementing the improvement plan through know-how exchange. Third, the “dedicated team” approach: the company assigns full-time staff members to the sites of selected suppliers to analyze the root causes of key problems and provide hands-on support and training to solve them.¹⁸ For example, Hape chose the “dedicated team” approach by setting up a supply-chain-management unit in the town where all suppliers are located, thereby providing continuous support for a small number of key suppliers. In contrast, for skills development with clients, a more focused approach would usually be appropriate, as the emphasis would now be not on solving problems but rather on providing specific training courses.

3.4 Get the incentives for both sides right. For clients, the mutual benefits of training programs are obvious, but for suppliers, things are not so straightforward: some suppliers are worried that the purchaser company, by providing the training, will reap all the benefits by acquiring better-quality products at the same or lower prices. Many companies have therefore adopted a policy of gain-sharing – by apportioning the cost savings, for instance, or by paying a higher price for better quality – and have found it to be an effective motivational tool. Many suppliers also appreciate the opportunity to develop new skills: they find it to be a positive experience, and it provides a powerful incentive to excel.¹⁹ However, some suppliers – especially low-skilled suppliers such as small-scale farmers – are less easily persuaded of the benefits. Consider one interesting case study from Tanzania: the Mkombozi Biharamulo Savings and Credit Cooperative Society encourages its members, mainly local farmers, to become micro-entrepreneurs, through training. But many of the farmers still struggle to visualize the new schemes as commercially viable: the market remains elusive because the new schemes have been under-publicized, and their productivity remains low owing to rudimentary technologies. Through participatory training for transformation, peasants are organized in small informal

learning groups, through which they analyze their potentials, problems and needs, prioritize them, and develop viable business plans. Acting as entrepreneurs, they have an incentive to participate in the training and to apply the acquired knowledge.²⁰

4. Good practices and practical examples for implementing the training programs

4.1 Develop a train-the-trainer program to multiply the training effect. If a client or supplier has a great number of employees in need of training, or if training is being targeted for a large group of small-scale suppliers such as farmers, then it makes sense to take a train-the-trainer approach – for several reasons. The approach makes it possible to train larger numbers of people; it is very economical; and it helps to sustain the effect of the training, as the trainers typically remain on-site or nearby, and so are available to offer ongoing advice or provide follow-up training sessions. Kencom SACCO, a credit union in Kenya, trains its members in critical business skills and entrepreneurship to help them avoid loan defaults due to unplanned personal consumption; and because so many members are eligible for the training courses, the credit union has adopted a train-the-trainer approach.²¹

4.2 Leverage your own expertise. As mentioned, the suppliers best suited to skills-development initiatives are those involved in matters where the company has experience of its own. In such cases, the company should leverage its own know-how in order to support the suppliers, and should actively engage in knowledge exchange – in both directions. Hape, for example, sends its own technical staff to the suppliers to provide on-the-job-training to machine operators; and conversely, it invites workers from selected suppliers to its own production facility to conduct workshops, to demonstrate their ways of using machines, and to explain lean working processes.

4.3 Partner with external trainers and local institutions. Just as a company might collaborate with external partners in pursuing skills-development measures for its own workforce, so it should consider doing so when pursuing skills development of its suppliers and clients. External partners contribute specific knowledge, and reduce resource requirements on the part of the company.²² In India, a DEG-supported German producer of welding machines collaborates with the Don Bosco Centre in Pune, an experienced provider of technical vocational courses, to train workers to qualify as service technicians for welding machines. The availability of well-trained service technicians is recognized as a key success factor for market entry in India.

4.4 Supplement technical training with sustainability training. In many companies in developing and emerging economies, the safety and labor conditions do not comply with international standards as set by the International Labour Organization (ILO). Responsible companies will offer support to their clients and suppliers not only by resolving technical issues but also by providing training programs on sustainability issues such as health and safety, labor law, and resource protection. A German producer of leather goods developed, with the support of DEG, a comprehensive training program in Bangladesh that provides technical training not only for its own production facility but also for two local tanneries. Since more than 90% of the suppliers' employees suffer from occupational diseases, a key element of the training program is occupational health and safety. Another core topic is improving the approach to resources – using them more efficiently and sustainably. In a similar vein, Hape regularly provides its suppliers with training modules in safety, health and environment (SHE).

4.5 Measure and track training results. Lack of follow-up is a major obstacle to success. Development teams must take responsibility for achieving specific improvements in quality, costs, volume or delivery time, and benefits should be tracked with clearly defined KPIs over time to truly measure the effect of development efforts. At one company, the main reason for the failure of several development programs was that the company's own personnel had neglected to track measures and milestones closely enough, and had failed to take corrective action the moment that suppliers fell short of the commitment outlined in the agreement.²³

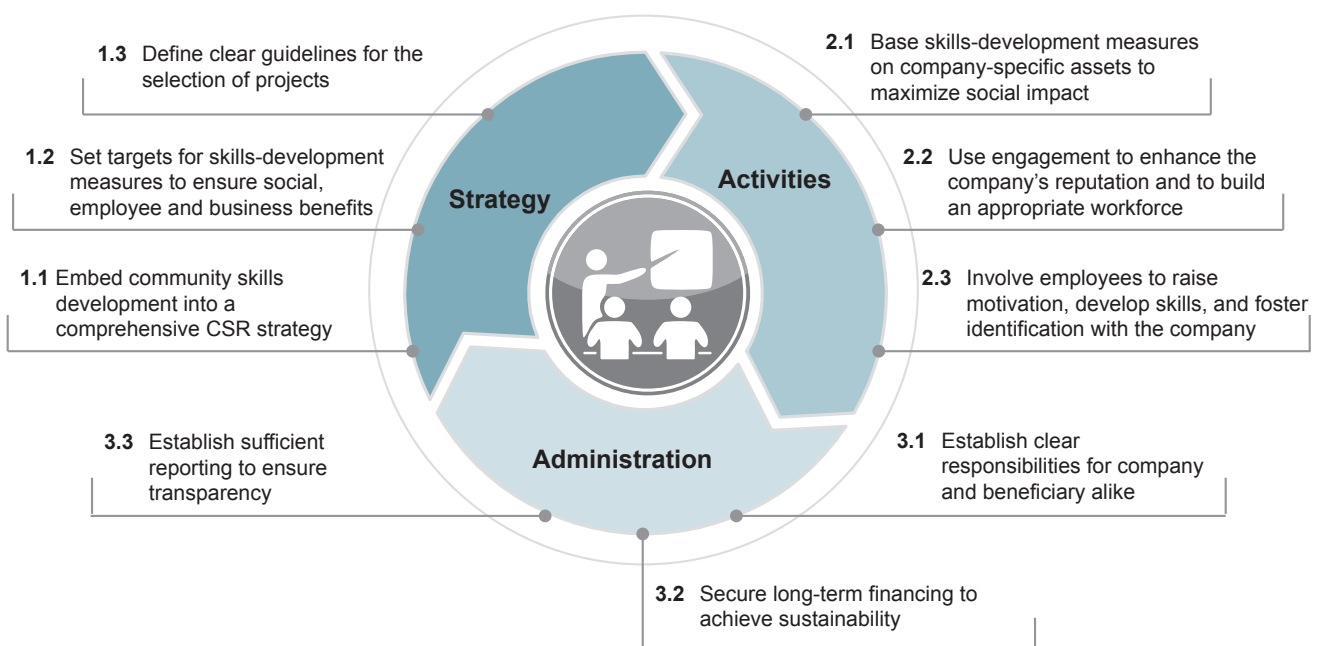
2.3 Good practices for closing skills gaps in the broader community

Closing skills gaps in the broader community is critical for economic and social development. And even though it will seldom make much direct contribution to closing a skills gap in a company, many private-sector enterprises still make a point of investing in local education, from kindergarten to tertiary level, as part of their CSR activities. The companies typically provide the funding without expecting any financial return, yet they should still experience some favorable impact, such as enhanced reputation or the closer affiliation of their own employees. In fact, if a company's engagement is selected carefully and structured adequately, there might even be a positive business case. For minimizing the skills gaps in the community – i.e. maximizing the social impact – they should plan, implement and monitor the measures just as carefully as they do with skills-development measures within the company and the supply chain. The various good practices can be grouped into three categories: strategy, activities and administration (Figure 7).²⁴

1. Good practices and practical examples for developing a community skills-development strategy

1.1 Embed community skills development into a comprehensive CSR strategy. Many companies – and particularly those that are family-owned – pursue their CSR activities out of purely altruistic motives. This approach runs the risk

Figure 7: Good-practice framework for closing skills gaps in the broader community



of failing to maximize the social impact, i.e. of failing to develop skills in the most efficient way: it often involves spontaneous responses to requests and uncoordinated activities that neglect the company's core competences. It would be better if companies based their CSR activities on a clearly defined strategy. The strategy should identify target sectors and individuals eligible for support, define the objective of potential projects and the approach to selecting them, and estimate the financial resources to be committed. An interesting example of a clear strategy is that of the Ohorongo Community Trust: it focuses its activities sharply on infrastructure, education and health, and all its projects in the local community fall within one of these three sectors.

1.2 Set targets for skills-development measures to ensure social, employee and business benefits. Companies often think that CSR activities should benefit the community alone. A modern CSR strategy, however, views the benefits as threefold: for the community, via social impact such as skills development and increased employability of students; for the employees, as a source of motivation and of identification with the company, and as a chance to develop new skills; and for the company, via an enhanced reputation, better government relations, or a better employer brand. The CSR strategy should set clear targets for each of the three benefits.

1.3 Define clear guidelines for the selection of projects. Project selection should be done on the basis of the pre-defined CSR strategy, and should ideally run through seven filters. (The first four are essential filters, the final three are "nice-to-have" filters.) The first filter is the set of three types of benefit (for society, for the employees, and for the business) as outlined above. The second filter is scalability: a measure should be implemented only if it is large enough to have a meaningful impact. For a skills-development initiative, this could mean, for instance, that the school supported has a sufficiently large capacity. The third filter is the use of the company's core assets: the measure should leverage such assets and the company's core competences. Ideally, a company supports skills-development measures in a way that relates them to its core competences; for instance, by encouraging its employees to teach their skills to local residents. The fourth filter is complexity: the measure should not be too complex, but neither should it be so simple that other companies can easily copy it. For skills development, this could mean that a company forms a partnership with an existing school rather than building and operating its own (primary or secondary) school. Fifth is quantifiability: the social, employee and business impact should be measurable. For instance, the social impact of a skills-development initiative could be measured by the number of students covered, the employee benefit by the hours of employee engagement in a year, and the business impact by the number of positive press articles on the initiative. Sixth is amenability to collaboration: value-

adding partners like non-governmental organizations (NGOs) should be available for cooperative efforts. For skills-development initiatives, collaborating with existing schools and public authorities is crucial. Seventh and last is concreteness: the tasks, responsibilities and goals of the proposed project should be clearly defined – for a skills-development initiative just as for any other engagement.

2. Good practices and practical examples with regard to structuring skills-development activities

2.1 Base skills-development measures on company-specific assets to maximize social impact. Skills-development measures should try to make use of a company's core competences and assets, as those strengths will help to close skills gaps in the community and maximize the social impact. The cement producer Ohorongo, for example, donates cement to the local community for use in building schools. Hape deployed its specific bamboo expertise to build and operate a bamboo kindergarten, and leverages its own products to run a Hape Experience Center which offers the full collection of Hape toys for children to play with as well as a number of different classes.

2.2 Use engagement to enhance the company's reputation and to build an appropriate workforce. "Do something good and talk about it!" – a company is perfectly entitled to use its investment in community skills development as a way of enhancing its reputation and to improve relations with the local government. Hape's Experience Center not only gives Chinese children and parents the chance to engage with an uncommon education concept – i.e. that playing helps to build creativity and fosters an independent spirit – but also serves as a marketing instrument for its own products. And suppose a company was facing a shortage of properly educated workers: in investing generously in local secondary education, the company could reasonably hope to recruit from these schools in due course. One motivational factor for Engro's investing in local education, for example, was the spin-off benefit of enhancing the company's relationship with the local communities, and the likelihood of gaining the social license to operate safely there and reducing the risk of strikes and protests.

2.3 Involve employees to raise motivation, develop skills and foster identification with the company. Ideally, employees should get closely involved in skills-development measures in the community; for instance, by teaching classes, organizing events, or helping to build new infrastructure facilities. In the best case, such involvement will not only increase their motivation but also make them proud of the company (and thereby increase the likelihood of their retention) and give them the chance to develop new skills (again, to the benefit of the company). So, if employees

teach classes in local schools, they can develop presentation skills; and if they organize local events, they can improve their project-management skills. A very good example is provided by Hape, which allows its design-department employees to devote one day per week to designing special toys for handicapped children attending the local school. The simultaneous effects are that the core competences of Hape are harnessed, the employees can develop their skills by dealing with the special needs of these children, and the company stands to benefit through the possible emergence of new products.

3. Good practices and practical examples for administering the initiatives

3.1 Establish clear responsibilities for company and beneficiary alike.

If cooperative ventures are to run smoothly and make optimal use of a company's input, it is important to define responsibilities clearly, and to have a dedicated contact person on both sides – the company and the beneficiary. In the collaboration between Hape and the National Technical Vocational School, an individual from each side was nominated to deal with all issues relating to the partnership, such as forwarding scholarship applications to the company, or requesting donations for tools and materials.

3.2 Secure long-term financing to achieve sustainability.

Most skills-development measures in the community are long-term oriented, such as investments in kindergartens, schools and universities. To safeguard the success of an initiative, long-term financing should be secured early on, specifically in the planning phase. The financing does not have to come from the company itself, but could come from international organizations or the public sector. Hape's investment in different schools in Xingren has focused on renovating the school buildings and providing modern teaching equipment, while the actual running costs are covered by the public sector.

3.3 Establish sufficient reporting to ensure transparency.

By defining targets clearly, and by reporting regularly on the skills-development initiative's performance in fulfilling its objectives, a company can optimize the use of resources and maximize the initiative's social impact. Ideally, KPIs are defined and goals agreed very early on in the cooperation agreement. To provide the right incentives to the beneficiary, these indicators should relate to output – for instance, to the number of graduates scheduled to gain a specific qualification.

Notes

- ¹ Since companies from industrialized countries often have more sophisticated HR standards, processes and systems, practitioners in less developed regions can benefit considerably by adapting those to the local context.
- ² Refer to Chapter 5 for a discussion of the applicability of the workforce-development good practices to different types of company and different skill categories.
- ³ See page 76 for a detailed case study on Hospital Sírío Libanês.
- ⁴ See page 99 for a detailed case study on Ohorongó Cement (Pty) Ltd.
- ⁵ See page 60 for a detailed case study on Hape Holding AG.
- ⁶ See page 103 for details on this initiative.
- ⁷ See page 87 for a detailed case study of JMS Holdings Ltd.
- ⁸ See step 6 of Chapter 5 (page 121) for some key success factors relating to external partners.
- ⁹ UNIDO & Scania (2013), Partnering for Employment and Economic Revival of Iraq's Industrial Manufacturing Sector.
- ¹⁰ See Chapter 5 for a quick self-assessment tool to identify gaps in hard and soft skills.
- ¹¹ See page 44 for a detailed case study on Engro Corporation Ltd.
- ¹² Collins, M. (2013), Change Your Company with Better HR Analytics.
- ¹³ Barber, F., Strack, R. (2005), The Surprising Economics of a "People Business", Harvard Business Review.
- ¹⁴ For more details of the initiative, see ACTIVOCA (2013), Value Chain Project Increases Egyptian Farmer Yields, Income and Trust.
- ¹⁵ Boston Consulting Group (2011), Supplier development. Bonanza or bust?
- ¹⁶ Ibid.
- ¹⁷ SWAT Team = Special Weapons And Tactics Team. The term was originally used to describe well-equipped and specialized police or army teams trained for rescuing hostages from buildings in a quick, precise and effective action. In the context of skills development for suppliers, the term is used to describe teams from original equipment manufacturers (OEMs) trained for making a quick analysis of issues and drafting quality-improvement plans during visits to suppliers. In keeping with the original use of the term, the visits are well-planned, compliant with master processes, and very short.
- ¹⁸ Boston Consulting Group (2011), Supplier development. Bonanza or bust?
- ¹⁹ Ibid.
- ²⁰ For more information, see International Labour Organization (2011), COOP Africa, Tanzania (11.10.2011).
- ²¹ For more details, refer to International Labour Organization (2011), COOP Africa, Kenya (11.10.2011).
- ²² Again, the collaboration partners need to be carefully selected. See page 20 for a stakeholder-mapping approach, and page 121 for some key success factors for setting up and implementing training measures with external partners.
- ²³ Boston Consulting Group (2011), Supplier development. Bonanza or bust?
- ²⁴ This framework is based on BCG's extensive experience in CSR projects, and was not developed bottom-up as the good-practice frameworks on workforce development and skills development along the value chain were. So not all the good practices listed here are accompanied by an illustrative practical example.



3. Assessing costs and benefits

A hands-on approach to evaluating the business case for investments to bridge skills gaps

As with any investment, companies should assess the costs and the benefits of a (planned) skills-development initiative. This assessment is what enables them to analyze the business-case potential and thereby take an investment decision (ex-ante view), or to evaluate whether a previous investment decision has succeeded in creating a business case (ongoing or ex-post view).

A systematic assessment of the costs and benefits is crucial for the following:

- Achieving the buy-in of senior management for investment decisions: Presenting a well-structured business case for a qualification initiative will help to persuade senior management and the board to invest in launching the project and to continue using scarce financial resources once the project is running.
- Securing external financing: A clear-cut appraisal of the costs and benefits is helpful if not essential when making loan applications, and can help to mobilize funding from finance institutions, especially DFIs.
- Identifying problems and shortfalls: Transparency over the cost and benefit drivers also facilitates targeted efforts to reduce costs and increase benefits and to thereby improve the business case.
- Showcasing your success: By establishing the positive effects of a skills-development initiative, companies can more effectively communicate their efforts and successes internally to decision-makers and employees, and externally to clients and shareholders.

Accordingly, this chapter introduces an approach for companies to conduct a cost-benefit appraisal (CBA) of their measures addressing skills gaps – in their own workforce, in the value chain, and in the local community. Since the objective of this report is to provide hands-on solutions for companies, the methods for assessing costs and benefits presented here are adapted to real-life challenges, and thus do not correspond exactly to those used in some academic literature.¹ To highlight the practical application, all concepts presented in this chapter are utilized in the case studies in Chapter 4.

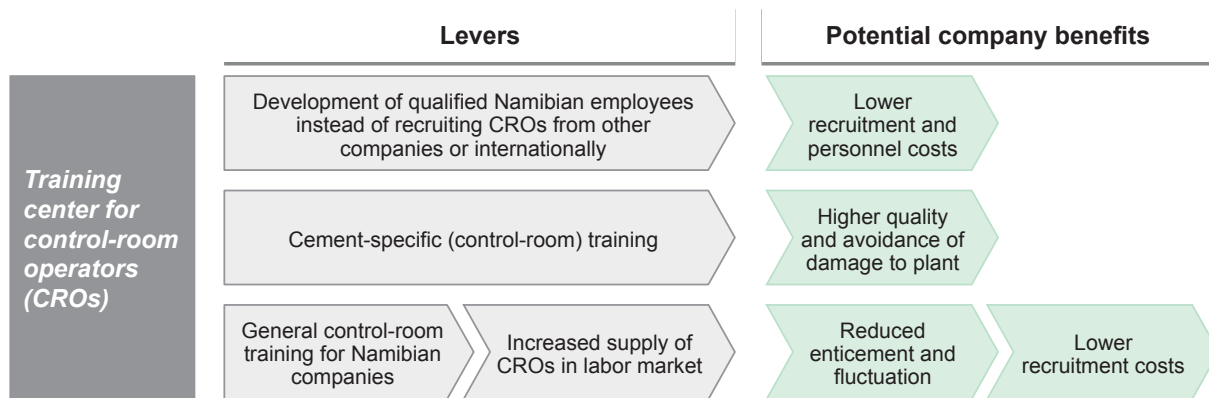
The way to actually identify a company's skills gaps will be presented in the practitioners' guide in Chapter 5. Meanwhile, this chapter is structured according to the three steps of the CBA approach:

- First, identify and quantify the costs and benefits as far as possible.
- Second, choose – on the basis of data availability and quality – and apply the most appropriate method to compare the costs and benefits. The methods presented in this report range from capital budgeting methods – such as a Net Present Value (NPV) calculation or a Payback Period calculation – to break-even simulation and cost comparison, to a purely qualitative comparison of costs and benefits.
- Third, round off the business perspective by extending the view in order to measure the social impact of an initiative.

3.1 Identifying and measuring the costs and benefits of a skills-development initiative

The first step in any type of CBA of an initiative is to identify and measure the related costs and benefits. The initiative's costs are often well-documented in accounting data (ex-post), or, at least, are obtainable through quotes for external services and goods (ex-ante); but the benefits are generally much harder to estimate. When a skills-development initiative has been implemented, it can be difficult to attribute specific effects to it, i.e. to exclude the influence of other measures. How can one disentangle the benefits of a training course, say, from the benefits arising from other changes in the company, such as the acquisition of new machinery or the optimization of processes? The following section provides guidance on identifying and measuring the costs and benefits in a structured way. If benefits (or even costs) cannot be quantified, it is still possible to conduct a CBA, and the section after that (3.2) suggests some methods of doing so.

Figure 8: Illustrative logical chain of effects for Ohorongo’s training center for control-room operators



3.1.1 Develop a logical chain of the activity: input and potential benefits

While costs are generally easy enough to grasp, benefits can be difficult to identify. So the inputs for any activity, the costs (one-off costs, running costs, and financing costs), will be discussed in the next section. This introductory section shows how benefits can be properly included in the assessment.

By studying the content and objectives of any skills-development initiative, you can develop qualitative hypotheses regarding the different ways in which the initiative provides benefits

to the company. Think about the benefits of an initiative in a structured way – see again the overview of potential benefits presented in the introduction (see Figure 2 on page 15). To identify the relevant benefits, you could ask yourself: Why should we do this? What will happen if we take this course of action? What will the outcomes of this initiative be, and which benefits do we want to achieve and actually expect?² Get internal and perhaps external experts to help develop and validate investment hypotheses. This hypothesis-developing process should take place during the planning phase of an initiative, though it is also the first step of an ex-post assessment. A good example of the method is that of Ohorongo’s training center for control-room operators (Figure 8).

Figure 9: Overview of different types of costs

	Cost category	Cost item	Examples
One-off costs	Planning	Planning and design of program	Staff time for design, selection of contractors, costs for external consultants
		Construction/Development	Construction costs of facility, or development costs for IT program (if applicable)
	Investment	Equipment	Costs for production/workshop, office and IT equipment
		Other investment costs	...
Running costs	Personnel	Wages (incl. social security)	Wages for project manager, instructors, participants (scholarships), support staff
		Accommodation and catering	Accommodation and catering costs for instructors and participants
		Travel	Travel expenses for project manager, instructors, participants
	Rental	Rental and maintenance	Rental and maintenance costs for buildings, equipment, vehicles, utilities, IT licenses
	Materials	Training materials	Costs for materials (production material, books, etc.)
	Other expenses	Evaluation and certification	Costs for external auditors for evaluation and certification of training
		Insurance	Costs for insurance (participants, facilities)
		Other running costs	...
Financing costs	Financing	Financing costs	Interest on capital, and opportunity costs of equity

Once you have listed the potential effects of the initiative, the next step is to assess the hypotheses by identifying and if possible quantifying the costs and benefits.

3.1.2 Identify and quantify the costs

Regarding the costs of a training initiative, three basic types of costs can be distinguished – one-off costs, running costs, and financing costs (Figure 9). For a valid assessment, it is important to cover not only external but also internal costs – for instance, for planning or internal trainers.

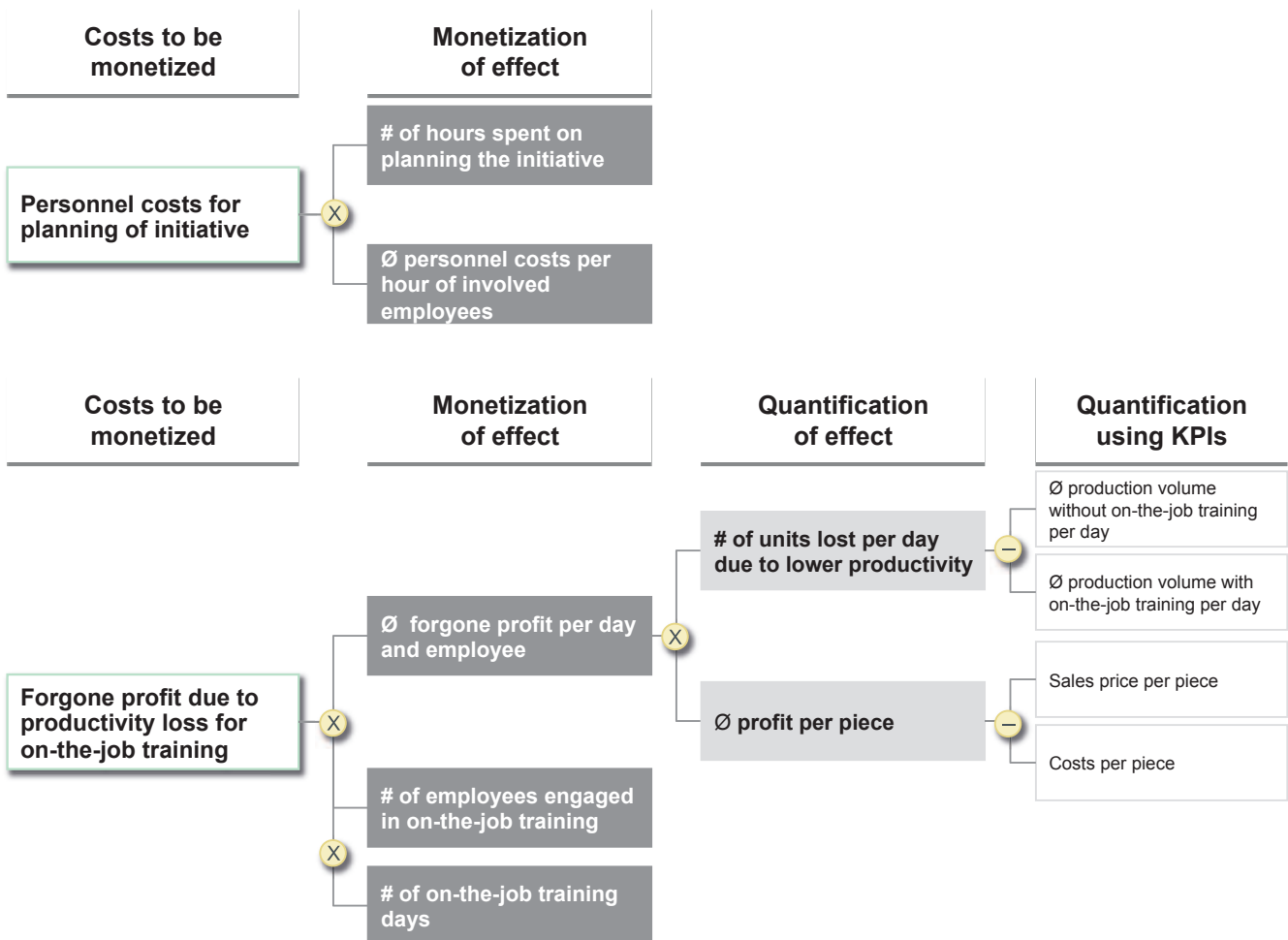
Costs tend to be readily specifiable in monetary terms. Where they are not already monetized – as with internal or indirect costs, such as staff time devoted to internal training – you can draw up a driver-tree to attribute a monetary value to them: for two examples, see Figure 10. The first example shows how you might calculate personnel costs that occur during an initiative’s planning phase, and that might not be regarded as direct costs if no single person is employed full-time on the planning. The

second example shows how you might assess a productivity loss for on-the-job training. Training measures clearly have a benefit for the trainee, but they often involve some costs for the trainer, i.e. the person who continues to do his or her own work but also provides guidance and support for the trainee. Without this new training work, the trainer would usually have greater productivity in his or her normal work – the differential translates into costs for the company in the form of forfeited profits due to a lower output.

3.1.3 Identify and quantify the benefits

If possible, proceed now to quantify the benefits, on the basis of the hypotheses in the logical chain. From a company perspective, benefits fall into two categories: first, revenue effects, i.e. increases in company turnover, thanks to higher output or better quality; and second, savings, through increased productivity of employees, or improved safety, or lower recruitment costs. There are some tangible benefits (i.e. highly visible, well-defined, objective and measurable benefits), such as a reduction

Figure 10: Driver-tree approach to quantify indirect costs



in attrition and absenteeism or higher product quality; but some of the positive effects are intangible, such as improvements in the company's reputation or its relations with local communities, and are therefore less easy to quantify. In a CBA, both types of benefit – tangible and intangible – should be included if possible: benefits that cannot be monetized can and should still be assessed, in a qualitative way (see Subsection 3.2.1 for ways to include qualitative information).

Develop HR and skills-related metrics

To quantify the benefits, it is essential to develop and measure specific HR and skills-related metrics. In many companies, busi-

ness metrics tend to focus on financial outcomes, and often fail to include HR indicators that are addressed by skills-development initiatives. It is possible, though, that some of the benefit KPIs are already incorporated within your company's performance-measurement system. A variety of KPIs could be used to measure the distinctive effect of skills-development initiatives (Figure 11). By referring to the (potential) benefits identified in the logical chain, you can select the appropriate KPIs. In general, it is advisable to focus on very few KPIs and measure them carefully rather than trying to measure everything. Since the KPIs within any category tend to be highly correlated, it makes even more sense to focus on one measurement for each potential benefit.

Figure 11: Potential KPIs to measure the benefits of skills-development measures

Type of benefit	Possible indicators to measure benefit
Increased productivity of employees	Output per worker/production team per day
	Profit per worker
Higher production quality	Error rate/first-pass rate
	Number of complaints from customers
Larger pool of prospective workers	Number of applications per vacancy
	Number of days required to fill open positions
	Number of interviews necessary to hire one adequately qualified candidate
Larger internal talent pool for management	Share of supervisory positions filled internally
	Share of management positions filled internally
Higher retention	Attrition rate
	Turnover rate
	Average tenure with company
Increased employee satisfaction and motivation	Absenteeism rate
	Share of satisfied and very satisfied employees
Higher innovation levels	Number of proposals for improvement from employees
	Number of patents
Improved work safety	Number of accidents
	Amount of production time lost each year owing to accidents
	Seriousness and frequency of injuries
Enhanced company reputation	Number of (favorable) press articles
	Number of industry/government/society awards
Improved government and community relations	Number of disputes
	Number of violent actions against company (e.g. blockages)
Quality of supplies	First-pass rate
	Number of complaints by customers caused by input-quality problems
Timeliness of supplies	Share of supplies delivered on time
	Share of suppliers delivered with a maximum delay of X days
Improved supply of qualified workers in the community	Number of students with completed secondary education
	Literacy rate in the local community

3.1.4. Measure the benefits by means of the KPIs

In order to establish the benefits of an initiative, you need to assess the changes in the selected KPIs over time. There are four basic methods, which differ greatly in terms of their complexity and their ability to address the challenge of attribution.³

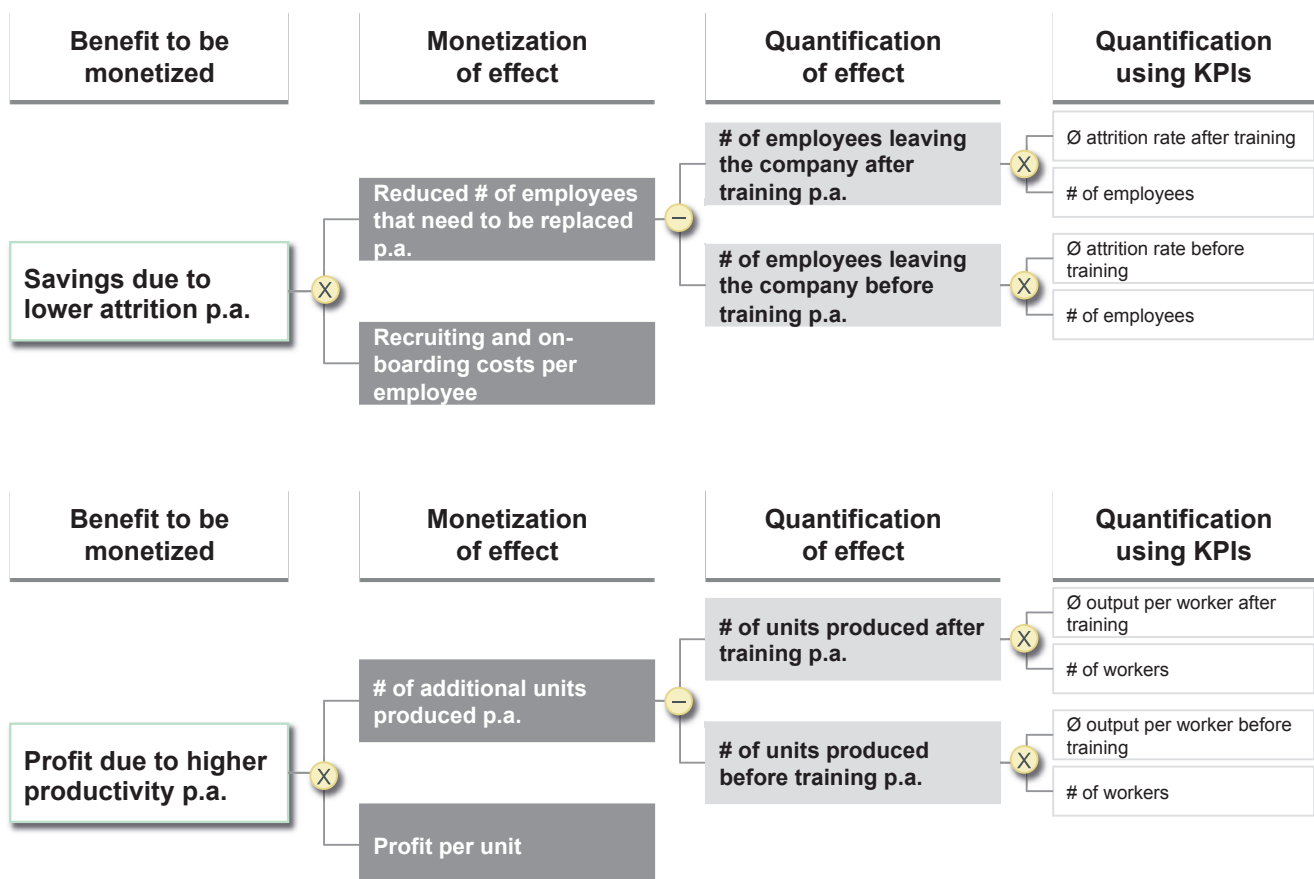
- 1. Comparison of aggregate values over time.** Measuring the same KPIs on an aggregate level (i.e. without distinguishing between beneficiaries and non-beneficiaries of an initiative) is by far the least complex – and therefore most widespread – method. However, since the beneficiaries of an initiative are clearly identified, it is not possible to attribute benefits to any specific initiative.
- 2. Comparison of beneficiaries over time.** By measuring the same KPIs for the beneficiaries of an initiative before and after the implementation of a skills-development measure, you get a first indication of the effect; but other events that occur between the two points in time might flaw the comparison and hamper any attempt to attribute the effect to a specific initiative.

3. Comparison of beneficiaries with a control group. By comparing KPIs over two groups of employees or business units – where one has undergone the initiative and the other (the control group) has not – you get a more reliable indication of the effects of the initiative. However, the attribution might still be misleading, owing to other, intrinsic differences between the two groups or units.

4. Comparison between groups and over time. The most sophisticated but also most complex approach combines the two methods just described in such a way as to isolate the effect of the skills-development initiative: beneficiaries are compared with a control group both before and after the implementation of the initiative, and that could control for other factors that might have influenced the KPIs.

While the last method is the “gold standard” for correctly attributing effects to an initiative, it is often not feasible from a practitioner’s point of view: it is just too complicated to define the beneficiaries and an adequate control group, and to track the KPIs separately over time. Since many companies don’t measure the benefits at all, the first method is at least a good starting point for a hands-on approach, and is quite sufficient in

Figure 12: Examples of driver-trees to quantify monetary benefits



most cases. No matter which method you choose, it is essential to measure the KPIs in a consistent way, to ensure comparability over time. Furthermore, you need to plan the assessment carefully beforehand, define the required level of granularity (e.g. by department, production team, individual worker) and establish the optimal frequency of measurement (e.g. yearly, quarterly or weekly).

Use driver-trees to quantify monetary benefits

To put a monetary value on the benefits, you can devise driver-trees, as illustrated in Figure 12 which shows examples for two typical benefits of training measures – a reduction in attrition and an increase in productivity. The main idea is to connect the non-monetary benefit (e.g. the reduction of attrition) to a monetary value (e.g. savings achieved by avoiding the recruiting and on-boarding costs of new hires). The last element on the right-hand side of the driver-tree involves the measurement of KPIs over time and/or across groups as just discussed.






3.2 Comparing the costs and benefits

Having identified and possibly monetized the costs and benefits of an initiative, you can now compare them in a structured way. If possible, opt for one of the quantitative methods, since they provide a more objective picture than a purely qualitative assessment. However, each quantitative appraisal should be supported by a qualitative appraisal of the costs and benefits, specifically by adding the qualitative information to the quantitatively derived results.

3.2.1 Select the appropriate methodology on the basis of data availability

Depending on the availability and quality of data, one of the four different methods could be used for weighing the costs and benefits – both ex-ante and ex-post (see Figure 13). If both the costs and the benefits of an initiative can be quantified, one

Figure 13: Overview of four different cost-benefit appraisal methods

		Quantitative				Qualitative
		Capital Budgeting		Break-even simulation	Cost comparison	Qualitative CBA
Quant. data requirements		NPV	Payback Period			
Costs		✓	✓	✓	✓	✗
Benefits		✓	✓	(✓)¹	✗	✗
Time perspective		Dynamic	Static	Dynamic	Static	Static
Description		Projection of the costs and benefits over a time horizon of 10-20 years, and calculation of the discounted net benefit (Net Present Value)	Calculation of the necessary time period until the net benefits (benefits minus running costs) equal the initial one-off investment	Identification of the key benefits and calculation of the necessary change in indicators to equalize costs (validation of results with experts)	Comparison of the costs of different alternatives if the benefits are equal across alternatives	Qualitative description and comparison of the costs and benefits (<i>tangible</i> and <i>intangible</i>) of an initiative – a necessary complement of any quantitative analysis
Application in case studies		 Planned training center for control-room operators (CROs)	 TVET for sewing-machine operators	 PCESSDC Technical Training College	 Initial training in Germany	

1. No exact data on benefits required, but information needed on how changes in benefit-KPIs impact on the total benefit

of the capital budgeting methods can be applied, i.e. using either the Net Present Value or the Payback Period of the initiative. These two calculations differ with regard to their time perspective – dynamic or static – and with regard to the interpretation of the results. If the benefits cannot be measured (yet), but if you have a clear understanding how they could be quantified, the break-even simulation helps to get a more objective assessment of the initiative's net benefit. If you can measure only costs of different alternatives, a cost comparison identifies the most cost-effective solution. Finally, a purely qualitative assessment should be done to complement any quantitative appraisal, but might be the only way to address a CBA if neither costs nor benefits can be measured. The examples in Figure 13 highlight the prevalent problem of quantifiable data.

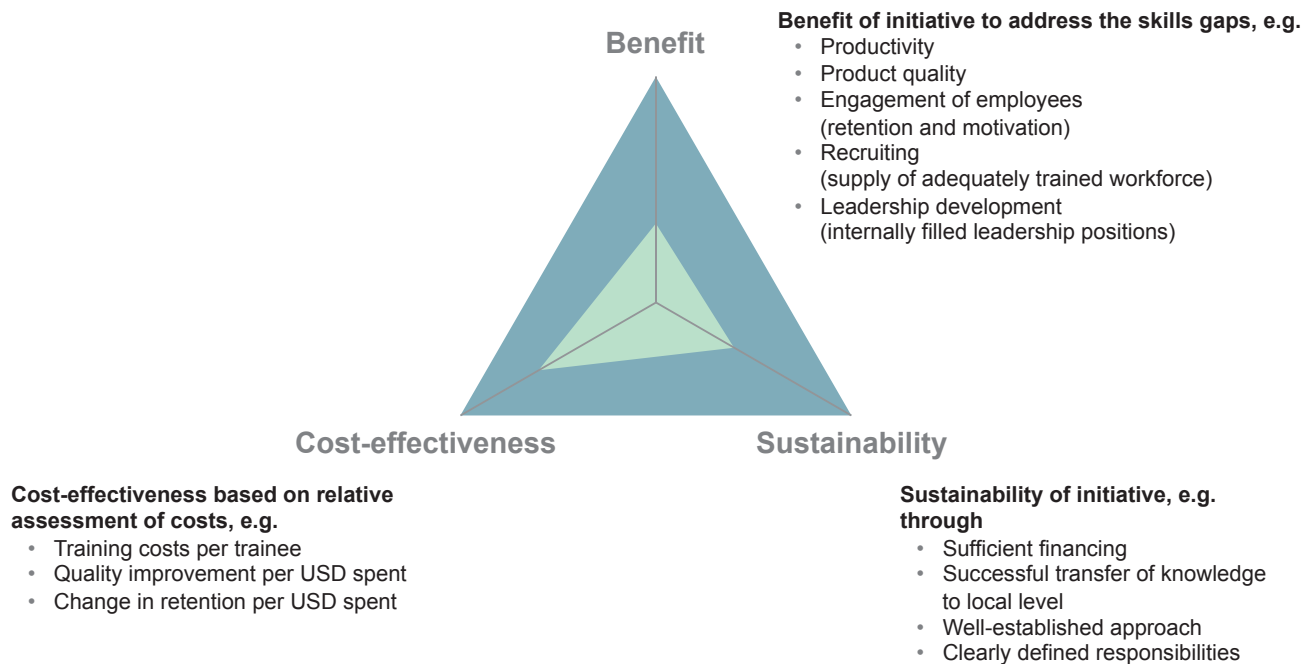
- **Capital Budgeting.** This method comes in two forms, NPV calculation and Payback Period calculation, which take a dynamic and static perspective respectively.
 - Net Present Value calculation. Many skills-development initiatives require some form of initial one-off investment, whereas the benefits accrue over a longer time horizon: consider how the training of employees to use a new production technique leads to a lasting increase in their productivity (especially if the training is backed by good documentation, which will make the training very sustainable). NPV makes it possible to compare investment costs against future (running) costs and benefits, by discounting future cash-flows via a discount rate.⁴ Depending on the type of initiative and its planned lifetime, you calculate the NPV by looking at the net sum of costs and benefits over a time horizon of typically 10-20 years.⁵ Since the NPV calculation usually encompasses a long time span, you would take inflation into account by using the nominal values (i.e. including the price increases due to inflation) for costs and benefits. You would also use the nominal discount rate (i.e. not inflation-adjusted).⁶ A positive NPV indicates that the initiative's cumulated (monetary) benefits over time outweigh its costs. One big advantage of the NPV is that it provides a clear decision criterion: if the NPV is positive, implement the initiative (for an ex-ante assessment), and if the NPV is negative, do not implement it. Despite this apparently objective assessment, however, you should still apply a qualitative assessment as well, since the NPV calculation is sensitive to the parameters chosen, such as the discount rate, and forecasting for 10-20 years ahead is naturally prone to uncertainty.⁷
 - Payback Period calculation.⁸ The appraisal here takes a static perspective: it shows how much time is needed to pay back the initial one-off investment given a constant annual net benefit (benefits minus running costs). In contrast to the NPV approach, the Payback Period appraisal does not provide an unambiguous decision criterion. And case studies show that this approach too necessitates many assumptions, and that the required quantitative data is not always available.

- **Break-even simulation.** If the exact quantitative benefits of an initiative are not available, but the costs and the current level of the KPIs are known, then you can develop a good simulation of the overall business effect by performing a modified break-even assessment.⁹ On the basis of the costs, calculate the required change in the benefit to equalize the costs, i.e. establish the benefit level at which the CBA becomes positive (e.g. above a productivity increase of 5%). Invite internal and perhaps external experts to analyze and validate the required change to ensure that the claimed net effect of the initiative is realistic. Despite being less clear-cut than a full-fledged NPV, the break-even assessment does provide some corroboration of a qualitative appraisal.
- **Cost comparison.** If different options are available for achieving the same benefit, the best initiative is obviously the least costly one. So you just need to compare the costs. Consider the case of Ohorongu: only by training and qualifying the employees was it possible to start production in the first place. For all the different ways of qualifying the workers, the benefit would be the same – namely, the start of production.¹⁰ So there is no point in modeling the benefits here – it would not affect the decision – and the calculation should instead focus on costs alone. To this end, the costs of the various options would be made as comparable as possible by analyzing the same time horizon and taking into account internal costs for planning and execution in each case.
- **Qualitative CBA.** If quantitative data are not available, you need to weigh the costs and benefits of an initiative qualitatively. And it is worth doing so in any case to complement a quantitative appraisal. Describing and comparing the costs and benefits (both tangible and intangible) is only the first step: you then need to make a judgment about the initiative's net effect. To underpin such an assessment, the usual basis is a series of structured interviews with internal and external experts. The way to validate the results and optimize the assessment is through triangulation, i.e. by cross-checking each interviewee's input with that of other interviewees.¹¹

3.2.2 Conduct a summary assessment

A comprehensive appraisal of a skills-development initiative should consider not only the costs and benefits of the initiative but also the sustainability of the initiative, i.e. whether the measure is likely to continue successfully in the future and whether it is generating lasting results. See the key success factors in Chapter 5, which highlight the importance of sustainable operation for any initiative: sustainability might be achieved, for instance, by securing long-term financing, training the trainers, and developing a comprehensive training manual. One way – the way applied in the case studies here – is to summarize the effects of a skills-development initiative and thereby look at three different dimensions: benefits, cost-effectiveness, and

Figure 14: Method for summary assessment of initiatives




sustainability; i.e. to establish whether the identified skills gaps were successfully addressed (benefits), to analyze the relative costs of the initiative in terms of outcomes (cost-effectiveness), and to evaluate the future fortunes of the initiative (sustainability). To determine the performance of an initiative along these three dimensions, you should use both quantitative and qualitative information to arrive at a qualitative assessment: In this report, a five-point scale is applied – from 1 (“very weak”) to 5 (“very strong”). You can then summarize the three dimensions in a single graph to visualize the assessment (Figure 14). The larger the green triangle is, the more successful the initiative is with regard to benefits, sustainability and cost-effectiveness. Such graphs also allow for a quick comparison of different initiatives as shown in the case studies in the next chapter.

Bear in mind that training measures provide benefits not just for the company and its employees, but also for the wider community and for society at large. So a comprehensive appraisal goes beyond costs and business benefits, and takes a broader perspective that includes the social impact of the initiative.¹²

3.3 Assessing the social impact of a skills-development initiative

As part of their CSR activities, private-sector enterprises often undertake dedicated skills-development initiatives in the local community, such as running kindergartens or investing in primary and secondary schooling, which are intended and expected to have a wider impact.¹³ However, a similar impact sometimes occurs as a side-effect of other skills-development initiatives too: many initiatives intended for the company’s own workforce or for the value chain will end up benefiting not just the company and its suppliers and clients but also the wider community. For example, skills development generally leads to better employability and better jobs, which in turn are linked to increased household income and higher local consumption as well as higher tax payments. This social impact should be included in a comprehensive CBA: by being able to show how your engagement benefits the community, you can improve government and community relations, secure the social license to operate, enhance your overall company reputation, and attract financing from DFIs and other socially-oriented investors. These benefits are even harder to assess and quantify, however, than the benefits for the company are, so they are often disregarded in a CBA. Nevertheless, it is possible to at least approximate the social impact, by means of a qualitative assessment.¹⁴ This section presents a logical way of defining the social impact and describing the different effects of skills-development initiatives on the community.

Figure 15: Example of a social-impact chain for Engro’s WELD project

	Input	Output	Impact	Value Creation
Description	Financial and non-financial resources provided within the initiative	Initiative’s direct deliverables for the beneficiaries	Impact of the initiative on society either directly or through the beneficiary	Monetization of impact
Example WELD Program 	<i>Training of female livestock-extension workers (FLEWs) and village milk collectors (FVMCs) and female farmers, totalling USD 2.1m</i>	<i>322 FLEWs and 216 FVMCs trained, who help farmers in almost 600 villages; more than 18,000 female farmers trained</i>	<i>538 jobs for women in a rural region created, with significant rise in their household income (and changes in household behavior); increase in farmers’ milk yields</i>	<i>Monthly household income for FLEWs and FVMCs jointly amounting to about USD 10,000 in total; value of increase in milk yields of USD 3.8m over the course of the project</i>

3.3.1 Draw up an effect chain to identify the effects of a skills-development initiative on society

As a first step, you need to establish a logical effect chain that links the company’s input, the initiative’s output, the effects on society, and the value created. Take the example of the Women Empowerment through Livestock Development (WELD) program by Engro Corporation Ltd., which trained more than 500 unemployed women in rural Pakistan to work as livestock-extension workers or village milk collectors (Figure 15). While the company benefits from the higher quality, scale and greater reliability of its milk supplies, each of these women can now earn a monthly income of about USD 24.¹⁵ This is not a large amount in absolute terms, but it can represent a significant increase in the household income in what is a very poor region – all the more so in that nearly all of these women were previously engaged only in household work. In many cases, of course, it is not possible to quantify the impact so precisely, but the qualitative identification and description of the impact levers can help to round out the business-centered CBA.

3.3.2 Note how skills-development initiatives can impact on society through various levers

The social impact of a skills-development initiative can be made through a number of different levers, either directly through the initiative (e.g. the creation of local employment or the provision of public services, notably education) or indirectly – the beneficiaries increase their household income and change their household behavior. Depending on the specific initiative, each impact lever will have greater or lesser relevance. Witness the way that Hape’s various measures to bridge skills gaps had different effects on society (Figure 16).¹⁶ The impact of the various initiatives is assessed qualitatively on a four-point scale, from zero benefit to large benefits. By adding a qualitative description of the social impact to the CBA (as was done in the case studies), you gain a more comprehensive picture of the overall costs and benefits. In addition, transparency about the social impact can help a company to communicate to external stakeholders how the company is making a positive contribution to society.

This chapter has shown the rationale for conducting a CBA for a skills-development initiative, and the techniques for doing so – techniques selected according to the availability and quality of data. By comparing the costs and benefits (including the social impact) in such a systematic way, one can establish a solid basis for an investment decision ex-ante, and can more confidently evaluate investments ex-post. The following case studies, with their different contexts, show how the various techniques can be applied.

Figure 16: Assessment of Hape's initiatives along the social-impact levers

		A.1	A.2	A.3	A.4	B.1	B.2	C.1	C.2	C.3
		Employee training	Identification of talent	Bamboo Research Center	Vocational training	Training of wood-suppliers	Training of bamboo-farmers	Hape Experience Center	Bamboo Kindergarten	Schools and Kindergarten
Directly through initiative	Local expenditure	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Tax payments	3/4	3/4	3/4	0	3/4	3/4	3/4	0	0
	Provision of public services	3/4	0	0	1	0	0	1	1	1
	Local employment	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Resource protection	0	0	3/4	0	3/4	3/4	0	3/4	0
Indirectly through individual beneficiary	Household income	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
	Household behavior	3/4	0	3/4	3/4	0	0	3/4	1	1
	Social security expenses	3/4	3/4	3/4	3/4	3/4	0	3/4	0	3/4
Summary impact on society		3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

Notes

- While the finance and business-administration literature takes the same approach to a cost-benefit analysis as this report, discussions in the public economics literature include the valuation of negative and positive externalities. See, for instance, Pearce, D., Atkinson G., Mourato, S. (2006), Cost-Benefit Analysis and the Environment: Recent Developments, for a discussion of the cost-benefit analysis in environmental economics.
To acknowledge this academic difference, this report uses the term appraisal (or assessment or evaluation) rather than analysis when referring to a CBA.
- Depending on the context, a similar logical chain could be established for the benefits to the workforce, for suppliers and clients, and for the community. See the case studies in Chapter 4 for a discussion of the benefits to these other stakeholders.
- As mentioned above, one major challenge in measuring benefits is to disentangle the effect of a single skills-development measure from the effect of other training measures or from other changes in the company, such as the introduction of new processes and/or machinery.
- For further details on the different quantitative methods, see any of the numerous finance textbooks on the market; for example, Quiry, P., Le Fur, Y., Salvi, A., Dallochio, M., Vernimmen, P. (2011), Corporate Finance: Theory and Practice (3rd Edition); see pages 295–303 for the NPV calculation.
- Owing to the discounting of future values, the costs and benefits that occur further in the future have a smaller effect on the NPV. Therefore, depending on the model period and the chosen discount rate, adding extra years to the model time span will often have only a very small effect on the NPV.
- Alternatively, you can use the real cost and benefits and the real discount rate. The real discount rate can be calculated as follows: $(1 + \text{nominal discount rate}) / (1 + \text{inflation rate}) - 1$.
- Companies often use their weighted average cost of capital or the return of an alternative investment (i.e. the nominal interest rate) as the discount rate.
- See Quiry, P., Le Fur, Y., Salvi, A., Dallochio, M., Vernimmen, P. (2011), Corporate Finance: Theory and Practice (3rd Edition), pages 333–5 for more details.
- This approach differs from the standard break-even analysis discussed in many textbooks, such as Ibid. / Quiry, P., Le Fur, Y., Salvi, A., Dallochio, M., Vernimmen, P. (2011), Corporate Finance: Theory and Practice (3rd Edition), pages 368–9. The standard approach assumes that the benefits are known and can be quantified.
- See subsection 4.5.5 for a detailed description of Ohorongo's initial training program.
- Guion, L. (2002), Triangulation: Establishing the Validity of Qualitative Studies.
- See the case studies in Chapter 4 for a discussion of benefits for employees and community.
- As outlined in the introduction, such an engagement can also have benefits for the company itself.
- By contrast, a rigorous quantitative approach is very time-consuming, and – if intended merely for assessing the social impact of an initiative – cannot usually justify being included among the measures to address skills gaps. So in most cases, it would be quite sufficient to make a less complex approximation, using a few quantifiable KPIs supported by a qualitative assessment.
- For more information on Engro's initiative, see page 48.
- See page 60 for a detailed case study on Hape Holding AG.





4. Company case studies

Learning from others

This chapter presents five detailed case studies of companies from different sectors and geographies that successfully implemented skills-development initiatives at all three levels: for their workforce, in the value chain, and in the local community. The case studies not only provide detailed insights into how the skills gaps were addressed, but also show how to apply the good-practice frameworks and the methodologies for the cost-benefit appraisal discussed in Chapters 2 and 3.



Engro Corporation Ltd.

A Pakistani multi-business holding advances its business growth and secures its social license to operate by successfully tackling local skills gaps

Executive Summary

Engro Corporation Ltd. (hereafter Engro) is a Pakistani group active in the fertilizers, foods, energy, and petro-chemicals businesses. The main business has been that of fertilizer production, initiated in 1968, but the company has in recent years successfully grown other businesses, and is constantly striving to expand its reach in Pakistan and beyond.

Within Pakistan, Engro has an excellent reputation, and is able to attract and select among the best graduates of the country's engineering and business schools. However, with its fertilizer production based in the Ghotki District, which is mainly rural and with very modest education levels, Engro finds it difficult to recruit properly trained locals, and has to hire workers from other areas in Pakistan – something that attracts criticism from the local population and media. Being a pioneer in many fields (for instance, energy generation from permeate gas) and continuously growing its business, Engro has to develop skills internally, especially in the case of its leadership personnel. A further challenge is this: through its foods and fertilizer businesses, Engro is deeply involved in Pakistan's agricultural sector, and that sector is still characterized by small-holder farms that have little access to modern farming techniques and have low productivity levels.

To tackle the skills gaps, Engro invests heavily in order to develop skills among its workforce, throughout its value chain, and in the community. For its internal skills development, Engro systematically assesses the competencies of its employees and makes tailored training plans. Moreover, it has a group-wide mentoring program, and offers its staff leadership courses at leading universities in order to develop talents internally. To increase the proportion of locals in its skilled workforce, Engro (together with other petrochemical companies) has formed a Public-Private Partnership (PPP) that established and now runs a technical training college (TTC) in Daharki, which since 2011 has been offering a three-year diploma for chemical and mechanical technicians. The first graduates have now joined Engro (and the other firms). Given the success of the program, the college's capacity has been increased, and it now offers other subjects, as well as six-month vocational training courses.

Regarding skills development in the value chain and in the community: Engro is always striving to maximize the quality of the rice and milk inputs for its food business and to increase the sales of its fertilizer business, so it has been developing the skills of thousands of small-holder farmers – training them in modern farming techniques, such as optimal sowing and conservation methods and fertilizer management. For its suppliers of milk, the company has implemented the Women Empowerment through Livestock Development (WELD) project, which trains women to work as milk collectors or else as extension workers offering basic advisory and veterinary services to family farmers, and providing relevant training to the women on those farms. Fertilizer production poses various problems: it involves hazardous materials that can cause great damage, so the local population is constantly concerned and critical, and has often staged protests in the past. To improve community relations and secure the social license to operate, Engro helps to provide high-quality education for the local population: it has adopted 33 public schools, and contributes to the training of teachers.

For Engro, addressing skills gaps has benefits for the company itself. The investment pays back. By supporting the TTC and local schools, the company achieves a dual goal: it secures highly qualified workers, who are likely to stay with the company longer and will potentially climb the career ladder, and it also improves community relations, in that the share of locals within the workforce is now rising. By conducting skills development among its rice suppliers and milk suppliers (who are also clients for its fertilizer business), the company improves the quality of its supplies and increases the sales of its fertilizer products.

For the local community, the beneficial social impact, especially for women, is considerable. The initiatives improve the productivity and hence the livelihoods of thousands of small-holder farmers, and provide direct employment for more than 500 trained women. The increase in milk yield alone more than pays off the investment for the WELD program. And the empowerment of women is truly transformative for their lives and for the patriarchal Pakistani society as a whole. In addition, there is Engro's involvement in providing high-quality education for the villages surrounding its production facilities: this engagement has extensive positive effects on the communities and on the life prospects of the children being educated.

Engro's example produces a number of good practices that other companies could adapt to their situation: a systematic succession-planning initiative, which takes into account the company's strategy (good practice 1.3 in the good-practice framework for workforce development described in Chapter 2.1); an employee engagement survey as a barometer for employee satisfaction (5.3); a group-wide mentoring system to develop the leaders of the future (5.5); and partnering with established partner organizations (4.3).

1. Company background

Engro Corporation Ltd. is a Pakistani multi-business holding active in the fertilizers, foods, energy, and petro-chemicals business.¹ Engro's history dates back to 1957, when its predecessor company, an Esso/Mobil Joint Venture, discovered the Mari Gas field in the Ghotki District – a discovery that formed the basis of urea fertilizer production. As Pakistan's first producer of a fertilizer brand, the company was involved in modernizing the country's agriculture sector. When Exxon decided to divest in 1991, Engro's employees, together with international financing institutions, acquired Exxon's 75% equity. In 2002, after expanding its fertilizer production, Engro decided to enter other business sectors, such as foods and energy.

Engro Fertilizers Limited was officially incorporated as a separate company in June 2009, following a decision to demerge fertilizer activities from the parent company. While the group and business-unit headquarters are located in Karachi, production of Engro Fertilizers is still based in the Ghotki District, in the city of Daharki. It was here that the company built the world's largest (as it was at the time) single-train urea plant, and became the leading urea manufacturer in Pakistan.²

In 2014, Engro had 3,824 employees, and generated total sales of USD 1.7 billion, representing a 13% growth in revenue over the previous year.³ That puts Engro among Pakistan's 20 largest companies.⁴ Engro Fertilizers is the group's largest business unit, accounting for about 50% of revenues, followed by Engro Foods (mainly dairy products) and Engro Eximp (rice and potash).

2. Pakistan's skills gaps: The public education system vs. industry demands

Even though secondary-school enrollment in Pakistan increased from 25% to 38% between 2005 and 2013, education attainment remains at a comparatively low level.⁵ And unsurprisingly, the figures for tertiary education figures are even more modest: enrollment of 4% in 2005, and about 10% in 2013.⁶ The current population is an estimated 180 million, and is growing at about

2.2% a year, so the country is expected to have 236 million people in the working age group by 2050. However, reports suggest that less than 6% of the current youth population has acquired any technical skills through Technical and Vocational Education and Training (TVET). So the majority of Pakistan's emerging labor force is lacking in education or in skills or in both. One problem is that in Pakistan, as in many countries, the implementation of TVET has shifted between different government departments, whose mandates partially overlap, hampering good governance and accountability.⁷

In line with the general trend in Pakistan, the province of Sindh, where Engro Fertilizer is located, has very modest educational attainments. From an analysis of the labor force in Sindh, it appears that a high proportion of the economically active population either has no education at all or less than one year's education (40% in 2010-11).^{8,9} The province's unemployment rate remains below the national average, even though it did increase significantly, from 3.1% in 2007 to 5.1% in 2011.¹⁰ Yet, the Ghotki District in the north-east of Sindh province, where Daharki is situated, has a much higher level of unemployment. The labor market in Sindh has a dual nature related to two different dynamics – on the one hand, that of the more developed urban centers, like the metropolitan region of Karachi; and on the other, that of the less developed rural areas. Daharki, home base of Engro Fertilizer's main production site, is a business center with numerous industries, particularly cotton factories and oil- and gas-exploration companies.¹¹

Even though Daharki itself is relatively wealthy, Sindh as a whole is facing major economic challenges, largely owing to the low skills base of its labor force. An assessment of selected TVET institutes in the province, conducted by the organization CARE, reveals that these institutions currently provide services to only a very small fraction of the young population.¹² Among the major weaknesses are: outdated curricula; a mismatch between the skills taught and those demanded by industries; inadequate quality-assurance mechanisms; a shortage of physical and learning resources; and low participation of the private sector. Furthermore, the assessment found evidence that the TVET system is not demand-driven: linkages to industry are fragile, poorly planned, and inadequately supervised. In interviews, employers unanimously complained that graduates were trained only in basic skills, so that each industry has to undertake its own in-house training in order to equip the TVET graduates with the requisite skill and knowledge. Going one step further, and examining the reasons for low enrollment in formal TVET institutions, the assessment identified the major obstacles as lack of information about the institutions and a general shortage of institutions in the rural areas. The latter point explains why Daharki's surrounding district – Ghotki, with a rural population of more than 80% – is particularly hard hit by a lack of skilled labor. The total skilled labor force amounts to about 4,500 workers – a mere 3% of the district's total population. This shortage partly accounts for the district's serious unemployment problem.

All notes at the end of this chapter (Page 59)

3. Engro's skills gaps: Lack of experienced production supervisors and of local technical staff

By virtue of being among Pakistan's top employers and very popular with graduates, Engro attracts a large number of applicants from across the country – amounting to 5-10 times the number of vacancies – and can select the best candidates from that pool.¹³ The company has a low attrition rate (by Pakistani standards) of about 7%, but its recruiting needs persist, largely owing to its continuous expansion. Of the employees who do leave Engro, many go abroad to work in the Middle East or in the United States. A couple of internal skills gaps affect the company on the operations side – notably, a shortage of experienced supervisors, and the scarcity of trained technicians and plant operators in the local community. Figure 17 provides an overview of these internal skills gaps at Engro Fertilizers.

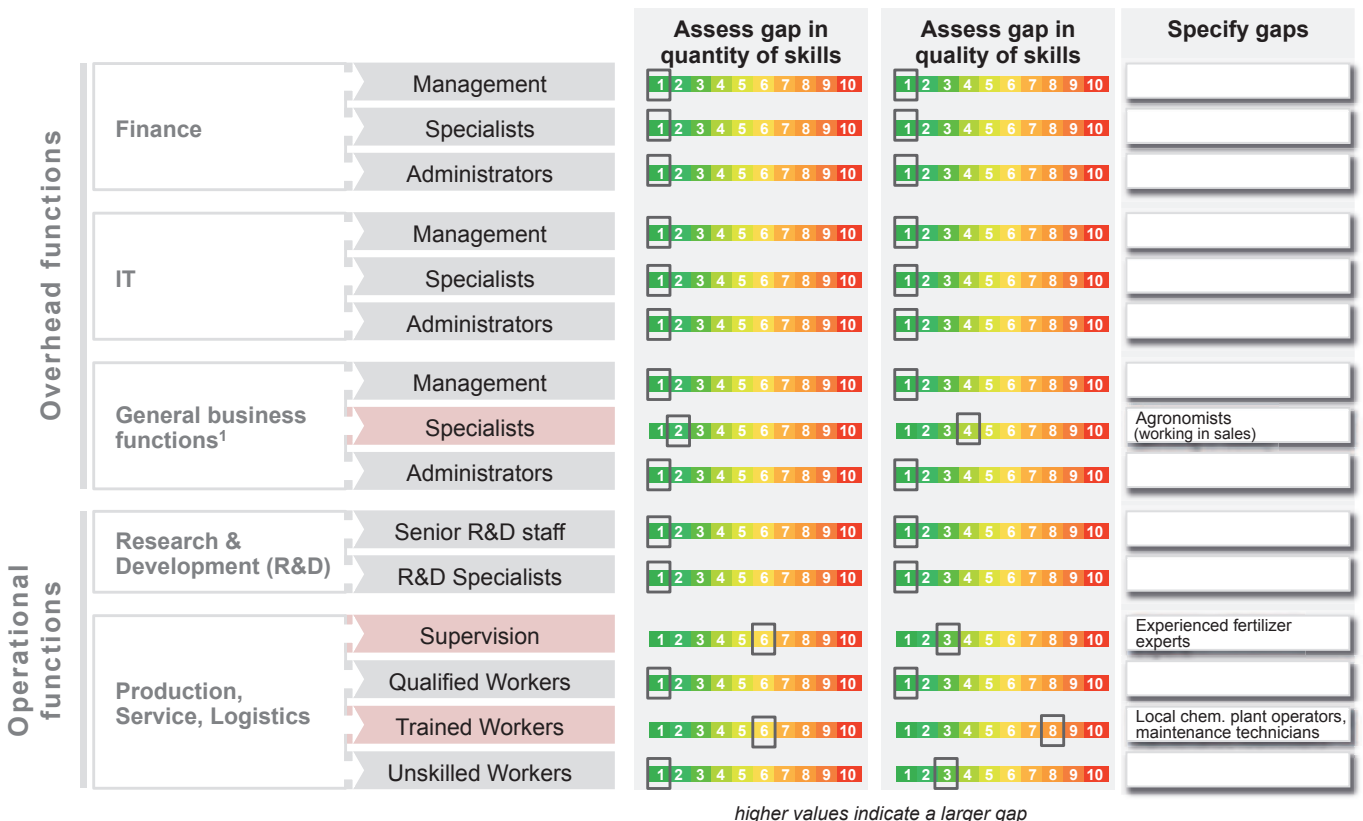
Administration: Minor shortage of agronomists to work in marketing and sales

In administration, Engro Fertilizers has no difficulty in filling most vacancies with highly-qualified candidates, and it has a low attrition rate, allowing it to develop its management personnel and their skills internally. The one recruiting challenge that it does face is that of finding enough agronomists to work in marketing and sales, where they reach out to clients and partner companies: these skills are generally rare in the country.

Operations: Difficulties in finding properly trained personnel from the local area

In production, Engro Fertilizers attracts the country's best engineers, and has no difficulty in filling vacancies, even though the company is growing continuously. And as for unskilled labor, there is never a shortage, given the region's high unemployment rate. The main recruiting challenge for the company has been in finding properly trained technical staff in chemical and mechanical engineering from the local area around its production site in Daharki. Despite being an industrial center, the district had no technical training college until recently, and the quality of public-run schools in the district, as in Sindh province generally, remains low. Accordingly, to acquire the requisite skills, the company has had to hire workers from Karachi or other areas that are more developed – a policy that has led to criticism from the local population and the media. Another challenge has been at the supervisory level – i.e. production experts with 5-6 years of work experience: Engro cannot easily recruit suitable candidates in the market, as there are only a few fertilizer-producing companies in the country, and Engro has very high quality standards. The solution has been to build these skills internally, and to gradually develop successors for those employees that leave. Generally, the company's need for new production workers and supervisors is constant, as the business is growing continuously (23% over the last year), and the company is considering expanding to new markets in Africa or Asia.

Figure 17: Assessment of Engro's skills gaps



1. Human Resources, Marketing and Sales, Communications etc.fit

Suppliers and clients: Lack of knowledge about modern farming techniques

Pakistan’s agriculture is still widely characterized by small-holder farmers who rely on mainly traditional farming techniques. For Engro, these small-scale farmers have a dual role: as clients for its fertilizer business, and as suppliers of raw materials (specifically rice and milk) for its food-producing business units. Although Engro Fertilizers does not primarily sell directly to small farmers, it is these farmers who constitute the final customers for its products. Engro Foods collects milk from thousands of farmers to produce dairy products (notably, beverages and ice cream). And Engro Eximp buys rice from thousands of farmers, for processing in the country’s largest rice processing and finishing mill. The contrast is stark: while Engro’s business units all use state-of-the art technology, the farmers generally have very limited knowledge about animal health and little expertise in modern farming techniques such as direct seeding of rice, resource conservation, efficient sowing, and fertilizer management (they still rely mainly on nitrogen). So their productivity has remained low, and the quality of their produce has often been unsatisfactory.

To sum up: Engro Fertilizers has few skills gaps on the administration side, as it can select among a large number of highly qualified candidates, thanks to its strong employer brand. The same applies to the operations side – at the engineer level and at the unskilled labor level. Where the problem does occur on the operations side is in finding trained technical staff from the local area (the education level of the local community is generally low) and in finding experienced production managers and supervisors (there are very few fertilizer companies in Pakistan). The other main skills gap that Engro Fertilizers has to deal with is that which characterizes its suppliers – small-holder farmers who are insufficiently knowledgeable about modern farming techniques.

4. Addressing Engro’s skills gaps

In striving to bridge the skills gaps just outlined and to secure the social license to operate, Engro has a number of initiatives at all three levels – within the company’s own current and prospective workforce, with its suppliers and clients along the value chain, and within the local community (see Figure 18).¹⁴

4.1 Engro’s workforce development: Training of current and future workers

Recognizing that its employees are the key to company success, Engro has made a priority of skills development – both within its workforce and among the local population, where requisite skills have been in short supply.

Systematic assessment and development of skills

The company has been a pioneer in many fields – to take one example, power generation from permeate – and it is one of the few fertilizer companies in the country. On both counts, skills have had to be developed internally. That is particularly true for management positions: the managerial staff need to have a deep understanding of the company’s business and to share its strong values and company culture. Senior executives are convinced that for the company to grow, it is crucial that the managerial staff and other employees should enhance their skills.

Accordingly, Engro invests heavily in training courses and general workforce development. Based on differentiated competency profiles, the training needs of every employee are analyzed and a training calendar is designed, with respect to both hard and soft skills. The technical training is mostly done in-house, while the soft skills – and especially leadership development for top

Figure 18: Overview of Engro’s initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 PCESSDC technical training college (TTC)	Foster skills development, and enable hiring of local diploma-holders
	A.2 Systematic assessment and development of skills	Promote internal career development
B <i>Value-chain development</i>	B.1 Skills development of farmers	Improve the productivity of farmers
	B.2 Women empowerment through livestock development (WELD)	Train women to provide advisory services to dairy farmers, to increase their productivity
C <i>Community development</i>	C.1 Education for local communities	Foster local education, to secure the social license to operate

talents – are refined and developed with outside help. Engro cooperates with established partners such as Dale Carnegie or Aon Hewitt, which have devised specific programs for Engro. In addition, Engro sends executives to world-class business schools like Harvard or INSEAD for leadership training courses.

PCESSDC technical training college: Training to recruit workers locally

Owing to the lack of properly trained technicians and other professionals, Engro used to hire very few people from the local community other than unskilled workers, such as drivers, housekeepers, and guards. The district has a high unemployment rate, and few prospects for its many young people, so Engro's practice of hiring people from other regions of Pakistan was the subject of increasing criticism from the population and media. That prompted Engro, together with other petro-chemical companies, to form a non-profit Public-Private Partnership (PPP) in 2009 to address the problem – the Pakistan Chemical and Energy Sector Skills Development Company (PCESSDC). Its aim is to provide education and training to the young and growing rural population to equip them for work in Pakistan's petro-chemical sector. A technical training college (TTC) was set up in Daharki that offers a three-year diploma in chemical and mechanical engineering to 60 students per year. The training on offer is gradually being extended to include instrumentation, electrical engineering, and computer science, and capacity is being increased to 120 students per year. Admission to the program is purely on merit, which is determined by entrance exams. To prepare applicants for the exams, private tuition institutes have opened in the area, and Engro offers coaching to the youth of the villages in the immediate vicinity to its fertilizer plant. The courses include many practical sessions, which are conducted in a well-equipped laboratory or workshop; they also involve an internship at Engro or one of the other partner companies. Moreover, Engro engineers and staff, including senior executives such as the Director of Manufacturing, visit the college to talk about their work and careers and to provide coaching. No other TTC in the country has a comparably close connection to industry. It is not enough, however, simply to complete the program: the graduates still have to apply for posts and pass further entrance exams in order to work for Engro or one of the other companies. The recruiting quotas of these companies reflect their respective shares of the PCESSDC. Finally, in addition to the diploma courses, the TTC is now offering six-month vocational training courses in welding, carpentry, pipe fitting and other technical trades, in cooperation with the Sindh Technical Education and Vocational Training Authority.

4.2 Skills development along the value chain: Improving productivity among suppliers and customers

The agricultural sector in Pakistan suffers from low productivity and high resource usage, owing to the lack of modern farming and resource-conservation techniques. Engro supplies fertilizers

to farmers (indirectly through distributors) and buys milk and rice from them, so its business is closely intertwined with them, and the company has accordingly invested heavily in developing their skills.

Skills development of rural farmers: Raising productivity and developing business

Through its rice and fertilizer business, Engro is involved in the production of staple food. Given the farming sector's low level of productivity, Engro, together with the German development agency GIZ, has implemented the so-called System Productivity Innovative Rice Trainings (SPIRIT) to improve yields and reduce the usage of water as well as other resources. From December 2013 to July 2015, Engro's agricultural experts and trainers provided on-site training courses and demonstrations to farmers and agri-farm support personnel, instructing them in modern farming techniques, such as alternate wetting and drying, optimal plant population, and fertilizer management. Building on the success of the SPIRIT program, a fertilizer outreach program is planned to train farmers specifically on the best fertilizer practices – for instance, combining different types of fertilizers to ensure balanced nutrition and soil sustainability.



Trained rice farmer in rice field

Empowerment of women through livestock development: Improving productivity and women's lives

Engro Foods works together with just over 2,000 milk collection centers, which collect milk from thousands of small traditional farms that typically have less than ten animals. At these family farms, women play an important role in the daily care and management of the animals, while the male household members are primarily responsible for selling the milk. These farms are characterized by low milk yields, and lack of inputs and capital. Engro, together with the United States Agency for International Development (USAID), has duly implemented a training program for small dairy farmers (targeting women especially) to improve livestock-care practices, and for local women to work as milk collectors or as livestock extension workers (providing basic extension services to local farmers such as vaccination or treatment of basic ailments). This Empowerment through Livestock Development (WELD) project is in the spirit of Engro's HR

gender-equality strategy, improving the situation of the self-employed female milk collectors. The project was successfully completed in July 2014, and it will now be extended – both to support women-led micro-enterprises offering extension services to farmers, and to establish and train farmer groups.



Training of female farmers

4.3 Closing skills gaps in the broader community: Securing the social license to operate

Despite living close to a petro-chemical industry cluster with 14 large companies, the population around Engro Fertilizers' Daharki production site is still mainly rural and has low levels of education. A particular concern of the company is that the fertilizer production process involves hazardous materials that could potentially cause considerable damage to the surrounding villages. In addition to it being a key means of living up to its corporate social responsibility aims, Engro views education for the local communities as a key lever to secure the social license to operate. Accordingly, the group invests heavily in local schools (mostly primary schools and middle schools but also high schools) and the education of teachers: it does so through the Engro Foundation, which pools its corporate citizenship activities. Faced with the low quality of the public education system, Engro does more than simply provide funding; it "adopts" schools from the government, by developing and renewing the schools' infrastructure, providing free teaching materials, managing the operational affairs, monitoring attendance and dropouts, and recording learning progress, as well as encouraging enrollment among the local population. As for the training of teachers, Engro – mindful of the vital role that teachers play in improving education in Pakistan – sponsors a Training and Resource Center, which was the first teacher-training facility in the Ghotki District.

5. The role of DFIs: Constant dialogue to identify opportunities for maximizing the impact on business and society

DEG has supported the expansion of Engro by providing financing – both for the modernization of the fertilizer production facility, and for Engro's Quadripur power plant, which utilizes permeate gas that used to be flared in the gas fields. These financing projects clearly impact very positively on Pakistan's agricultural economy and energy supply. In addition, DEG and Engro are constantly working together, with a deliberate development perspective, to identify projects that will improve the lives of the local population. In this regard, DEG supported the TTC by financing a modern mechanical lab – a resource that differentiates the TTC from other colleges and gives its students a competitive edge. Moreover, DEG supports financially the continuation and extension of the WELD project, in its efforts to establish women-led micro-enterprises and to set up and train farmer groups.

6. The costs and benefits of Engro's engagement

Accounting data produce a well-documented picture of the costs of Engro's skills-development initiatives. The benefits, in contrast, are difficult to identify and to quantify, as they accrue on different levels – for the company itself, for employees, along the value chain, and for the local community. Figure 19 summarizes the costs and benefits of the different initiatives at each level.

6.1 Costs and benefits of Engro's workforce development

Company costs and benefits: Improving productivity and securing the social license to operate

Engro has contributed about USD 677,000 to the establishing of the PCESSDC since 2009, and incurred indirect costs of USD 294,000 for planning, coordinating, and lobbying for the program. On average, that amounts to costs of USD 162,000 per year for the years from 2009 to 2014, when the first intake of students graduated from the program.

In return, Engro benefits from the TTC in various ways: Of the first batch to graduate – 49 in total – 21 graduates joined Engro in the summer of 2014, and in future the company plans to hire about 50% of the new graduates each year. As evidence of the high quality of the TTC and the demand for trained locals, there is fierce competition among employers for the graduates. For Engro – which needs to recruit about 75 additional diploma-holders each year – the TTC enables an increase in local sourcing

Figure 19: Overview of the costs and beneficiaries of Engro’s engagement

Type of initiative	Initiative	Costs ('000 USD)	Beneficiaries			
			Engro	Employees	Suppliers	Community
A <i>Workforce development</i>	A.1 PCESSDC technical training college (TTC)	One-off: 971 Running: 162 p.a.	+++	+		++
	A.2 Systematic assessment and development of skills	Running: 773 p.a. (Engro Fertilizers)	++	+++		+
B <i>Value-chain development</i>	B.1 Skills development of farmers	One-off: 186	++	+	+++	+++
	B.2 Women empowerment through livestock development (WELD)	One-off: 446	++	+	+++	++
C <i>Community development</i>	C.1 Education for local communities	Running: 521 p.a.	++			+++

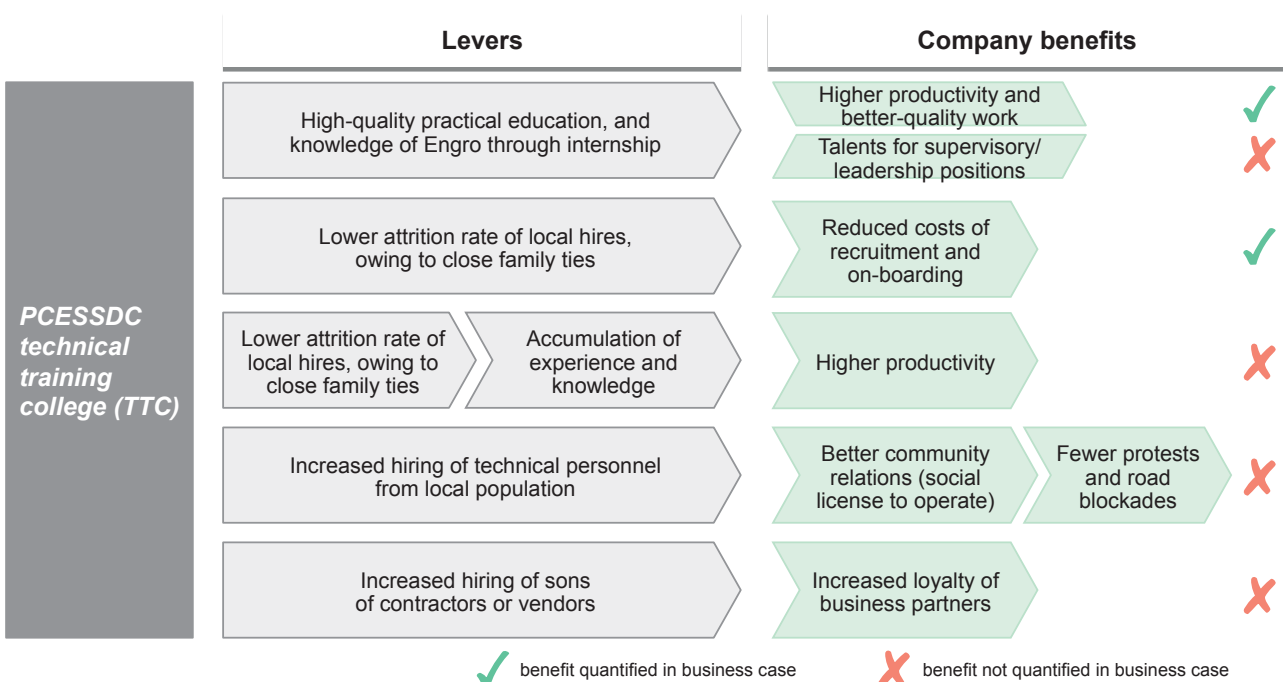
+ Small benefits ++ Medium benefits +++ Large benefits

of recruits, and that leads to four main benefits: better-qualified staff, reduced recruitment needs thanks to a lower attrition rate, stronger community relations, and improved relations with contractors and vendors (see Figure 20).

Graduates of the TTC are better qualified than candidates from other schools, since the program contains more practical elements, and the graduates already know Engro, thanks to the integrated internship. From the results of Engro’s standardized entry tests and interviews, it emerges that those hired from the TTC had on average a 27% higher test score and an 8% higher interview rating than those hired from the National Technical Schools. Given that Engro Fertilizers’ production involves haz-

ardous (explosive) materials, all newly hired diploma-holders – irrespective of prior knowledge or test scores – have to undergo a two-year internal trade apprenticeship, involving classroom and on-the-job training in the company’s strict security regulations, the production processes, and the techniques for their specific position. So there is actually a two-year time lag before the TTC graduates’ better qualification begins to reveal its positive impact on production. The TTC graduates have the potential to climb the career ladder within Engro and eventually become supervisors. They are expected to have a lower attrition rate than diploma-holders from other regions, as they are deeply rooted in the Daharki vicinity with their families and friends. A lower attrition rate will reduce the substantial costs

Figure 20: Logical chain of effects that the PCESSDC TTC produces for Engro



involved in recruiting and on-boarding (via the two-year trade apprenticeship for new hires); and it should also lead to increased workforce productivity, as employees tend to be more productive if they stay longer with the company.

As described in Figure 20, the benefits stemming from the superior quality and lower attrition rate of new hires are typical effects that could be quantified. Since the first graduates joined Engro only last year, quantitative information is not available yet, and a full-fledged NPV is therefore not possible. It is possible to offer a break-even simulation, however. Based on the costs of the program and the impact levers identified above, the break-even simulation assesses the necessary change in the key variables – i.e. attrition level and productivity – at which the Cost-Benefit Appraisal becomes positive. The simulation is based on Engro’s (projected) costs for the program and the current average attrition rate and productivity level, as well as some other key inputs (see Figure 21). Engro expects its current annual costs (both direct and indirect) to increase by 10% each year. With an annual recruitment need of 75 graduates, it plans to hire 50% of the TTC graduates in mechanical and chemical engineering each year, i.e. 35 graduates, from 2016 onwards.

As the benefits take quite a long time to accrue, a dynamic break-even simulation is conducted over a 10- and 15-year time horizon, using discounted cash-flows. Three different scenarios are calculated (low, medium and high) for the two key variables

to show the sensitivity of the results (see Figure 22). The scenarios show variations in the attrition rate and productivity relative to other graduates hired by Engro. The overview shows that the higher productivity of TTC graduates has a greater impact on the results than a decrease in the attrition rate. For an attrition rate of 3.5% (in the high scenario), the increase in productivity needed for reaching break-even is 14.8% for a 10-year horizon and 8.7% for a 15-year horizon – figures that seem reasonably plausible, given the better interview results of the TTC students.

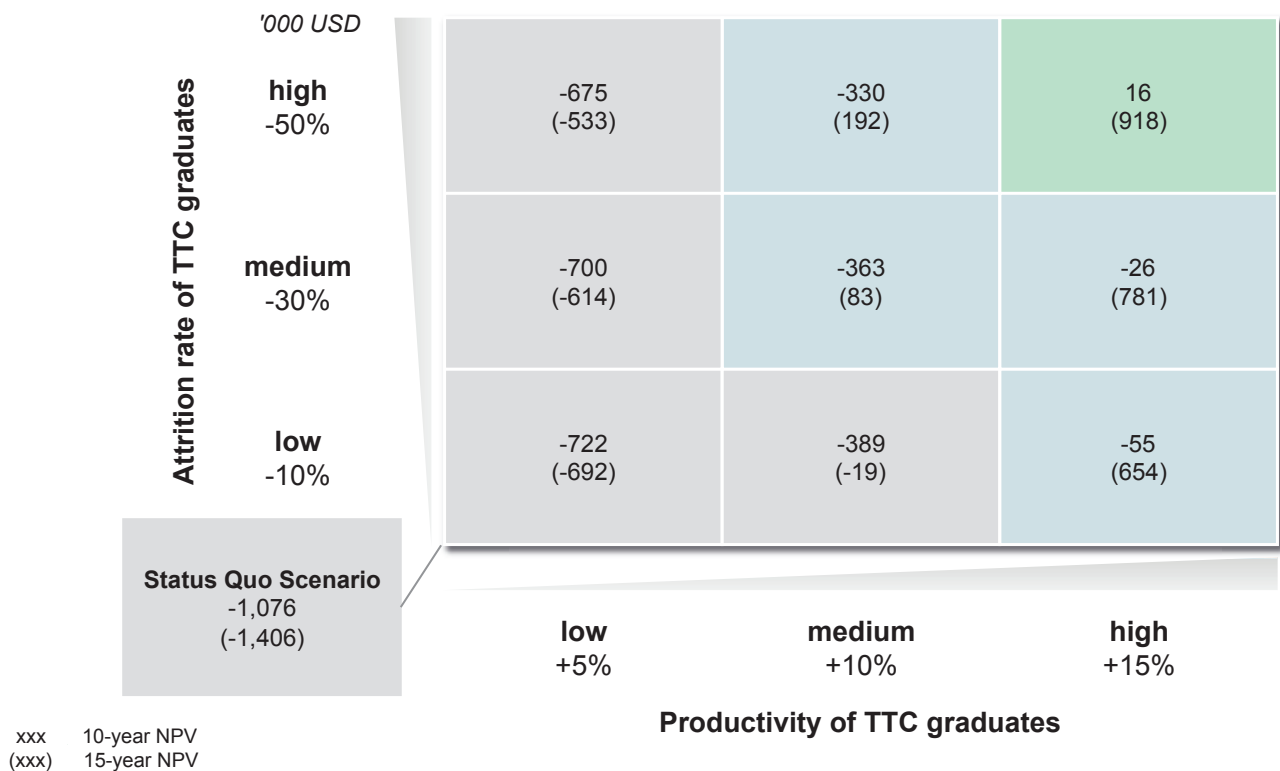
In addition to these quantifiable benefits, there are two other important benefits for Engro. First, the training and hiring of local youth serves as a response to the criticism expressed by the local population and media, and improves community relations, to the point of securing a social license to operate for the company. Such a social license is a critical advantage, given the sensitive nature of Engro’s fertilizer business. Anecdotal evidence suggests that the community relations have indeed improved: the company now experiences fewer protests or blockades of the road or factory gate due to these labor issues – disruptions that jeopardize the smooth functioning of the production process. Secondly, more than 40% of the students come from the families of Engro contractors or vendors, and that connection fosters their loyalty to Engro. With the range of benefits it generates, the TTC can certainly claim to have a significant positive impact on Engro.

Figure 21: Inputs for the break-even simulation

Costs ('000 USD)		Benefits	
Direct costs to Engro 2009-2014	677	Hired graduates of TTC (fixed number 2016 onwards)	2014: 21 2015: 33 2016: 35
Indirect costs to Engro 2009-2014 (staff time devoted to planning, coordination, lobbying, etc.)	294	Average attrition rate	7%
Projected increase in costs per year (without inflation)	10%	Training and on-boarding costs ('000 USD) – - two-year internal trade apprenticeship (TA) program	8
		Average value added per employee ('000 USD) ¹	97
		Productivity of students after internal TA program relative to average productivity	75%
		Time needed by hires from other programs to reach higher productivity of TTC students (after TA program)	3 years
Other assumptions			
Inflation rate	7%	Discount rate	12%

1. Calculated using BCG Workonomics approach: Value added per employee = (Revenues – Costs of sales (excl. personnel costs) – Depreciation)/# of employees.

Figure 22: Overview of different scenarios for the break-even simulation



The annual training spending at Engro Fertilizers is USD 773,000. By means of its systematic assessment and development of skills, the company is able to identify and develop talented staff for leadership positions and to promote them internally. Employees have a clear career perspective, and this increases their satisfaction: witness the high employee engagement index of 73% in 2014, and Engro's rating as one of the top five employers in Pakistan in 2013. One further virtue: the company has a very low accident rate, thanks to the high security standards and the internal training in security issues.

Employee benefits: Moving up the ranks internally

Thanks to the systematic training in hard and soft skills, and Engro's strategy of developing leadership personnel internally, the internal career prospects for employees are very good. And they can improve their salary considerably if they move up the ranks. Employee satisfaction is reflected in the high engagement rate and the popularity of Engro as employer.

Community benefits: Improving employability locally

For the community too, Engro's workforce development, particularly the TTC, is highly beneficial.¹⁴ The community benefits greatly from the improvements to the education and employability of local youth – enabling about 100 graduates each year

to work for the petro-chemical industry. Engro specifically supports the admission of local youths to the TTC – that is, children from the immediate vicinity of its plant – by offering coaching sessions in the villages of the so-called Community Awareness and Emergency Response (CAER) program. Of the 45 young trainees, ten (i.e. 22%) were admitted to the TTC. Against the backdrop of a 35% unemployment rate locally, the creation of well-paid jobs is a great boon to the local community. Other potential jobs for the students – bus driver, auto-mechanic, or other positions in services – typically offer them a starting salary of USD 1,200 per year. Engro offers them almost double – USD 2,200. Moreover, at Engro their annual salary can increase to more than USD 4,000 within five years. For a rough calculation, apply the initial salary difference to about 100 graduates per year, and the result is an additional household income of USD 100,000 for the community each year – with corresponding increases in local consumption and tax payments. Note too that the TTC itself – the construction of it and its ongoing operations – has created further local employment. For the local population, it also remedied a serious shortcoming in the provision of education: previously, there had been no training institute for the children graduating from Engro's adopted schools. Of the 49 first-batch graduates of the TTC, four had attended Engro's community schools – a showcase of the transformative effect that the company's skills-development engagement is having on the people from the local community.

6.2 Costs and benefits of Engro’s skills development along the value chain

Costs and benefits for Engro: Increasing the quality of inputs and sales of fertilizers

Together with its partners, Engro invested about USD 186,000 in the SPIRIT program for training rice farmers in 2014, and USD 446,000 in the WELD program from 2011 to 2014 (the other 80% of WELD’s USD 2.2m project costs was borne by USAID). Both programs have a clear bottom-line focus: their aim is to expand the production of rice and dairy products through increases in productivity and hence production volume, and also to improve quality (for instance, less contamination of milk). By training farmers in optimal fertilizer management and the application of different types of fertilizers, the SPIRIT program also has the effect of boosting the sale of fertilizers. In addition to these direct business impacts, Engro also benefits from the enhanced image and reputation conferred by some of the training courses – courses that combine value-chain development with corporate-citizenship activities. The success is further evidenced by the news that the WELD program is to be continued and extended, and that a new outreach program is currently being planned.

Benefits for employees: Improving Pakistan’s agricultural sector

The employees who are involved in Engro’s value-chain development initiatives – as trainers and experts, for instance, or in the program management – are thereby helping to improve the lives of thousands of small-holder farmers, and contributing to the modernization of Pakistan’s agricultural sector. They take pride in the work, and gain a considerable sense of satisfaction from doing something meaningful for a greater cause.

Benefits for suppliers, clients, and the community: Improved livelihoods for thousands of farmers, and the empowerment of women

Suppliers and clients of Engro Foods and Engro Fertilizers consist of thousands of small-holder farmers producing milk and rice, so the benefits for suppliers and for the community are closely intertwined. The increase in production volume, made possible through the training, leads to a direct improvement in the living conditions of the suppliers’ families. More than 10,000 rice farmers and 2,000 farm support workers have received training: the training in direct seeding substantially increased rice yields by about 14%, and the training in alternate wetting and drying techniques reduced water consumption by 20-35%. In addition, because of the WELD program, women are trained to work as village milk collectors and as livestock extension workers (advising local farmers and performing simple veterinary tasks). The benefits for these women and the community have been substantial.

For an assessment of the social impact of the training, the approach described in Chapter 3 will be used. First, a social-impact chain is drawn that connects Engro’s inputs with the outputs and the social impact (see Figure 23).

To identify the impact, one begins by analysing the different impact levers that work either directly through the initiative or indirectly through the beneficiary (see Figure 24).

By training 538 women to work as extension workers and milk collectors, Engro created employment for those women. Previously, the women either had not had work or had been engaged only in smaller economic activities, such as embroidery, stitching, or tailoring (about 40% of participants). Generally, women are economically marginalized in rural Pakistan: 94% of the women

Figure 23: Social-impact chain for Engro’s WELD program

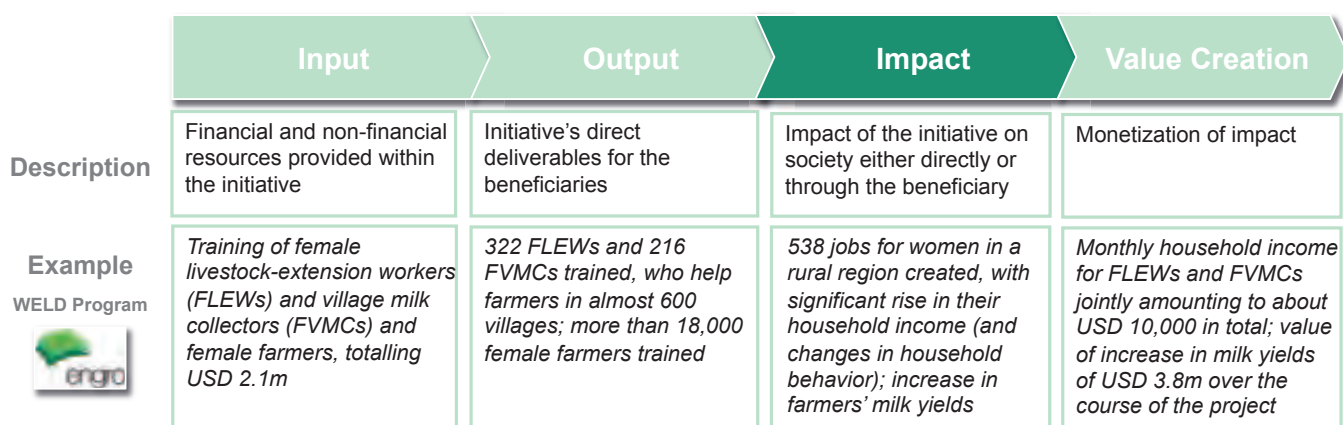
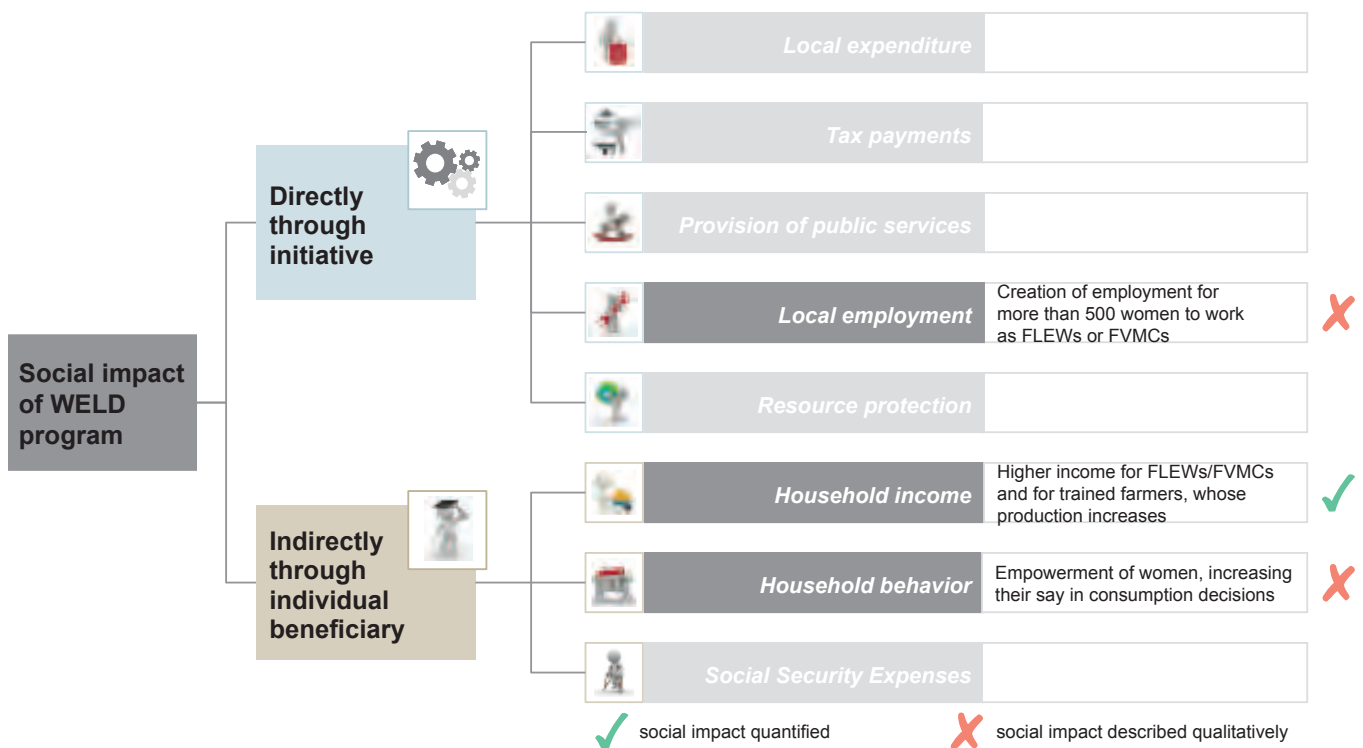


Figure 24: Social-impact levers of Engro's WELD program



in the Ghotki District stay at home, according to an Engro Foundation survey. The trained women can now offer their services to farmers in the villages, and thereby increase their family's income and improve their own position both within the family and in society. Traditionally, men sell the milk and engage in business activities, while the women work at home and are involved in caring for the cattle. The training of FVMCs and FLEWs has disrupted that traditional arrangement: not only do the trained women gain a higher status, but so too do the women in the farmers' families as they can now sell the milk to the FVMCs, and they receive advice and training from the FLEWs. More than 18,000 women have now been trained as farmers in this way. The empowerment of women has positive effects on household behavior, as women tend to spend more on education and health compared to men; and it is changing male attitudes regarding women working outside the home. The long-term impact is sure to be considerable. That said, it is very hard to quantify overall, and is therefore best assessed qualitatively (see the next section).

Nevertheless, some measure of social impact is quantifiable: the increase in household income of the FVMCs and FLEWs and also of the farmers' families (thanks to higher milk yields, resulting from improved animal health). The FLEWs have an average monthly income of USD 20 each, and the FVMCs USD 25 – compared to about USD 5 before the intervention. Accordingly, for the 538 women – 322 FLEWs and 216 FVMCs – the increase in their joint income amounts to about USD 10,000 per month. As for the rise in the income of farmers' families: daily milk

yields have increased on average from 3.6 to 4.9 litres per cow/animal, which means an increase of about USD 3.8 million (valued at the average milk price) in total to the family incomes of the 18,000 women trained in farming techniques over the project period.

6.3 Costs and benefits of Engro's closing skills gaps in the broader community

Company benefits and costs: Securing the social license to operate, and reducing security risks

Engro spent about USD 521,000 on its education activities in 2014. Such engagement has done much to improve relations with the local community, which have traditionally been difficult. If accidents were to happen at the production plant, the potential damage and negative effects on the vicinity would be serious, so the local population has tended to take a critical view of Engro, and protests have taken place from time to time. As the overall security situation in the region is generally worrying, Engro Fertilizers and other petro-chemical companies have had to invest heavily in the security of its facilities and employees. These precautions could be reduced somewhat if the local community felt more protective towards the company. The hope is that, through its skills-development program for the local children, Engro can secure the social license to operate, and can spend relatively less on security. Anecdotal evidence suggests

that the community relations have indeed improved: the company now experiences fewer protests or blockades of the road or factory gate – disruptions that jeopardize the smooth functioning of the production process.

Community benefits: Improving the education and employability of local children

For the poorly educated rural communities nearby, Engro’s community-development efforts provide great benefits by improving the quality of and access to education. The company not only provides financing, but effectively adopts government schools, and in that way achieves a sustainable improvement. Over the last five years, the number of adopted schools has increased from 25 to 33, and the number of students has risen from about 3,000 to over 4,500. Engro Fertilizers alone supports 22 schools around the plant’s location in Daharki, serving more than 2,500 pupils. Half of these schools are in the Katcha area, where the security situation has been very difficult, but where former delinquents have now been integrated into the schooling initiative, and are supporting the development of schools and urging community members to enroll their children. So Engro’s community development can claim not just to have created employment but also to have improved the security situation locally.

Through its various measures to close the skills gaps in its workforce, in the value chain, and in the community itself, Engro achieves a variety of benefits for the community. These benefits can be assessed qualitatively along the different social impact levers (see Figure 25). As discussed above, Engro’s initiatives have a large positive impact on society – particularly the initiatives relating to value chain and community development.

6.4 Overall assessment of costs and benefits

Figure 26 provides a summary assessment of the three main initiatives along three dimensions – benefits, cost-effectiveness and sustainability.¹⁵ The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative. All three initiatives perform well along the benefits and sustainability dimension, but differ in their cost-effectiveness.

- **The technical training college** has large positive effects for Engro, enabling the company to hire local diploma-holders of very high quality and with lower attrition, and thereby helping

Figure 25: Qualitative assessment of Engro’s initiatives along social-impact levers

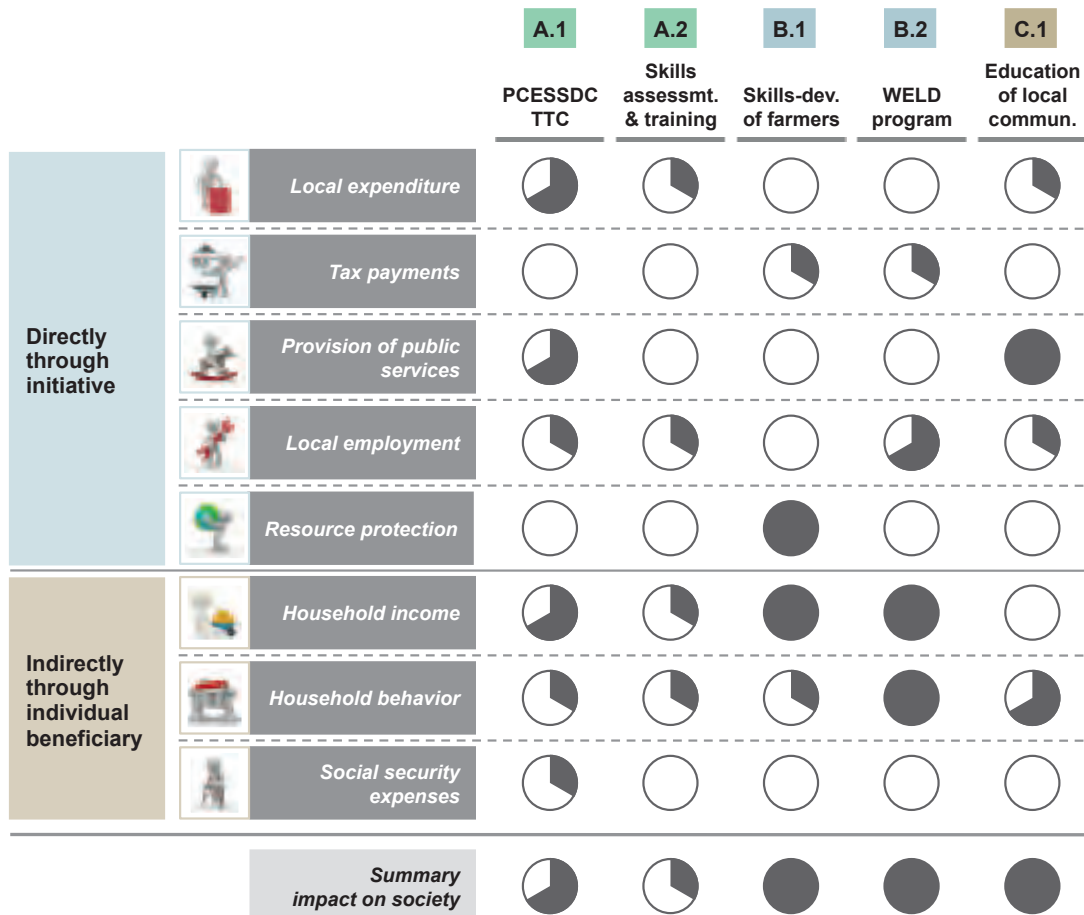
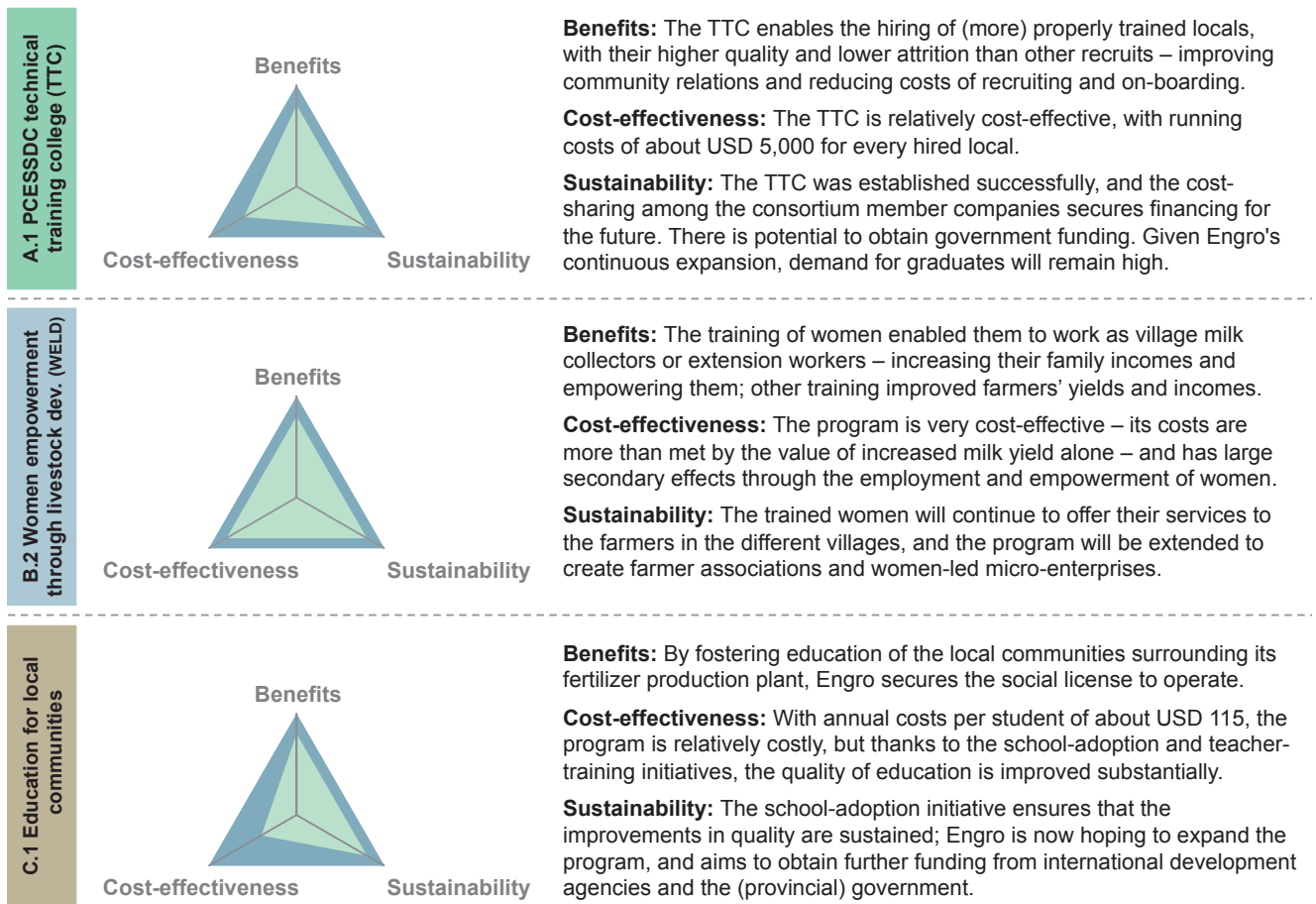


Figure 26: Summary assessment of selected initiatives



to improve community relations and reducing the substantial costs of recruiting and on-boarding. The program seems very sustainable, thanks to the cost-sharing among the various member companies and to the potential for obtaining government funding. Furthermore, demand for properly trained local staff is likely to remain high, owing to Engro's continuous expansion.

- **The Women Empowerment through livestock development (WELD)** program has large positive effects, transforming the lives of the trained female milk collectors and trained female extension workers, and greatly improving the lives of the trained female farmers by boosting their yields and hence incomes. The increase in milk yield alone more than pays off the investment of Engro and its partners, so the program is considered highly cost-effective. The trained women are now economically active, and will continue to offer their services to farmers, so the program can also be considered very sustainable. In addition, the program is to be extended by creating female-led micro-enterprises and farmer associations, which will increase the employment effect and facilitate future knowledge exchange.
- **Engro's education program for local communities** is highly beneficial for the company, in that it improves community relations and secures the social license to operate (espe-

cially for its highly sensitive fertilizer plant). For the community, Engro's engagement increases the quality of education considerably. The adoption of schools and the contribution to teacher training make the benefits sustainable. Engro is now in discussion with the provincial government, and with international development agencies like USAID, to secure additional funds. The program currently involves an annual investment of about USD 115 per student, which means that it is not particularly cost-effective; but cost-effectiveness is not the main focus of these activities, and Engro is truly transforming the education activities in the villages surrounding its facilities.

The analysis of the costs and benefits of Engro's measures to close the skills gaps can be summarized as follows: Engro invests heavily in the skills development of its (prospective) workforce, in the value chain, and in the community. The total one-off investment has been USD 1.6 million, and running costs USD 1.3 million – jointly amounting to far less than 1% of the group's 2014 revenues of USD 1.7 billion.¹⁵ In return, Engro benefits from a very well-trained workforce, and is able to develop skills as well as leadership personnel internally. This is particularly important, as the company is constantly expanding – venturing into other geographies and sectors – and its personnel

require a firm understanding of the group’s values and core business. By supporting the TTC and local schools, Engro not only improves its ability to recruit highly qualified workers – workers who tend to stay with the company longer and potentially climb the career ladder – but also improves community relations by increasing the share of locals among its workforce. By engaging in skills-development projects for its suppliers of rice and milk (who are also clients for its fertilizer business), Engro enhances their productivity and the quality of their products, and at the same time fosters the sales of its own fertilizers. For the local communities, there is a substantial social impact – especially for women – as the initiatives improve the livelihoods of thousands of small-holder farmers and provide employment for more than 500 trained women. The empowerment of women is transformative for the lives of the women themselves and for the patriarchal Pakistani society as a whole. As for Engro’s program of providing high-quality education for the villages surrounding its production facilities, this engagement has large positive effects on the communities, and boosts the life prospects of the children being educated. From Engro’s own perspective, its education activities improve community relations and secure the social license to operate.

7. Conclusion

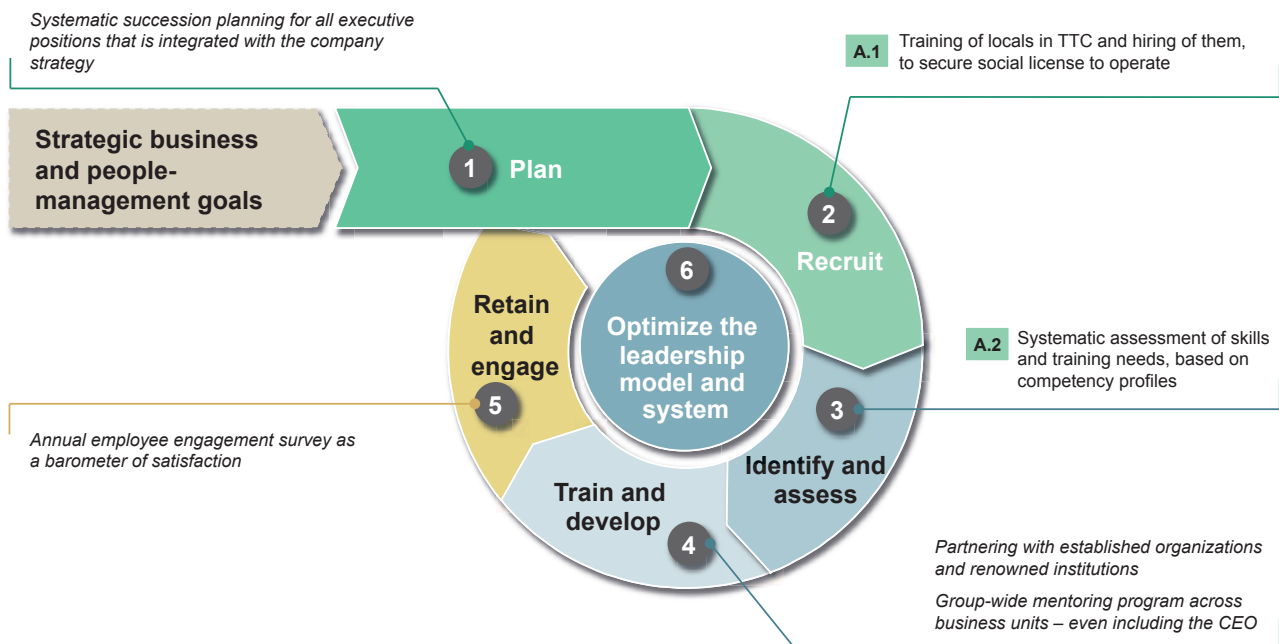
Engro’s skills-development initiatives aim mainly at addressing the skills gaps among the local workforce and among its suppliers. The CBA of the initiatives revealed substantial benefits for Engro and for the local community.

Good practices from Engro that can help companies to close their skills gaps

From studying Engro’s initiatives and activities, it is possible to identify a number of good practices for workforce development. Figure 27 presents an overview of these practices along the HR value chain – including those relating to the topics of recruiting and retaining employees.

Among these good practices it is worth highlighting four elements that other companies could replicate or adapt to their specific needs and context:¹⁶

Figure 27: Overview of good practices from Engro’s workforce development



Note: Measures that are printed in italics are not described in detail in this case study.

1. **Systematic succession planning, taking into account the company's strategy.** Engro has a seven-step framework for CEO succession planning that maps the current leadership pipeline against the three- to five-year strategy. Through talent identification and specific training courses, the company ensures that more than three successors are available for each management position (good practice 1.3 in the good-practice framework for workforce development described in Chapter 2.1).
2. **Conducting an employee engagement survey as a barometer for employee satisfaction.** Each year, Engro conducts an engagement survey among its employees to assess their level of satisfaction. Employee engagement is a central objective and KPI of the company's HR strategy (good practice 5.3).
3. **A group-wide mentoring system to develop the next generation of leaders.** Engro has a group-wide mentoring system for all top talents across its business units. The mentoring is centrally administered through the group's HR department. Mentors include the CEO and other directors, who provide coaching to talented prospective leaders. By spanning the different business units, the mentoring system fosters the development of a group-wide network and reduces silo-thinking (good practice 5.5).
4. **Partnering with established partners and renowned institutions.** For its internal development of skills and talents, Engro cooperates with renowned organizations like Dale Carnegie or the company Aon Hewitt – organizations that have a confirmed track-record in HR development, and ensure that Engro's activities incorporate state-of-the-art knowledge and proven concepts (good practice 4.3).

Specific factors for improving the business case

The CBA of Engro's TTC showed that the program is clearly beneficial to Engro, thanks to the expected higher productivity and lower attrition rate of the TTC graduates as well as the non-financial benefits. To further improve the business case, it is worth considering two actions.

1. **Tailor the curriculum to Engro's needs (and to those of the other companies).** Although TTC students receive a very practical education, they still have to undergo two years of apprenticeship training at Engro. By including even more practical elements (such as another internship) into the curriculum, it would be possible for new hires to begin work while already familiar with the machinery and processes at Engro (or other companies). In that way, the two-year apprenticeship could be shortened, and the on-boarding costs could be considerably reduced (good practice 4.4).

2. **Leverage the graduates' special qualities.** Through having close family ties in the area, TTC graduates are less likely to quit the company for work abroad. Engro is likely to remain their center of reference and interest, so they tend to be focused and keen to accumulate experience. To those of particularly high quality, it is worth offering a fast-track career path as soon as they join the company (good practice 4.6).

Lessons learned from Engro

From the analysis of Engro's activities, it is possible to derive lessons learned that might help other companies to address their own skills gaps more successfully:

- **Talented graduates should have the prospect of a fast-track career.** To fully leverage talent and to provide additional incentives for top-performing students, consider introducing a structured fast-track career path. Combined with a mentoring program and with dedicated training plans, a fast-track scheme would enable outstanding graduates to move quickly into managerial positions (good practice 4.6 in the good-practice framework for workforce development described in Chapter 2.1).
- **Transparency of available and required competencies is crucial for talent development.** It is important to understand fully and explain clearly the required competencies for different positions and levels (competency profiles), and to assess employees' performance against these competencies. In that way, companies can identify gaps and make training plans accordingly (3.1).
- **Leveraging employees in supplier- and community-development activities helps to increase employee satisfaction.** If a company integrates its employees into its skills-development initiatives as trainers, it can imbue the employees with a feeling of pride and purpose, and thereby boost their engagement and loyalty. At Engro, these activities have become an integral part of the general company culture, which stresses that employees should contribute to improving the lives of the population at large – "Together we will change the world" (good practice 2.3 in the good-practice framework for closing skills gaps in the broader community described in Chapter 2.3).
- **Seek and make use of public funds for large-scale skills-development programs.** Engro is a showcase example of a private-sector company that involves public development institutions, such as GIZ and USAID, in planning, implementing, and thereby boosting the impact of skills-related activities in the value chain. Companies – and even Engro, could go further, and tap such organizations not just for their funding but also for their expertise, especially on large-scale or very ambitious skills-development projects.

Notes

- ¹ Engro will be used to refer to the holding itself and to group-wide activities. When the different business units are under discussion, their specific names will be cited.
- ² Information provided by Engro. If no specific reference is given, information in this case study is based on information provided by Engro and/or based on expert (phone) interviews in July and August 2015.
- ³ The following exchange rates are used: 1 USD = 102.01 PkR.
- ⁴ The Express Tribune (2012): The growth of the “billion dollar club” in Pakistan. <http://tribune.com.pk/story/483287/corporate-revenues-the-growth-of-the-billion-dollar-club-in-pakistan/>
- ⁵ The World Bank: Secondary school enrollment. <http://data.worldbank.org/indicator/SE.SEC.ENRR/countries/PK?display=graph>
- ⁶ The World Bank: Tertiary school enrollment. <http://data.worldbank.org/indicator/SE.TER.ENRR/countries/PK?display=graph>
- ⁷ United Nations Educational, Scientific and Cultural Organization (2012): National Roundtable on Technical and Vocational Education and Training, Concept paper and Government of Sindh, Karachi (2013): Sindh Employment Trends 2013 skills.
- ⁸ Government of Sindh, Karachi (2013): Sindh Employment Trends 2013 skills.
- ⁹ “These provincial averages, however, mask considerable variations within the urban-rural sectors in the province; nearly 56 percent of the rural labour force has no formal education and/or education less than one year, while the corresponding figure for the urban sector is much less at 20.6 percent.”
- ¹⁰ Ibid. In Pakistan, the national standard for working age population is 10 years and above.
- ¹¹ Ibid.
- ¹² Care International in Pakistan (2015): Enhancing Socioeconomic Development through Investing in Human Capital in Punjab and Sindh.
- ¹³ Engro has very different business areas, requiring different kinds of skills and professionals, so the internal skills-gap assessment was conducted on just one of them – Engro Fertilizers. However, the general results are also valid for all other businesses within Engro.
- ¹⁴ The initiatives listed here represent just a selection of highlights from the Engro group, especially those of Engro Fertilizers. To discuss all the initiatives of the different business units would clearly be beyond the scope of this case study.
- ¹⁵ The following discussion applies the techniques for assessing social impact presented in Chapter 3.
- ¹⁶ The other good practices were described in detail in the sections above.

Hape Holding AG

A sustainable toy manufacturer in China fosters youth apprenticeship and develops its suppliers

Executive summary

The Hape Holding AG (hereafter Hape) is a leading manufacturer of toys made from renewable materials such as wood and bamboo. The group's main production facility is in Beilun, in East China. Producing innovative and high-quality toys, Hape is reliant on a supply of adequately qualified workers – workers who combine a thorough understanding of wood as material with technical ability at handling the increasingly complex machines. Guaranteeing high quality to its clients, the company also depends on the quality of its supplied and pre-processed materials. For these reasons, and to give something back to society, Hape has introduced various initiatives to address skills gaps on three levels – workforce development, skills development along the value chain, and closing skills gaps in the broader community.

Within this broad approach to tackling its skills gaps, a few particular initiatives deserve highlighting. With regard to workforce development, Hape has developed a dedicated three-year vocational-training program for wood-mechanics to ensure the supply of adequately trained workers. With regard to skills development along the value chain, the company also trains its suppliers of wood products and bamboo products in order to improve the quality and punctuality of its supply. As part of its community-development activities, Hape runs an Experience Center which offers the full collection of Hape toys for children to play with and is building a bamboo kindergarten in the company-owned bamboo forest in order to raise awareness of the educational value of play, and to promote a more nature-oriented education from the very start of a child's life.

Hape's wide-ranging initiatives to address skills gaps have significant positive effects on the company, its employees, the suppliers, and the broader community. Hape itself benefits from a better-educated and highly motivated workforce, product innovations and higher quality of its supplies and final products. Its employees have better career opportunities at Hape, with the prospect of higher earnings and an increased "market value". For suppliers, the initiatives have opened up new earning opportunities and have raised the safety and efficiency of their production. And as for the wider community, it profits from more and better jobs not only in Beilun but also in the communities of the numerous suppliers and the location of the training school. Furthermore, better-educated employees are able to support their families and they tend to value education more – a benefit for generations to come.

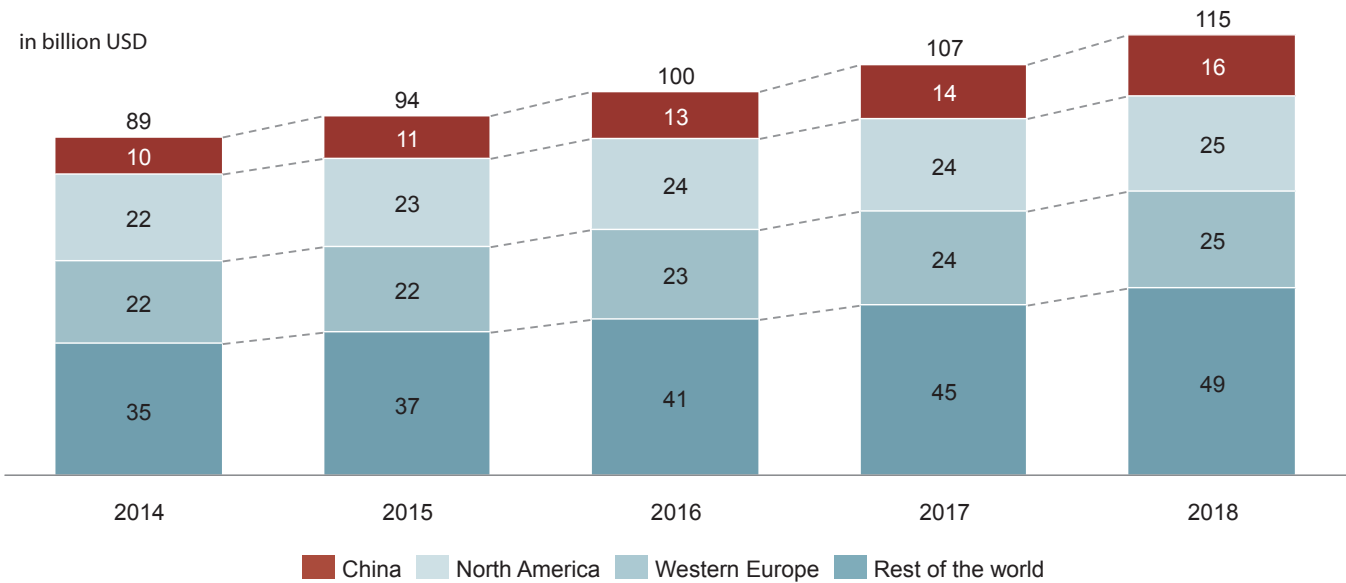
The commitment of the company's founder and top management to pursuing skills development and forming long-term relationship with its employees was one key success factor of Hape's initiatives. In addition, Hape's emphasis on "training the trainers", and enhancing the transfer of knowledge from international experts to employees at the local level, serves as a model for other private-sector enterprises that would like to invest in closing skills gaps. Among Hape's various initiatives, there are three aspects worth emphasizing on account of the positive experiences they demonstrate and their potential for replication by other companies: a systematic identification and development of internal talent; setting up a vocational training program with external partners; and fostering intra-company knowledge circulation through international secondment programs. Leveraging its experience from China for its new production facility in Romania, Hape seconded new Romanian staff to China, and has also formed a partnership with a local vocational school in Romania to train employees. Three good practices could be replicated by other companies in order to address similar skills gaps in their workforce: systematically evaluate and develop internal talent (good practice 3.2 in the good-practice framework for workforce development described in Chapter 2.1); develop a vocational training program tailored to the company's needs (4.4) and foster intra-company knowledge circulation (4.5).

In order to tackle skills challenges successfully, a number of recommendations have been identified, the most important ones being: reduce attrition rates of new hires in the first months; increase the appeal of work; and ensure that the relevant skills are taught. Hape's experience has shown that – by investing in the education of the workforce, along the value chain, and within the community – it is certainly possible to bridge local skills gaps, and that such investment can prove profitable in the long run.

1. Company background

The Hape Holding AG, founded in 1986 by the German entrepreneur Peter Handstein, has advanced over the last two decades to become one of the leading producers of educational wooden toys. In 1995, after years of continuous growth within Europe, Hape expanded to Beilun (Ningbo) in East China, where it created an innovative factory adopting ecological, technological, and efficiency practices. The company's ecological ethos is evidenced

Figure 28: Market size and forecast for North America, Western Europe, China, and the rest of the world



Note: Individual values may not sum up to totals due to rounding errors

by using renewable raw materials as much as possible and by its exclusive use of water-based colors in production.¹ As an Original Equipment Manufacturer (OEM), Hape produces wooden toys for renowned international companies (about 60% of sales), and has also developed its own brand Hape as another key area of activity.

Experiments in using the local bamboo plants for toy production led to an alliance with UNESCO and the first full line of bamboo toys in 2005. The recent acquisition of George Luck Puzzles™ and Käthe Kruse® plush toys has expanded Hape’s product portfolio. Hape works together with bamboo- and wood-suppliers in the nearby regions of Anji and Yunhe, who produce spare parts as well as wooden and bamboo products.

The company has been growing continuously over recent years: it now employs about 1,400 people worldwide, and sells its products in over 60 countries across various regions. Hape aims to double its revenues by 2018, to reach USD 193 million, by increasing sales of its own brand – particularly in China.²

2. The global toy industry’s irresistible rise

Following long continuous growth, the market for traditional toys and games (excluding electronic games and toys) has developed into a global USD 94 billion business, and is expected to grow further by 7% annually until 2018 (see Figure 28).³

Western countries used to be the key sales destinations, but today Asia, Western Europe, and North America represent equal-sized markets, each with USD 23 billion of sales in 2015.⁴ The outlook for the global toy market remains positive, with strong growth outside the traditional core markets.

Taking a global view, the People’s Republic of China is the world’s biggest producer and exporter of toys. It is responsible for 68% of all toys sold in the US, and for 85% of toys sold in Europe.⁵ As well as being the largest manufacturer, China is also the most promising market: its own demand for toy products is projected to grow by 12% annually until 2018, offering enormous sales potential for manufacturers.

3. The workforce challenge faced by Chinese businesses

Significant improvements have been made in China over the last two decades in regard to education. By implementing compulsory schooling for children aged 6 to 15, China has attained universal primary enrolment and gender equality in education. Some 74% of students also go to upper secondary school: 43% of those study at a vocational institution, and the remainder at a general secondary school without an occupational focus.⁶

Despite these great strides in the last couple of years, China will need to invest even more in education if it is to fully achieve the transition to an upper middle income country. The Chinese economy is structurally changing from a manufacturing-based

All notes at the end of this chapter (Page 75)

to a service-based economy. Service industries took over from manufacturing industries as the main growth driver in 2013 – both in terms of share of GDP and in terms of GDP growth.⁷ This transformation necessitates a large number of skilled workers (those with university degrees or vocational training) in the upcoming years.

According to estimates, 24 million skilled workers could be lacking by 2020, assuming that no major policy changes are made.⁸ About two thirds of this shortfall is expected among vocationally trained workers, and one third among university graduates. This predicted skills gap could in the worst case lead China into the “middle-income-trap”, a well-known phenomenon where emerging economies stagnate and fail to progress into the ranks of high-income countries.⁹ Until 2030, the shortage of (skilled) workers is expected to intensify even further, owing to the long-term negative effects of China’s one-child policy and the substantial time lag before the recent changes in population policy have an effect.¹⁰

China used to be a cheap offshore production location for low-value-added manufacturing, but manufacturing wages rose 11.9% annually between 2001 and 2012. Productivity has been growing too, but at a slower pace.¹¹ That indicates a worrying trend: productivity, which depends on the skill level of the labor force, needs to increase; otherwise, jobs and potential jobs will migrate to other emerging markets.

In short, China needs to increase its labor productivity if it wants to remain a competitive production location; and for that to happen, China needs to have sufficient high-skilled workers. In the long term, education-policy reforms by the Chinese government, such as adjustments to the curriculum, can help in closing the skills gap; but currently, companies face a mismatch between the skills required and the skills being taught. Therefore, the private sector needs to invest in skills development. For Chinese employees, the most important characteristic of a job is the opportunity it offers for learning and career development – this characteristic ranks higher than work-life balance or an attractive salary – so investing in skills development also constitutes an asset for companies in respect of recruiting qualified employees.¹²

4. Hape’s skills gaps in production and administration and among suppliers

Hape is experiencing skills gaps both in production and in administration: graduates prefer working in industries with a more modern image than wood-processing, such as electronic goods manufacturing. In addition, vocational schools and universities have failed to update their curricula to meet the changing needs of the market with regard to hard and soft skills. For instance, one attribute often missing among new Hape employees is the ability to solve problems in groups – a key skill in modern-day organizations.

Figure 29 provides an overview of Hape’s internal skills gaps, showing that the gaps are due mainly to quality (where the actual candidates lack the necessary skills) rather than to quantity (where too few suitably skilled candidates are available, since there is an insufficient number of them in the labor market as a whole).

Production: Difficulties in recruiting and retaining qualified production workers

In production, the company struggles to recruit and retain qualified wood-workers who have mechanical skills suitable for a variety of machines and tasks, and who possess a deep understanding of wood as production material. Given Hape’s ambitious growth targets, however, a sufficient supply of wood-workers is crucial. As with other companies in the toy industry, Hape also finds that young people are now less willing to work in the noisy and dusty environment of a wood-workshop: they prefer cleaner working conditions, such as those offered by plastic-injection molding companies or white-collar jobs in the services industry.

Hape, like other manufacturing companies, is increasingly investing in automation to address the scarcity of young and adequately trained production workers, and is also reducing production costs and raising quality standards. These processes are driving the need for better-qualified personnel.

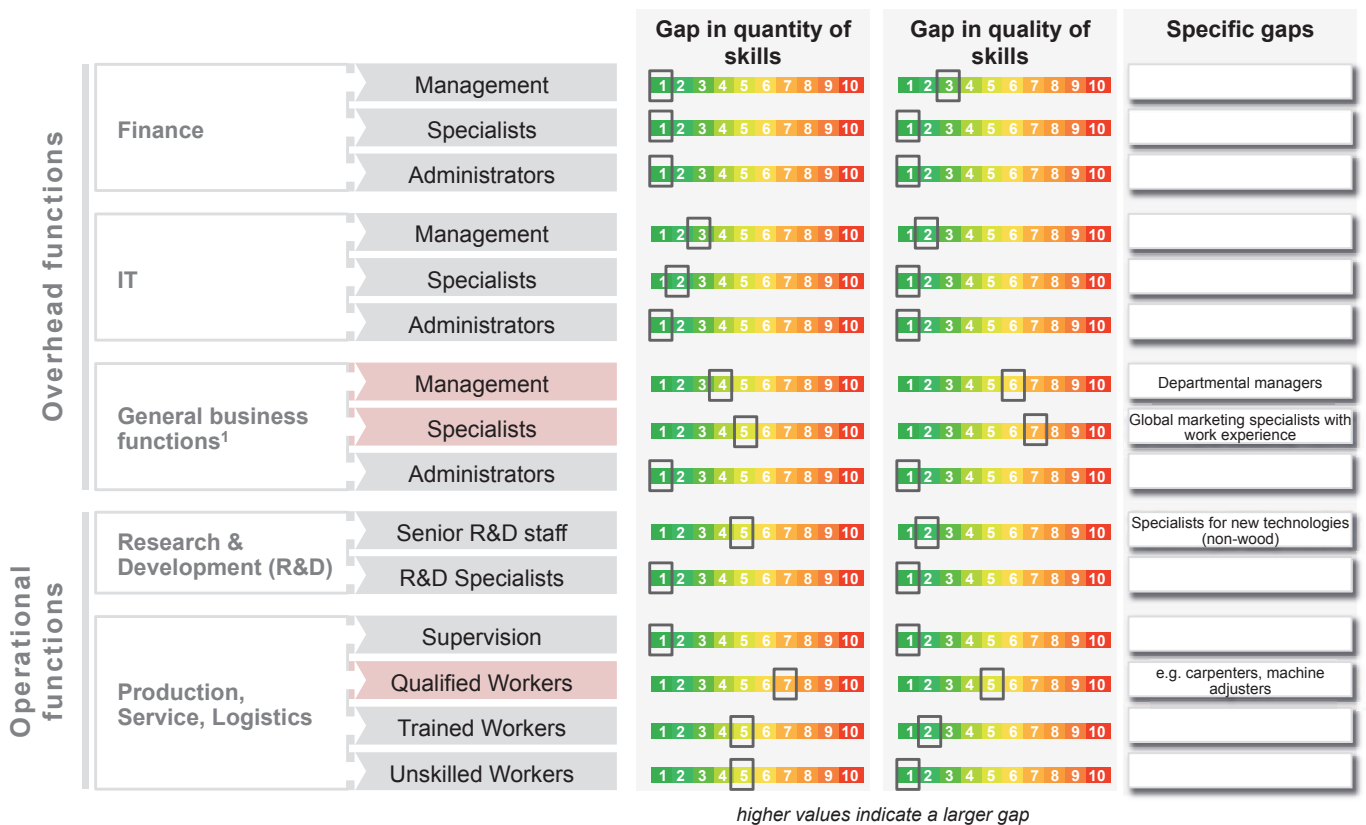
“A production worker aged 40 is actually considered young in the toy industry.”

Manager of a large supplier in Yunhe

Retention of new hires – a challenge for Hape

With an average time of 15 days to fill a vacancy in production, it is currently not particularly difficult to find new workers. The trouble is that almost 70% of these new hires leave the company within one year – most of them during the first three months. Excluding these departures, the annual attrition rate at Hape is only 11%, so clearly the key challenge is that of retaining new hires. Similarly, the attrition rate for newly hired administrative staff is 32%, compared to just 15% if the new hires are excluded. The average attrition rate in China is about 16%¹³, showing that Hape is actually very able to retain workers – provided that they stay for at least one year. Workers are paid for piece-work – i.e. their pay is based on their output – so new workers often receive only the minimum wage during their early weeks on the job, and that increases their discontent with the uncomfortable work environment. For Hape, the first month also serves as a probation period, during which the new hires’ performance is assessed. Attrition during these first months is considered part of the normal recruitment process. Since the company recruits about 500 workers each year to replace leaving staff, the high attrition rate among new hires involves a sub-

Figure 29: Assessment of Hape's skills gaps



1. Human Resources, Marketing and Sales, Communications etc.

stantial cost, as new workers have to be trained and productivity increases considerably with experience. And hiring itself is costly, as positions have to be advertised, candidates have to be interviewed and tested, and formal administrative work has to be completed.

Administration: Difficulties in filling specialist positions in marketing and design

In administration too, Hape struggles to attract adequately trained and experienced marketing experts to strengthen its brand globally. The reason is not only a general shortage of such personnel in this field in China, but also the location of the company's headquarters in Beilun. The city is less attractive for job-seekers than other cities in the region, such as Shanghai or Hong Kong. Similarly, it is difficult for Hape to attract the right designers for its local design office in China – specifically, designers with sufficient knowledge of Hape's international target markets. For this reason, and to ensure proximity to the European and other western markets, one of the international design teams is based in Italy.

Suppliers: Skills gaps in complying with Hape's high standards

Guaranteeing high quality for its clients, Hape is highly reliant on the quality of the supplied products and spare parts. Thanks to close monitoring of its supply base, Hape realized that many

suppliers lacked knowledge of modern production and quality management standards, process optimization, and environmental, health and safety standards.

5. Addressing Hape's skills gaps at three different levels

To bridge these skills gaps, Hape has implemented a number of initiatives that can be divided into three different types – workforce development, skills development along the value chain, and closing skills gaps in the broader community (see Figure 30). The first level comprises all measures that target the company's current or prospective workforce, such as internal training or vocational training programs. The second level includes training courses for suppliers, while the third level targets the skills development of the (local) community – for instance, through the construction of a local school.

5.1 Investing in your own people: Hape's workforce development

As the education system and labor market do not provide the specific skill set that Hape needs for its high-quality products, the company invests a lot in its current and prospective work-

Figure 30: Overview of Hape’s initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 Employee training program	Improve skills of new hires and experienced staff
	A.2 Identification and promotion of talented administrative staff	Form top talent pool for leadership positions
	A.3 Bamboo Research Center (2014–2016)	Generate new innovative ideas for bamboo products and improve skills in creative thinking and design
	A.4 Vocational Training Program (2011–2014)	Ensure (long-term) supply of adequately qualified wood-workers
B <i>Value-chain development</i>	B.1 Training of wood-suppliers (2006–2008)	Improve EHS among suppliers, as well as quality and punctuality of supply
	B.2 Training of bamboo-farmers (2007–2010)	Improve EHS among suppliers as well as quality and punctuality of supply; develop new products
C <i>Community development</i>	C.1 Hape Experience Center (2011–2014)	Promote creative thinking at a young age, and sales of Hape products
	C.2 Bamboo Kindergarten (included in research center)	Promote natural way of education, and Hape brand
	C.3 Maria Hope School, Yuzhang Central Kindergarten and Sunshine school	Support (early-childhood) education in poor region, and of disabled children

force. However, the engagement is not limited to the production site in China as the company invests heavily in the training of staff for its new production site in Romania (see Textbox 4).

Developing the current workforce through training and internal advancement of talent

Recognizing the importance of developing new hires as well as experienced staff, Hape has created a comprehensive employee training program for its administrative and production staff. The program comprises more than 25 mandatory and optional courses, such as “ISO (International Standards Organization) and toy regulations”, “Quality Control tools” or “Six Sigma”, that are provided in-house or through external experts.

In addition to these courses, Hape has introduced a sophisticated system to identify and promote talented administrative staff for leadership positions at the management level. All employees are evaluated on a list of published criteria, and are assigned to one of three groups – A, B and C. The performance of employees with high leadership potential in groups A and B is evaluated jointly by all department managers, in order to avoid biased evaluations by department managers that want to keep the talented employees in their own departments. In addition, A and B employees are required to conduct cross-departmental projects in order to gain exposure and expand their company-wide knowledge. They form a talent pool that is continuously trained and prepared for internally filling management positions – for instance, through exchange programs with Hape’s subsidiaries abroad.



Bamboo-lamp in Hape’s Bamboo Design Center

Promoting innovative ideas through university collaborations and research in bamboo

In order to complement its internal design skills, build up skills in China, and give students the opportunity to gain practical international experience, Hape has over the last ten years collaborated with universities from Denmark, Germany, Israel, Switzerland, the US and China itself in setting up workshops, with about 15 students and two professors each year, on innovative uses of bamboo. And in order to further advance knowledge of bamboo as a plant and as a material for toys and construction, Hape began building a Bamboo Research Center in 2014 including a bamboo museum and kindergarten as well as an educational farm next to the actual research facility.

Textbox 4: Leveraging Chinese know-how for the new production facility in Romania



Workers in Hape's Romanian wood-workshop



Seamstresses in Käthe Kruse workshop in Romania

In 2014, Hape decided to expand production to Romania to make full use of the country's abundance of beech wood (which is mostly exported as raw material to China at present), its proximity to the European core market, and lower labor costs than in China. Located in Avrig – a town in the southern Carpathians near Sibiu – the Romanian Hape facilities are producing wooden toys and Käthe Kruse plush toys.

Gaps in skills specific to the wooden- and plush-toy industry

Given the high unemployment rate, the company received a large number of applications to fill its vacancies for production ramp-up, but most of the candidates lacked experience in wooden- and plush-toy production. Accordingly, Hape leveraged its expertise to train workers in its existing production facilities abroad.

Internal knowledge exchange to address the skills gap

Thinking well ahead, the company sent 17 workers, including foremen and production and plant managers, to China for training – some of them for more than a year – to gain a deep understanding of Hape's production processes, its machines specially developed in-house, and its quality standards. The foremen now lead the production ramp-up and train the other Romanian workers.

Similarly, for its plush-toy production, Hape sent four newly recruited seamstresses, who had previously worked in leather and textile production, to Käthe Kruse's production facility in Latvia to train them in the specifics of plush-toy production and the company's high quality standards. During the training, they rotated every two weeks to get to know the different production steps. After two months, their learning progress and skills were evaluated in order to assign them a position matching their skills and preferences, and to prepare them specifically for this position in the remaining three months. Three of the female workers are now employed at Hape as plant manager,

as forewoman, and in quality control. Additionally, during production ramp-up, two Latvians provided further training and assistance in Romania. The sustainability of the training is fostered through an ongoing exchange between the trainees and the trainers – for instance, in mastering the cutting processes.

In comparison with the training offered by other local companies (e.g. glass- and window-makers), the key success factors of the Hape program are: the strong support provided by Hape's production foremen and workers, and the dedicated approach of the school, which offers theoretical classes and practical training in the workshop. The program enables the students to actively perform simpler tasks in the production process instead of just standing by as onlookers.

As sewing is very popular in the region, Hape and the school are currently testing the demand for additional vocational training by offering internships to four young women to train as seamstresses specializing in plush-toy production.

Costs and benefits

By training some workers in its production facilities abroad, Hape has been able to realize a quick production ramp-up and to maintain the company's high quality standards. In plush-toy production, just three months after production began, productivity has already reached 60% of Latvian productivity levels, and the first deliveries of final products have been made. For Hape, the vocational training does not involve major costs, as it was only necessary to revive the pre-existing program and the workshop at the school. So Hape only has to cover the running costs, in the form of wood supply for the workshop, and indirect costs for staff time devoted to training. For the students, the program is very beneficial, in offering them the opportunity to secure a good position at Hape close to their homes in Avrig. The region has a high unemployment rate – the newly created jobs have made positive impacts on the community through increased tax payments and reduced social spending.

Securing a long-term supply of skilled wood-mechanics through vocational training

In the Chinese vocational-education system, the only wood-related apprenticeships are carpentry and carving, but both programs have a poor reputation. Additionally, university and vocational graduates tend to lack essential skills that Hape requires – skills in material management, technical drawing, machine maintenance, and work security. Accordingly, Hape decided to develop a vocational training program for wood-mechanics in cooperation with the government-run National Technical Vocational School in Xingren county in South Western Guizhou, China's poorest province, about 1,700 kilometers south-west of Beilun.¹⁴ This partnership forms part of the development-cooperation scheme involving the twinned cities Beilun and Xingren that was formed in 1998. Hape was already familiar with the region from a previous engagement with a local school, and now chose to set up its vocational program here to foster education and employment of the local young people, while at the same time ensuring a long-term supply of skilled workers for Hape's own purposes. Ideas for establishing a similar program closer to its production facility in Beilun were not pursued, as young people there are no longer willing to work in wood-production and prefer white-collar jobs.



Two vocational students in the school's wood-workshop

The three-year program is guided by the German dual vocational-training scheme for toy technicians and carpenters, combining theoretical lessons in school with practical exercises in the workshop and at Hape. The students spend the first two years in the school in Xingren, then work at Hape's production facility in Beilun during the third year. Hape set up the program at the well-established vocational school by building and equipping a wood-workshop with modern machinery, tools and wood materials for the practical exercises. Most importantly, four teachers were trained by one of Hape's best technical-department employees and by a German carpenter who stayed at the school for the first three years. To enable students from poor families to participate in the vocational training, Hape provides bursaries worth about USD 2,600 per year for the first two years of the program, during which time the students do not receive a salary.

In addition, there is a scholarship scheme for particularly talented students. To provide job-security after the training ends, Hape guarantees to employ at least the best 85% of graduates each year, and helps the other students to find a job if the company cannot contract them. The program has a maximum capacity of 50 places per year. Since its launch in September 2011, a total of 163 students have started the training, of which 17 have graduated to date.

5.2 Skills development along the value chain: Helping others as a way of helping yourself

Since the quality of its final products and hence the reputation of the Hape brand depend heavily on the quality of the supplied and pre-processed materials, Hape also needs to ensure that its suppliers are sufficiently qualified. Accordingly, the company has introduced dedicated initiatives for its wood- and bamboo-suppliers.

Training of wood-suppliers as the foundation for sophisticated supply-chain management

From 2006 to 2008, Hape trained 45 small and medium wood-suppliers in Yunhe in environmental, labor and safety standards, as well as in the principles of wood-processing and product quality. Thanks to two half-year training courses with two training days per week by Hape experts and to a comprehensive training manual, Hape managed to establish norms and standards corresponding to those of the International Council of Toy Industries and ISO. After the training courses, 34 of the 45 participating suppliers received Hape's "Certificate of Resource Protection." Despite introducing these higher standards, Hape was able to win nine new suppliers. At the same time, Hape stopped collaborating with other suppliers that were unwilling or unable to comply with the norms. Eventually, the training and certification laid the foundation for the introduction of systematic supply-chain management (SCM) and the establishment of a local supply-chain office, with seven employees to monitor and ensure the quality of supply from Yunhe. Such a strategic approach to supplier development is considered good practice in developing countries (see Textbox 5).

Today, Hape offers regular training courses for its suppliers – for instance, on health and safety for workers, and on quality and process improvements. Either Hape experts offer these courses for groups of suppliers directly in Yunhe or the suppliers visit Hape's production facilities in Beilun for training. In addition, selected employees of the suppliers can undergo traineeships with Hape in order to gain a better understanding of its production and quality standards. In total, about 70% of Hape's suppliers have received some form of training.

Training of bamboo-farmers as a means to new bamboo products

Hape also offered training courses to its bamboo-farmers in Zhejiang and Anhui province from 2008 to 2010 on optimized bamboo-harvesting and processing, product quality and value creation. After a course on environmental and safety issues, the farmers were trained by Hape experts on ways of creating bamboo products from their harvested raw material. Subsequently, a farmer's cooperative with 55 members was formed, which produced bamboo test cubes for Hape. In addition, three design workshops were held – with students from Tel Aviv, Weimar, Aarhus and Hangzhou – to bring together students and manufacturers with the aim of developing new ideas for bamboo toys.

5.3 Closing skills gaps in the broader community: Looking beyond your own house

Driven by its founder and CEO, Peter Handstein and forming part of the company's mission, Hape has made a point of caring since its foundation. In China, Hape has therefore invested in a number of different initiatives that contribute to closing skills gaps in the local community, especially initiatives targeting early childhood education.

Hape Experience Center and Bamboo Kindergarten: Playing is learning

Hape is very mindful of how important early-childhood education is in creating life skills and professional skills, and in fostering an independent spirit and creativity.¹⁵ Hape also recognizes that many Chinese parents and education authorities do not see the educational benefits of playing, and that they consider the primary purpose of toys is to keep children quiet. So Hape founded the Hape Experience Center as a pilot to raise awareness of a different concept of education. The center is a walk-in kindergarten in Beilun, offering children the opportunity to play with Hape toys under the guidance of specially trained kindergarten teachers, or to take courses in Do-it-Yourself, music, or English. Besides five high-skilled Chinese teachers, one employee is a Bulgarian citizen who specializes in child therapy and teaches western-style early-childhood education based on the children's innate ability to learn through playing.



Hape's Experience Center

Textbox 5: Strategic skills development of suppliers

Facing rising wages and competitive pressure to lower costs, companies from all industries are increasingly shifting parts of their production to suppliers. Without a systematic approach to supplier development, however, companies can run into a frustrating cycle of quality and capacity problems that lead to production interruptions, and require short-term firefighting and costly rush-orders from alternative suppliers.

Experience shows the great benefits of training suppliers to meet specific performance standards. The benefits go beyond quality improvements, and include reliability, punctuality, and improvements in environmental, health and safety, as well as cost-reductions and enhanced supplier loyalty.

To unlock this potential, companies must approach supplier development strategically, though in a way tailored to the supplier. Seven simple guidelines will help to put supplier development on the right track:

1. Target a small number of key suppliers.
2. Focus on what matters most, and do not try to fix everything.
3. Align the organization, and make supplier development a part of Purchasing rather than Research and Development.
4. Choose the right development approach, and specify how much training and what sort of training the supplier needs.
5. Engage and motivate the target suppliers by devising incentives and penalties.
6. Develop a roadmap, and ensure indicator-based reporting.
7. Measure and track results.

Source: Boston Consulting Group (2011): Supplier development. Bonanza or bust?.

Going one step further, Hape now plans to open an integrative bamboo kindergarten for about 40 handicapped and non-handicapped children in the planned bamboo research center to allow children to play in a natural environment. It will take a different educational approach from traditional Chinese kindergartens, which tend to focus sharply on discipline and indoor activities. The kindergarten will feature a nature-experience path in the company-owned bamboo forest, as well as outdoor playgrounds and an educational farm, serving as a showcase for nature-oriented education, and should help to spread the concept in China. The kindergarten is open for day trips by other kindergartens, so that they can give their children a different learning experience. With fees similar to those of normal Chinese kindergartens, the bamboo kindergarten is not profit-driven but rather aims to foster the awareness and value of nature education among parents, pre-school teachers and educationists.

Maria Hope School, Yuzhang Central Kindergarten and Sunshine school

Hape’s founder Peter Handstein funded the renovation of the primary school in Xingren, the Maria Hope School, with the aim of making a return contribution to Chinese society. The initiative involved replacing the old school building, and equipping it with modern facilities and teaching materials. The school’s capacity has more than doubled, to 1,000 pupils from grade 1 to 6. The school is located in a poor area inhabited by many children of migrant workers, so about 600 of the pupils board at the school overnight.



Maria Hope Primary School

Peter Handstein also co-funded the construction of the new Yuzhang Central Kindergarten to replace the old kindergarten that had reached the limits of its capacity. The government-run kindergarten provides early childhood education to the local children.

In Beilun, Hape also supports the Sunshine school for handicapped children, notably through donations of toys. In addition, employees of Hape’s design department devote one day a week to visiting the school and developing toys specifically for the needs of handicapped children, thereby underlining Hape’s long-term commitment to supporting these children.



Outside playground of Yuzhang Central Kindergarten

6. The role of DFIs: DEG as a trusted partner for Hape’s initiatives

DEG has been Hape’s longstanding financial partner in providing equity and now debt financing for the company’s long-term growth, and it has also played a vital role in realizing the various initiatives for addressing the skills gap. Since 2006, DEG has supported Hape within the develoPPP.de program and through a technical-assistance project financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) – catalyzing Hape’s investment in education through additional financing. In providing grants of up to 50% of the individual project costs, DEG has enabled Hape to make the initiatives a reality, and has thereby not only benefited Hape as a company but also made a distinct positive impact on the local communities.

7. The costs and benefits of Hape’s engagement

While the costs of Hape’s numerous and wide-ranging initiatives are based on accounting information, the benefits are difficult to quantify, as they accrue over time and on different levels. Figure 31 provides an overview of the costs and the

different groups of beneficiaries – the Hape company, its employees, its suppliers, and the community. The costs and benefits are described below for the three different types of initiative – workforce development, skills development along the value chain, and closing skills gaps in the broader community.

7.1 Costs and benefits of Hape’s workforce development

Company benefits: Having more and better-trained young employees at Hape

With running costs of USD 72,000 for internal and external training courses, Hape’s employee-training program produces various benefits by improving the safety and productivity of workers, and the quality of production and administration. The internal and external training courses also increase the motivation, retention and career of employees. Witness the relatively low turnover rate – tenures last an average of five years. Of the 300 employees that Hape had in China ten years ago, an impressive total of 250 still work for Hape. They received company shares on completing ten years of tenure, underpinning the company’s strategy to build a long-term relationship with its employees.

With no specific costs, the scheme for identifying and promoting talented administrative staff is very beneficial for Hape, in helping to secure qualified and experienced managers for leadership positions. For the employees, the system is impressively transparent, and enables them to develop leadership skills and climb the career ladder.

The costs of the Bamboo Research Center amounted to more than USD 3.5 million for the construction of the actual center, the integrated bamboo kindergarten, renewable energy supply, and bamboo guest houses. The financial benefits cannot be quantified, but research on bamboo constitutes the basis for future product development, and creates a potential competitive advantage for Hape’s all-bamboo product line.¹⁶ This bamboo product line and the company’s use of sustainable materials have attracted attention from the media – including a report by a leading international broadcasting company – which has promoted the brand on a global level. The workshops with international students, costing about USD 100,000 per year for travel and accommodation, create considerable positive benefits for Hape, as evidenced by the new product ideas that have emerged – for instance, a new bamboo toy (“Totter Tower”) that was developed by a student from Bauhaus University in Weimar and that has now become an integral part of Hape’s bamboo-product offering. The workshops have also proved beneficial from a hiring perspective: several of the participants have returned to

Figure 31: Overview of the costs and benefits of Hape’s initiatives

Type of initiative	Initiative	Costs ('000 USD)	Beneficiaries			
			Hape	Employees	Suppliers	Community
A Workforce development	A.1 Employee training program	Running: ~72 p.a.	+++	++		+
	A.2 Identification and promotion of talented administrative staff	No directly related cost	+++	+++		+
	A.3 Bamboo Research Center (2014-2016)	One-off: 3,579	+++	++	+	+
	A.4 Vocational Training Program (2011-2014)	One-off: 436 Running: ~23 p.a.	+++	+++		+++
B Value-chain development	B.1 Training of wood-suppliers (2006-2008)	One-off: 227	++	+	+++	++
	B.2 Training of bamboo-farmers (2007-2010)	One-off: 312	+	+	+++	+
C Community development	C.1 Hape Experience Center (2011-2014)	One-off: 441	++			++
	C.2 Bamboo Kindergarten (included in research center)	Included in research center	+			++
	C.3 Maria Hope School, Yuzhang Central Kindergarten, and Sunshine school	Privately financed by Peter Handstein	+	+		+++

+ Small benefits ++ Medium benefits +++ Large benefits

work for Hape. The Bamboo Research Center makes Hape even more attractive to international designers and researchers, and helps to increase knowledge exchange and innovation.

Having invested USD 436,000 for the set-up of the vocational training program – i.e. the construction and equipment of the training facilities and the training of the teachers – and financing the limited running costs of about USD 23,000 for scholarships and wood material, Hape begins benefiting from the vocational training when students enter their third year and start working at Hape's production facility in Beilun. These third-year students, as well as the graduates, have received a broad technical education, and have gained a profound understanding of wood as material and a higher awareness of working conditions and safety standards. All of that enables Hape to deploy the students flexibly on different machines, which ultimately leads to higher-quality products. Through the program, Hape also gains access to younger employees that bring fresh ideas to the established workforce.

Employee benefits: Enabling employees to develop their career and increase their earnings

From an employee perspective, Hape's high security and health standards, as well as its continuous training, mean that working at Hape becomes safer for them. In addition, the training courses enable employees to improve their existing skills and develop new skills, and to climb the career ladder. In particular, graduates from the vocational training program, thanks to their enhanced diligence and their understanding of the production processes, have a better chance of climbing the career ladder and becoming team leaders and foremen before they turn 30 years old, and can look forward to a long career at Hape (see the box for a brief case example). By making the workers more productive, the training courses also serve to increase the workers' income – which is based on piece-work – resulting in wages averaging about USD 500 per month (complemented by a comprehensive benefits package), compared with USD 350 per month for a typical worker in the Chinese toy industry.

Story of a beneficiary

The story of 20-year old WeiWei illustrates the social and personal benefits of the vocational training. Coming from a family of construction-workers, she graduated from the program in 2014, and is now working with Hape's state-of-the-art laser-cutting machine. Whenever possible, she sends money home to support her family. The production leader sees a bright future for her at Hape, with the potential to be a team leader in her mid-20s and a forewoman by the age of 30.

Community benefits: Fostering local skills development

For the local community, Hape's approach to internal training and talent development also creates advantages by securing employment and enabling employees to gain a higher income by means of increased productivity. Their families benefit directly, and the community benefits through higher consumption and tax income. Of Hape's workforce-development initiatives, it is undoubtedly the vocational-training program that generates the most social benefits for the community.



Vocational students in the school's wood-workshop

Hape emphasizes that its vocational training program should not be viewed primarily as a recruiting instrument but rather as a way of contributing to the skills development of young people in the less developed Guizhou province. The main benefit is to enhance the education and employment prospects of the children in the region – some of them from ethnic-minority families. Most students come from families with a low level of formal education, with the parents engaged in farming or construction work. By increasing the students' awareness of the importance and the long-term benefits of education, the initiative extends its positive effect to future generations. In fact, the positive impact goes beyond education: graduates who leave Hape usually return home to work or to start their own businesses, and thereby create additional job opportunities and contribute further to the welfare of the community.

7.2 Costs and benefits of Hape's skills development along the value chain

Company benefits– and benefits for the suppliers: Creating a win-win situation through the training courses

Hape's training program for wood-suppliers had one-off costs of USD 227,000 for the trainers and training material. As a consequence of its wood-supplier training courses and the resulting introduction of a supply-chain management system, Hape was able to win nine new suppliers, and has benefited

from improvements in product quality, as measured by first-pass rate and on-time delivery. From 2011 to 2015, the first-pass rate of a sample of five suppliers that received training increased from 80.7% to 86.1%.¹⁷ And from 2011 to 2014, the number of Hape's suppliers using water-borne paint increased from 11 to 21, to the benefit of workers and consumers alike. Through systematic supplier development, Hape was able to increase its purchasing volume from suppliers in Yunhe from USD 8 million in 2006 to USD 23 million in 2014. Looking ahead, these improvements in supply are vital for Hape's future growth, which can only be realized through an increase in high quality products from well-selected suppliers.

Thanks to the training of bamboo-farmers, which had one-off costs of USD 312,000 for the trainers and equipment, Hape was able to develop one new bamboo product. Unfortunately, the trained bamboo-farmers no longer work in the cooperative, and some have changed to a different industry. But Hape continues to collaborate closely with two bamboo-product suppliers in Anji, and purchases goods with an annual value of USD 1.1 million, thereby securing about 200 jobs with the suppliers.

Of course, the main beneficiaries of the wood-supplier training are the recipients – the suppliers themselves. The suppliers benefit from substantial safety improvements through improved awareness on the part of managers and workers, as well as from higher product quality and more efficient processes. These advances enable them not only to fulfill Hape's demanding requirements but also to win new clients. The incentives and pushes for continuous improvements, combined with Hape's best practices and cutting-edge technical knowledge, give the suppliers a competitive advantage over their competitors. This success shows how Hape goes well beyond the training activities of other companies, which focus more on soft skills for management and communication.

Community benefits: Creating and securing employment in the community

Regarding community benefits, the training courses for suppliers strengthen the local communities by securing and creating employment among suppliers, thereby benefiting workers and their families, as well as the community as a whole through higher consumption and tax receipts. There are spillover effects on other toy producers in Yunhe too: Hape's initiative has set new environmental, health and safety standards, as well as production standards, which other suppliers have to adopt if they want to avoid losing staff and revenue to more compliant competitors. In this sense the training courses have managed to improve working conditions locally, as well as closing skills gaps.

7.3 Costs and benefits of Hape's closing skills gaps in the broader community

Company benefits: Establishing Hape's brand and improving government relations

The costs of the Hape Experience Center amount to USD 441,000, while the costs of the bamboo kindergarten are included in the bamboo research center. Both initiatives were not primarily designed to yield a financial return but are aimed at contributing to local skills development. Nevertheless, the experience center and bamboo kindergarten do have an important marketing role for Hape through favorable media coverage. The initiatives' revenues cannot yet cover the running costs of the project – notably, the teachers' salaries. But the non-financial benefits are clear: reinforcing the Hape brand in the Chinese market, and thereby helping Hape in its aim of doubling its revenues by 2018 and becoming the number one toy brand in China. If the market response in Beilun is positive, the plan is to open new branches to spread the concept, and thereby increase the impact on skills development. In addition, Hape's relationship with local government and civil society in Beilun and Xingren has improved, thus reducing political risks such as the chance of local-government opposition to future investment projects. Note, too, that Hape China has a good reputation locally and its founder Peter Handstein has received the award of Ningbo Entrepreneur with most Social Responsibility from the local government, as well as a series of other honors. Finally, by further expanding the production base from China to Romania, Hape is also building bridges between governments, at both regional level (Avrig and Beilun) and national level (Romania and China).

Community Benefits: Closing the local skills gaps

Hape's community-development initiatives contribute to closing the skills gaps by providing education to more than 1,000 children in the less developed Xingren county – many of them from families of migrant workers with little school education. The vocational school makes a long-term positive impact on employment in the region and raises the perceived value of education. Additionally, Hape's kindergartens are helping to transform the approach to early-childhood education in the long term. The attention that the initiatives are receiving – from education authorities, parents, and other kindergartens – is very encouraging.

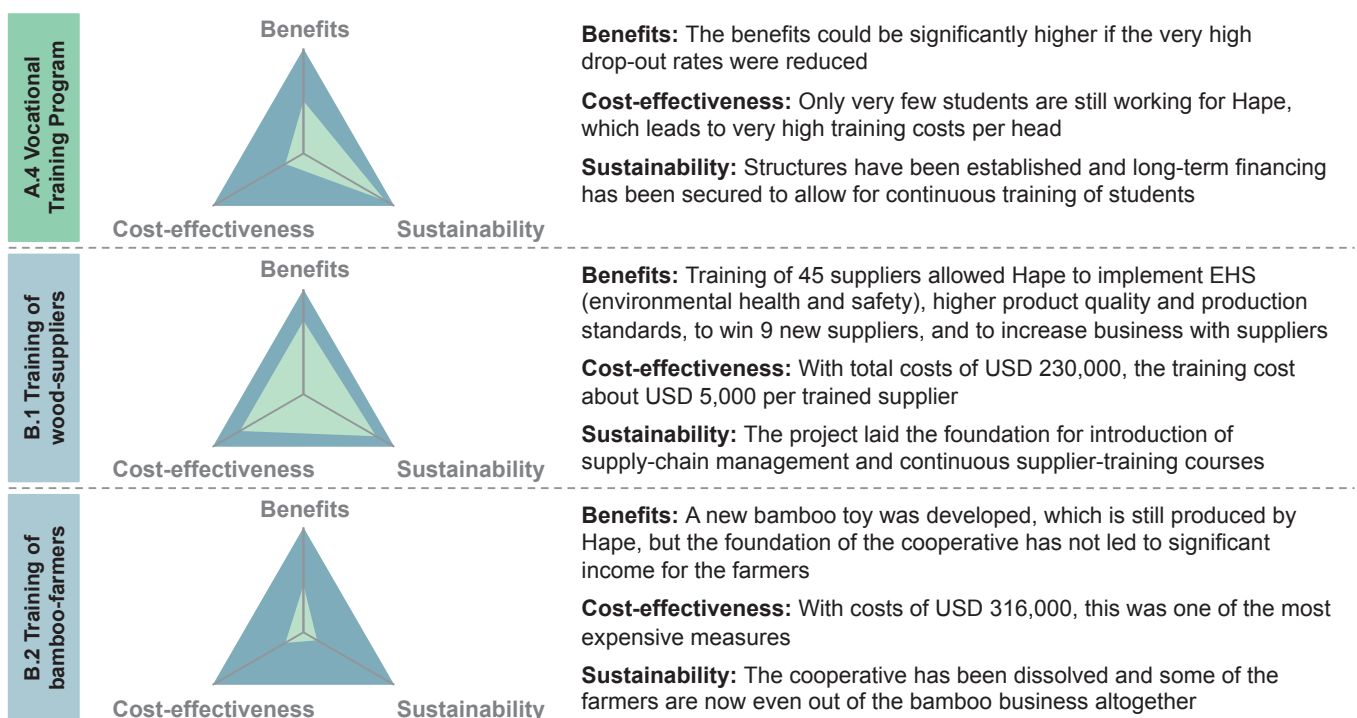
7.4 Overall assessment of costs and benefits

Figure 32 provides a summary assessment of three selected initiatives along three dimensions – benefits, sustainability, and cost-effectiveness. The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative. Looking at Hape’s vocational training first, you can see that the initiative ranks high in terms of sustainability, since structures have been established and long-term financing has been secured, but that there is still room for improvement with regard to benefits and cost-effectiveness, mainly owing to the high drop-out rates and subsequently high costs per trained worker for Hape. Therefore, the business case of the program is not yet positive. A comparison of the two supplier-training programs reveals considerable differences: the wood-supplier training program had far larger and more sustainable benefits than the training program for bamboo-farmers, which turned out to be relatively expensive without having a significant long-term effect.

Weighting the overall costs and benefits of Hape’s broad range of initiatives produces the following summary: Hape has invested heavily to address skills gaps on all three levels – within the company’s own current and prospective workforce, with suppliers, and within the local community.

The initiatives listed in Figure 32 have directly measurable one-off costs of USD 1.42 million and running costs of USD 95,000 per year – equivalent to about 1.5% and 0.1% of Hape’s annual revenues respectively. For this investment, Hape has been able to reap substantial benefits: through its workforce-development program, the company was able to upskill its employees, to increase productivity and retention, to fill management positions internally, and to train some highly qualified wood-workers for its production. Investment in suppliers significantly increased the quality and timeliness of inputs and broadened the supplier base. Finally, its investment in the local community helped Hape to promote its brand in China, to open up a new sales channel, and to foster good relations with local government. Some of these benefits are hard to measure, and most of them are even harder to quantify. However, they feed into Hape’s company values and its commitment to forming long-lasting relationships with its employees, suppliers and the community. Taken together, the overall net benefit of the initiatives does appear to be a positive one – even though some of the initiatives were implemented without the direct intention of producing a financial return.

Figure 32: Summary assessment of selected initiatives



8. Conclusion

Hape is taking a very broad approach to skills development – tackling skills gaps in its workforce, among its suppliers and in the wider community. The initiatives were not primarily intended to yield a financial return; they reflect the commitment of Hape and its founder to the development of employees and to fostering (early-childhood) education. Nevertheless, they have turned out to be very beneficial for the company as a whole, its employees, suppliers and the wider community.

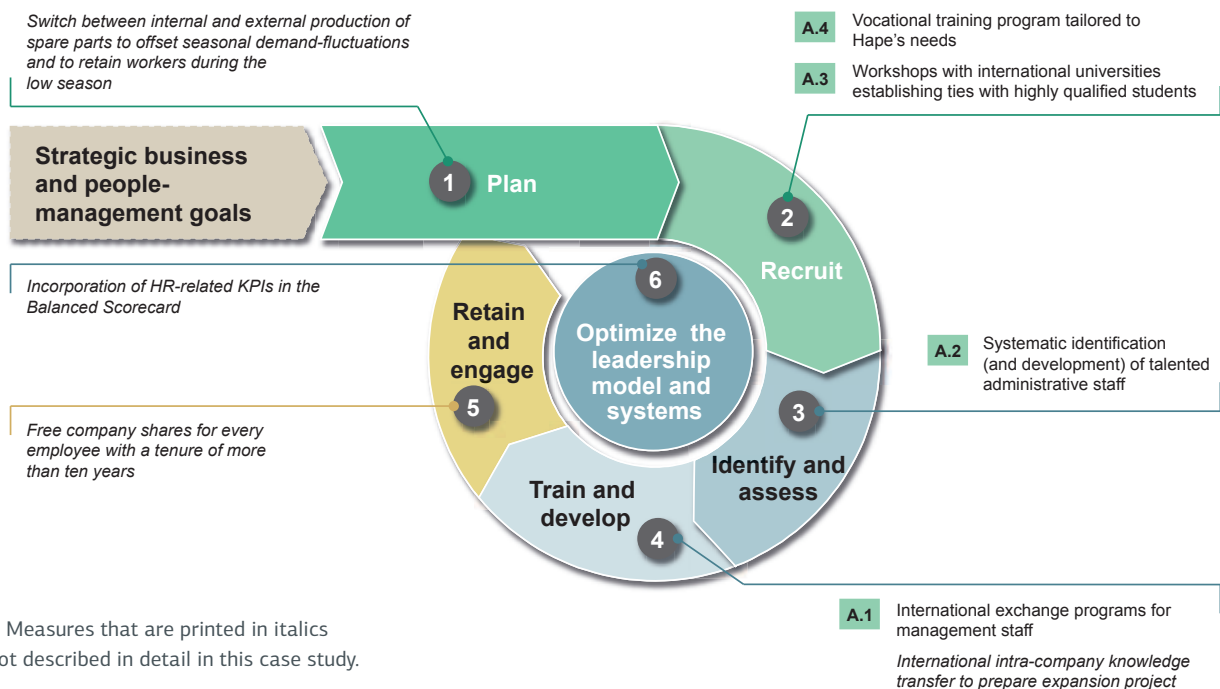
Good practices from Hape that can help companies close their skills gaps

From studying Hape’s many and varied initiatives, it is possible to identify several widely applicable good practices. Figure 33 presents an overview of these good practices for workforce development, related to topics ranging from planning to retaining and engaging employees.

Among these good practices, it is worth highlighting three elements that other companies could replicate or adapt to their specific needs and context:

- 1. Systematic evaluation and development of internal talent (A.2).** It is conducted through a transparent evaluation scheme (A, B, C logic) that identifies employees potentially suited for leadership positions. A broad-based evaluation by all department managers for A and B employees prevents line managers from clinging on to their talented staff; and the promising candidates are given the chance to carry out cross-departmental projects to gain company-wide exposure and knowledge (good practice 3.2 in the good-practice framework for workforce development described in Chapter 2.1).
- 2. Development of a vocational-training program (A.4)** with an established vocational school ensures the long-term supply of adequately skilled employees. It does so by developing a curriculum tailored to the company’s needs, by training the instructors accordingly, by undertaking to hire a large number of graduates, and by providing education to children from disadvantaged families (good practices 4.3 and 4.4).
- 3. Intra-company knowledge circulation (A.1).** It is maximized through international exchange programs for managers and through traineeships for new production workers in established facilities. Such schemes should function as disseminators of knowledge for new hires, especially when production expands to new geographical regions (good practice 5.5).

Figure 33: Overview of good practices from Hape’s workforce development



Note: Measures that are printed in italics are not described in detail in this case study.

Key factors for improving the business case for Hape's vocational training

Hape stresses that the primary aim of its vocational training program is not to yield a financial return, but to contribute to the skills development of young people in the less developed province of Guizhou. All the same, some factors can increase the benefits for Hape and help to create a business case:

- 1. Minimize drop-out rates.** For the program to have a positive business impact, minimize drop-out rates by arranging open-doors days to provide information beforehand, and by establishing a mentoring system for the young trainees – especially in their third year at the company, since Hape only starts benefitting from the program in the third year and once the graduates join production. To this end, it is crucial to carefully monitor drop-outs and the various causes (good practices 5.3 and 5.5).¹⁸
- 2. Actively involve parents or guardians.** As the program is already established and has low running costs, one essential way to maximize the number of applicants is by ensuring that parents or guardians receive targeted marketing and information on the structure and benefits of the program. That helps to overcome the common skepticism of parents or guardians, who tend to favor more prestigious jobs for their children that may allow them to earn a salary right from the start.
- 3. Tailor the curriculum to the company's needs.** For the students to be a real asset to the company, tailor the curriculum to the company's needs, and ensure that the instructors themselves are carefully trained. Hape's own three-year training program, with its intensive training of the instructors, goes far beyond the norm in China, where many companies provide only one-month internships for instructors to get to know the company's requirements. Hape could go even further, and incorporate more toy-making practical exercises in the first two years (good practice 4.4).
- 4. Leverage the graduates' knowledge.** Offer a fast-track career for graduates of the program: that will make working at Hape more attractive to them, and will increase their value to the company by preparing them to become team leaders or foremen and perhaps eventually move to management positions (good practice 4.6).
- 5. Provide and advertise scholarships.** Ensure that scholarships are available, are well-publicized, and are administered quickly, in order that children with a weaker economic background can take part in the program (good practice 3.1 in the good-practice framework for closing skills gaps in the broader community described in Chapter 2.3).

Lesson learned from Hape

From an analysis of Hape's initiatives, it is possible to derive some lessons that might help other companies to address skills gaps more successfully:

- **Attrition is particularly high in the first few months, and needs to be addressed with specific measures.** Hape's experience shows that it is crucial to tackle high attrition in the first few months – for instance, by introducing open-doors days in production, implementing a shorter assessment of performance, offering attractive salaries to the new hires, and opening out a clear career path for them – one that integrates production with administrative functions (good practices 4.1 in the good-practice framework for workforce development described in Chapter 2.1).
- **Retention and integration of new hires within the company is essential.** In order to retain and quickly integrate new hires (especially migrant workers) into the company, a mentoring system for new hires could be introduced (good practice 5.5).
- **The quality of trainers is critical for successful training.** Trainers need to be carefully selected, and should themselves be trained to transfer knowledge from external experts (potentially international experts) to local personnel and to ensure that the relevant skills are taught and the training is sustainable (good practice 4.3).
- **The work should be appealing to aid the recruiting and retaining of workers.** In order to recruit and retain more qualified workers, the appeal of work in the wooden-toy industry needs to be enhanced – for instance, through increased automation. Note, however, that the increasing complexity of machines requires a different skill set and better trained workers, and that automation therefore impacts both on the demand for skills and on the supply of skills (good practices 1.4 and 5.4).
- **Training courses can create sustainable improvements in supply.** Training courses for suppliers should be introduced to create sustainable improvements in the quality and punctuality of supplies. Starting with the most important suppliers and issues, the training could then be rolled-out. The results of the training need to be monitored via clear and transparent indicators – such as first-pass rate, on-time delivery, and final-client complaints – and clear incentives and sanctions need to be established. Ideally, training courses are conducted on a regular basis, and are gradually extended to other areas such as HR or product development (good practices 2.2, 3.4, 4.4, and 4.5 in the good-practice framework for skills development along the value chain described in Chapter 2.2).

Notes

- ¹ Information provided by Hape. If no specific reference is given, information in this case study is based on information provided by Hape and/or based on expert interviews conducted in China and Romania in May and June 2015 respectively.
- ² The following exchange rates are used: 1 USD = 6.21 RMB; 1 USD = 0.91 EUR.
- ³ Euromonitor (2015), Toys and Games Database.
- ⁴ Ibid.
- ⁵ Dannwolf, U., Ulmer, F., Cooper, J., Hartlieb, S. (2011), Chemicals in Products: Toys Sector Case Study for UNEP, Dialogic and Dekra Report.
- ⁶ OECD (2010), Learning for Jobs. OECD Reviews of Vocational Education and Training: Options for China.
- ⁷ World Bank (2014), China Economic Update – June 2014.
- ⁸ McKinsey & Company, Inc. (2013), The \$250 billion question: Can China close the skills gap?.
- ⁹ International Monetary Fund (2013), Growth Slowdowns and the Middle-Income Trap.
- ¹⁰ Boston Consulting Group (2014), The Global Workforce Crisis: \$10 Trillion at risk.
- ¹¹ Economist Intelligence Unit (2014), Still making it – An analysis of manufacturing labor costs in China.
- ¹² Boston Consulting Group and the Network (2014), Decoding Global Talent.
- ¹³ Boston Consulting Group (2012), Four Ways to Stop Worrying About Talent in China
- ¹⁴ Guizhou's GDP per capita is USD 4,244 – significantly lower than China's average of USD 6,807. World Bank (2014), World Development Indicators 2014; DB Research (2015), China Chartbook – Guizhou.
- ¹⁵ Lego Learning Institute (2010), The Future of Play: Defining the Role and Value of Play in the 21st century.
- ¹⁶ Measuring the business impact of innovations requires an analysis of the entire innovation-to-cash process (all efforts to turn an idea into cash), with metrics for innovation inputs, processes, and outputs. Assessing the benefits of innovation is a cumbersome task: a study by BCG has shown that only 32% of executives are satisfied with the innovation-measurement practices in their company. See Boston Consulting Group (2009), Measuring Innovation 2009: The need for action.
- ¹⁷ Quality problems, such as sub-standard coloring, often resulted from a faulty understanding of Hape's quality requirements. Furthermore, poor on-time delivery rates required Hape to maintain larger stocks so as to avoid production delays.
- ¹⁸ Note that after the training was reformed, Hape's retention rate increased significantly. From 32 students who started in 2012, 26 reached their third year and are now working with Hape in Beilun. Six months before the program finishes, the graduation rate is expected to be very high.

Hospital Sírio Libanês

A Brazilian hospital is committed to skills development of its workforce and the community

Executive Summary

Established in 1921, the Sociedade Beneficente de Senhoras – Hospital Sírio Libanês (hereafter HSL) is a leading private hospital in Brazil, and is well-known throughout Latin America. The hospital, with six units in São Paulo (headquarters) and Brasília, is a non-profit civil entity, renowned for its high-quality care and expertise in the areas of oncology, neurosurgery and transplantation. HSL is in the midst of a large-scale modernization and expansion, which will double its 2013 capacity by 2017.

Given its excellent reputation, it has no difficulty in attracting highly qualified doctors and healthcare specialists. The difficulty is rather with the low- to medium-qualified operational jobs – those involving auxiliary medical tasks (e.g. hygiene, cleaning, hosting and catering), nursing work, and technical support functions (as provided by electricians, plumbers and specialist mechanics). It is here that the hospital struggles to recruit enough adequately qualified candidates, and where it faces high attrition rates.

For HSL, investment in people and skills development is part of its strategy: the management believes that the hospital's success is based on the efforts of everyone. There is also the matter of staying abreast of the newest developments in technology and treatments, and that too requires continuous training. Accordingly, HSL invests heavily in systematically assessing training needs and providing employee training – including graduate courses or distance-learning platforms. In addition, the hospital invested in a multi-disciplinary qualification center, which uses simulation techniques to train new hires and existing staff to work effectively in multi-disciplinary teams. In order to fill vacancies on the low-to-medium skill level internally and to increase career prospects, the hospital has introduced a skills-upgrading program, which awards scholarships for up to two years of specialist training for nursing technicians and staff in technical support functions. On completion of the course, the trainees can change departments and gain promotion.

To address the relatively high attrition rate among low-skilled auxiliary medical staff, HSL initiated a neighborhood qualification project, which provides three months of training to people from the local area to work in catering, hygiene or other auxiliary roles. Furthermore, in partnership with the Ministry of Health, HSL trains healthcare professionals from across the country, and provides outpatient services to the needy. The training courses are conducted partly through HSL's own Sírio

Libanês Education and Research Institute (IEP), which advances research in healthcare and spreads the latest knowledge.

It turns out that HSL's initiatives generate important benefits for the hospital: they enable it to maintain its high quality standards, fill positions internally, and bridge its skills gaps. For its employees (especially the low-to-medium-skilled), the initiatives help to increase their career prospects and salaries. By involving employees in the community-development initiatives, HSL not only realizes the initiative at low cost, but also instills a sense of pride among the employees. For the community, the neighborhood qualification project boosts employment locally; the training of healthcare professionals and the other work of the IEP contribute to improving the Brazilian public healthcare system. In sum, the benefits clearly outweigh the costs.

Among HSL's activities, a number of good practices can be cited as potentially helpful to other companies: notably, the identification of suggested improvements through an engagement survey (good practice 5.3 in the framework for workforce development described in Chapter 2.1), detailed operational personnel planning (1.1), transparent and comprehensive career paths (4.1), and dedicated training and development teams in each department (4.2).

1. Company background

The Sociedade Beneficente de Senhoras – Hospital Sírio Libanês (i.e. the Ladies' Beneficent Society; hereafter HSL) is a leading private hospital based in São Paulo, Brazil. Established in 1921 by a group of first-generation Syrian and Lebanese immigrant women, HSL operates as a non-profit civil entity, although its management structures resemble those of the private sector.¹ The hospital specializes in surgery, using the latest medical technologies, but also provides a wide range of inpatient and outpatient health services. Across the country and Latin America, HSL has a very high reputation in the fields of oncology, cardiology, neurosurgery, urology, orthopedics and abdominal surgery. The hospital runs six medical centers in São Paulo and Brasília, employing 5,800 staff overall, of whom 3,200 are medical staff. In 2014, at its main Bela Vista complex in São Paulo, HSL accommodated 439 beds and conducted 1,155 surgical procedures on average each month.

All notes at the end of this chapter (Page 85)

In 2008, HSL developed a long-term modernization and expansion plan, as its capacity was no longer sufficient to cater for the demand for health services in São Paulo. The plan, which entails a cost of USD 375 million, is aimed at optimizing work flows while reducing operative and administrative costs.² A more specific aim is the modernization of existing hospital facilities and the construction of two new hospital towers to be fully operational by 2016. By 2014, 71 new beds had already been added, and a new intensive care unit is to follow in 2015. By 2020, the number of employees is expected to rise to 8,500.

2. Workforce challenges faced by health service providers in Brazil

High demand for health services and the low quality of public health institutions – in such an environment, private hospitals such as HSL have become essential for providing high-quality health services and filling gaps in Brazil’s public health system. In a 2014 survey, the public Unified Health System (SUS) was rated unsatisfactory by 80% of the population, owing to lengthy waiting times and the difficulty of accessing more complicated procedures. Hence the high demand for private healthcare.³

Demand for healthcare generally in Brazil, and specifically for private healthcare, is due to rise further, in keeping with three inter-related trends: first, Brazil’s average population is aging; second, the country’s middle class – and the proportion of the population that can afford to pay privately for healthcare services – has been constantly growing; third, along with the emerging middle class, people have become more knowledgeable about healthcare standards, and more willing to invest a larger share of their income in medical care.⁴ Owing to existing deficiencies in Brazil’s public healthcare system, middle-income earners are expected to turn increasingly to private healthcare providers.

The Brazilian healthcare sector is characterized by regional disparities: in the state of Rio de Janeiro, there are more than 40 physicians per 10,000 population, as against just 7 per 10,000 in the state of Maranhão.⁵ Measured against the UK figure of 23 physicians per 10,000 population, the national physician shortfall is 168,000, according to official calculations – almost 50% of the country’s current total of about 360,000 active doctors. In recent years, according to the annual social information report, 54,000 more positions for physicians were created than students graduate from medical schools. In a satisfaction survey of SUS, 58% of respondents consider the main problem to be the shortage of physicians. The Brazilian government has launched an initiative called *Mais Médicos* (more doctors) to hire local and foreign physicians to work in poor and remote areas.⁶ The initiative shows that Brazilian healthcare providers generally struggle to attract physicians – especially in remote regions. Apart from the shortage of physicians, another factor weakening Brazil’s healthcare system is the lack of standardized processes, largely due to the weakness of management skills on the part of many executives. The negative impact is

severe – on corporate strategic planning, clinical governance structures, and operational efficiency.⁷

These workforce challenges faced by Brazilian health service providers have to be seen against the backdrop of Brazil’s increasingly tight labor market in general. By 2020, the labor shortage could amount to 8.5 million workers (7% of the required labor supply), owing to a slowdown in population growth and to an aging population, according to a study by The Boston Consulting Group (BCG).⁸

In sum then, Brazil’s health service providers face two broad workforce challenges: under-recruitment of qualified medical staff and doctors in a time of rising demand; and the inadequacy of management structures, especially in the country’s public healthcare system, due to a lack of sufficiently trained and experienced management personnel.

3. HSL’s skills gaps: Coping with vacancies in auxiliary medical and technical support positions

HSL’s ambitious plan – to almost double its number of hospital beds and to increase its medical staff by 1,200 within less than ten years – poses various challenges for the hospital’s human-resources structures. Despite the rising demand for medical staff in Brazil, and the nationwide difficulty in finding them, HSL has been able, thanks to its excellent reputation, to attract highly qualified physicians, nurses and healthcare specialists. Applicants outnumber vacancies, so HSL is in a position to select from a large pool of candidates. Its main challenges therefore are to identify those candidates that fit into the hospital’s culture; to maintain engagement among the existing medical staff; and to ensure the expansion’s success by securing skilled personnel for leading and managing larger units and the larger organization.

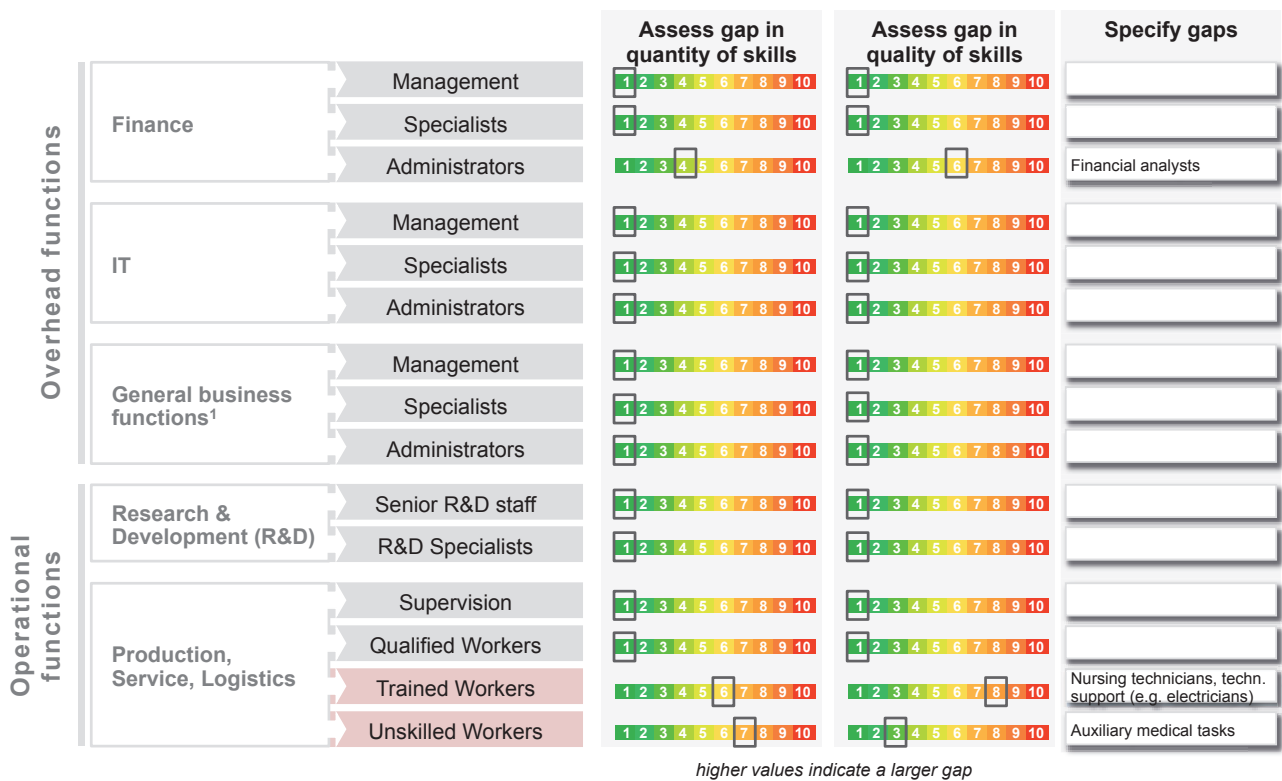
Administration: Only a small shortage of financial analysts thanks to low attrition levels

On the administration side, HSL registers almost no skills gaps, since it is able to recruit sufficient qualified personnel and has a very low turnover – less than 10% per year. For this reason, the hiring needs are very low, and most of the management personnel can be developed internally. It is only with regard to financial analysts that the hospital has some difficulties in finding enough qualified candidates (Figure 34).

Operations: Shortages of auxiliary medical and technical support functions at the low-to-medium-skill level

On the operations side, HSL faces skills gaps mainly at the low-to-medium-skill level – for auxiliary medical tasks such as hygiene, cleaning, hosting and catering. Candidates have to go through three months of in-house training to ensure compliance with the hospital’s high hygiene and sanitary standards. The

Figure 34: Assessment of HSL's skills gaps



1. Human Resources, Marketing and Sales, Communications etc.

turnover of these trained employees is about 20% per year, which is higher than that at other hospitals, so new staff are constantly having to be recruited and trained. Similarly, HSL faces a skills gap among its nursing technicians: they have about 1.5 years of vocational training, but tend to lack practical knowledge. Finally, HSL has difficulties in finding adequately qualified staff in technical support functions – electricians, plumbers, and specialist mechanics such as air-conditioning mechanics or x-ray mechanics.

In sum, there are obvious advantages in being a renowned medical institution when it comes to attracting healthcare professionals and skilled administrative staff from all over Brazil; but skills gaps persist for HSL in respect of auxiliary medical staff and nursing technicians and technical support staff.

4. Addressing HSL's skills gaps and improving public healthcare

To tackle its skills gaps, HSL has implemented a number of initiatives at two levels – workforce development and closing skills gaps in the broader community (Figure 35). In addition, it monitors the quality of its medical and hospital supplies and service suppliers rigorously and provides specific training courses to suppliers.⁹

4.1 HSL's workforce development: Taking care of those who care

Skills development is essential for continuously improving the quality of HSL's care and for enabling the incorporation of new technologies and treatments. Training is also an integral part of the hospital's strategy and its expansion project, for which nearly 1,500 new employees were hired for the São Paulo unit in 2014 alone. For these reasons, and to address the above-mentioned skills gaps among its auxiliary medical and technical support staff, HSL invests heavily in the development of its current and prospective workforce.

Multi-disciplinary qualification center: Using simulation methods to develop skills

Working in multi-disciplinary teams is an important precondition for delivering high-quality care to patients. Accordingly, HSL has invested in a multi-disciplinary qualification center that provides training to teams by simulating typical situations, including the most frequent errors that occur during treatment and care. The current focus is on providing simulation training to newly-hired staff in nursing, physiotherapy, nutrition, cleaning, and other healthcare-related professions. This on-boarding training is divided into three parts: first, information management, computer and IT tools; second, the right approach for assisting (elderly and difficult) patients; finally, quality standards such as hand hygiene, isolation of contagious patients, and ways

of reacting in emergencies. An additional media room allows the recording and editing of training sessions for future use. In future, the simulation training should be extended to include administrative staff and other sections of the workforce.



HSL's new multi-disciplinary qualification center

**Skills-upgrading program for the operational level:
Fostering skills development of the low-skilled to qualify them for formal positions**

Every two years, HSL conducts an engagement survey among its workforce to identify pain points and suggestions for improvement. The last survey revealed that many employees feel they lack good career prospects at the hospital. For this reason, and also because so many auxiliary medical and technical-support positions remain unfilled owing to the lack of qualified internal and external candidates, HSL has developed a skills-upgrading program to develop skills internally. Starting in the summer of 2015, the program offers scholarships for employees who wish to gain further qualifications for working in difficult-to-recruit areas, such as those of electricians, nursing technicians and financial analysts. The employees are selected jointly by managers from their current (sending) department and future (receiving) department, and will undergo up to two years of

specialist technical training in selected schools and certified institutions before they change positions. The plan is to offer scholarships to about 30-40 employees each year.

**Systematic skills assessment and employee training:
Ensuring high-quality patient care**

HSL carries out an annual performance assessment – currently covering 95% of the workforce – in order to assess each employee's development stage and identify potential skills gaps, training needs, and opportunities for professional development. Following a systematic self-assessment, the manager and employee jointly devise an individualized plan detailing the employee's specific development and training path. In addition, HSL continuously monitors healthcare-related indicators, such as hand-hygiene performance or number of patient falls, and develops training programs accordingly.

Following this systematic needs analysis, the hospital offers a broad training program for its employees – particularly for the care teams, in view of the rapid evolution in patient-care equipment and techniques. Training courses are provided in-house, either by external training providers or by the hospital's own Education and Research Institute (IEP) training center (see below for further details). At the IEP, 5% of courses are earmarked for HSL employees, fully paid for by the hospital, and awarded via a (performance-based) selection process. In addition, employees with tenure of more than one year can apply for scholarships (worth 70% of the tuition fees) for Masters or PhD programs (at the IEP or external institutions) and for language courses. There are also education forums on different topics, and more than 15 courses – including nursing, physiotherapy, and infection prevention – that are available to employees through a distance-learning platform. The platform had about 14,000 hits in 2013. Finally, a dedicated management-development program offers leadership training tailored to each of the four management levels, from supervisor to superintendent.

Figure 35: Overview of HSL's initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 Multi-disciplinary qualification center	Foster effective cooperation in multi-disciplinary teams and through simulation training
	A.2 Skills upgrading for operational level	Foster skills development and fill vacancies internally in auxiliary medical and technical support positions
	A.3 Systematic skills assessment and employee training	Develop skills systematically in keeping with individual training needs
B <i>Value-chain development</i>	<i>A systematic analysis of training activities for suppliers as part of the requirements for the OHSAS 18000 and ISO 14001 certifications was beyond the scope of this case study.</i>	
C <i>Community development</i>	C.1 Neighborhood qualification project	Train and hire people from the neighborhood for auxiliary medical tasks
	C.2 Proadi-SUS training of public healthcare professionals	Foster skills development of the public health sector in return for tax exemptions
	C.3 Education and Research Institute (IEP)	Advance and spread knowledge in (public) healthcare



Snapshot from HSL's distance-learning platform

4.2 Closing skills gaps in the broader community

Since HSL's foundation in 1921, it has maintained the philanthropic ideal and social responsibility as part of its DNA. Hence its committed and continuous engagement in developing skills in the local community and in the Brazilian healthcare sector in general.

Neighborhood qualification project: Training auxiliary staff locally

The hospital regularly replaces its low-skilled staff locally, and provides employment opportunities for the local community. To optimize its sourcing, HSL introduced a community education course in 2012, providing free three-month courses in hygiene, catering and auxiliary tasks for people from the neighborhood of its main Bela Vista hospital in São Paulo. For each intake, about 20-30 participants are selected by HSL's management and recruiting specialists on the basis of interviews as well as some basic tests. The participants are trained by HSL employees. HSL eventually hires about 60-65% of each intake, even if at the start of the course no position is available: the natural fluctuation rate will create the necessary openings within a couple of weeks.

Proadi-SUS: Improving the public health system in return for tax exemptions

HSL is certified by the federal government as a charitable organization, and has large tax incentives for providing support to the public Unified Health System (SUS). The incentives take the form of various exemptions – from the employer's share of payroll tax, from the profit participation contribution (PIS), and from the social security financing contribution (COFINS). The gains from these exemptions must be reinvested in philanthropic projects under the SUS Institutional Development Program Proadi-SUS; the programs include research on health, implementation of new technology, training of medical staff, and patient services for the SUS. At HSL, about 60-70% of the tax-exemption gains are devoted to training healthcare profes-

sionals; the remainder is spent on research or philanthropic patient services. HSL thereby contributes substantially to the development of Brazil's public health system through the development and transfer of expertise in management as well as new technologies. Eager to share its expertise and experience in managing public healthcare units – to improve their effectiveness and speed of response – HSL established the Sírío Libanês Institute for Social Responsibility, which administers three health clinics and intensive care units in partnership with the municipality and federal district of São Paulo. Finally, HSL is engaged in a further undertaking, in return for help provided by the Brazilian Development Bank (BNDES) in funding the hospital's expansion: HSL is investing 5% of the USD 123 million loan into SUS projects aimed at enhancing health professionals' technical and theoretical skills.

Education and Research Institute (IEP): Advancing public knowledge in healthcare

Education and research are crucial when it comes to maintaining HSL's status as one of the leading medical institutions in Latin America. The IEP was duly established in 2003, with the aim of creating new health-related knowledge and of training healthcare professionals. The institute is equipped with research laboratories for 13 lines of research; it features computer rooms and telemedicine rooms as well as an exhibition space and a library; and it offers specialization courses, refresher courses, and masters and PhD courses, as well as distance-learning courses. In the context of the Proadi-SUS program, the institute also provides training courses in management, healthcare and education for healthcare professionals from all over the country.

5. The role of DFIs: DEG and other DFIs as important financial partners for HSL's growth

For its ambitious expansion project, HSL has received financing from DEG, the French DFI Proparco, and the Brazilian Development Bank (BNDES). As part of the financing agreements, the DFIs have pushed for certification in accordance with OHSAS 18001 and ISO 14001 (two important international standards for occupational health and safety and for environmental management), and in that way have helped HSL to structure and formalize its occupational health and safety measures as well as its activities to protect the environment.

6. The costs and benefits of HSL's engagement

From HSL's accounting data, it is possible to identify the costs of its workforce- and community-development efforts. The benefits, in contrast, cannot be quantified: they accrue on various levels – namely, the institution, its employees, and the

local community, as illustrated in Figure 36. Accordingly, the cost-benefit-appraisal for all initiatives is done qualitatively. The costs and benefits of the initiatives on the different levels are analyzed below.

6.1 Costs and benefits of HSL's workforce development

Company benefits: Having better-qualified auxiliary and technical staff at HSL

The multi-disciplinary qualification center had investment costs of about USD 142,000 in 2014, and has monthly running costs averaging about USD 4,825 – i.e. yearly costs of about USD 57,900. The multi-disciplinary qualification center was completed this year, and systematic training was launched in July, so the benefits cannot yet be fully assessed. But according to the HR department, it is already evident that the participants of the simulation training absorb the training content much better than they do in other modes of training, and that benefit helps to avoid costly re-training and produces better preparation for the actual work. HSL plans to train a total of 400 employees this year.

A further plan is to invest about USD 93,000 in scholarships in the first year of the skills-upgrading program. This program requires no initial investment cost for HSL. In return, HSL expects to be able to fill more positions internally – positions for which qualified candidates are not easy to find in the labor market. The advantages of using internal candidates are these: it saves on recruiting and on-boarding costs; the internal candidates are already familiar with the institution's high quality standards and culture; and attrition will likely decrease, thanks to the employees' improved career prospects (according to the employee engagement survey, low career prospects were a major cause of attrition).

In 2014, HSL spent more than USD 1.4 million on employee training measures. The continuous training of its employees allows HSL to maintain its high-quality patient care. Even against other leading hospitals in the country, HSL excels: it provides on average three hours more training per employee per year – 42.4 compared with 39.2 for the group of four other leading hospitals.¹⁰ Moreover, in 2014, HSL provided a total of 364 scholarships for qualification courses – two thirds of them for language courses. The systematic needs assessment and training are also essential for the hospital's expansion project: the new hires and existing staff need training in order to cope with the larger organization and different processes.

Thanks to its training program, enhanced career prospects, and an attractive benefit package, HSL appears to gain an advantage over other leading hospitals in respect of retention: HSL's average annual attrition rate is 19.9%, compared with 23.2% for the group of four other leading hospitals. HSL regularly receives accolades for the outstanding quality of its patient care, research, and role as employer; for instance, it has been ranked as Brazil's "most admired company in the healthcare sector," and one of the "Best Companies for Consumers" in respect of client relations.

Employee benefits: Improved career prospects within HSL

For employees, HSL's investment in training is beneficial in that it strategically improves their qualification and career opportunities. The multi-disciplinary qualification center equips newly hired auxiliary staff with essential knowledge, and thereby helps them to feel well-prepared for their new positions – that was one key insight from the feedback they gave after the training. Their career prospects improve, especially through the skills-upgrading program: on completion of the training, they can change positions and thereby usually receive a higher salary. As 60% of the hospital's staff are women, and 70% of

Figure 36: Overview of the costs and benefits of HSL's engagement

Type of initiative	Initiative	Costs ('000 USD)	Beneficiaries			
			HSL	Employees	Suppliers	Community
A Workforce development	A.1 Multi-disciplinary qualification center	One-off: 142 Running: 58 p.a.	+++	+++		+
	A.2 Skills upgrading for operational level	Running: 93 p.a.	+++	+++		+
	A.3 Systematic skills assessment and employee training	Running: 1,400 p.a.	++	++		+
C Community development	C.1 Neighborhood qualification project	Running: 7.6 p.a.	+++	+		+++
	C.2 Proadi-SUS training of public healthcare professionals	Running: 34,000 p.a. (cost-neutral)	+			+++
	C.3 Education and Research Institute (IEP)	N/A	+++	+		++

+ Small benefits ++ Medium benefits +++ Large benefits

management positions are held by women, HSL's skills-development measures are particularly beneficial in advancing the status of women in the workplace.

Community benefits: Guaranteeing high-quality care and local employment

HSL's workforce-development program is also of benefit to the local community, as training and qualifications underlie the provision of continuous high-quality care in the hospital. Workforce development is also crucial for the hospital's expansion, which benefits the community through increased employment and through higher tax payments and spending by new hires or promoted employees. Fixed employment increased by 1,000 employees during the three years 2012-2014, and gross payroll payments rose by more than USD 19 million over the same period.

6.2 Costs and benefits of HSL's closing skills gaps in the broader community

Company benefits: Creating a win-win situation for HSL and local communities

The neighborhood qualification project costs only about USD 1,900 per intake, or about USD 7,600 per year, since the trainers are all HSL employees, and finding candidates is very easy thanks to the existing close ties to the community. For HSL, the project is highly beneficial in successfully addressing its main skills gap in auxiliary tasks. Initially, in 2012, only four out of 20 trained hospitality assistants were hired. But in 2013, the program's second year, 24 out of 59 trainees were hired as hospital catering personnel. The training of community members has benefited HSL more than normal external hiring would in several ways. First, the training replaces the internal starter training at HSL for new hires, so the community members, when they join HSL, do not require any additional internal training and are already familiar with the internal processes and quality standards. Second, the community trainees have a lower attrition rate, as they live near the hospital, which saves them time and money to go to work. (Many hires from other parts of the metropolitan area quit when they find another job that is closer to home for them.) Furthermore, HSL has more time to get to know them better during the training period, and is able to select the most promising candidates. Third, by hiring an entire group of trainees at any one time, HSL can exploit economies of scale in recruitment. In addition, the project underpins the hospital's commitment to the local community, and reinforces its reputation as a socially responsible institution.

By definition, the Proadi-SUS program is cost-neutral for HSL, as the hospital has to invest the tax-exemption gains into philanthropic activities in education, research and patient care. In 2014, these gains amounted to about USD 34 million (BRL 118 million) – about 7% of its revenues. The hospital does still bene-

fit, however, from this cooperation with the Ministry of Health, inasmuch as the tax-exemption gains can be partly invested in research, which can further improve the hospital's provision of high-quality care. Moreover, the training of and knowledge exchange with public healthcare professionals from all parts of the country helps to advance HSL's own skills, and consolidates its reputation as a high-quality healthcare provider.

For HSL, the IEP is an important contributor to maintaining the hospital's renowned state-of-the-art patient care and to advancing healthcare knowledge. The importance of the IEP's research activities – involving close cooperation between the hospital's researchers and healthcare professionals – is evidenced by its high publication output: 120 papers have so far been published in peer-reviewed scientific journals. In addition, in 2014, the IEP hosted 60 courses and (international) conferences, bringing together specialists from around the globe.

Employee benefits: Sharing employees' experience for the benefit of the community

Employees, too, benefit from HSL's community-development initiatives – particularly the neighborhood qualification project and the IEP – in that the employees are integrated into these activities as teachers and instructors. In transmitting their knowledge and sharing their experiences, they gain a sense of pride and satisfaction at helping the local community.

Community benefits: Employment opportunities and improved healthcare

HSL's community-development initiatives create considerable benefits for the local community and for the Brazilian healthcare system as a whole. The "neighborhood qualification project" boosts the employability of the local population, and provides direct employment at HSL to about 40-60 people each year – people who might not otherwise be able to find formal employment, as prior to the training their level of education was too low. So the project serves to strengthen the local community, increases families' incomes, and provides them with a more stable livelihood than the informal sector can offer.

The Proadi-SUS program is very beneficial for the country's overall public healthcare system, as healthcare professionals receive training – at one of Latin America's leading healthcare institutions – in state-of-the-art management and treatment methods. The other beneficiaries are the patients, especially those from economically deprived backgrounds, who receive world-class medical treatment: in 2014, more than 23,000 medical interventions were undertaken, including transplants and cancer treatment.

Similarly, the IEP advances knowledge in the public health system: through its education courses, conferences and meetings, healthcare professionals are upskilled, and that enhances the Brazilian health system as a whole. In 2014, the IEP reached

some 24,000 people. And in 2012-2014, the Proadi-SUS program – through its 15 free courses, as well as refresher and specialization courses, graduate degree programs and continuing education – had more than 12,000 participants from across Brazil.

6.3 Overall assessment of costs and benefits

A summary assessment of three initiatives can be developed along three dimensions – benefits, cost-effectiveness and sustainability – as illustrated in Figure 37.¹¹ The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative. One glance shows that all three initiatives have registered a good overall performance.

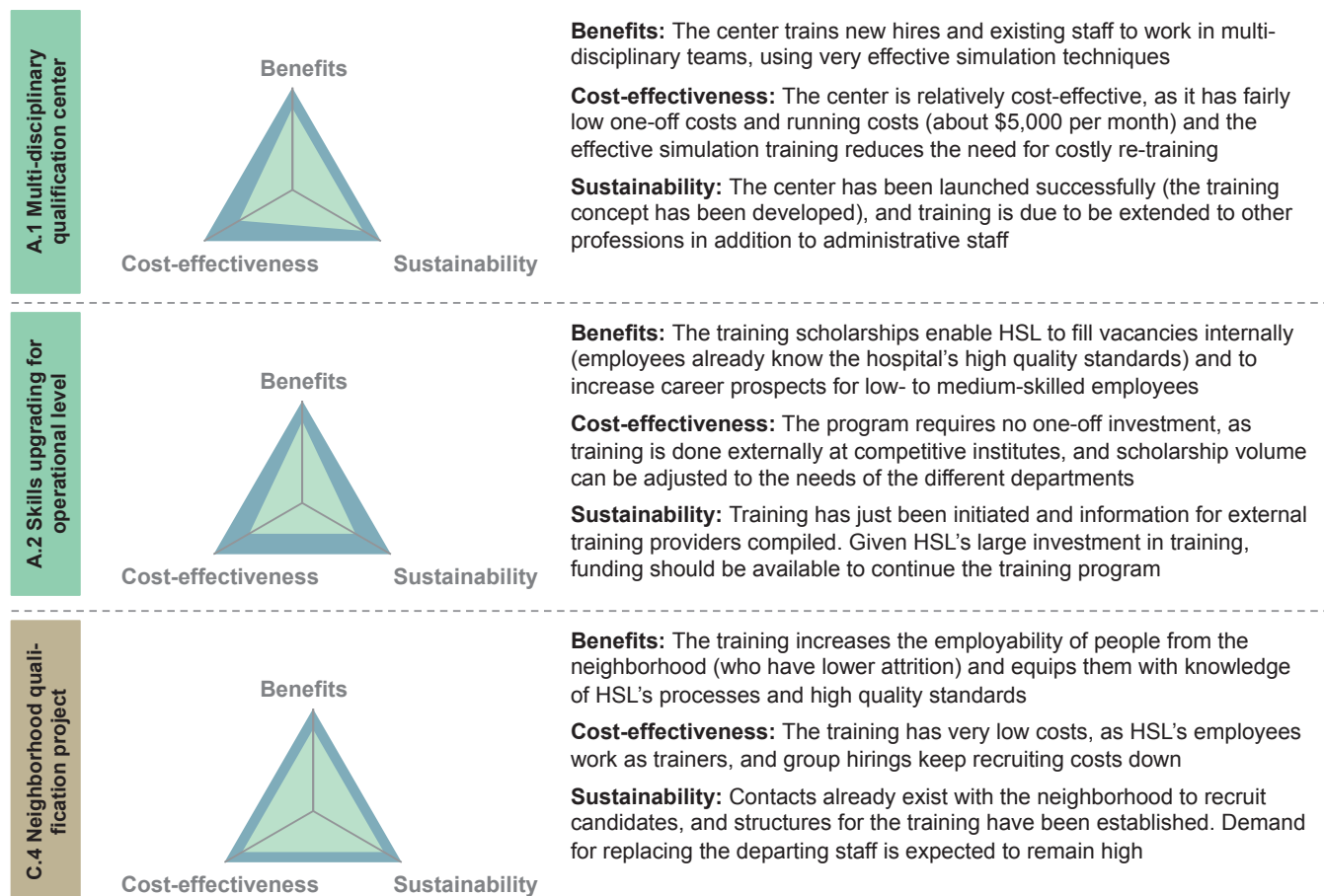
- **The multi-disciplinary qualification center** is very beneficial for HSL, as it enables more effective training of new hires and existing staff. Through the use of simulation techniques, employees can internalize the contents better, and that reduces the amount of costly re-training. With costs of about USD 5,000 per month, the center is able to train several teams each month. Now that the center is fully set up, and the contents are fully developed, everything is ready for future train-

ing courses. Looking further into the future, the training program will be extended to include other professions.

- **The skills-upgrading program**, by providing scholarships for specialized technical education, helps employees at low or medium levels to climb the career ladder, and helps HSL to fill vacancies internally. Despite its considerable total costs, the program is cost-effective, as it has no one-off costs and relies on external training institutes that have to compete in the private-tuition market. The first scholarships have now been awarded, and a list of training institutes has been compiled. So the expectation is that the program will continue in the future, especially since it can be adjusted to the specific needs of the different departments.
- **HSL's neighborhood qualification project** helps HSL to fill auxiliary medical positions, and keep them filled, by training local residents, who have a lower attrition rate than other recruits. By using HSL's own staff as trainers, the project is very cost-effective. And it is very sustainable, now that the recruiting network has been established and demand within HSL looks set to remain high.

By weighting the overall costs and benefits of all initiatives, the following appraisal emerges: HSL has invested heavily in the skills development of its current workforce and the community. The six initiatives listed in Figure 36 (Page 81) have one-off

Figure 37: Summary assessment of selected initiatives



costs of USD 142,000 and running costs of USD 1.6 million per year (excluding the costs for the Proadi-SUS initiatives, which are financed through the identical tax-exemption gains). These running costs correspond to 0.4% of HSL's 2014 revenue. In return, HSL successfully reduces its staff shortages in auxiliary medical positions and technical support functions. Moreover, HSL's workforce-development program helps the hospital to maintain its high-quality care and excellent reputation: it does so by assessing training needs systematically and by offering specific training courses accordingly; by improving collaboration within multi-disciplinary teams; by upskilling new hires through simulation training; and by filling positions (up to and including management level) internally with candidates that are familiar with the hospital's processes and high standards. In keeping with its responsibility as a leading healthcare institution in the country (and as a condition for the tax exemptions it receives as a charitable organization), HSL helps to improve the public health system by means of training public health professionals, advancing research, and directly treating those who cannot afford high-quality care. By qualifying people from the neighborhood for auxiliary medical positions, HSL addresses this internal skills gap and at the same time supports the local community.

For employees, the workforce-development program improves their qualification and career prospects, enabling them to move up the career ladder and to map out an individual career path for themselves. The local community benefits too, particularly

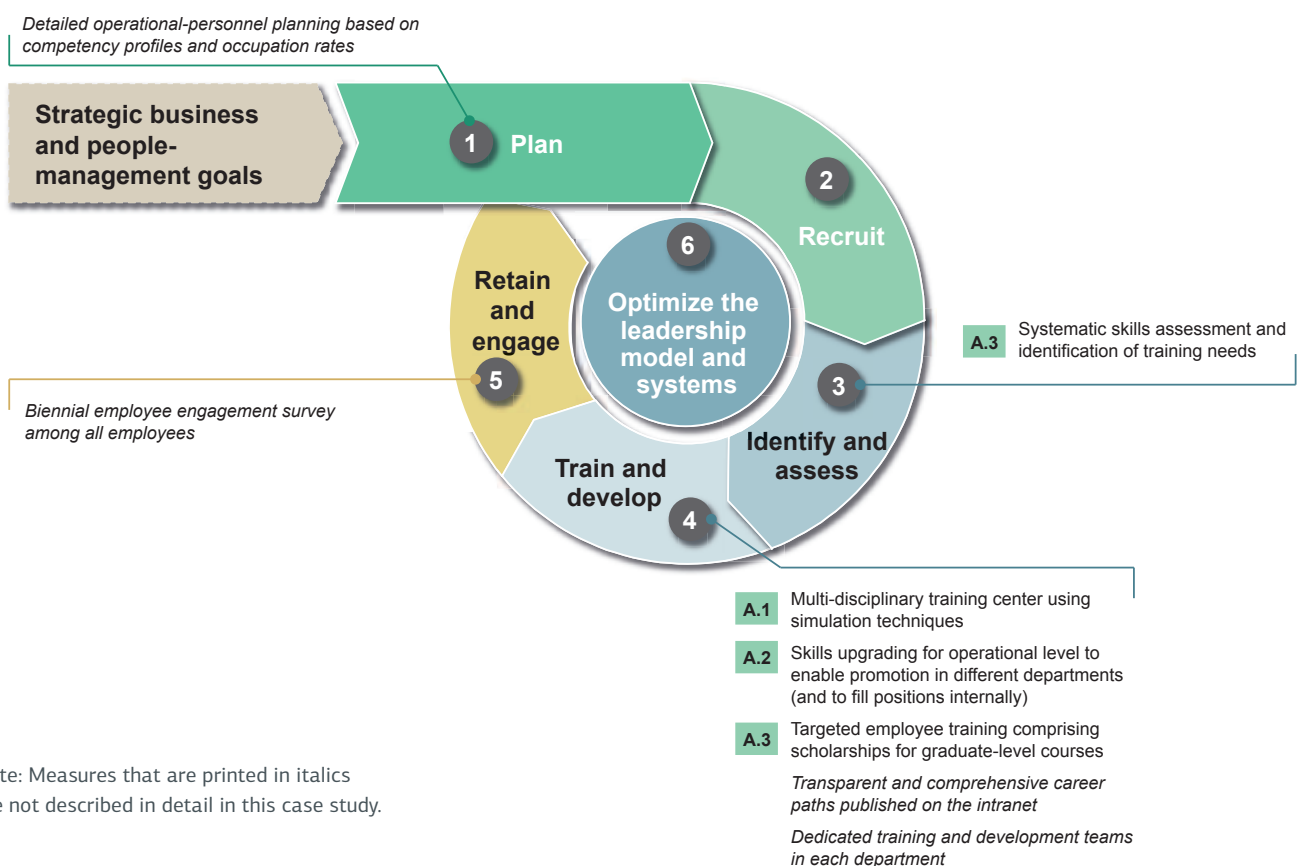
thanks to the opportunity to enter formal employment. That opportunity is facilitated by the neighborhood education project – a win-win project, since HSL likewise benefits from the improved employment situation locally. São Paulo and Brazil as a whole benefit tremendously too, through having a world-class medical institution and from the training and research that HSL conducts to improve the public health system.

In sum, although the lack of quantitative data prevented a quantitative cost-benefit-appraisal, the above qualitative comparison of costs and benefits is a very heartening one: it shows clearly how beneficial HSL's investment in the skills development of its workforce and the community is – for the employees, for the community, and for HSL itself.

7. Conclusion

HSL has engaged very effectively in training its workforce and the community, and its initiatives have succeeded in narrowing HSL's skills gaps on the operational level for auxiliary medical tasks and technical support functions. The initiatives have also helped the hospital to maintain its eminence in high-quality care. And the ongoing program of workforce development supports the current large expansion project, which requires the training of thousands of new employees.

Figure 38: Overview of good practices from HSL's workforce development



Note: Measures that are printed in italics are not described in detail in this case study.

Good practices from HSL that can help companies to close their skills gaps

From studying HSL's initiatives and HR activities, it is possible to identify a number of good practices for workforce development. Figure 38 presents an overview of these practices.

In addition to the initiatives described above, it is worth highlighting four elements:

- 1. Identification of employees' expectations and suggestions for improvement.** This is accomplished through an employee survey every two years, covering more than 75% of all employees, that is evaluated by an independent third party. Results are integrated into the strategic management agenda (good practice 5.3 in the good-practice framework for workforce development described in Chapter 2.1).
- 2. Detailed operational personnel planning.** It is based on individual competency profiles, occupation rates, and complexity of patients, and is designed to increase capacity utilization and reduce the need for recruitment by shifting professionals between departments (good practice 1.1).
- 3. Transparent and comprehensive career paths.** These cover all positions from unskilled worker to CEO. They are accessible for every employee via the intranet, offering the choice of technical, managerial or educational paths, as well as assessing competency profiles and job profiles (good practice 4.1).
- 4. Dedicated training and development teams in each department.** The purpose is to foster skills development specific to the department's needs (good practice 4.2).

Key factors for improving the business case for HSL's multi-disciplinary qualification center

The qualitative analysis has shown that the multi-disciplinary qualification center is already fairly cost-effective, as it has relatively low running costs of USD 5,000 per month, and its innovative simulation teaching methods reduce the need for costly re-training. To further improve the business case, it is worth considering two actions to increase the benefits and reduce the costs:

- 1. Extend the training to include other professions.** As already planned by HSL, the center should be used to train other professions in addition to assistant medical staff as at present, since the training methods are highly effective and the running costs of the center are fixed.
- 2. Share costs with other hospitals, and train external medical professionals.** It is important to utilize the full capacity of the training center. One important way to achieve this goal, once internal training needs are satisfied, is to cooperate with other healthcare providers in training their staff in the existing facilities. In return, the external providers could contribute to the running costs of the center – for example, by paying a course fee.

Lessons learned from HSL

From an analysis of HSL's initiatives, it is possible to derive some lessons that might help other companies to address their own skills gaps more successfully:

- **Using new technologies and methods will help greatly to increase the absorption of training content.** By testing and adopting new methods and technologies, a company can facilitate access to training content (e.g. through distance learning or e-learning) and aid its translation into daily practice (good practice 4.4 in the good-practice framework for workforce development described in Chapter 2.1).
- **Integrating HR and employee development into the company's strategy will contribute to skills development.** Skills development will be boosted considerably if given explicit support by top management, and if employees' contribution to it is given proper acknowledgment (good practice 6.5).
- **Taking employees' feedback seriously and responding explicitly will help to boost employee engagement.** By conducting an employee engagement survey and/or inquiring into the reasons for voluntary exits of employees, a company can gain a wealth of information. By acting swiftly on this information and developing initiatives that explicitly respond to the employees' concerns, the company can build trust and evolve the partnership between management and staff (good practice 5.3).
- **Leveraging employees in community-development activities helps to reduce costs and increase employee satisfaction.** If a company integrates its employees into community-development initiatives as trainers, it can not only reduce training costs but also imbue the employees with a feeling of pride and purpose, and thereby boost their engagement and loyalty.

Notes

- ¹ Information provided by HSL. If no specific reference is given, information in this case study is based on information provided by HSL and/or based on expert interviews conducted via telephone in June and July 2015.
- ² The following exchange rate is used: 1 USD = 3.52 BRL
- ³ Deloitte (2014): 2015 Health Care Outlook Brazil.
- ⁴ PricewaterhouseCoopers (2013), The Healthcare market in Brazil.
- ⁵ World Health Organization (2013), A universal truth: No Health Without a Workforce.
- ⁶ Government of Brazil (2013), Meeting Minutes: Mais Médicos.
- ⁷ Deloitte (2014), 2014 Global Health Care Outlook: Shared Challenges, Shared Opportunities.
- ⁸ Boston Consulting Group (2014), The Global Workforce Crisis: \$10 Trillion at Risk.
- ⁹ HSL is providing training to suppliers as part of the requirements for the OHSAS 18000 and ISO 14001 certifications. A comprehensive review of these training activities was beyond the scope of this case study.
- ¹⁰ HSL uses as a benchmark the other four hospitals in São Paulo that are also rated as "excellent" institutions.
- ¹¹ The other three initiatives – including the special cost-neutral training program based on the tax exemptions – are described more fully above, and are summarized in the overall qualitative assessment below. For details on the methodology, see Chapter 3.



JMS Holdings Ltd.

A Bangladeshi garment manufacturer boosts its productivity through workforce development

Executive summary

Chittagong-based JMS Holdings Ltd. (hereafter JMS) is one of Bangladesh's leading manufacturers of ready-made garments. It comprises three garment-producing companies in the low-to-medium-price segment. As JMS was regularly producing at the limits of its capacity, it embarked on an ambitious expansion and optimization project in 2012 in order to increase its production capacity and competitiveness. ww

Given the limited availability of formal training and qualifications in industrial engineering and production techniques for the textile sector in Bangladesh, the company's particular challenge for its expansion project is a skills gap in production mid-management, i.e. line supervisors and line chiefs. Line supervisors and chiefs require a deep understanding of modern production layout and techniques, and a technical understanding of the different cutting-edge machines, as well as strong leadership and communication skills. At the level of machine operators, JMS can easily recruit a sufficiently large number of workers, but they must be trained internally to fulfill the efficiency requirements and to comply with health and safety standards.

In order to address the gaps, JMS has introduced three main initiatives to support the skills development of its current and prospective workforce. In cooperation with the textile consulting company Gherzi, JMS set about organizing training courses for productivity as an integral part of a comprehensive program of production optimization. In this context, JMS introduced a separate training station for providing practical training for new hires and refresher courses for established staff without hampering the actual production process. In addition, JMS offers practical training at the training station as part of a three-month technical-vocational-education-and-training (TVET) course for sewing-machine operators, in cooperation with the established local Chittagong Mohila Polytechnic Institute (CMPI). On completion of the 21-day training course at JMS, students can join JMS's production line directly, thereby providing the company with adequately qualified operators that have a higher efficiency than other recruits. In addition to its workforce development, JMS also fosters skills development among its local fabric suppliers by training them in quality improvements as well as health and safety measures. Moreover, in order to give something back to the local community, JMS also

finances a pre-primary school in Chittagong, as well as a school and a college on the island of Hatiya.

JMS's workforce development has led to a substantial increase in productivity and quality. And thanks to the training manuals and the establishment of the separate training station, further improvements are likely to take place in the future through continuous skills development. For employees, the initiatives also proved to be highly beneficial in leading to higher wages by virtue of higher efficiency. The community benefits as well: directly through the provision of education for local children, and indirectly through the availability of more and better jobs – the majority of which are for women – and through the increased employability of young women from local villages via the TVET course, with substantial secondary benefits on family income, health and education.

The key success factors behind JMS's initiatives are its partnership with international experts and an established school, and its management, which embraces change. A number of good practices from JMS can provide guidance for other companies; namely, the introduction of a separate training station (good practice 4.4 in the good-practice framework for workforce development described in Chapter 2.1), the linking of wage increases to productivity (5.2), the improvement of working conditions (5.4), and the investment in non-financial benefits (5.4), such as the free provision of health products.

1. Company background

Family-owned JMS Holdings Ltd., established in 2007, is one of Bangladesh's leading garment manufacturers, originating as the consolidation of five garment-producing companies, the first of which was founded in 1994. With its headquarters in the Central Economic Processing Zone in Chittagong, JMS now encompasses three garment-producing companies (one of which also engages in garment washing) – the other two companies were closed by the owner following safety concerns. JMS produces ready-made garments (RMGs) for export to North America and Europe – primarily in the low-to-medium-price segment, though it has also been able to supply to high-quality brands. The main clients include international retail chains and warehouses. The holding company employs more than 6,300 workers, the large majority of whom (70%) are women.¹

[All notes at the end of this chapter \(Page 98\)](#)

As the group was regularly manufacturing at the limits of its capacity, it has since 2012 invested heavily in new machinery, in the renovation and construction of a new garment and washing facility, and in training. Its expansion was partially financed through a long-term loan from DEG. In 2014, the group exported more than 21 million pieces of clothing, and had a turnover of USD 78 million.³

2. Workforce challenges faced by RMG businesses in Bangladesh

Since the 1980s, the RMG industry in Bangladesh has experienced rapid growth. With the Chinese RMG industry in decline, Bangladesh has emerged as a rapidly growing global producer of garments. Owing to low wages and high workforce availability, RMG-export levels in Bangladesh have grown steadily over the past ten years – with average annual growth rates above 15% – and many leading international retailers from Europe and the US have relocated their sourcing bases to Bangladesh.³ In 2013-2014, RMG exports amounted to USD 24.5 billion and accounted for 80% of the nation's export earnings. Some 4.2 million out of Bangladesh's total workforce of about 80 million are employed in the RMG industry.⁴ About 80% of these workers are women.⁵

Bangladesh's garment sector used to be infamous for low wages, unsafe working conditions, and long working hours of 12-14 hours per day, owing to poor workplace-safety regulations and inadequate factory inspections. However, international pressure to improve working conditions intensified following the collapse of the Rana Plaza building in April 2013, and in December 2013 the government duly lifted the minimum wage in the garment industry by 77%, from USD 38 to USD 68 (BDT 5,300) per month.⁶ In addition, the Accord on Fire and Building Safety in Bangladesh was signed that year by more than 200 apparel brands, retailers and importers from over 20 countries, by two global and eight Bangladeshi trade unions, and by four NGOs. The Accord aims to improve workers' safety and anti-fire and safe-building measures by means of independent factory inspections, with full transparency about results and corrective action plans, as well as a worker-participation program providing training on fire precautions and operational health and safety.⁷

In consequence, Bangladeshi RMG manufacturers see their margins under pressure: the large international buyers use their bargaining power to keep prices low, and at the same time (minimum) wages rise, tougher regulation on health and safety is introduced, and investment has to be made in further fire- and building-safety measures.⁸ In order to remain globally competitive, RMG manufacturers in Bangladesh need to invest in the skills development of their workforce in order to significantly increase productivity.

In addition to employing unskilled and poorly educated personnel at low wages who are trained on the job, manufacturers are increasingly looking for higher-skilled workers and professionals to increase the productivity of their production processes.⁹ In light of the challenges in recruiting and retaining skilled personnel in the RMG industry, various initiatives have been launched to improve the quality and availability of training institutions.¹⁰ However, TVET facilities in Bangladesh often suffer from poor quality, inefficiency, and a lack of resources.¹¹ Moreover, there are only very few dedicated training programs for garment workers at higher skill levels. Given the poor public education and limited vocational industry-specific training, it is all the more important to involve the private sector in fostering skills development.

3. JMS's skills gaps: Lack of adequately qualified production supervisors and line chiefs

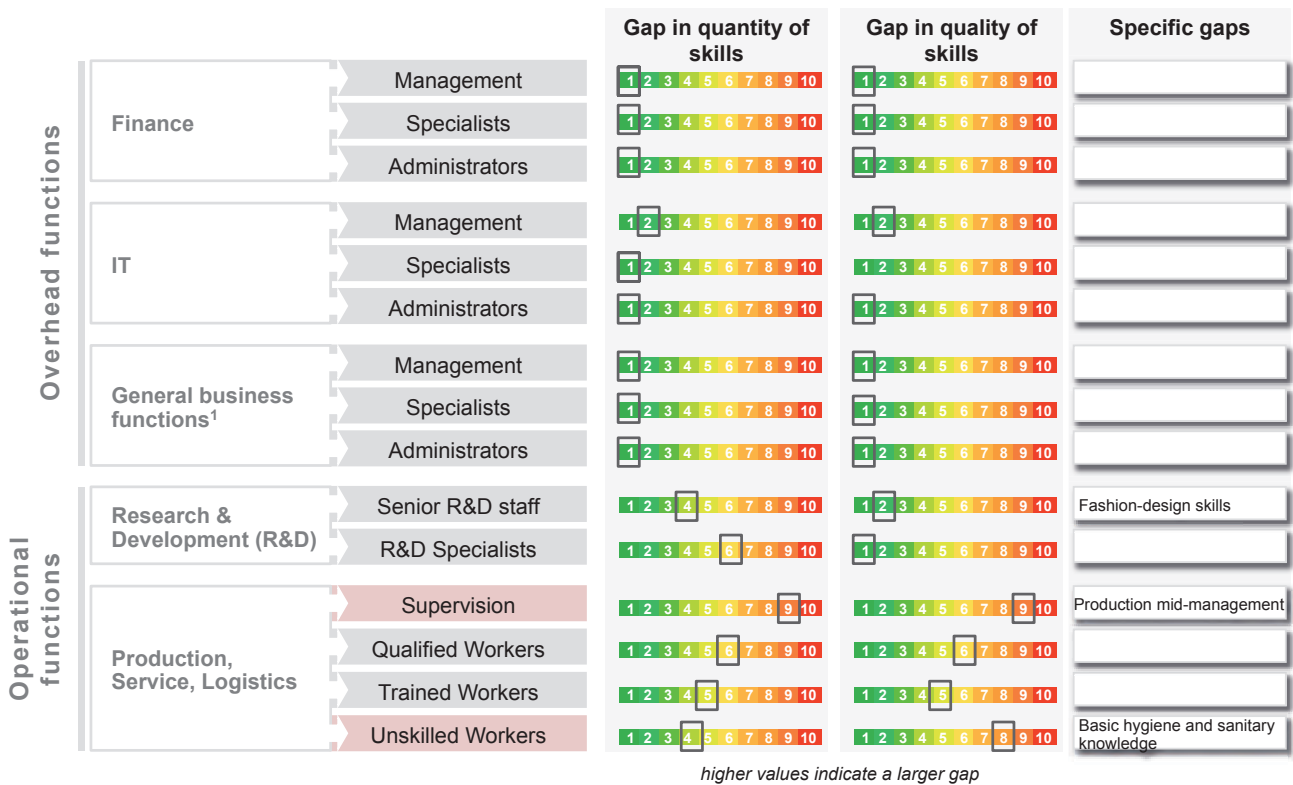
JMS has (internationally) trained administrative staff in sufficient numbers and of good quality; where JMS faces skills gaps is on the production side and among its suppliers. Figure 39 provides an overview of JMS's internal skills gaps. Four particular skills-gap challenges can be identified:

Production: Line supervisors and chiefs lacking essential skills to boost productivity

There is great competitive pressure to increase productivity, and that, in turn, requires a comprehensive restructuring of production processes. For JMS, the widest skills gap is in production mid-management, i.e. line supervisors and line chiefs. As there is no dedicated training institute in the country for the relevant technical skills, the line supervisors and line chiefs often have an inadequate understanding of industrial engineering and modern production layout and techniques. Given the increasingly sophisticated machines that are used for achieving greater automation and higher productivity, supervisors also need a good technical understanding of the different specialized machines. So they require special on-the-job training. In terms of soft skills, JMS has also identified some deficits in leadership and communication skills among its production mid-management.

Regarding unskilled machine operators (i.e. seamstresses), JMS has a sufficient supply of women available from the poorer villages in the North who can be recruited directly at the factory gate. (In Chittagong, a generally higher wage level prevails, so local women are less attracted to working in the garment sector.) These women need to be trained on the job to reach adequate levels of quality and efficiency. Moreover, they often lack a proper understanding of health and safety issues, even though JMS requires a minimum level of eight years of schooling.

Figure 39: Assessment of JMS's skills gaps



1. Human Resources, Marketing and Sales, Communications etc.

Retention: Losing workers who return to their home villages and marry

Attrition is close to 3% per month, mainly for two reasons. First, a high proportion of employees are migrant workers from other parts of the country, who are likely to return to their home region. Second, a high share of the employees are women, who often stop working once they are married and have children. This 3% rate is actually well below the average of 4.7% in a sample of 41 Bangladeshi factories that were trained by the NGO Impact, but JMS still strives to reduce attrition in its own workforce.¹²

Research and Development: Lacking the design skills to offer more original designs

Looking forward, JMS aims to offer more of its own designs to clients from the fashion industry. For this reason, it plans to set up a design team that understands the international fashion market and can absorb the latest trends. JMS had difficulties in finding these special skills in Bangladesh, so it hired an experienced Indian designer to build up its design team.

Suppliers: Lacking knowledge to compete with Chinese imports

Lacking own spinning facilities, JMS has to source all of its fabrics externally. JMS requires fabrics of a very high quality for its renowned clients. To minimize lead times, the company would like to source from local suppliers, but they cannot guarantee the constantly high quality-level demanded by JMS. Currently, Bangladeshi production of fabrics is disadvantaged by lower-quality equipment and processes, lower productivity, poorer quality of fabrics (mainly because of foreign yarn elements and irregular shading of fabric pieces) and unreliable timeliness of supply. So local suppliers cannot yet compete with Chinese production, and JMS buys 90% of its fabrics from China. According to JMS's merchandising manager, most local suppliers lack sufficient knowledge of quality requirements, modern production techniques and recipes to guarantee a constantly high product quality. Skills development of these suppliers is crucial, in order to increase their competitiveness.

Figure 40: Overview of JMS's initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 Training for productivity	Increase the productivity of production through training, new production layout, and new machinery
	A.2 Training station for on-boarding and continuous training	Ensure an adequate efficiency level before integrating new operators into the production line
	A.3 TVET for sewing-machine operators	Provide technical and vocational training to enable young women to work for JMS as sewing-machine operators
B <i>Value-chain development</i>	B.1 Supporting Bangladeshi fabrics production	Promote the local production of fabrics
C <i>Community development</i>	C.1 Early childhood education and local schools	Provide early childhood education and schooling (incl. scholarships) to disadvantaged children in Chittagong and on Hatiya Island

4. Addressing JMS's skills gaps

To tackle its skills gaps, JMS has implemented a number of initiatives on all three levels – within the company's own current and prospective workforce, with suppliers, and within the local community (see Figure 40).

4.1 JMS's workforce development: Laying the foundations for productivity increases

For JMS, the quality of its workforce is essential for competitively producing high-quality goods for its renowned clients in North America and in Europe. JMS has therefore introduced three initiatives to foster the skills development of its current and prospective workforce.

“Training for productivity”: Radically transforming production with the help of outside consultants

From 2012 to mid-2014, Gherzi consultants radically transformed operations at JMS by introducing specialization in pre-production and production, changing the production layout – for instance, by removing tables between production lines to create space for processed goods – and by introducing new machines to increase automation. In addition to these changes in operations, the collaboration with Gherzi involved extensive training courses covering the entire workforce. With the help of job descriptions detailing the skill requirements for each position, and a standardized IQ test for all staff from machine operators to the managing director, the employees' aptitude for their current position was assessed. Dedicated training modules were then provided as appropriate, based on an elaborate training manual: the modules involved 30 days of theoretical training

for pre-production management and seven days for production management (line chiefs and supervisors), followed by a six-month and three-month on-the-job training program respectively. Additionally, all sewing operators and workers were trained on the job and at a separate training station. From the ranks of pre-production and production management, more than 100 employees received training relevant to their specific departments; and eventually all production workers, too, received theoretical and practical training. To sustain the training initiative, one Romanian Gherzi consultant with long experience in the international garments sector was hired as plant manager. That hiring has enabled JMS to provide training to new employees and to offer refresher training courses internally.

Facilitating on-boarding and ongoing training through a separate training station

One result of the collaboration with Gherzi was the introduction of a dedicated training station, including a training production line and a dedicated station for dexterity training. Based on standardized curricula and tests, the training line makes it possible to train new hires as well as existing staff in new production techniques, without hampering the normal production process. New hires just have to pass a basic assessment that checks their visual abilities and to show a basic understanding of patterns and demonstrate their literacy, but no prior knowledge of sewing is required. During a 21-day course combining theoretical and mostly practical exercises – such as basic dexterity training, general sewing-machine techniques, and paper and fabric skills – trainees reach the requisite efficiency level to be integrated into the production lines. The training station also enables refresher training courses if supervisors identify issues in production. Apart from the RMG-specific knowledge, new hires receive fire training and safety training, and are taught basic hygiene and sanitary standards.



TVET students at the training station

TVET to recruit new workers from local villages

Over several years, JMS has offered internships to female students engaged in the four-year diploma program in textile engineering at the Chittagong Mohila Polytechnic Institute (CMPI). Building on that good relationship, JMS decided in February 2013 to launch a TVET program for RMG sewing-machine operators. The competence-based training program was developed together with the International Labour Organization (ILO) TVET reform project and the Directorate of Technical Education; it consists of two months of theoretical and practical training in the CMPI workshops, followed by one month of training at JMS's training station. The candidates for the training program are recruited by means of marketing in the local area, including advertisements and street marketing, which favors group recruitment of many women from the same village. The program is open to women above the age of 18 (to prevent child labor) and above grade eight – many of whom would not otherwise have thought of working in the formal sector or for JMS. During open-doors days at the school and via personal interviews, their aptitude for the program is tested.



Sewing workshop in the CMPI

4.2 Skills development along the value chain: Making fabrics from Bangladesh competitive on the world market

For the sake of superior quality and low prices, JMS is sourcing most of its fabrics from China. However, in an effort to buy as much as possible from the local economy, JMS has started to purchase fabrics from local suppliers. Today, these local purchases account for about 10% of the fabrics bought by JMS. Overall, about 15% of all JMS supplies are produced in Bangladesh, including packaging material such as plastic bags and cardboard boxes. JMS supports the development of its suppliers through skills transfer: the purchasers invite pre-selected suppliers to the JMS production site, and explain to them the quality requirements of JMS's clients and the quality-testing procedures. Once delivery has begun, JMS continuously interacts with the suppliers if the fabric falls short of the necessary quality standards; and it offers them solutions to fix the underlying problems, such as changing the recipe or improving the water quality in the coloring process. The purchasers also regularly visit the suppliers' production facilities to provide support. Apart from transfer of know-how, JMS supports its local suppliers financially by paying invoices right away and sometimes even in advance of delivery. In addition, JMS conducts regular audits of its suppliers to ensure compliance with safety standards and CSR expectations, suggesting specific corrective actions and deadlines for implementation, monitoring progress, and providing training sessions on health and safety and environmental concerns.

4.3 Closing skills gaps in the broader community: Giving back to society

Wishing to give something back to society, JMS's founder supports education in the local community of Chittagong and close to his home on Hatiya Island, 65 kilometers (40 miles) off the coast of Chittagong. In Chittagong, the company fully finances the running costs of the JMS Pre-Primary School, which provides initial education to 26 students aged 4-6. Although preference is given to the children of JMS employees, the school is open to the community in general. On the island, JMS has built and co-finances the operation of the Hatiya Public Welfare Trust School, which offers grade 6-10 classes for nearly 1,000 students in two locations. In addition, JMS supports the Hatiya Community College – the first and only secondary education institution on the island – by covering part of the running costs. The college is for grades 11 and 12. It currently has more than 200 students, and plans to increase its capacity by another 100 in the near future. Finally, JMS also sponsors 15 scholarships for poor and talented students in grade 7, who are selected via an island-wide competition.¹³ The students receive a monthly payment of BDT 500 (USD 6.50) as pocket money and to pay for additional private tuition.

5. The role of DFIs: DEG encouraged JMS to go beyond minimum standards

DEG has played an important role in the company’s transformation process by providing long-term financing at substantially lower rates than the 14% annual interest on local (currency) loans with a maximum credit period of five years, and by offering technical assistance. DEG has made its loan conditional on improvements in environmental responsibility and employee health and safety, and provides technical assistance to help JMS in implementing these measures; in doing so, DEG encouraged JMS to comply with and to go beyond international minimum standards. Specifically, DEG encouraged JMS to close down two factories that did not meet fire and building safety standards. Thanks to having already implemented many of the requirements, JMS enjoyed an advantage when the Accord on Fire and Building Safety in Bangladesh was signed in 2013. Moreover, its collaboration with DEG gave JMS access to the Gesellschaft für Internationale Zusammenarbeit (GIZ), another German development organization with which JMS is collaborating to improve social compliance. In this context, the company has joined the Alliance for Sustainable Textiles that was initiated by the German Ministry for Economic Cooperation and Development.

6. The costs and benefits of JMS’s engagement

The costs of JMS’s initiatives are well documented in accounting data; the benefits of the initiatives are apparent on all three levels – the company’s own workforce, its suppliers, and the local community. Figure 41 summarizes the costs and benefits of the initiatives at each level.

6.1 Costs and benefits of JMS’s workforce development

Company benefits: Increasing JMS’s competitiveness

The comprehensive transformation project realized with Gherzi – including the training program for productivity that JMS embarked on in 2012 – incurred total costs of USD 1.5 million, of which USD 820,000 are related to skills development, while the rest was spent on machine equipment and furniture. On the benefit side, the training courses for the new production processes and machines created a tremendously positive impact on the company’s performance – boosting productivity (by 37%), increasing capacity (by 74%), and by improving quality, as well as reducing absenteeism (from 4% in 2012 to 2% per month in 2015), attrition (from above 5% in 2012 to below 2% per month in 2015) and wastage (the rejection rate decreased by more than 80% from January 2014 to May 2015 – see Figure 42).¹⁴ In addition, profits have increased by over USD 1 million since 2012. It is impossible to disentangle the effects of the different elements of the transformation process, as each would not have been possible without the others. According to the former Gherzi consultant who now works as general manager for JMS, the most important productivity lever is the optimization of production layout, followed by the training of employees, and lastly the usage of new machines.¹⁵

To calculate the net benefit of the “training for productivity” program, one has to make some simplifying assumptions. On the basis of the former consultant’s expert judgment, it is assumed that 30% of the productivity increase (of 37% per worker) can be attributed to the training, while the remaining 70% should be attributed to the new production layout and

Figure 41: Overview of the costs and benefits of JMS’s engagement

Type of initiative	Initiative	Costs ('000 USD)	Beneficiaries			
			JMS	Employees	Suppliers	Community
A <i>Workforce development</i>	A.1 Training for productivity	One-off: 820	+++	+++		+
	A.2 Training station for on-boarding and continuous training	One-off: 26 Running: 6 p.a.	++	++		
	A.3 TVET for sewing-machine operators	One-off: N/A Running: 7 p.a.	++			+++
B <i>Value-chain development</i>	B.1 Supporting Bangladeshi fabrics production	No direct costs	+		+++	+
C <i>Community development</i>	C.1 Early childhood education and local schools	One-off: 15.5 Running: 38 p.a.	+	++		+++
			+ Small benefits	++ Medium benefits	+++ Large benefits	

machinery.¹⁶ On the basis of the 2012 production numbers and profit per piece, the 11% increase in productivity attributable to the training (i.e. 30% of the total productivity increase of 37%) leads to an additional income of about USD 330,000 per year – everything else remaining equal. Accordingly, the break-even point of the USD 820,000 investment in productivity training is reached after 2.5 years.

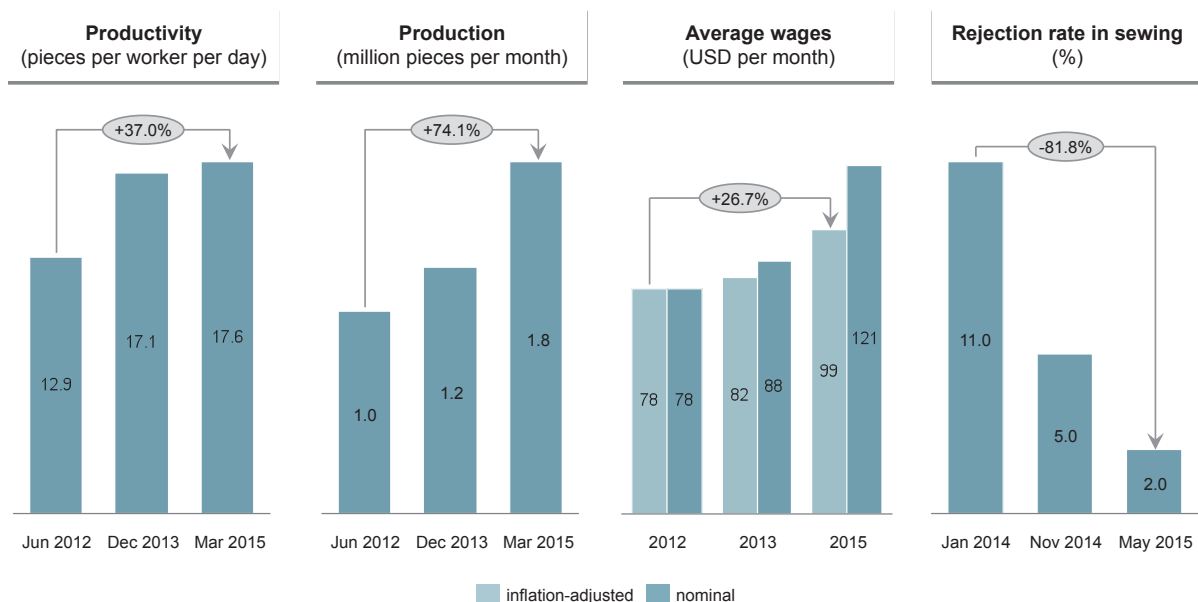
The training also had the effect of improving the product quality substantially – making JMS itself a benchmark for quality production in Chittagong. Consider too, in addition to the training measures, JMS’s ongoing construction and renovation of its production facilities and its introduction of new production techniques on all production lines: once all of this is completed, JMS will be able to service high-quality clients even better and to gradually upgrade its client portfolio to achieve higher margins. Given the positive effects of the Gherzi project, JMS is planning to work together with the NGO Impactt on complementary training to close the productivity gap relative to high-productivity countries like Indonesia and Turkey, and to further improve compliance. Impactt has an impressive track record in the RMG sector in Bangladesh through its Benefits for Businesses and Workers program.¹⁷

The training station had one-off costs of USD 26,000 for the equipment, and has running costs of about USD 6,000 per year for the instructors. It allows JMS to train new workers and existing staff without reducing the efficiency of its production process or incurring production losses. Through the on-boarding training, workers reach a high level of efficiency and quality, and the low running costs are offset through higher volume and quality of production. Thanks to the opportunity to train workers continuously at the training station, it is possible to make continuous improvements to the production process and to introduce new techniques and machinery smoothly.

In addition, as another important side-effect, the “training for productivity” program and the training station tend to increase specialization among the operators. That helps to boost retention, as employees who excel at operating a specific machine cannot easily transfer their know-how to other companies.

The TVET program did not require any investment costs from JMS. The set-up and the first two years of the program – specifically, the training equipment and the teachers – were financed by the ILO. Further funding is now provided by the I-K Foundation and the Directorate for Technical Education – funding for the four teachers and the running costs of the school – while JMS is responsible for the practical training, and contributes through technical support from JMS’s production manager and through the provision of fabrics. Four batches with up to 30 students are trained every year, and on completion of the practical training at JMS, the students receive a certificate and can decide whether to continue working for JMS or to work for another company. To date, six intakes have been completed, and about 50 graduates have joined JMS (for the first six intakes, the drop-out rate averaged 24%; a total of 94 students have graduated to date). The running costs of the TVET program for JMS can be split into direct and indirect costs. The direct costs consist of the USD 70 wage that JMS pays each trainee during the last month of training, which is the same amount that other recruits receive in the first month. With four intakes per year, each with an average of 26 students, the total direct running costs amount to about USD 7,280 per year. The program’s indirect costs arise from the technical support that the school receives via JMS’s production manager and from the provision of fabric for the school workshop – but these costs are negligible on this aggregate level, and have no impact on the result. As for the benefits of the program, JMS attracts women who would not otherwise have applied to work for JMS, ensuring a supply of 15-20 trained machine operators per intake, and

Figure 42: Development of KPIs over time



thereby reducing the need to hire unskilled workers from other sources. On average, about two thirds of the graduates have joined JMS, while others started working for Youngone Ltd., the largest textile company in Bangladesh, with Korean owners, or for other, smaller firms. Thanks to the practical exercises at the training station, graduates of the program can join the production process directly upon graduating, and they possess a deeper technical understanding of the process than unskilled workers that have not undergone the theoretical training at CMPI. Furthermore, the TVET program's graduates produce at a higher efficiency, averaging 60% vs. the 54% for a sample of other recruits.

In order to calculate the net benefit of the TVET program, one has to compare the costs and the benefits. Assuming a full capacity utilization of the program with four intakes of 30 students each, a total of 120 students graduate from the TVET program every year. If two thirds of these graduates continue to join JMS (80 students), JMS each year has to pay a wage to 40 trainees who do not join the company later – a total of USD 2,800 per year. After graduation, outside hires and graduates of the TVET program earn about USD 85 per month. In terms of benefits, the higher productivity of the program's 80 graduates that join JMS each year (using a piece price of USD 1.36 and a production rate of 170 pieces per month for other recruits) yields a positive net benefit for JMS of about USD 150,000 per year. In addition, the attrition rate of graduates of the TVET program is one third lower (22% vs. 33% per year) than that of other recruits, who often come from other parts of the country. From this simple business-case calculation, it is clear that the initiative provides a positive return for JMS.

Employee benefits: Increased earnings through higher productivity

For JMS employees, the main benefit of JMS's workforce development is the higher salary they can earn through higher production efficiency (see the box for some brief case examples). Their compensation consists of a base salary, as prescribed through the national minimum wage, plus an efficiency bonus based on their daily performance. Each operator's performance is measured daily, and the bonus is calculated accordingly, reaching from BDT 15 per day for 66% efficiency to BDT 45 for over 99% efficiency. The daily bonuses are added up over the course of the month, and are doubled by JMS at the end of the month if efficiency remained above the threshold of 66% throughout. On average, 80% of machine operators reach the efficiency threshold and receive a bonus. Therefore, despite the reduction of working hours following the implementation of a two-shift system, workers' salaries increased significantly thanks to the transformation of production. In a study comparing JMS's average monthly wage with a sample of 41 factories that were trained by Impactt, it turns out that JMS's wage of USD 121 (BDT 9,414) is 36% higher than the average, which was USD 89 (BDT 6,921).¹⁸

In addition, workers benefit from better working conditions through changes in the production layout – for instance, higher desks or ergonomic chairs – reducing the strain on their backs caused by constant bending and bad furniture. The training on the training line – whether courses for new hires or refresher training courses – helps machine operators to attain higher productivity levels and thereby a higher income.

The participants on the TVET course get the chance to improve their circumstances, by virtue of their qualifications and increased employability. And their close connection with JMS allows them to continue working there and to provide for their families.

The commitment of JMS and its management to the well-being, health and safety of its employees is borne out by a major strategic decision of the Managing Director, Mr. Ali: namely, to close down two factories that did not meet safety standards, instead of trying to get by with minor changes and delaying any response to the demands. The garment industry is notoriously lacking in compliance with environmental responsibility and health and safety standards. What made Mr. Ali's bold and radical move all the more impressive is that one of the factories closed – Fashion Ltd. – was the first of the group's larger production facilities and had a high symbolic value.¹⁹

Community benefits: Creating and ensuring better jobs for local women

The community benefits from JMS's workforce development through more and better jobs, which are being secured and will continue to be created thanks to JMS's increased competitiveness. Already, JMS is providing employment to more than 6,300 people, 70% of them women. The TVET course increases the employability of women from more distant villages who would otherwise not have found employment in the formal sector or earned an income but would have been limited to staying at home caring for their families. By means of the three-month training program, they can start working at JMS or other RMG companies in the area and secure a wage above the legal minimum. During the first two months of training, they receive a weekly allowance of BDT 80 (USD 1). Apart from the technical training, the women's livelihood skills improve through the sanitary and hygiene training, with positive spill-over effects on their families and neighbors. The training and employment of women is also likely to have long-term positive effects on the development of the local communities: numerous studies have shown the wide-ranging benefits in education, nutrition and health of children, and have also shown how family incomes increase through the improved intra-household bargaining power of employed women who contribute to household income.²⁰

Story of the beneficiaries

Two of the young women who are currently on the training line were persuaded by their school teacher to undergo the TVET program in order to earn money instead of just staying at home, caring for their families, and sewing for private use. They started the program with several other women from the same village, which eased their transition to the new working environment.

The case of two other young women shows the effects of the training: graduating from the first intake, they have now been working in JMS production for over a year, using several different machines and earning about BDT 9,500 (USD 122) per month – far more than the minimum wage, and a great help to them in sustaining their families.

6.2 Costs and benefits of JMS's skills development along the value chain

Company benefits and benefits for the suppliers: Reaching export-quality standards and decreasing lead time

JMS's support for local suppliers has no directly related costs, as the knowledge transfer is mainly on an ad-hoc basis and is part of the purchasers' daily job. In return, by supporting its local suppliers, JMS is able to broaden its supplier base and to become less dependent on Chinese suppliers. The biggest advantage, however, is the decrease of 20 days in lead time, as it takes about 22 days to ship fabric from China to Chittagong. Being able to deliver quickly is a big competitive advantage in the fast-moving garment industry – particularly for the European market, where Turkish producers have a significant geographical advantage.

The suppliers benefit not only from elevated sales revenues, but most importantly from higher product quality, which helps them to acquire new clients. JMS is known in the Bangladeshi garment industry to produce increasingly for high-end brands in the US and Europe, which demand very high quality standards. In supplying JMS, the local producers can credibly demonstrate their ability to comply with these standards. Using JMS as a reference, they are able to win orders from other RMG producers in Bangladesh that also produce for more prestigious brands.

Community benefits: Creating and securing employment in the community

JMS's local suppliers provide employment for more than 15,000 people. Sales to the local RMG industry help to secure these jobs. And further jobs should be created by higher product quality and higher productivity, as more fabric would then be sourced locally rather than from China. Taking the minimum salary

for machine operators of USD 86 per month as a proxy, that would suggest that the local suppliers generate an income of around USD 15.5 million per year for local households. JMS's own purchasing volume from local suppliers amounts to USD 7.2 million per year; local production means local value creation, with positive secondary effects such as increased revenues and employment for sub-suppliers.

6.3 Costs and benefits of JMS's skills development in the broader community

Company benefits and costs: Corporate Social Responsibility with a positive side-effect

For the construction of the Hatiya Public Welfare Trust School in 2008, JMS invested BDT 1.29 million (USD 16,600). The ongoing financial support for the JMS Pre-primary School amounts to BDT 40,000 (USD 515) per month, and the contributions to the Hatiya Public Welfare Trust School and the Hatiya Community College are BDT 114,118 (USD 1,470) and BDT 87,000 (USD 1,120) per month respectively. Together with the scholarship payment of BDT 500 (USD 6.50) per month, the annual support totals about BDT 3 million (USD 38,630). JMS stresses that all engagement in the local community is purely CSR, and that no return of any kind is expected. Since JMS exports 100% of its goods and has no own brand, a positive company image in the local community is of much lower importance than for other companies. By supporting education on the island of Hatiya, the founder of JMS is able to give something back to his community. Similarly, the continuous support of the JMS Pre-Primary School outside the Chittagong Export Promotion Zone is mainly for philanthropic reasons. However, it is worth noting that most of the pupils are children of JMS employees, so the school does help JMS in retaining qualified workers: the employees recognize and appreciate JMS's engagement, and value the high-quality education provided.

Community benefits: Narrowing the skills gaps through primary and secondary education

JMS established the Hatiya Public Welfare Trust School in the remotest area of Hatiya Island, a part inhabited by 35,000 people. Before JMS engagement, there was not a single school or college in that particular area (in fact, no college on the entire island). Through the support provided by JMS, nearly 1,000 students now have access to primary education, and more than 200 to secondary education.

Private-sector investment in schooling can make a significant impact in Bangladesh, as the lack of basic education – including literacy, and basic mathematical and English skills – represents a major obstacle to development. The school enables students from the island to find higher-qualified and better-paid jobs and to raise their living standards above those of their parents, who

often work in low-skilled jobs or small-scale agriculture and fish-farming. Intermediate education for the young people on the island is a prerequisite to obtaining higher education, and it opens the door to specialized jobs and managerial positions on the mainland – not only in the garment industry.

6.4 Overall assessment of the costs and benefits

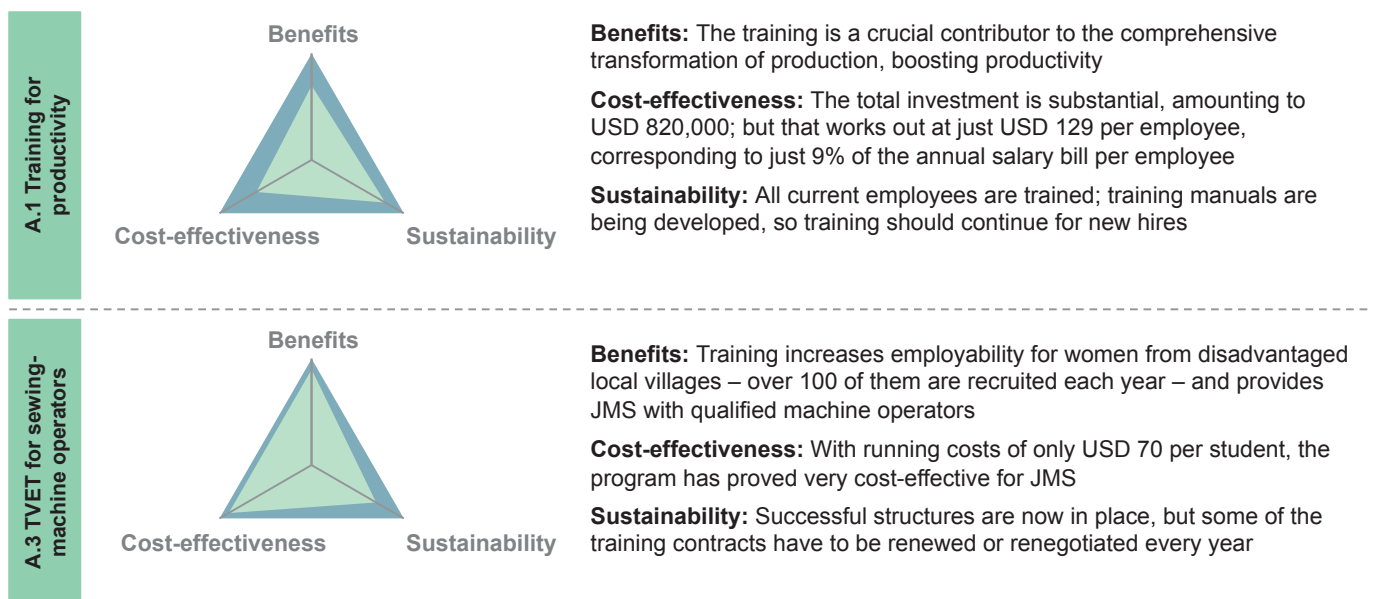
Figure 43 provides a summary assessment of the two key initiatives along three dimensions – benefits, cost-effectiveness and sustainability.²¹ The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative. One glance shows that both of the initiatives have registered a good overall performance.

- **The training program for productivity**, as discussed earlier, generated considerable benefits for JMS, transforming its production and boosting its productivity. In terms of sustainability, the development of training manuals and the completed training of all current employees ensure that training can be continued for new hires and that refresher training courses are offered. Regarding cost-effectiveness, the program received substantial investment, but it remains relatively inexpensive at the employee level, corresponding to just 9% of the average annual salary. The business-case calculation showed that break-even is reached within 1.5 years.
- **The TVET course for sewing-machine operators** scores very high along all three dimensions: it increases local employability (providing additional jobs each year for more than 100 women from disadvantaged areas, who most likely would not have entered the job market otherwise), while costing

only USD 70 per student for JMS – no more than the cost of recruiting unskilled workers at the factory gate. The business-case calculation showed a net benefit of USD 150,000 per year. As for sustainability, the continuity of the program is ensured: structures are well-established, with teachers, curricula and a functioning workshop in the CMPI; and there are long-term funding agreements between JMS, the I-K foundation and the Directorate for Technical Education. However, the current contractual arrangements between JMS and the school to train the students at the worksite in their final month are valid for just one year. But six intakes of students have now progressed, and the collaboration is a proven success, so the partners might move to a longer contract period, lasting several years, to increase planning security and thereby ensure sustainability.

By weighting the overall costs and benefits of all initiatives, the following appraisal emerges. JMS has invested heavily in the skills development of its current and prospective workforce, its suppliers, and the local community. The five initiatives listed in Figure 41 had direct measurable one-off costs of USD 861,151 and running costs of about USD 51,000 per year, corresponding to 1.1% and less than 0.1% respectively of the company’s 2014 revenues. So, clearly the overall costs of the initiatives are relatively small, particularly for the vocational training program and the training station. In return, JMS has been able to reap great benefits from the implemented initiatives, which laid the foundation for substantial increases in productivity and quality. The business case for the TVET program also showed a positive financial return for JMS, even though not all of the program’s graduates join JMS. If they do join other RMG companies, though, that still represents a benefit – for the local community.

Figure 43: Summary assessment of two selected initiatives



JMS's employees have also benefited considerably, since the training enabled them to achieve higher efficiency and thereby increase their income, while at the same their working conditions improved extensively. Local suppliers of fabrics benefit too, from JMS's know-how transfer and financial assistance, which improve the quality and timeliness of supply as well as the health and safety of their workers. The local community in Chittagong and Hatiya profits greatly from JMS's commitment to enhancing education and its contributions to local schools and colleges. In addition, the creation of more and better-paid jobs, especially for women, is likely to lead to substantial secondary benefits in the form of higher consumption, and better education and health for children. To sum up, JMS's initiatives have shown that investment in the skills development on all three levels is not only beneficial for its employees, suppliers and the community, but also pays off financially for the company itself, and lays the foundation for future growth in a competitive sector.

7. Conclusion

JMS has successfully trained its workforce, and its initiatives have helped to boost productivity and competitiveness, while also reducing attrition. The business-case analysis shows that the benefits of the initiatives clearly outweigh the costs, creating a positive overall business impact. Going forward, JMS needs to further tackle its skills gap in production mid-management, a challenge that has not yet been fully addressed.

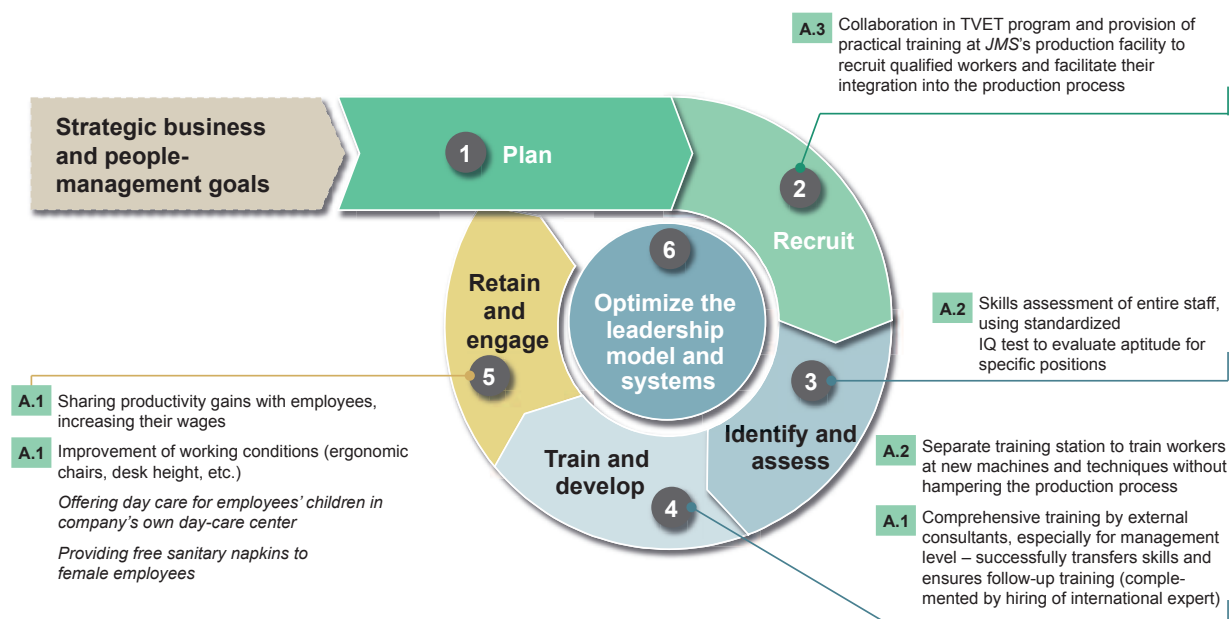
Good practices from JMS that can help companies to close their skills gaps

From studying JMS's initiatives, it is possible to identify a number of widely applicable good practices. Figure 44 presents an overview of these practices.

Among these good practices, it is worth highlighting four elements that other companies could replicate or adapt to their specific needs and context:

- 1. Introduction of a separate training station (A.2).** In manufacturing industries, it enables the provision of practical training for new hires and of refresher training courses, all without hampering the actual production process (good practice 4.4 in the good-practice framework for workforce development described in Chapter 2.1).
- 2. Linking wage increases to productivity gains through a transparent efficiency bonus (A.1).** It serves as a means of increasing workers' engagement and retention. At the same time, it allows the community to enjoy the benefits of technological advances and increased automation in the form of higher household incomes (good practice 5.2).
- 3. Improvement of working conditions (A.1).** A simple example is that of equipping work stations with ergonomic chairs and keeping working material at the same height in order to avoid constant bending over. These small changes in workplaces not only benefit workers' health but also increase efficiency (good practice 5.4).

Figure 44: Overview of good practices from JMS's workforce development



Note: Measures that are printed in italics are not described in detail in this case study.

4. Investing in non-financial benefits for employees. A simple example is the provision of free or subsidized sanitary napkins. When employers take such measures, at very low cost, in female-dominated industries, they demonstrate that they care for their employees, and thereby help to reduce absenteeism and increase retention (good practice 5.4).

Key factors for improving the business case for JMS's TVET program

The business-case analysis of JMS's TVET program has shown that the initiative undoubtedly has a positive business effect. As the running costs are already very low, the main lever for improving the business case even further is to increase the benefits of the program. To this end, two actions are worth considering:

- Increase the number of TVET graduates that join JMS. Analyze the reasons why about a third of the TVET students decline to join JMS after graduating; develop targeted measures to improve the ratio; keep reinforcing during practical training the benefits of working for JMS.
- Leverage the theoretical knowledge and loyalty of the TVET graduates. Develop a fast-track career program for TVET graduates by means of specific training courses that build on the TVET curriculum; that will make JMS even more attractive for these graduates, and will at the same time help to bridge the skills gap in production mid-management.

Lessons learned from JMS

From an analysis of JMS's initiatives, it is possible to derive several lessons that might help other companies to address skills gaps more successfully:

- **Transparent and comprehensive career paths are crucial for internal development.** The development of clear career paths – offering every employee an attractive career outlook – forms the basis for the systematic development of employees, and increases their motivation and their affiliation with the company (good practice 4.1).
- **Enabling changes between production and non-production departments is key to developing the production staff.** When designing comprehensive career paths, ensure that career transitions are possible between production and non-production departments, and facilitate such transitions by means of specific training courses. In that way, you can enhance the career prospects of production staff (good practice 4.1).
- **Retention and integration of new hires within the company is essential.** In order to retain new hires (especially migrant workers) and integrate them quickly into the company, introduce a mentoring and buddy system for new hires – ideally with mentors from the same region in the case of migrant workers (good practice 5.5).
- **Providing specific education opportunities for women aged 16-18 is critical for increasing female participation in the labor force.** Many women who leave school at 16 are lost as prospective employees, since they cannot join

the TVET program until they turn 18. Accordingly, it is worth investigating opportunities to provide specific vocational training for women aged 16-18 (good practice 4.4).

- **Integrating supplier training into supply-chain management is vital for achieving sustainable improvements.** Ensure a systematic supply-chain management system that identifies the key issues (and includes them in supplier training), provides incentives for suppliers to engage in training, and monitors results systematically. Such a system creates the preconditions for sustainable improvements in quality and timeliness of supply (good practice 1.1, 3.4, and 4.5 in the good-practice framework for closing skills gaps in the broader community described in Chapter 2.3).

Notes

- ¹ Information provided by JMS. If no specific reference is given, information in this case study is based on information provided by JMS and/or based on expert interviews conducted in Bangladesh in July 2015.
- ² The following exchange rates are used: 1 USD= 77,71 BDT; 1 USD = 0.91 EUR.
- ³ World Trade Organization (2015), Clothing – Merchandise Trade by commodity.
- ⁴ World Bank (2015), Labor force, total.
- ⁵ International Labour Organization (2015), Improving working conditions in the ready made garment industry: Progress and achievements.
- ⁶ Morgan Stanley (2015), Bangladesh Ready-Made Garments Industry: Moving towards Sustainability – Executive Summary.
- ⁷ Accord (2013), Accord on Fire and Building Safety in Bangladesh.
- ⁸ Therefore, a further expansion of production is expected, and various comparative studies have identified Ethiopia, Kenya and Tanzania as probable candidates for RMG manufacturing sites. For more information, see Solidaridad Berenschot (2014), Africa en vogue – the opportunities and challenges of textile & apparel market sourcing in East Africa.
- ⁹ World Bank (2014), Recognizing Prior Competence: Increasing Skilled Manpower in Bangladesh. ¹¹² For example, World Bank (2015), Bangladesh – Skills and Training Enhancement Project.
- ¹⁰ For example, World Bank (2015), Bangladesh – Skills and Training Enhancement Project.
- ¹¹ World Bank (2010), Skills and Training Enhancement Project – Project Information Document.
- ¹² Impactt's training program includes an HR module that aims to increase retention and attendance. For more information on the training and its impact, see Impactt (2013), Nicer Work? Impactt's Benefits for Businesses and Workers Programme 2011-2013.
- ¹³ Scholarships for the same students in grades 6, 8 and 9 are provided by other companies from the region.
- ¹⁴ 2015 figures are monthly averages calculated on a year to date basis.
- ¹⁵ By introducing two-shift production, JMS also managed to solve the previous overtime problem: the first shift simply cannot work longer than eight hours, since the second shift then begins. In that way, the two-shift production contributed to reducing the reputational and legal risk that all RMG manufacturers face from non-compliance with labor law.
- ¹⁶ The 30% attribution to training is a lower-bound estimation. So the net benefits of the training program might be even higher.
- ¹⁷ Impactt (2013): Nicer Work? Impactt's Benefits for Businesses and Workers Programme 2011-2013.
- ¹⁸ Ibid.
- ¹⁹ Before signing its loan agreement, DEG encouraged JMS to improve fire and building safety in these two factories. Their closure paved the way to the DEG financing.
- ²⁰ See for instance Doss, C. (2011), Intrahousehold bargaining and resource allocation in developing countries – Background Paper for World Development Report 2012.
- ²¹ The other three initiatives are summarized in the overall qualitative assessment below.

Ohorongo Cement (Pty) Ltd.

A cement producer successfully addresses skills gaps for a greenfield project in Namibia

Executive summary

Ohorongo Cement (Pty) Ltd. (hereafter Ohorongo) is Namibia's first and only cement-producing company, located in the resource-rich but economically weak Otjozondjupa province in the north of the country. When setting up production in 2010, Ohorongo's German mother company Schwenk faced the challenge that cement-specific skills were not available on the Namibian labor market. In particular, the company is reliant on qualified control-room operators (CROs) and foremen to manage the production process of its modern plant. In addition to the lack of cement-specific control-room skills, the Namibian labor market is generally very short on higher qualifications, and very few candidates combine an adequate qualification with skills in leadership, effective communication and problem-solving. Accordingly, Schwenk and Ohorongo invest a lot in the skills development of the workforce.

Well before production started, Namibian CROs and foremen were recruited and sent to Germany for an intensive five-month initial training course, combining theory-based and simulation sessions with practical experience in Schwenk's plants, to enable them to manage the global process and run the plant in Namibia. Given the lack of experienced supervisory and management candidates, Ohorongo also develops these skills internally, through a comprehensive employee training program for workers and management – including courses in both soft and hard skills – based on a systematic assessment of training needs for the different positions.

In a very tight labor market, with fierce competition from manufacturing and mining companies for trained and experienced production staff, Ohorongo strives to retain key employees, in whose training it has invested a great deal. Its retention strategy comprises various short-to-medium-term measures: one key element is the payment of a retention bonus to key personnel who commit to staying three years with Ohorongo. In order to ensure a sufficient supply and adequate training of CROs in the future, the company is building a CRO training center to train current staff and new hires as well as employees from other manufacturing and mining companies. The business case for the initiative appears to be negative if the center trains only Ohorongo's new hires, but it could become positive if the training capacities are fully utilized and the running costs are shared with other companies.

Ohorongo's skills-development initiatives enabled the smooth ramp-up of production and the production of high-quality cement, allowing it to quickly take over the Namibian market. In the face of stiff competition, the initiatives ensure a sufficient supply of qualified personnel for its production now and in the future. Ohorongo's employees benefit from the initiatives through higher skill levels, allowing them to move up the career ladder and earn a higher salary. By training CROs in excess of its own demand, Ohorongo also contributes to the skills development in the country; and by addressing the serious under-supply of qualified CROs in this way, the company reduces the risk that qualified personnel will be enticed away to other companies.

There are a number of good practices that other companies could copy, if applicable to their situations: collaborate with competitors in training to address the skills shortage in the industry (good practice 4.3 in the good-practice framework for workforce development described in Chapter 2.1), assess training needs in a timely way (1.1) and provide systematic internal training (4.4), and set up a mentoring system for personnel in key positions (4.5 and 5.5). In sum, the case of Ohorongo underscores the importance and benefits of early skills development, especially for greenfield projects in remote regions and with generally low skill levels.

1. Company background

Ohorongo Cement (Pty) Ltd. is a cement-producing company located near the small town of Otavi in the resource-rich but economically weak Otjozondjupa region in northern Namibia.¹ The company is owned by the German Schwenk Zement KG (hereafter Schwenk) and a group of development finance institutions – namely, the South African Industrial Development Corporation and the Development Banks of Namibia and South Africa. The company sources all raw materials required for production locally, and completes the entire production process in Namibia. Production began in 2010, in what is the most modern cement plant in Africa. The company today has 312 permanent employees in the plant and at its headquarters in Windhoek, of whom about 98% are Namibians.²

All notes at the end of this chapter (Page 111)



Ohorongo cement plant in Otavi

2. Namibia's skills gaps: The lack of higher-qualified workers

Namibia has gone a long way in improving literacy and primary schooling over recent years, but access to secondary and tertiary education is still limited.³ In the Otjozondjupa region where Ohorongo is located, about 40% of the population have completed primary education, but only 19% and 4% have gone on to complete secondary and tertiary education respectively.⁴ Only 3% of any school-age cohort enroll in technical vocational education and training (TVET) or higher education: 2,800 TVET and 4,000 university students every year out of a population of 2.3 million Namibians. The curricula often do not match industry needs, and there is also a shortage of experienced instructors and researchers.⁵

Owing to the low numbers and the limited employability of graduates, Namibian businesses across all sectors face skills gaps. In a 2010 survey of more than 100 Namibian companies, 96% of respondents felt that the country is experiencing a skills shortage, 45% assessed the situation as very severe, and the majority expected the situation to worsen over the next five years. In particular, specialist positions for managers, professionals and technicians remain vacant.⁶ The skills gaps are particularly wide in the mining and building sectors, with a joint shortage of over 15,000 skilled workers from 2012 to 2016, increasing to about 25,000 for the period 2022-2025. For Ohorongo specifically, the projected demand for stationary plant operators will exceed projected supply by about 300-400 workers over the period 2012-2025. Despite this gap, unemployment is at a staggering 30% – 36.8% in Otjozondjupa⁷ – with youth unemployment exceeding 56%.⁸ Unsurprisingly, therefore, a majority of companies that face skills gaps have a strategic skills-development plan in place, but 53% of those feel that their initiatives are only partially effective.⁹

3. Ohorongo's skills gaps: The lack of qualified production staff with cement-specific skills

Given the limited availability of skilled workers in Namibia, it is generally very difficult to hire suitable employees; and the higher the required qualification and the greater the responsibility of the position, the more difficult it becomes. Several types of positions in administration and production are very hard to fill, as can be seen in Ohorongo's skills-gap assessment in Figure 45. In addition to a general skills gap and tight labor market, Ohorongo faces a very particular challenge in production: namely, the unavailability of cement-specific skills in Namibia. However, these skills gaps so far have not yet impacted negatively on Ohorongo, thanks to the support of its mother company Schwenk in Germany, which is able to step in if there is a shortage.

Administration: Gaps in respect of finance managers and IT specialists

In administration, Ohorongo struggles to find qualified personnel for management and specialist positions in finance, IT and marketing: it takes a long time to fill positions, and often involves paying a substantial premium to attract the right recruits. The few candidates who are very well-qualified tend to capitalize on their skills and will often change companies.

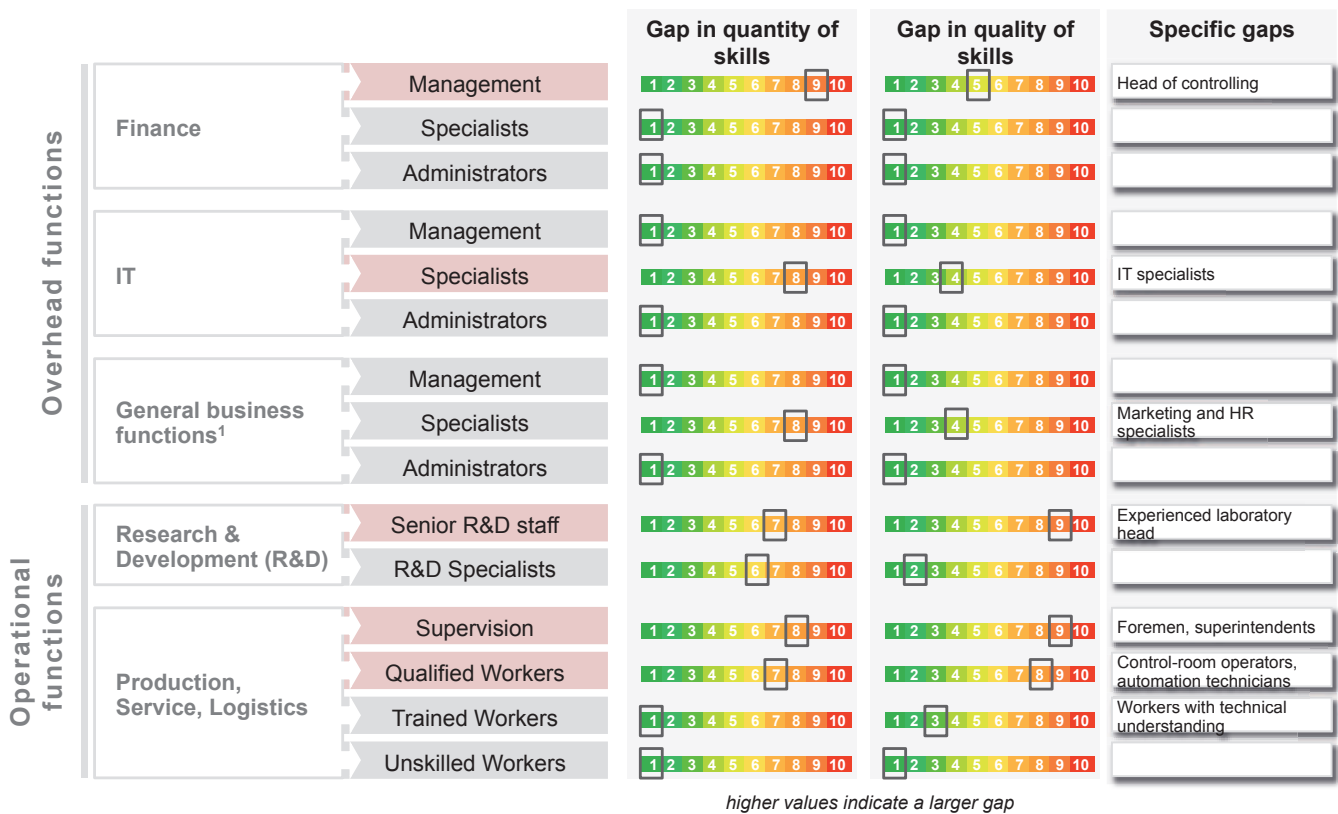
Production: Finding and retaining experienced staff – a constant challenge

In production, Ohorongo has serious difficulties in finding adequately trained CROs – the personnel that oversee the complex production process, control the plant's cutting-edge technology, and ensure the company's renowned quality. To fully master the requirements, the CROs need 2-3 years of on-the-job training and practical experience. As cement-specific skills are lacking in Namibia, workers would have to be recruited from South Africa or internationally.

Regarding the supervisory level – foremen and superintendents, the next operational levels from CROs – the skills gap is even wider, since these positions require a cement-specific technical understanding of the entire production process, as well as certain administrative and leadership skills. The needed skill set includes the ability to take responsibility, as well as to communicate feedback and instructions effectively to subordinates. At the moment, the superintendent position remains vacant, and foremen are taking over these positions as surrogates with limited authority.

Finally, there are laboratory heads and quality-control specialists – the people who perform the essential analysis of raw materials and the final product to ensure high quality standards. All mining companies in Namibia are facing the challenge of filling these

Figure 45: Assessment of Ohorongo’s skills gaps



1. Human Resources, Marketing and Sales, Communications etc.

positions; all the more so for Ohorongo, given its demand for cement-specific skills that are not available on the local market. Accordingly, Ohorongo had to recruit an Indian laboratory head – not an easy undertaking, since Namibian national legislation requires companies to give preference to Namibians in hiring, and allows the recruitment of foreigners only if the position cannot be filled nationally. To receive a work permit for foreign workers, the law prescribes the training of a Namibian under-study, to work alongside the foreign expert with the aim of bridging the skills gap in the long run.

Retention: Competing with mines for trained staff

Even if the vacant positions can be filled, Ohorongo faces an additional challenge: retaining qualified and trained workers. This challenge arises mainly for two reasons. First, despite decreasing commodity prices, mining companies are still generating higher margins and are thereby creating upward pressure on wages. Despite a non-poaching agreement, there is fierce competition for qualified and experienced production staff, with nearby uranium- and gold-mining companies and a copper smelter offering attractive salaries and benefits such as housing. Second, employees’ loyalty to a specific company is often weak, and workers are generally amenable to moving to other parts of the country for the sake of a slightly higher income.

4. Addressing Ohorongo’s skills gaps, and those of the country

Ohorongo has implemented a number of initiatives to address its skills gaps, mainly at the workforce level rather than at the supplier and community levels. Its workforce-development initiatives target both its current and prospective workforce (see Figure 46).

The company has no systematic supplier-development program, but as an all-Namibian producer, the company sources all raw materials for its production from Namibian suppliers, and has built up a local supplier network in the Otavi region – for instance, for protective gear, pallets, and transportation. While Ohorongo has engaged in knowledge transfer to its resource-suppliers, most other suppliers do not relate to its core business and require different kinds of expertise. For this reason, Ohorongo has supported their development mainly financially through long-term contracts. Regarding closing skills gaps in the broader community, finally, Ohorongo actively supports the local community, business communities and government authorities by means of projects in infrastructure, health and education, managed by the Ohorongo Community Trust. To date, however, the Trust has not launched any specific skills-development program for the local community.

Figure 46: Overview of Ohorongo’s initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 Initial training program for production ramp-up (2010)	Train technical and administrative staff, supervisors and managers
	A.2 Employee training for workers and management (ongoing)	Develop internal skills (particularly soft skills) to aid career development and enable trainees to be competent in their new positions
	A.3 Retention strategy for key employees (ongoing)	Identify and retain positions/position-holders that are crucial for Ohorongo’s success
	A.4 Training center for control-room operators (2015)	Train control-room operators for Ohorongo and the mining industry
B <i>Value-chain development</i>	<i>Ohorongo provides comprehensive financial support to most suppliers, and selective skills-transfer to resource-suppliers, but no systematic skills-development program targeting suppliers overall. Most suppliers (e.g. of protective gear, pallets, transportation) do not directly relate to the core business, and require different kinds of expertise</i>	
C <i>Community development</i>	<i>Ohorongo Community Trust supports business communities, the Otavi community, and government authorities in infrastructure, education and healthcare, via donations in cash and in kind, but it provides no specific skills-development program</i>	

A properly trained and qualified workforce was and is essential for the successful ramp-up of Ohorongo’s production, and for guaranteeing the production of high-quality cement in Namibia. For this reason, the company introduced four initiatives to foster the skills development of its current and prospective workforce.

Initial training for production ramp-up: Allowing a smooth and successful start to production

Being a classic greenfield investment, Ohorongo had to start from scratch in Namibia, with the recruitment of personnel to initiate production. Given the limited availability of qualified operations specialists, especially CROs, in the Namibian labor market, the mother company Schwenk and Ohorongo worked together with a headhunting company to recruit key personnel well in advance of the start of production. Many employees were recruited from mining companies, but they naturally lacked cement-specific knowledge, so Ohorongo sent a total of 60 new hires for an intensive initial training program to the mother company in Germany. Those with corporate functions received 2-3 weeks of training to introduce them to their counterparts and to the company-wide systems; in contrast, the 26 CROs, automation technicians and foremen underwent 3-5 months of intensive training: for the sake of back-up, enough CROs for five shifts were trained, even though the plant is run in four shifts. In keeping with a rigorously prepared training curriculum, the trainees first received a general introduction to the cement industry, laying the foundation for the subsequent advanced training courses. This two-week introduction combined theoretical and practical elements, and was conducted in collaboration with the German Cement Industry Association (VDZ) to ensure that state-of-the-art knowledge was conveyed. After a specific control-room simulation training course, the trainees were allocated to different Schwenk plants to receive further applied training and to experience daily operations at first hand. At the end of their stay in Germany, having acquired a thorough

understanding of the general processes, all operations personnel underwent plant-specific training from the plant supplier. The training was documented in comprehensive training manuals and in experience reports compiled by the participants themselves: these documents would subsequently be available for consultation during daily operations in Namibia.

Employee training for workers and management: Improving their skills for higher positions

Against the backdrop of a general shortage of qualified personnel, it is necessary to arrange in-house development of employees’ skills, particularly for the supervisory level. Every year, about half of the company’s employees receive training via internal or external trainers.

Ohorongo has set up a systematic training and development plan that defines the training requirements for each position; there are, for example, training courses on leadership, project management or disciplinary hearings for senior positions. In addition, Ohorongo collaborates with the Namibian Institute of Mining Technology (NIMT) in offering skills-upgrading to its artisan workers, by means of a vocational training course that combines theory-based lessons at NIMT with practical sessions at Ohorongo. Currently, 13 employees participate in the program; and while they are studying at NIMT, apprentices from NIMT work at Ohorongo to fill the capacity gaps, thereby also contributing to skills development in Namibia. Moreover, the company offers a study scheme that grants financial support to employees who need to acquire additional skills for their new positions. Currently 20 employees in total are benefiting from the scheme. Ohorongo’s financial support for training measures is conditional on the retention of employees, and grants have to be repaid if employees leave the company within two years. Ohorongo also cooperates with Namibian universities, and offers internships to students. It has also introduced a

student scholarship scheme that currently supports two women – one studying in South Africa, one in Namibia – who will join the company upon graduation.

In addition, a mentoring system has been introduced, and four Ohorongo staff in senior positions are currently being mentored by experienced professionals from Schwenk; for instance, the Namibian quarry manager is being mentored by the German quarry manager. The mentoring involves regular knowledge exchange about new trends, concerns, or ideas for improvement, as well as visits at the respective production facilities in Germany and Namibia. The scheme is due to be rolled out further in future.

Retention strategy: Retaining key employees in a very tight labor market

Given the complexity of the production process and Ohorongo's high quality standards, CROs need up to five years before they can effectively manage the different production steps and machines. It takes even more time for the development of foremen and superintendents who need to acquire additional leadership skills. To this end, Ohorongo invests a great deal in the training of its employees, and that makes them very attractive to other companies, which are always looking for qualified personnel. So Ohorongo has developed a dedicated retention strategy to create the conditions for long-term skills development within the company and to retain key personnel. Critical positions (notably, senior CROs and superintendents) and position holders were systematically identified through an analysis of the labor market, performance evaluations, and Ohorongo's organizational structure. After analyzing the causes of exit of former employees, the company implemented a broad range of measures: short-term (such as vouchers for corporate clothing, after-hours events, and shaded parking); medium-term (such as development plans or performance recognition) and long-term (notably, a retention agreement). The retention agreement is a key element of the strategy: a bonus offered to key employees is paid in installments, producing an immediate cash-flow benefit for the signatories. However, disbursement of the full payment is conditional on completion of three years with Ohorongo. If employees leave the company within the three years, they have to repay the bonus pro rata. To date, 12 employees have signed a retention agreement and have received the payments.

Training center for CROs: Fostering development of control-room skills at Ohorongo and in the Namibian labor market

The training of cement CROs and supervisors is crucial to the production process, but remains a challenge for Ohorongo. The company therefore decided to set up a control-room simulation training course to train new hires as well as existing staff on site. The state-of-the-art training simulator allows the trainees to study the dynamic behavior of a cement plant in real time. Ohorongo has the capacity to train eight candidates simultane-

ously; in the first year, it will train its existing CROs as well as selected craftsmen, in order to improve their technical understanding. The training should then be extended to CROs of other mining and manufacturing companies. An external trainer will supervise the first training sessions, and will train local trainers to conduct the training in the future. Ohorongo is currently assessing opportunities to collaborate with NIMT on theory-based training courses.



Control room of the cement production

5. The role of DFIs: Incentivizing Ohorongo to think beyond its own interests in training

DEG, together with other DFIs, provides long-term financing to Ohorongo, but it does more than that: it also supports Ohorongo's workforce development through a technical-assistance project, financing 50% of the training center for CROs. DEG provided no dedicated technical or administrative support for Ohorongo to plan the initiative, but DEG's involvement did encourage Ohorongo to plan and structure the project thoroughly. In addition – as intended – it achieved a wider impact by incentivizing Ohorongo to open up the training center to other companies too, particularly from the mining industry, thereby fostering the development of control-room skills in Namibia.

6. The costs and benefits of Ohorongo's engagement

The costs of Ohorongo's initiatives to develop its workforce can be easily obtained from accounting data. The benefits are harder to quantify, as they accrue on various levels – namely, the company, its employees, and the local community, as shown in Figure 47. The costs and benefits of the initiatives on different levels are analyzed below in this section.

Figure 47: Overview of the costs and benefits of Ohorongo’s engagement

Type of initiative	Initiative	Costs (‘000 USD)	Beneficiaries		
			Ohorongo	Employees	Suppliers
A Workforce development	A.1 Initial training program for production ramp-up (2010)	One-off: 1,194 Running: N/A	+++	+++	+
	A.2 Employee training for workers and management (ongoing)	One-off: N/A Running: 162 p.a.	++	++	+
	A.3 Retention strategy for key employees (ongoing)	One-off: N/A Running: ~40 p.a.	++	++	
	A.4 Training center for control-room operators (2015)	One-off: 403 Running: 48 p.a.	+++	+	+

+ Small benefits ++ Medium benefits +++ Large benefits

6.1 Costs and benefits of Ohorongo’s workforce development

Company benefits: Ensuring a sufficient number of qualified CROs and production specialists for Ohorongo

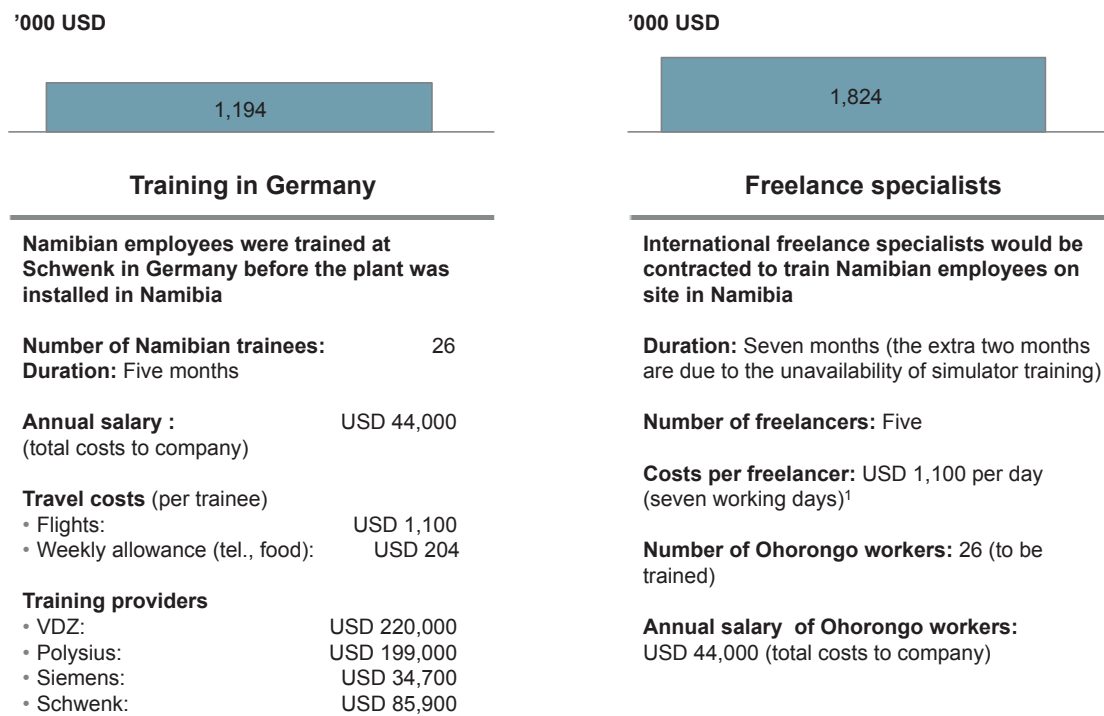
The initial training of CROs was crucial to the start of operations at Ohorongo, as there were no cement-specific CROs available in the Namibian labor market. Even though the approval of the plant could still have taken place via Schwenk employees or international freelance experts, these outside personnel could hardly run the daily operations: that would be too costly, and the project would have been financially unviable. So the question was not whether to conduct initial training, but which form of training to opt for. A business-case analysis needs to focus only on the cost aspect of the two different options – the benefit is the same in all cases: namely, being able to operate the plant

Figure 48 compares the costs that two options would incur in achieving the common benefit (i.e. a trained team of CROs, foremen and technicians that can run the plant). The two options are these: simulator training of the Namibian CROs in Germany; vs. training them on-the-job directly at the running plant in Namibia through international freelance experts.¹⁰ Besides the pure cost aspects, each option has its own advantages and disadvantages. The first option, simulator training in Germany, is relatively fast, as different critical situations can be simulated in a short time – certainly it is much faster than the on-the-job option. The simulator training in Germany also helps to acquaint the new employees with the company culture and quality standards and with their working counterparts at Schwenk. In addition, it leverages the latest knowledge available from and about the industry association and German

suppliers. On the downside, the language barrier between the Namibian and the German employees limits the effectiveness of the training. As for the second option, the on-the-job training in Namibia, it has one major advantage – the “home advantage”: the trainees do not have to adapt to the unknown environment in Germany, and the training takes place in the actual plant where the trainees will finally work. The drawbacks, however, are that the external trainers lack the company-specific knowledge, and the training at the new plant hampers the production ramp-up, as training occurs simultaneously with the start of production. Regarding costs, finally: as Figure 48 shows, the cheaper option turns out to be the first option – the initial training in Germany costs just two thirds the amount that the training via freelance specialists in Namibia would cost. So overall, the preferable option is to provide the training in Germany, and that is the option that was chosen by Schwenk.

Thanks to the initial training in Germany, the newly trained team of Namibian CROs were able to be involved in the entire production ramp-up process, from approval of the plant in Namibia to the daily operations. In addition, the training in Germany ensured that Namibian production standards now conform to Schwenk’s own high quality standards, and Ohorongo has duly become the preferred cement supplier not only for all Namibian construction projects but also for high-profile infrastructure projects throughout sub-Saharan Africa. Moreover, thanks to the initial training in Germany of employees with corporate functions, Ohorongo could be integrated very rapidly into the reporting systems of the mother company Schwenk, and the plant was certified very shortly after its opening. Unfortunately, about 40% of the trained employees have now left the company, in order to realize their higher market value or to live closer to their families. But before they quit, they served as knowledge-disseminators, passing on their know-how to those who were not trained in Germany and were recruited later.

Figure 48: Cost comparison of options for the initial training of CROs



1. The freelancers work and charge seven days per week
Source: Schwenk; BCG Analysis

With costs of about USD 162,000 per year, the training for workers and management is relatively expensive, but it reflects Ohorongo’s need and commitment to develop skills internally.¹¹ In return, the company benefits from a better-qualified workforce – both in hard skills and in soft skills – that can produce at high quality and maintain the modern production facility.

The training program could not resolve all the challenges, however: superintendent positions remain difficult to fill permanently and the company now has to offer step-up assignments, with limited authority, to foremen to work as superintendents. The mentoring program for key personnel has proved a success, though, as one Namibian logistics manager from the Namibian site transferred to the mother company Schwenk in Germany.

As the retention strategy is still being rolled out, the costs and benefits cannot yet be fully assessed. But the retention bonus has registered at least one visible success: a technical service manager who had planned to start his own business opted against leaving and was successfully retained. The bonuses are relatively expensive, but they also have important benefits: if successful, they avert the costly recruitment, on-boarding and on-the-job training of new hires. In addition, retaining employees helps to ensure Ohorongo’s high-quality production, which depends on staff with several years of cement-specific experience and training. The other components of the retention strategy are less costly but arguably less effective, as Namibian

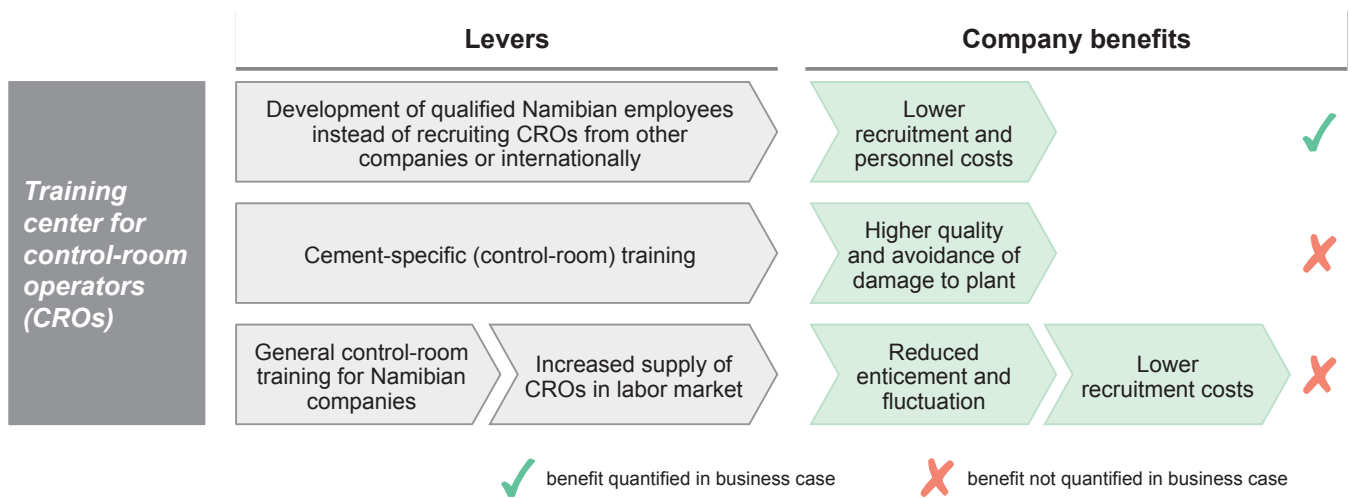
employees tend to base their choice of employer primarily on salary offers. Still, the focus on monetary incentives is problematic: it addresses the retention problem only in the short-to-medium term, and it can lead to a cycle of ever-increasing wage demands after the three-year period has elapsed.

The training center for CROs is expected to create substantial benefits for Ohorongo. By developing skills in-house, it ensures the availability of adequately trained CROs, foremen and supervisors. Without it, CROs would have to be recruited from mining companies, and that would involve paying a salary premium of at least 10%. Figure 49 shows the different levers and benefits of the training center.



Control-room operator

Figure 49: Benefits of the training center for CROs



From the projected costs and benefits, it is possible to calculate a simple ex-ante business case for the training center. The key inputs are summarized in Figure 50. It is assumed that five new hires are trained every year in one batch, and that the company's overall attrition rate (including retirement) is 15%.¹² (This represents a very cautious estimate, as Ohorongo's current attrition rate is actually below that 15% figure.) The main quantifiable benefit of the training center for Ohorongo is the avoidance of the 10% premium on salaries (50% in the first year) for newly hired CROs or for internally promoted CROs.¹³ The saving per trainee is about USD 3,000 annually. The one-off costs for setting up the training center plus the first two years of operation (including an external trainer to train the internal trainer) add

up to about USD 400,000. About 50% of that is covered by a DEG technical assistance project. After the first two years, the salary for the internal trainer amounts to about USD 8,000 for each two-month intake. Other running costs include the costs for renewing the simulation software license every three years (USD 44,000) and the salary of the trainees that is paid during the training, amounting to USD 4,600 per trainee.

Using an inflation rate of 6% and a discount rate of 5% shows that the ten-year NPV of the training center is negative (about USD -293,000) if the running costs are not shared with other companies (see Figure 51).

Figure 50: Main inputs and assumptions for the business-case calculation for Ohorongo's CRO training center

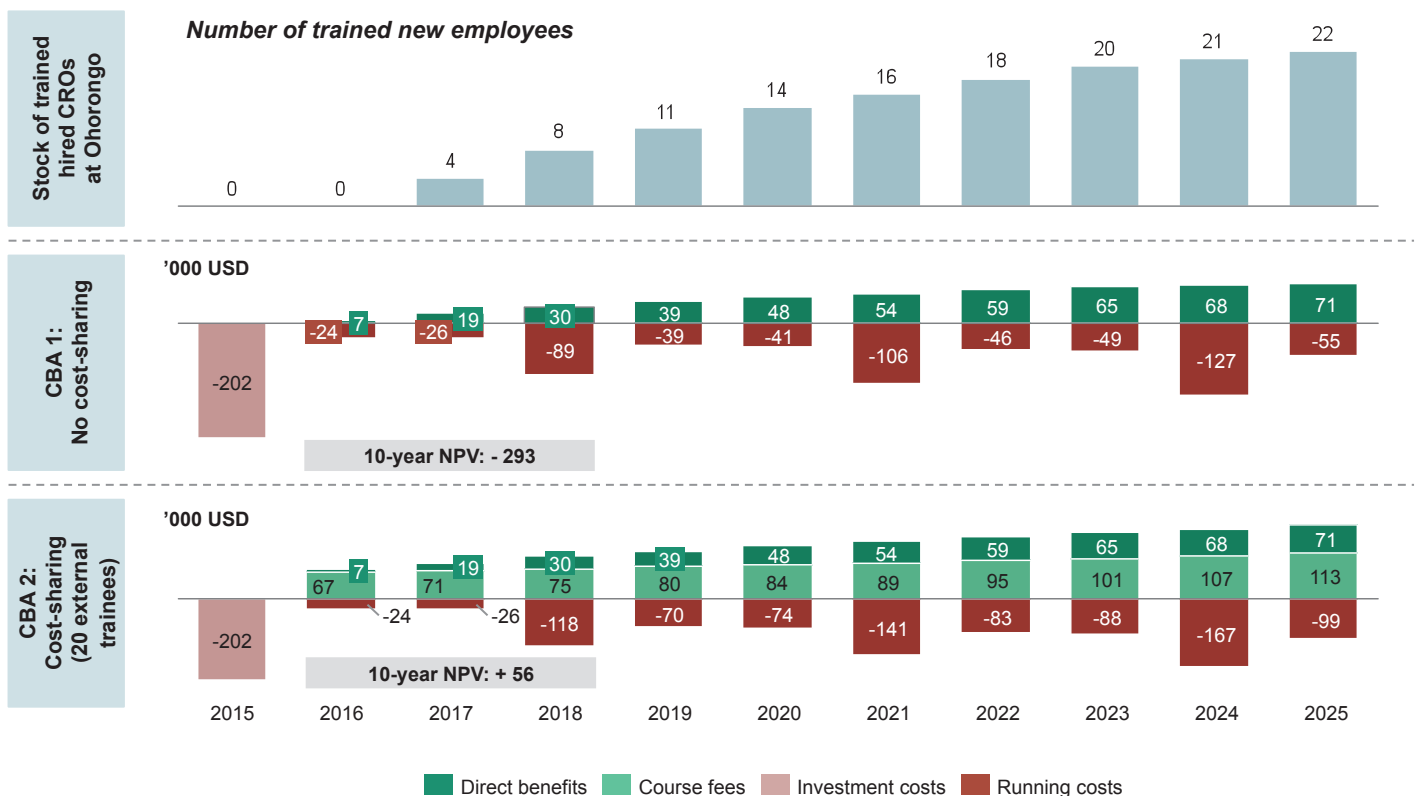
Benefit assumptions		Investment costs	
Hirings per year to replace leaving staff and internally promoted CROs	5	One-off costs for set-up of training center and first two years of operations (e.g. training of internal trainers); 50% financed through DEG technical-assistance project	USD 201,500
Attrition rate of newly trained and existing staff (incl. retirement)	15%	Running costs	
Annual savings in salary per trainee, avoiding the 10% recruitment premium on salaries for CROs recruited from other companies	USD 2,740	Internal trainer (per batch)	USD 8,070
Cost-sharing with others: course fee for each external participant (covers the running costs – assuming a capacity utilization of 20 participants per year)	USD 3,160	Salary of trainee (per batch)	USD 4,560
		Renewal of Simulex Training Software License (every three years)	USD 44,050
Other assumptions			
Inflation rate	6%	Discount rate	11%

However, if the center also trains 20 employees from other companies every year, and they pay a course fee of USD 3,150 each, the business case now has a positive NPV, amounting to about USD 56,000.¹⁴ The center has a capacity for 48 CROs, in six batches of eight per year. The NPV increases further if the capacity is better utilized – adding up to about USD 255,000 for 30 external trainees. The assumed course fee is still very attractive for other companies, as they benefit from trained CROs every year, and also avoid having to pay the 10% recruitment bonus. So, by sharing the costs with other companies and by increasing capacity utilization, the training center does have a positive business case. In addition to the quantified benefits, training ensures high-quality output at the plant, and decreases the risk of damage there. Furthermore, by training CROs to levels beyond Ohorongo’s own needs and those of other companies, the training center increases the availability of those skills in the Namibian labor market, and thus helps to meet the demand for CROs in the market and to reduce the war for talent and the enticement-escalation between companies. This long-term approach to reducing attrition is expected to bring down recruitment costs for CROs, thereby reinforcing the business case further. Overall, taking into account the non-monetized benefits, there clearly is a positive business case for the training center.

Employee benefits: Increased skills and salary

Ohorongo’s workforce development is very beneficial for its employees: it improves their skills, thereby allowing them to climb the career ladder within Ohorongo and to earn a higher salary. The intensive initial training in Germany in particular made it possible for the trainees to become foremen and control-room supervisors (see the box for a brief case example). The notable increase in their market value is evidenced by the fact that a significant number of trainees left the company for better-paid positions in other firms. The systematic skills development offered at Ohorongo gives employees a long-term opportunity to develop their careers, as the company plans to operate the scheme for many years to come. As it happens, the supply of raw materials is secured for the next 300 years – many times longer than the typical mining company could hope for, with a mere ten years of extraction potential. Ohorongo’s commitment to building lasting relationships with its employees can also be seen in the various employee benefits on offer, such as housing allowances.

Figure 51: Business-case calculation for Ohorongo’s CRO training center



Story of a beneficiary

One of the participants of the initial training course in Germany was Leston Heyn, a 34-year-old Namibian who joined Ohorongo from the control room of a zinc-mining company that closed. Two days after passing the job interview, Leston was sent to Germany for six months to learn the specifics about the control-room operation of a cement plant – the first trip outside Namibia in his life. At Ohorongo, he first got promoted to senior CRO and then to a clinker- and

cement-production shift foreman, in which role he is now leading 14 workers. The training has helped him enormously to excel at his new tasks: “After the training I quickly got promoted to control room supervisor and only recently to production foreman. I still have my training manual and my experience reports, and consult them when I am not sure how to handle a new situation. I have also invested myself in leadership courses because I would like to work in a management position.”

Community benefits: Strengthening the local economy and fostering Namibia’s skills development

Through its workforce-development initiatives, Ohorongo has made it possible for this remote and economically weak region to engage in productive economic activity in the first place. The company secures good jobs for its 312 employees – 98% of whom are Namibian. By training NIMT apprentices at its production site and by training (in line with current plans) CROs from other companies, Ohorongo is fostering skills development more broadly in Namibia and supporting national economic development.

6.2 Overall assessment of costs and benefits

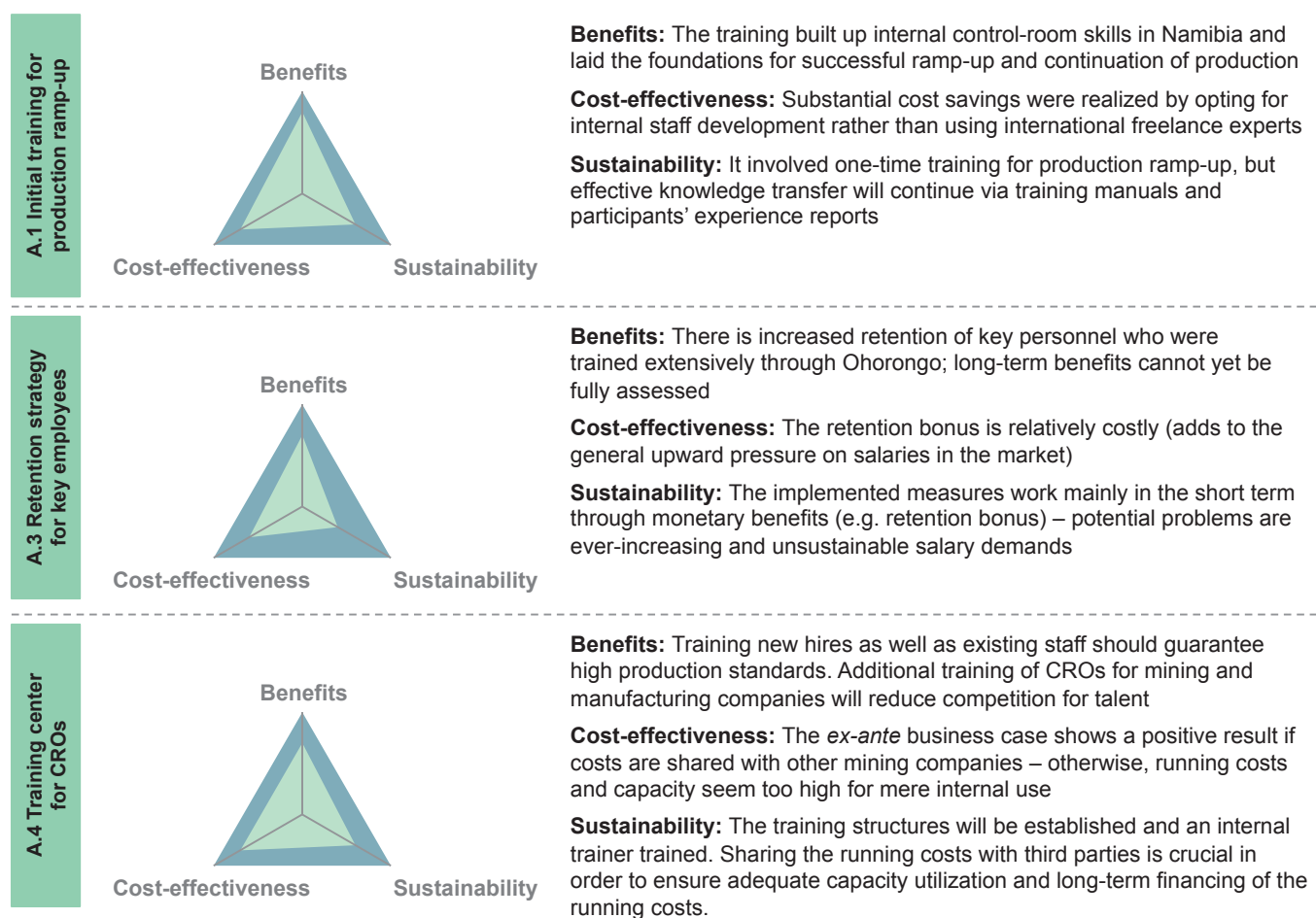
Figure 52 provides a summary assessment of three selected initiatives along three dimensions – benefits, cost-effectiveness and sustainability.¹⁵ The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative.

- **The initial training initiative** scores high in terms of benefits and cost-effectiveness, as the program successfully built up internal skills, and the German-location option had much lower costs than the rival freelance-expert option. In terms of sustainability, the initiative scores somewhat lower, as it was a one-time training course, and although the knowledge was transferred on to other Ohorongo employees, about 40% of the original trainees have left Ohorongo in the meantime.
- **The retention strategy** for key employees cannot yet be fully assessed for its benefits, as it is just being rolled out, but it is expected to increase retention. In terms of cost-effectiveness and sustainability, the initiative scores slightly lower, since the focus on monetary benefits – notably, the saving of the 10% annual salary premium – works mainly in the short term, and it creates the potential for ever-increasing salary demands once the retention agreement comes to an end.

- **The planned training center for CROs** cannot yet be fully assessed, as it is just being implemented, but the expected benefits and the ex-ante business case are very positive – provided that the center is also used to train CROs from other mining and manufacturing companies, as is envisioned by Ohorongo. The training itself is certainly sustainable, thanks to the plans for training internal trainers and to the compilation of training manuals; and long-term financing could be secured if other companies contribute to the running costs.

By weighting the initiatives’ overall costs and benefits, the following appraisal emerges: Ohorongo invests heavily in workforce development, with one-off costs of USD 1.6 million (initial training program plus training center for CROs) and annual running costs of about USD 250,000. The largest proportion of these costs was spent on the initial training of CROs, supervisors and administrative staff in Germany – a program that was indispensable for ramp-up of production, and one with much lower costs than would have been incurred by a comparable training course conducted in Namibia by international freelance experts. Only by undertaking this internal skills-development initiative could the company ramp up production so smoothly and produce a consistently high-quality cement. One ongoing challenge is that of retaining trained personnel in a tight and highly competitive labor market, but through its internal training center and its retention strategy, Ohorongo seems well-prepared to improve retention both in the long term and in the short term. The business-case calculation has shown a positive return, provided that some of the costs are shared with other companies. For employees, the training courses improve their career prospects and salary, or their market value if they change companies. The local community, and Namibia as a whole, benefit through the creation of jobs in a structurally weak region, and through the development of cement-specific skills as well as control-room skills, which are otherwise lacking in the country. In sum, the overall benefit of the measures seems to outweigh the costs – particularly in the long run.

Figure 52: Summary assessment of three selected initiatives



7. Conclusion

Ohorongo has successfully developed cement-specific skills among its employees, as well as control-room skills, leadership skills and artisanal skills. It has thereby addressed its skills gaps, and it will contribute to further skills development in the economy through the CRO training center. The benefits of the initiatives – establishing high-quality cement production in Namibia, and internally developing and retaining critical skills that are not available in the market – will pay off the costs many times during the company's life.

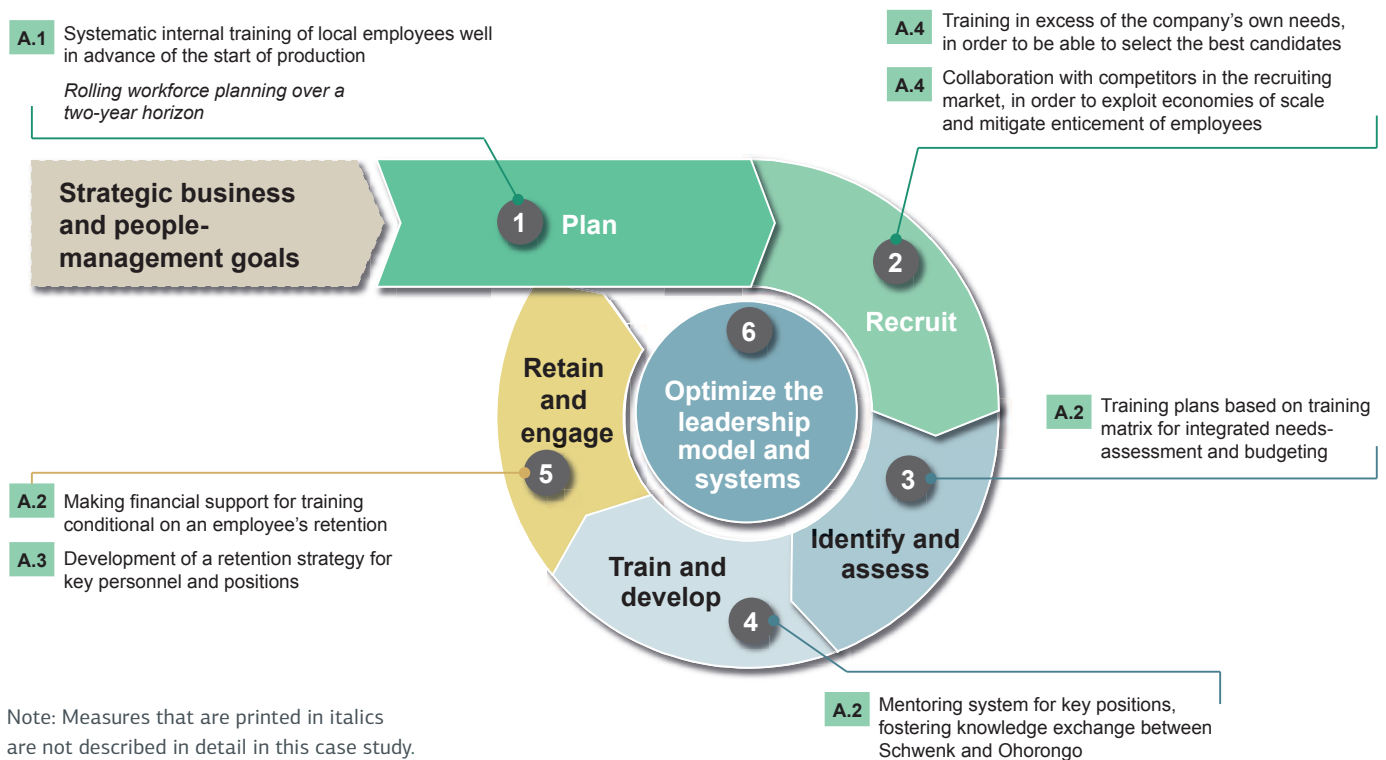
Good practices from Ohorongo that can help companies to close their skills gaps

From a study of Ohorongo's four initiatives to develop its workforce, it is possible to identify a number of widely applicable good practices, related to topics ranging from planning to retaining employees. The good practices are presented in Figure 53.

Among these good practices, it is worth highlighting three elements, as they provide valuable guidance for other companies facing similar challenges:

- 1. Collaboration with competitors in the recruiting market (A.4)** – specifically, collaborating on training for scarce skills. Such collaboration enables economies of scale in training provision, reduces the risk of employees' being enticed away, and lowers recruitment costs for all companies (good practice 4.3 in the good-practice framework for workforce development described in Chapter 2.1).
- 2. Timely assessment of training needs and systematic internal training (A.1)** of local employees well in advance of the start of production. Such prompt measures allow a smooth ramp-up of production, and ensure high-quality output from the very beginning (good practices 1.1 and 4.4).
- 3. A mentoring system for personnel in key positions (A.2).** Such a system tends to foster international knowledge exchange between the mother company and local subsidiaries. It enables managers to share good practices, and to experience first-hand during visits the daily work in their counterpart departments (good practices 4.5 and 5.5).

Figure 53: Overview of good practices from Ohorongo's workforce development



Key factors for improving the business case for Ohorongo's CRO training center

The business-case analysis of Ohorongo's planned CRO training center shows that the benefits cannot fully cover the running costs or make up for the investment costs unless Ohorongo involves other companies or third parties in its financing. Two specific measures for improving the business case are worth considering:

- 1. Reduce the running costs of the CRO training center.** Share the running costs with other manufacturing and mining companies that can train their CROs in Ohorongo's facility – for instance, by introducing a course fee for external participants or a lump-sum annual fee per company. The increase in capacity utilization will also lead to a per-capita reduction of costs and a positive NPV in the business-case calculation.
- 2. Increase the benefits of the training center.** Establish a partnership with NIMT for a theory-based training program for process-control specialists. Such a program would contribute to financing the costs of the training center, and would give Ohorongo access to well-qualified CROs as potential recruits.

Lessons learned from Ohorongo

From analyzing Ohorongo's initiatives and skills gaps, it is possible to derive some lessons that might help other companies to address skills gaps more successfully:

- **Low-to-medium-skilled workers need to be integrated into development plans.** To help low-skilled workers move up the career ladder, and to protect their employment from any move to outsource non-critical jobs, it is crucial to integrate them into development plans and career paths by offering them specific training courses (good practice 4.1 in the good-practice framework for workforce development described in Chapter 2.1).
- **An effective retention strategy combines financial and non-financial benefits.** The analysis of Ohorongo's retention agreement shows that the retention bonus creates the danger of ever-increasing wage demands. To achieve a longer-term increase in retention, it is crucial to create in employees an emotional bond with the company and the location – for example, by helping them to acquire property, find jobs for their spouses, and obtain high-quality education for their children – especially in small and remote communities (5.1 and 5.4).
- **An effective retention strategy takes into account the individual preferences of employees.** Ohorongo's experience shows that employees have different preferences

regarding financial and non-financial benefits. To increase employee satisfaction and thereby increase retention, it is worth introducing a cafeteria system for benefits – i.e. offering employees a variety of benefits from which they can select according to their individual preferences (5.1 and 5.4).

- **Leveraging internal expertise is key to strengthening the impact of CSR activities.** By developing a CSR strategy that leverages the core expertise of company and staff, a company can enhance the benefits not just for the community and wider society but for the company and staff themselves. For instance, by involving employees in a community welfare or education project, you tend to increase their job satisfaction and their pride in the company (good practices 1.1 and 2.3 in the good-practice framework for closing skills gaps in the broader community described in Chapter 2.3).

Notes

- ¹ The region has an unemployment rate of about 33%, which is well above the Namibian average of 28%. Namibia Statistics Agency (2015), The Namibia Labour Force Survey 2014 Report.
- ² Information provided by Ohorongo. If no specific reference is given, information in this case study is based on information provided by Ohorongo/Schwenk or based on expert (phone) interviews in June 2015.
- ³ Republic of Namibia (2012), National Human Resource Plan (2010-2025).
- ⁴ Namibia Statistics Agency (2011), Otjozondjupa Census Regional Profile 2011.
- ⁵ Republic of Namibia (2012), National Human Resource Plan (2010-2025).
- ⁶ Namibian Employers Federation (2010), Namibia's Skills Deficits: Cross-Sectoral Perceptions and Experiences.
- ⁷ Namibia Statistics Agency (2011), Otjozondjupa Census Regional Profile 2011.
- ⁸ International Labour Organization (2015), Country Profiles Namibia. ILOSTAT Database.
- ⁹ Namibian Employers Federation (2010), Namibia's Skills Deficits: Cross-Sectoral Perceptions and Experiences.
- ¹⁰ In theory, there is a third option: the training in Namibia would be conducted by Schwenk employees. That option would have the lowest costs of all, but it was considered too disruptive to pursue. It would mean sending five senior CROs to Namibia for seven months, and also assigning Schwenk employees to provide comprehensive on-the-ground support (in addition to the support being provided anyway by 6-7 Schwenk employees during the first year); such large-scale diversion of staff would obviously have a serious negative impact on Schwenk's production capacity in Germany.
- ¹¹ The following exchange rates are used: NAD (Namibian Dollar) 1 = USD 0.0804; USD 1 = EUR 0.91.
- ¹² Given an attrition rate of 15%, the training of five new hires per year leads to a steady-state stock of 26 trained new hires in year 14. This is the required number to maintain the production level.
- ¹³ In the first year, it is assumed that the training is conducted in such a way that the trained CROs work on average for half a year for Ohorongo.
- ¹⁴ The course fee is calculated so as to cover the running costs of the center (trainer salary plus license renewal), assuming an average capacity utilization of 20 trainees.
- ¹⁵ The employee training program for workers and management is not analyzed in detail here, as it is a combination of several components that are described qualitatively in the text above.



5. A guide for practitioners

How to bridge skills gaps step-by-step

The following practitioners' guide, an aid to narrowing or closing skills gaps, is based on BCG project experience and informed by the case studies described in Chapter 4. The objective of the guide is to provide a step-by-step approach for practitioners, especially in emerging and developing countries, who face the challenge of skills gaps and are in charge of HR development – whether in an actual HR department or in any administrative or operational department. The guide will help the reader to implement the good practices for workforce development and to conduct the cost-benefit appraisal (Chapter 2.1 and Chapter 3).

The guide proposes a six-step approach: to identify the skills gaps (Step 1), prioritize them (Step 2), and analyze their root causes (Step 3); then to develop measures for closing the gaps (Step 4), assess the measures' costs and benefits (Step 5), and implement the most promising measures (Step 6). While this approach is aimed specifically at closing skills gaps in the company's own workforce, it can be adapted and applied to supplier and client development, and to a lesser extent even to closing skills gaps in the broader community.¹

Step 1: Identify gaps in hard and soft skills through a systematic self-assessment

To begin identifying the hard and soft skills that are lacking, companies should undertake a structured self-assessment. Generic templates are available for this purpose, which can be applied across industries. To validate the data and to get a more comprehensive picture, you should ideally conduct the assessment several times, independently by different functions – for instance, by top management, HR, and operations. Such a multi-perspective assessment helps to identify common pain points, and can initiate a useful dialogue within the organization. Each assessment is inevitably somewhat subjective, so there is no clear threshold between critical and non-critical skills gaps. In the interviews conducted for the company case studies (Chapter 4), for example, expatriate managers tended to rate the identified skills gaps as significantly wider and more serious than their local counterparts did, because they compared the local skills levels with those in their home country rather than within the local context. Accordingly, the main objective of the self-assessment is to foster a discussion within the company, and to establish a common view of the gaps most

urgently in need of bridging. If the assessment highlights concerns about various specific inefficiencies, the corresponding skills gaps should be further investigated and addressed. Additionally, some objective factors – such as vacancies that cannot be filled with adequately qualified candidates; or the need for numerous interviews to find a suitable candidate; or a high share of outside hiring for leadership positions – point to serious skills-gap problem within the company and to the need for concerted intervention.

Identify gaps in hard skills

A generic template for the assessment of skills gaps can help you to identify deficits in hard skills (Figure 54). The template covers the different skill levels for overhead functions like finance, IT, and general business functions (e.g. HR or marketing and sales) – managers, specialists, and administrators; and for operational functions like R&D and production – supervisors, qualified workers, trained workers and unskilled workers. If your company operates at various locations, the assessment could be undertaken for each site individually, in order to identify specific needs and measures at each site.

For each function and skill level, the gap in the quantity and quality of skills should be assessed on a scale from 1 to 10, with higher values indicating a larger gap. A gap in the quantity of skills means that you face difficulties in finding enough employees. A quality gap arises if the candidates available in the market and the employees within the organization do not have the right skills to perform well in the specific position, even though they might have the required formal qualification. The various skill levels differ in their competency requirements, required education levels, and required experience. Figure 55 provides some concrete examples for the various skill levels. Depending on the industry, the functions and skill levels correspond to different job profiles; for instance, qualified workers can correspond to wood-mechanics for the wooden toy manufacturer Hape Holding AG and to nurses in the case of the Brazilian hospital provider Hospital Sírio Libanês (HSL).²

Identify gaps in soft skills

Since soft skills – such as leadership, communication, or problem-solving skills – are as important as hard skills, they should be also addressed in a comprehensive skills-gap assessment.

[All notes at the end of this chapter \(Page 121\)](#)

Figure 54: Template for assessment of gaps in hard skills

Please assess magnitude of gap on scale from 1 (small) to 10 (large)

		Function	Skill level	Assess gap in quantity of skills	Assess gap in quality of skills	Specify gaps
Overhead functions	Finance		Management	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Specialists	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Administrators	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
	IT		Management	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Specialists	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Administrators	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
	General business functions ¹		Management	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Specialists	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Administrators	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
Operational functions	Research & Development (R&D)		Senior R&D staff	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			R&D Specialists	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
	Production, Service, Logistics		Supervision	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Qualified Workers	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Trained Workers	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
			Unskilled Workers	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	

higher values indicate a larger gap

1. Human Resources, Marketing and Sales, Communications etc.

Figure 55: Requirements regarding competencies, level of education, and level of experience for different skill levels

		Function	Skill level	Competencies	Level of education	Experience
Overhead functions	Finance, IT, General Business Functions		Management	Manage team, unit or department with responsibility for performance and personnel	high (master's degree)	several years
			Specialists	Perform primarily non-standard tasks	medium (university degree)	some years
			Administrators	Perform simple and standardized administrative tasks and assist specialists (e.g. checking and paying invoices)	low (vocational training)	not required
Operational functions	Research & Development (R&D)		Senior R&D staff	Develop new products, define and monitor quality standards	high (diploma, PhD)	several years
			R&D Specialists	Realize new product ideas and/or ensure quality	medium to high (university degree)	some years
	Production, Service, Logistics		Supervision	Supervise group of qualified workers or entire production process (e.g. team leaders, foremen or line chiefs)	medium to high (university degree)	several years
			Qualified Workers	Perform different and specialist operative tasks	low (vocational training)	a few years
		Trained Workers	Perform simpler operative tasks	no formal education	some months	
	Unskilled Workers	Perform simple auxiliary tasks requiring no prior training (e.g. cleaning, transporting production material)	only basic education	not required		

Figure 56: Template for assessment of gaps in soft skills

Please assess magnitude of gap on scale from 1 (small) to 10 (large)

	Soft skill type	Indicators	Assess skills gap	Specify gaps
Soft skills	Leadership / Teamwork	<ul style="list-style-type: none"> Working with others Managing information Following directions 	1 2 3 4 5 6 7 8 9 10	
	Communication	<ul style="list-style-type: none"> Convincing others Appropriate communication style Coherent and effective expression 	1 2 3 4 5 6 7 8 9 10	
	Project management	<ul style="list-style-type: none"> Logical structuring of tasks Completion of tasks on time Decision-making 	1 2 3 4 5 6 7 8 9 10	
	Problem-solving	<ul style="list-style-type: none"> Identifying root causes Focus on workable solutions Flexibility to react to change 	1 2 3 4 5 6 7 8 9 10	
	Creativity	<ul style="list-style-type: none"> Development of new ideas Integration of different approaches Thinking outside the box 	1 2 3 4 5 6 7 8 9 10	
	Value delivery	<ul style="list-style-type: none"> Balancing client/company interests Commitment to quality standards Efficient resource-management 	1 2 3 4 5 6 7 8 9 10	

higher values indicate a larger gap

In order to evaluate soft skills in a systematic way, you can use the template for the assessment of gaps in soft skills provided in Figure 56. Analogously to the assessment of hard skills, the same scale from 1-10 is used (1 for a very minor skills gap; 10 for a very wide skills gap). You can conduct this assessment either for the whole workforce, in order to gain an overview and to discover where the main pain-points are, or for specific job groups and departments, to help identify the most appropriate training measures in each case.

Step 2: Prioritize the skills gaps

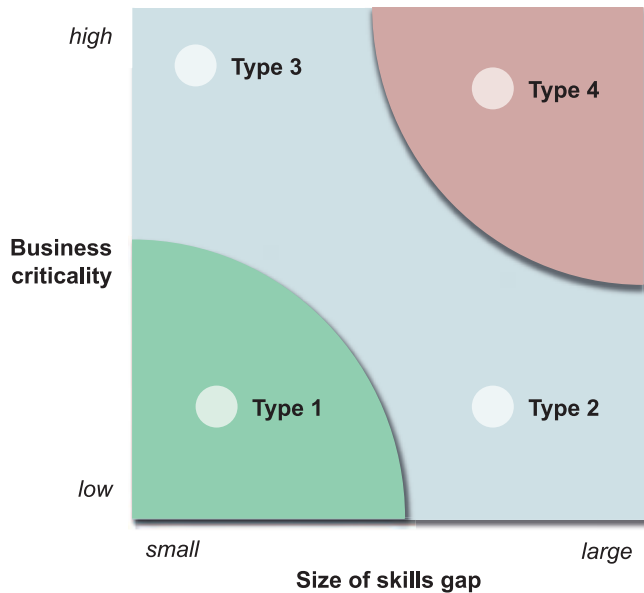
Once the hard and soft skills gaps have been identified and quantified, the next step is to prioritize the skills gaps to ensure that the most pressing ones are addressed first. Do not try to bridge every skills gap simultaneously. This could overstretch available financial and HR resources, and the measures could lose effectiveness owing to a lack of attention and scrutiny. Two possible dimensions to use in prioritizing skills gaps are the size of the gap, and the criticality of the skill for business success. In the worst case, the inability to close the gap can have a serious adverse effect on the company's financial performance – particularly if key positions remain vacant. The skills-gap prioritization matrix provides a very simple way to rate

skills along these two dimensions (Figure 57). While skills can obviously be located anywhere in the matrix area, there are four different basic types that can be distinguished:

- **Type 1:** skills for which there is no wide quality or quantity gap, and which are not critical for business success. These skills can be de-prioritized and addressed opportunistically.
- **Type 2:** skills for which there is a wide gap, but that gap has no severe business impact, at least in the short-run. A typical example is that of production workers in many developing countries: owing to a lack of thorough training, their productivity is lower than in industrialized countries, but there is a sufficiently large number of workers available to offset the productivity deficit, so that there is no immediate danger that the company will be forced out of the market.
- **Type 3:** skills for which the quantitative or qualitative gap is not particularly wide, but where the gap nevertheless represents a high risk to business. These gaps could be for specialist positions, which remain vacant because no adequate applicants can be found; or they could be quality gaps, where a senior office-holder lacks a crucial skill. Given their business criticality, such gaps should be addressed quickly, with well-defined and targeted measures.
- **Type 4:** skills with a wide gap, where the gap seriously endangers business success. For example, a large number of qualified production workers might lack the right skills after a new generation of machines is introduced. Such gaps should be addressed as a matter of priority.

The outcome of the skills-gap prioritization exercise is a graded list of skills gaps in your company or unit, indicating clearly which of them should be addressed first. Before deciding on specific measures, it is worth taking a step back to analyze the root causes of the most serious gaps on the list.

Figure 57: Skills-gap prioritization matrix



Step 3: Analyze the root causes of the skills gaps

Many of the skills gaps that afflict companies are caused by the shortage of trained workers on the local market. However, there are often internal reasons as well that cause or aggravate a skills gap. A thorough understanding of these factors is crucial for identifying the right counter-measures.

The HR value chain, as presented in Chapter 2.1 (see page 15), provides a structure for systematically analyzing the root causes of the skills gaps. Taking the sample questions in Figure 58 as a starting point, you can go through the different steps of the HR value chain, from planning to the overarching leadership model, in order to identify the causes for each of your company's skills gaps. A practical example: suppose that your company is facing a quantitative gap for qualified production workers that is serious enough to justify urgent intervention. Before starting to develop measures to close the gap, you should carefully analyze the causes of this shortage of production workers. The reasons could be many and varied, and rooted in any or all of the links in the HR-value chain. One reason might be that you have an inadequate planning system and your HR department is simply

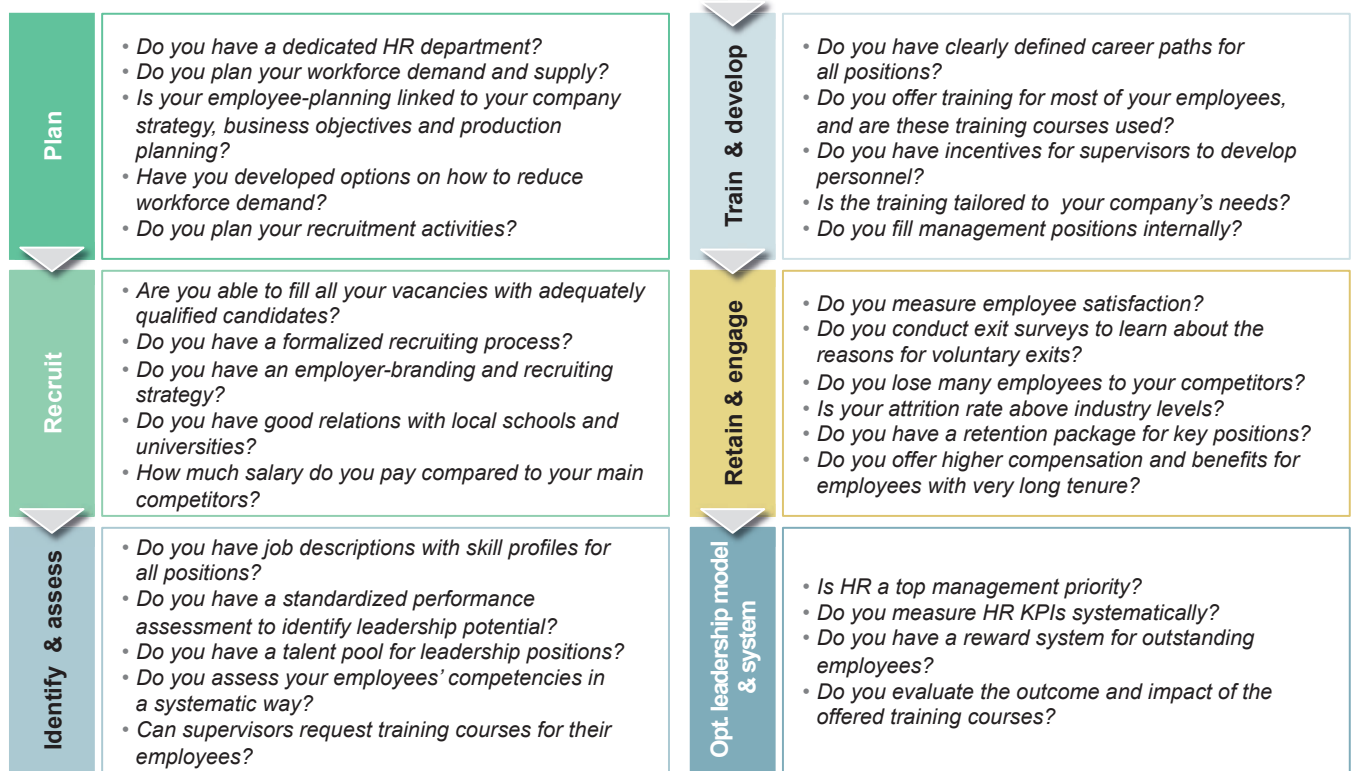
unaware of the need, or is given very little notice of the problem (Plan). Or perhaps you advertise the positions, but receive very few applications in response – maybe because your company lacks a good employer reputation or offers an uncompetitive salary (Recruit). Another possible reason for the gap is that you are unaware of the latent skills in your production workforce, and hence do not know which employees to select for training and upskilling (Identify & assess). Or perhaps the training measures that you do offer are inadequate for turning unskilled workers into qualified production workers (Train & develop). Or the gap might persist because you keep losing qualified personnel to your competitors (Retain & engage). Finally, the problem could be attributable to the leadership model in your company – an under-appreciation of high-performing employees, for example, which thwarts the company's efforts to attract and retain qualified production workers (Optimize leadership model & systems).

Step 4: Identify potential measures to close the skills gaps

The root-cause analysis will indicate which areas you should concentrate on. To identify potential measures to close the skills gaps, you could refer to the good-practice framework for workforce development, as described in Chapter 2 (see page 15). The framework provides a plethora of ideas for closing the respective skills gaps for each link of the HR value chain.

The numerous good practices listed in Chapter 2 will vary in their relevance, according to the type of enterprise, the skill levels involved, and the phase of a company's lifecycle. Figure 59 shows which of those good practices could be most relevant for your company: it evaluates the individual good practices for four main stages of a company's life, and assesses how applicable they are for different companies and skills.³ A higher relative importance in any one specific situation is indicated through darker colors. Some general patterns become clear at once. Only a few of the good practices are equally relevant for all types of company and across all stages – notably, collaborating with external partners in training, tailoring training to the specific needs of the company and target group, and making HR a management priority. The good practices listed are generally more relevant for companies in a steady-state or expansion phase than in pre-production and ramp-up (with the notable exception of initiatives that prevent a delay in production-start). Moreover, most good practices are more relevant for medium-sized to large corporates than to small-sized companies, since size is an important factor. Apart from a few good practices in the planning stage, most good practices are equally relevant for service companies and manufacturing companies. Regarding the skill level – qualified workers vs. professionals vs. management/supervisory level – the relevance of good practices varies more.

Figure 58: Sample questions for root-cause analysis along the HR value chain



Consider again the practical example of a quantitative gap for qualified production workers:

- If you found through your root-cause analysis that you have an inadequate planning system, the right starting point might be good practice 1.1 “Align production and capacity planning” in the good-practice framework for workforce development on page 17 in Chapter 2.⁴
- If the key challenge is that you receive too few applications, any of the following good practices should provide ideas for developing suitable measures: 2.1 “Develop a positive employer brand”, 2.4 “Leverage employee and alumni networks”, and 2.5 “Tap into non-traditional workforce pools”.
- If the cause of the skills gap is that your investment in internal workforce development is not effective, because you have insufficient information on the skills and potential of your employees, you should consider applying one or both of the following good practices: 3.1 “Gain a clear understanding of available competences” and 3.2 “Systematically identify development potential”.
- If your analysis suggests that the training programs you offer are under-used, good practice 4.2 “Provide incentives for undergoing and approving training courses” could be applicable.
- If the lack of qualified production workers is due to the loss of many employees to competitors, you could begin to develop targeted measures by adopting any of the following good practices: 5.2 “Set up a fair and transparent compensation

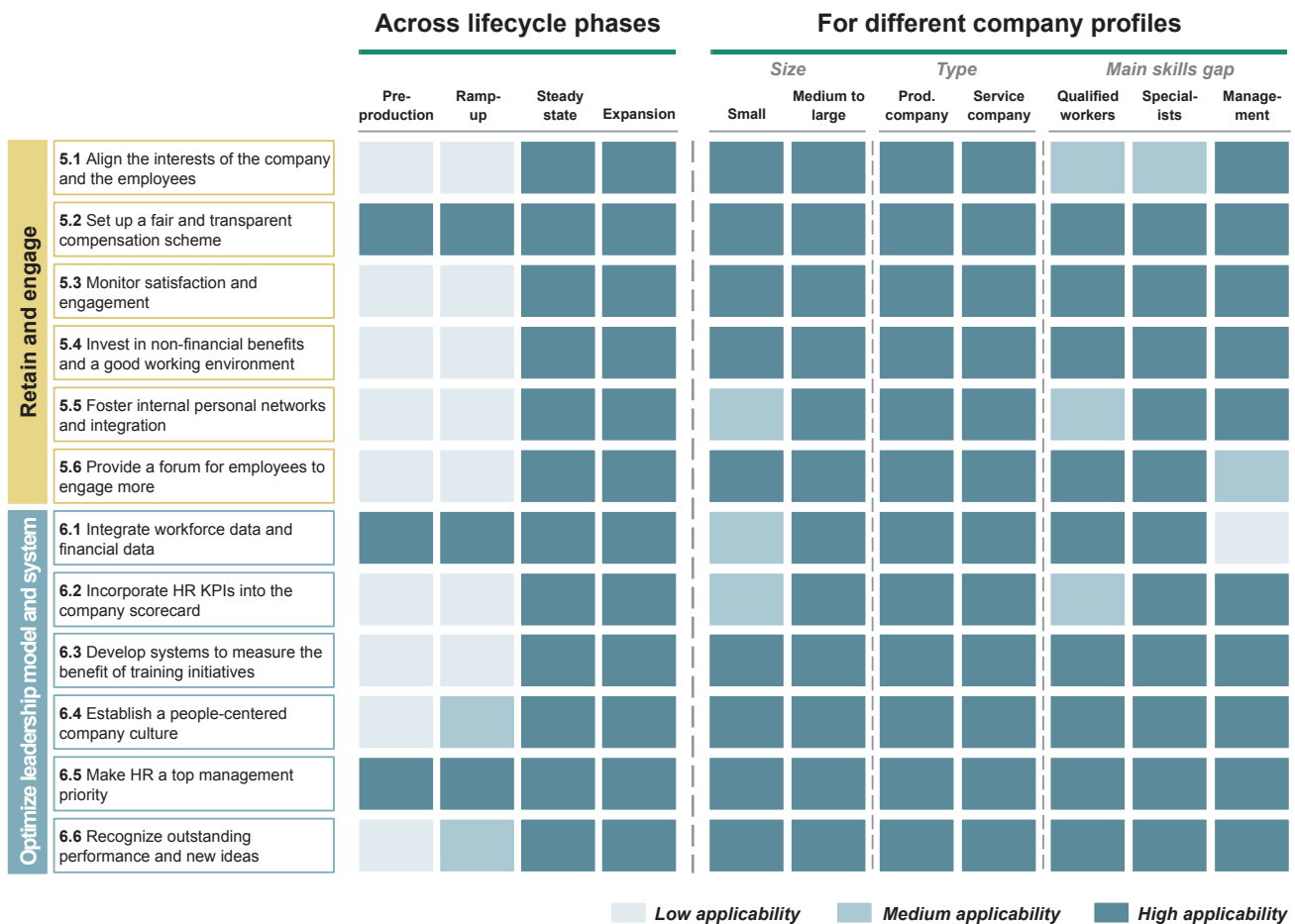
scheme”, 5.3 “Monitor satisfaction and engagement”, and 5.4 “Invest in non-financial benefits and a good working environment”.

- Finally, if you lose many production workers because they feel that their work is not appreciated, a potential solution is that of good practice 6.6 “Recognize outstanding performance and new ideas”.

Since most of the good practices are not universally suitable for all company types, you need to carefully assess the relevance of each initiative for your individual situation, i.e. the lifecycle stage of your company, its size and type, and the skills gaps it is experiencing. This assessment needs to be made against the backdrop of the root-cause analysis, to make sure that you identify the most relevant measures for addressing the causes of the problem in each case. Note that the good practices are generally transferable to different types of skills gap, though you might need to adapt them to your company's specific skills gaps. And before committing to implement a measure, it is worth conducting a cost-benefit appraisal to assess whether its benefits outweigh the costs.

Figure 59: Applicability of good practices for workforce development

		Across lifecycle phases				For different company profiles						
		Pre-production	Ramp-up	Steady state	Expansion	Size		Type		Main skills gap		
						Small	Medium to large	Prod. company	Service company	Qualified workers	Specialists	Management
Plan	1.1 Align production and capacity planning	Dark	Light	Light	Dark	Light	Dark	Dark	Light	Dark	Light	Light
	1.2 Conduct strategic workforce planning	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Dark	Light
	1.3 Establish succession planning for key positions	Light	Light	Dark	Dark	Dark	Light	Dark	Dark	Light	Light	Dark
	1.4 Reduce critical-workforce demand through automation	Dark	Light	Light	Dark	Dark	Dark	Dark	Light	Dark	Light	Light
	1.5 Offset short-term demand fluctuation to retain workforce	Light	Light	Dark	Light	Light	Dark	Dark	Light	Dark	Light	Light
	1.6 Outsource non-critical jobs in order to relieve specialists	Light	Light	Dark	Dark	Dark	Dark	Dark	Light	Light	Dark	Light
Recruit	2.1 Develop a positive employer-brand	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Dark	Dark
	2.2 Shift the hiring criterion from "ready-to-use" to "potential"	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Light	Light
	2.3 Identify and affiliate potential employees as soon as possible	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Light	Dark	Light
	2.4 Leverage employee and alumni networks	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Light
	2.5 Tap into non-traditional workforce pools	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Light
	2.6 Use new technologies to enhance recruiting experience	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Light
Identify and assess	3.1 Gain a clear understanding of available competencies	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Light	Dark	Dark
	3.2 Systematically identify development potential	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark
	3.3 Identify and manage a top talent pool	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Light	Dark	Dark
	3.4 Define company-wide performance standards	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Dark	Dark
	3.5 Collect structured and transparent feedback	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Light	Dark	Dark
	3.6 Provide probational leadership experiences to talented staff	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Dark	Light
Train and develop	4.1 Develop clearly defined career paths with aligned training plans	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Dark	Dark	Light
	4.2 Provide incentives for undergoing and approving training	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Light
	4.3 Collaborate with external partners	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark
	4.4 Tailor training to the needs of the company and the target group	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark
	4.5 Foster internal knowledge transfer	Light	Light	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Dark
	4.6 Develop fast-track programs for high-potential employees	Light	Light	Dark	Dark	Light	Dark	Dark	Dark	Light	Dark	Light



Step 5: Conduct a cost-benefit appraisal of planned initiatives

After a potential solution has been found for your company's specific skills gap, it is worth conducting an ex-ante cost-benefit appraisal. Such an analysis can check whether the (intended) benefits outweigh the (expected) costs, and can help to secure top-management buy-in, to obtain external funding, and to identify possible weaknesses in the initiative. Depending on the availability and quality of data, the analysis might take the form of a capital budgeting study (whether an Net Present Value calculation or a Payback Period calculation), a break-even simulation or a cost comparison. It should be rounded out by a qualitative assessment of benefits and by devising chains of logical effects to clarify the initiative's costs and benefits.⁵ As discussed in Chapter 3, you should start the appraisal of costs and benefits with the objectives (i.e. the intended benefits) and identify the best levers for attaining them. The optimal level of detail for a cost-benefit appraisal depends on the capital investment, the running costs, and the complexity of the planned measure. For instance, the introduction of a quarterly award for the best-performing employees will warrant a less sophisticated comparison of costs and benefits than would the establishment

of a vocational training center with a three-year vocational training program for dozens of students. Nevertheless, any proposed measure deserves at least a basic comparison of costs and benefits, to define the objectives and create transparency about the expected costs. In addition, in the course of appraising the business benefits and costs of the initiative, you should also consider the potential social impact, as that will round out the picture of the initiative's total costs and benefits.

From the results of the cost-benefit appraisal, you should be able to determine which levers to press in order to reduce the costs or increase the benefits – especially if the results suggest a negative overall effect on the company. For instance, various levers for improving the net benefit of a training initiative are at your disposal (Figure 60). On the costs side, for example, you can try either to reduce the total cost of an initiative or to reduce your company's share of the total cost. This latter aim could be achieved via cost-sharing agreements with other companies (such arrangements can also exploit economies of scale, and thereby bring down the cost per training participant). On the benefits side, the training curriculum should be tailored to your company's specific needs, for example, and incentives should be offered to participants to continue working for your company.

Figure 60: Levers for improving the net benefit of a training initiative

Levers to reduce costs		Levers to increase benefits	
<ul style="list-style-type: none"> Use standard elements (such as building designs and curricula) instead of re-inventing everything 	Reduce total costs of the measure	<ul style="list-style-type: none"> Increase the number of students/ training participants 	Increase total benefits of measure
<ul style="list-style-type: none"> Find partners to finance measures either on a grant or interest-free loan basis Liaise with industry partners or education partners to share costs 	Reduce costs borne by the company	<ul style="list-style-type: none"> Agree on retention-periods with training participants Actively advertise your investment in training measures as a recruiting and marketing measure 	Increase total benefits for company
<ul style="list-style-type: none"> Exploit economies of scale: increase number of students/training participants (but not above demand) 	Reduce costs per participant		
<ul style="list-style-type: none"> Agree on cost-sharing if the training participant does not join or leave the company (within a certain timeframe) 	Reduce costs per participant working with company	<ul style="list-style-type: none"> Tailor the training curriculum to the needs of the company Actively recruit from supported schools and universities 	

A cost-benefit appraisal not only provides an indication of whether the benefits exceed the costs, but also helps to identify potential improvements to the initiative. If a well-structured business case can be presented, that will help in achieving buy-in from senior management, and also in securing financing both from internal and from external sources.

Step 6: Implement the selected initiatives

After you have decided on a specific skills-development initiative, and the (internal) support and financing have been secured, you can begin working on the detailed implementation planning. Again, as with the cost-benefit appraisal, the ideal level of planning depends on the initiative's complexity and riskiness. Also, evaluation of the initiative is crucial: the KPIs should be introduced early (see Chapter 3) to enable the monitoring and assessment of the initiative as it proceeds and after it has been implemented. Several key success factors have been identified from the experiences of the case-study clients, and from an analysis of DEG's portfolio of skills-development initiatives implemented with its clients. They are grouped into the three phases of the skills-development project: set-up, implementation, and sustainable operation (Figure 61). Once again, the factors vary in relevance, according to the type of skills-development initiative involved.

In the set-up phase of the initiative, it is essential to get the backing of top management and to establish ownership and

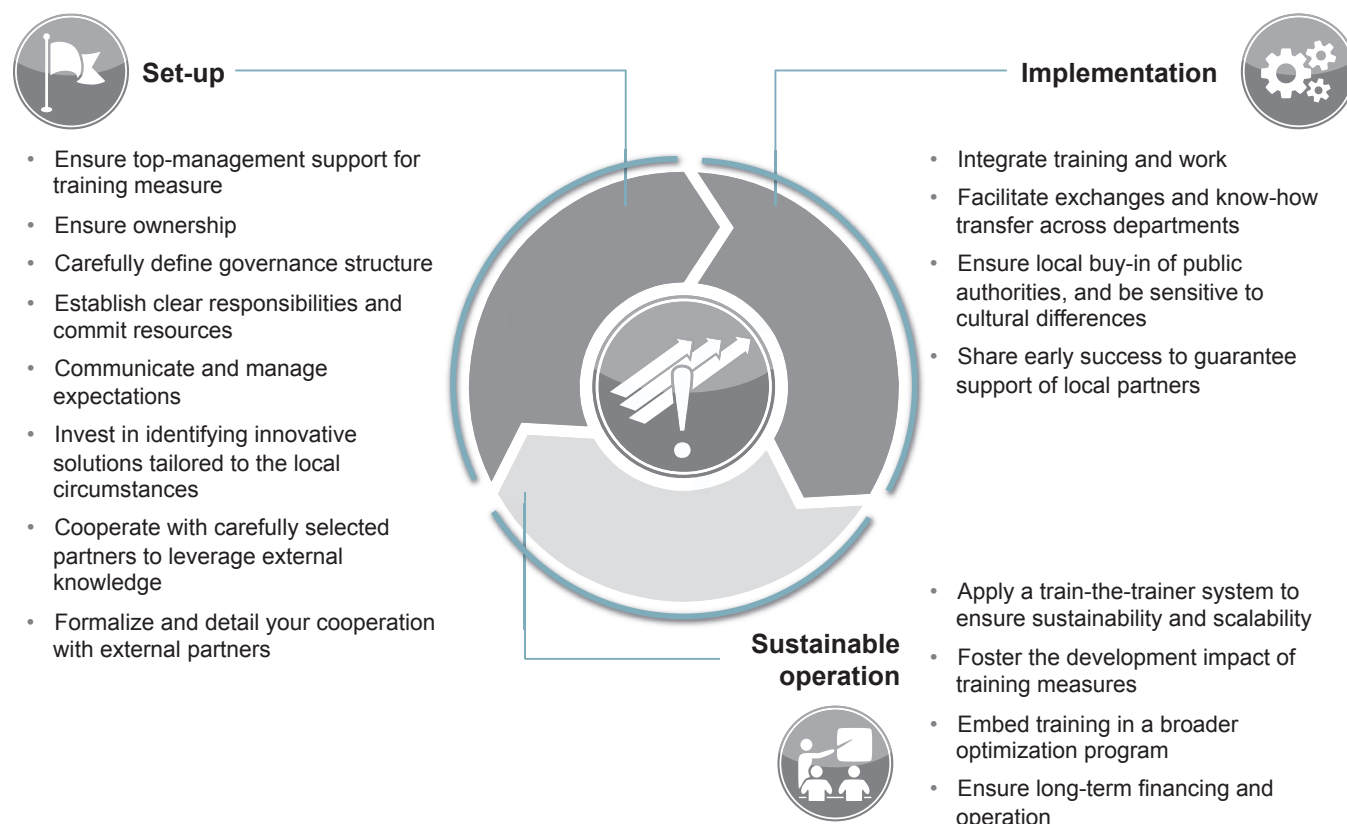
clear responsibilities, both within the company and with external partners. Experience shows that the project's success relies heavily on the careful selection of external partners and on formalizing your degree of cooperation with them.⁶ It is also crucial to manage the expectations of all partners involved, and to carefully define the governance structure and internal reporting obligations – and the external reporting obligations, to the local community, government or other key stakeholders.

In the implementation phase, make sure to publicize early successes to partners and within the organization. This will help in maintaining their support. It is equally important to ensure the buy-in of local authorities – for example, by engaging the relevant education authorities early on to discuss the certification of the training program. To maximize the benefits of skills development within the company, ensure an effective exchange and know-how transfer between external trainers and internal experts as well as across departments.

For the sustainable operation of the initiative, the company has to secure long-term financing, either from internal or from external sources – for instance, by sharing the running costs with partners or training beneficiaries, or by committing funds for several years. The sustainability of the initiative can also be enhanced by embedding the training in a broader optimization program. The Bangladeshi garment manufacturer JMS Holdings Ltd., for instance, incorporated training as an integral part of its radical transformation process, which involved a new production layout and an upgrade to new machinery.⁷

Given the huge variation in skills gaps and company characteristics, there can be no one-size-fits-all solution. But the six-

Figure 61: Key success factors for measures to close skills gaps



step approach described above will provide guidance to companies for identifying and addressing the specific skills gaps in their workforce. Note that, although the approach has been presented here in the context of workforce development, the basic steps are equally applicable for skills development along the value chain. In Step 1, for instance, companies could conduct the skills-gap assessment jointly with their suppliers or clients. For Step 3, the root causes of the skills gaps should be analyzed in a similar way to that suggested for the company's own workforce. Chapter 2 (page 25) provides a good-practice framework for skills development along the value chain that can serve as a basis for Step 4, developing qualification measures. As with initiatives for the company's own workforce, a cost-benefit appraisal should be conducted as Step 5, before taking the implementation decision. Finally, the key success factors of Step 6 are just as applicable for skills development along the value chain as they are for workforce development.

Although the template for skills assessment does not really apply to closing skills gaps in the broader community, it does offer useful guidelines: make an assessment of the needs (in secondary or tertiary education, for instance); prioritize them; identify initiatives likely to address them (making use of the good-practice framework for closing skills gaps in the broader community, in Chapter 2, page 27); and conduct a cost-benefit appraisal of those initiatives. (Since social impact is much

harder to quantify than business impact, more emphasis would be put on the qualitative assessment here.) Finally, apply to the favored community-development initiative the same key success factors for set-up, implementation and operation as you would for a workforce-development initiative or any other development initiative along the value chain.

Notes

- ¹ For instance, if a company is dissatisfied with the quality and timeliness of its local supplies, or if it receives complaints from its clients and can trace the causes back in the supply chain, it should consider establishing a supplier-development program. The good-practice framework for skills development along the value chain in Chapter 2.1 provides some guidance on establishing such a program.
- ² See Chapter 4 for detailed case studies on Hape (page 60) and HSL (page 76).
- ³ The downturn phase of a company is not included, since closing skills gaps is not relevant in this phase.
- ⁴ The numbers refer to the good-practice framework for workforce development in Chapter 2.
- ⁵ See page 36 for more details on the different approaches to conduct a cost-benefit appraisal.
- ⁶ See Textbox 1 on page 20 for a structured assessment of potential external collaboration partners (stakeholder mapping).
- ⁷ See the case study on JMS Holdings Ltd. on page 87 for the details.



6. Conclusion

Private-sector investment in bridging skills gaps is a win-win situation for companies and society

In developing and emerging countries, skills gaps will remain a challenge, one that will possibly even intensify in the short term. Productivity and growth are constrained by the lack of adequately qualified workers and managers, and the tide will take considerable time to turn. Where public-sector efforts have fallen short in building up an adequately trained workforce, private-sector companies need to step in to bridge the skills gaps. Such an engagement will also benefit the local community (e.g. through more and better employment, higher household incomes, and greater local expenditure) and society as a whole, since higher skills levels allow a more efficient use of technologies, enhance innovation and productivity, and thereby increase the competitiveness of a country.

This report is written from a private-company perspective. It takes a comprehensive view of skills gaps by looking at good practices and real-life examples from the private sector, in three areas: workforce development, skills development along the value chain, and closing skills gaps in the broader community. The listed good practices for closing skills gaps are not restricted to training, but also cover other approaches to reducing the disparity between supply and demand, such as better planning and demand management, more successful recruitment, and increased retention.

In addition to the significant positive effects for employees, suppliers, clients and the local community (illustrated by the case studies in Chapter 4), private-sector investment in closing skills gaps has clear benefits for the company itself. Workforce development increases the productivity of the employees, boosts product quality, drives innovation, improves work safety, increases employee satisfaction and motivation, and enhances the company's reputation. Skills development along the value chain improves the quality and timeliness of supplies, leads to lower input prices, and reduces the reputational risk. Finally, investment in closing skills gaps in the broader community fosters good relations with local people, secures the social license for the company to operate, strengthens government relations, and enhances the company's reputation.

To ensure that the measures to bridge skills gaps are both effective and efficient, it is essential to take a structured approach, as outlined in the practitioners' guide in Chapter 5. First, the gaps should be identified and prioritized and their root causes should be analyzed carefully. Then, potential measures to address these gaps should be developed. The good practices and practical examples presented in Chapter 2 provide some ideas for designing programs for workforce, value-chain and community development.

Once potential measures are identified, the company should conduct an ex-ante appraisal of the anticipated costs and benefits (Chapter 3). An investment in closing skills gaps is no different in essence from any other investment that the company may decide on – such as buying new machinery, expanding production facilities or acquiring a subsidiary company – where assessing costs and benefits is a standard requirement for getting management approval. Yet companies tend to avoid conducting the same rigorous assessment when pondering measures to address skills gaps – perhaps because the benefits are sometimes hard to identify and even harder to quantify. Chapter 3, therefore, presents five different methods of conducting a cost-benefit appraisal – ranging from purely quantitative to entirely qualitative approaches. A thorough cost-benefit appraisal can be extremely valuable: not only will it enable the company to select the most beneficial and cost-effective measures, it will also indicate ways of designing and refining them in order to maximize the benefits and minimize the costs.

If the measures are well-planned and well-structured (ideally by incorporating the key success factors presented in Chapter 5), they constitute a win-win situation for both the company and society – for the company, they add up to a positive business case; and for society, they help to overcome a major constraint on national economic development, and thereby benefit the country as a whole.



Annex

A. List of figures

Figure 1:	Company benefits from investing in closing skills gaps	12
Figure 2:	Overview of recent reports on skills gaps	13
Figure 3:	The HR value chain	16
Figure 4:	Good-practice framework for workforce development	17
Figure 5:	Stakeholder map and contribution for TVET in Bangladesh's RMG sector	20
Figure 6:	Good-practice framework for skills development along the value chain	25
Figure 7:	Good-practice framework for closing skills gaps in the broader community	27
Figure 8:	Illustrative logical chain of effects for Ohorongo's training center for control-room operators	32
Figure 9:	Overview of different types of costs	32
Figure 10:	Driver-tree approach to quantify indirect costs	33
Figure 11:	Potential KPIs to measure the benefits of skills-development measures	34
Figure 12:	Examples of driver-trees to quantify monetary benefits	35
Figure 13:	Overview of four different cost-benefit appraisal methods	36
Figure 14:	Method for summary assessment of initiatives	38
Figure 15:	Example of a social-impact chain for Engro's WELD project	39
Figure 16:	Assessment of Hape's initiatives along the social-impact levers	40
Figure 17:	Assessment of Engro's skills gaps	46
Figure 18:	Overview of Engro's initiatives to bridge its skills gaps	47
Figure 19:	Overview of the costs and beneficiaries of Engro's engagement	50
Figure 20:	Logical chain of effects that the PCESSDC TTC produces for Engro	50
Figure 21:	Inputs for the break-even simulation	51
Figure 22:	Overview of different scenarios for the break-even simulation	52
Figure 23:	Social-impact chain for Engro's WELD program	53
Figure 24:	Social-impact levers of Engro's WELD program	54
Figure 25:	Qualitative assessment of Engro's initiatives along social-impact levers	55
Figure 26:	Summary assessment of selected initiatives	56
Figure 27:	Overview of good practices from Engro's workforce development	57
Figure 28:	Market size and forecast for North America, Western Europe, China, and the rest of the world	61
Figure 29:	Assessment of Hape's skills gaps	63
Figure 30:	Overview of Hape's initiatives to bridge its skills gaps	64
Figure 31:	Overview of the costs and benefits of Hape's initiatives	69
Figure 32:	Summary assessment of selected initiatives	72
Figure 33:	Overview of good practices from Hape's workforce development	73
Figure 34:	Assessment of HSL's skills gaps	78
Figure 35:	Overview of HSL's initiatives to bridge its skills gaps	79
Figure 36:	Overview of the costs and benefits of HSL's engagement	81
Figure 37:	Summary assessment of selected initiatives	83
Figure 38:	Overview of good practices from HSL's workforce development	84
Figure 39:	Assessment of JMS's skills gaps	89
Figure 40:	Overview of JMS's initiatives to bridge its skills gaps	90
Figure 41:	Overview of the costs and benefits of JMS's engagement	92
Figure 42:	Development of KPIs over time	93
Figure 43:	Summary assessment of two selected initiatives	96

Figure 44:	Overview of good practices from JMS's workforce development	97
Figure 45:	Assessment of Ohorongo's skills gaps	101
Figure 46:	Overview of Ohorongo's initiatives to bridge its skills gaps	102
Figure 47:	Overview of the costs and benefits of Ohorongo's engagement	104
Figure 48:	Cost comparison of options for the initial training of CROs	105
Figure 49:	Benefits of the training center for CROs	106
Figure 50:	Main inputs and assumptions for the business-case calculation for Ohorongo's CRO training center	106
Figure 51:	Business-case calculation for Ohorongo's CRO training center	107
Figure 52:	Summary assessment of three selected initiatives	109
Figure 53:	Overview of good practices from Ohorongo's workforce development	110
Figure 54:	Template for assessment of gaps in hard skills	114
Figure 55:	Requirements regarding competencies, level of education, and level of experience for different skill levels	114
Figure 56:	Template for assessment of gaps in soft skills	115
Figure 57:	Skills-gap prioritization matrix	116
Figure 58:	Sample questions for root-cause analysis along the HR value chain	117
Figure 59:	Applicability of good practices for workforce development	118
Figure 60:	Lever for improving the net benefit of a training initiative	120
Figure 61:	Key success factors for measures to close skills gaps	121

B. List of textboxes

Textbox 1:	Mapping stakeholders for cooperation	20
Textbox 2:	Training and qualification measures for private-sector companies in developing countries	21
Textbox 3:	Skills transfer through board mandates	22
Textbox 4:	Leveraging Chinese know-how for the new production facility in Romania	65
Textbox 5:	Strategic skills development of suppliers	67

C. List of abbreviations

BCG	The Boston Consulting Group
BDT	Bangladeshi Taka
CBA	Cost-benefit appraisal
CEO	Chief Executive Officer
CMPI	Chittagong Mohila Polytechnic Institute
CSR	Corporate social responsibility
CRO	Control-room operator
DEG	Deutsche Investitions- und Entwicklungsgesellschaft mbH
DFI	Development Finance Institution
EDFI	Association of European Development Finance Institutions
HR	Human resources
HSL	Sociedade Beneficente de Senhoras – Hospital Sírío Libanês
ILO	International Labour Organization
IT	Information Technology
ISO	International Organization for Standardization
KPI	Key performance indicator
NGO	Non-governmental organization
NIMT	Namibian Institute of Mining Technology
NPV	Net Present Value
PPP	Public-Private Partnership
R&D	Research and Development
RMG	Ready-made garment
TVET	Technical vocational education and training
WELD	Women Empowerment through Livestock Development

D. List of references

- Accenture, Solving the Skills Paradox: Seven Ways to Close Your Critical Skills Gaps, 2013:
<http://www.cas-us.com/SiteCollectionDocuments/PDF/Accenture-Solving-the-Skills-Paradox.pdf>
- Accord, Accord on Fire and Building Safety in Bangladesh, 2013:
http://bangladeshaccord.org/wp-content/uploads/2013/10/the_accord.pdf
- ACT, A better measure of skills gaps, 2011:
<https://www.act.org/research/policymakers/pdf/abettermeasure.pdf>
- ACTIVOCA, Value Chain Project Increases Egyptian Farmer Yields, Income and Trust, 2013:
<http://acdivoca.org/resources/newsroom/news/value-chain-project-increases-egyptian-farmer-yields-income-and-trust>
- Barber, F., Strack, R., The Surprising Economics of a “People Business”, Harvard Business Review, 2005:
<https://hbr.org/2005/06/the-surprising-economics-of-a-people-business>
- Boston Consulting Group and The Network, Decoding Global Talent, 2014:
https://www.bcgperspectives.com/content/articles/human_resources_leadership_decoding_global_talent/
- Boston Consulting Group, Four Ways to Stop Worrying About Talent in China, 2012:
https://www.bcgperspectives.com/content/articles/globalization_people_management_human_resources_four_ways_stop_worrying_talent_china/
- Boston Consulting Group, Measuring Innovation 2009: The need for action, 2009:
https://www.bcgperspectives.com/content/articles/innovation_operations_measuring_innovation_2009/
- Boston Consulting Group, Supplier development. Bonanza or bust?, 2011:
https://www.bcgperspectives.com/content/articles/sourcing_procurement_manufacturing_supplier_development/
- Boston Consulting Group, The Global Workforce Crisis: \$10 Trillion at Risk, 2014:
https://www.bcgperspectives.com/content/articles/management_two_speed_economy_public_sector_global_workforce_crisis
- Collins, M., Change Your Company with Better HR Analytics, 2013:
<https://hbr.org/2013/12/change-your-company-with-better-hr-analytics/>
- Dannwolf, U., Ulmer, F., Cooper, J., Hartlieb, S., Chemicals in Products: Toys Sector Case Study for UNEP, Dialogic and Dekra Report, 2011: http://www.unep.org/chemicalsandwaste/Portals/9/CiP/CiPWorkshop2011/UNEP%20CiP_Toys%20case%20study_Final%20report%202.pdf
- DB Research, China Chartbook – Guizhou, 2015:
http://www.dbresearch.com/PROD/DBR_INTERNET_ENPROD/PROD000000000247522/Guizhou.pdf
- Deloitte, 2014 Global Health Care Outlook: Shared Challenges, Shared Opportunities, 2014:
<https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/dttl-lshc-2014-global-health-care-sector-report.pdf>

Deloitte, 2015 Health Care Outlook Brazil, 2014: <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-2015-health-care-outlook-brazil.pdf>

Doss, C., Intrahousehold bargaining and resource allocation in developing countries, Background Paper for World Development Report 2012, 2011: <http://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1322671773271/Doss-Intrahh-bargaining.pdf>

Economist Intelligence Unit, Still making it – An analysis of manufacturing labor costs in China, 2014: http://www.eiu.com/public/topical_report.aspx?campaignid=ChinaManufacturing

Euromonitor, Toys and Games Database, 2015: <http://www.euromonitor.com/toys-and-games>

Government of Brazil, Meeting Minutes: Mais Médicos, 2013: <http://www.relacoesinstitucionais.gov.br/portal-federativo/articulacao-federativa/sistema-de-assessoramento-federativo-sasf/reunioes/2013/04-06-2013/memoria-reuniao-sasf.pdf>

Guion, L., Triangulation: Establishing the Validity of Qualitative Studies, 2002: <http://www.rayman-bacchus.net/uploads/documents/Triangulation.pdf>

Hanushek, E., Woessmann, L., Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation, NBER Working Paper No. 14633, National Bureau of Economic Research, Cambridge, 497–512, 2009: [http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%2BWoessmann%202012%20J EconGrowth%2017\(4\).pdf](http://hanushek.stanford.edu/sites/default/files/publications/Hanushek%2BWoessmann%202012%20J EconGrowth%2017(4).pdf)

Impactt, Nicer Work? Impactt's Benefits for Businesses and Workers Programme 2011-2013, 2013: <http://www.impacttlimited.com/wp-content/uploads/2013/10/BBW-Nicer-Work-Report.pdf>

International Finance Corporation, Assessing private sector contributions to job creation and poverty reduction, 2013: http://www.ifc.org/wps/wcm/connect/0fe6e2804e2c0a8f8d3bad7a9dd66321/IFC_FULL+JOB+STUDY+REPORT_JAN2013_FINAL.pdf?MOD=AJPERES

International Finance Corporation, Investing in Women's Employment: Good for business, good for development, 2013: http://www.skillsforemployment.org/wcmstest4/groups/skills/documents/skpcontent/ddrf/mtix/~edisp/wcmstest4_121248.pdf

International Labour Organization (2011), COOP Africa, Tanzania (11.10.2011): <http://www.ilo.org/public/english/employment/ent/coop/africa/areas/challenge/tanzania.htm>

International Labour Organization (2011), COOP Africa, Kenya (11.10.2011): <http://www.ilo.org/public/english/employment/ent/coop/africa/areas/challenge/kenya.htm>

International Labour Organization, Country Profiles Namibia, ILOSTAT Database, 2015: http://www.ilo.org/ilostat/faces/home/statisticaldata/ContryProfileId?_afrLoop=92120066402347

International Labour Organization, Improving working conditions in the ready made garment industry: Progress and achievements, 2015: http://www.ilo.org/dhaka/Whatwedo/Projects/WCMS_240343/lang--en/index.htm

International Monetary Fund, Growth Slowdowns and the Middle-Income Trap, 2013:
<https://www.imf.org/external/pubs/ft/wp/2013/wp1371.pdf/>

Lego Learning Institute, The Future of Play: Defining the Role and Value of Play in the 21st century, 2010:
<http://www.smartplaynetwork.org/wp-content/uploads/2014/11/Future-of-Play-Report.pdf>

Manpower Group, Talent Shortage Survey, 2015:
<http://www.manpowergroup.com/wps/wcm/connect/manpowergroup-en/home/thought-leadership/research-insights/talent-shortage-2015> Let's Work, A global partnership to create more & better private sector jobs, 2014: <http://www.letswork.org/wp-content/uploads/2014/08/Lets-Work-Brochure-2014-FINAL.pdf>

McKinsey & Company, Inc., The \$250 billion question: Can China close the skills gap?, 2013:
<http://mckinseysociety.com/downloads/reports/Education/china-skills-gap.pdf>

Morgan Stanley, Bangladesh Ready-Made Garments Industry: Moving towards Sustainability – Executive Summary, 2015: http://www.morganstanley.com/sustainableinvesting/pdf/Bangladesh_Garments_Industry_Exec_Summary.pdf

Namibian Employers Federation, Namibia's Skills Deficits: Cross-Sectoral Perceptions and Experiences, 2010:
<http://www.ippr.org.na/sites/default/files/SkillsResearchDeficit.pdf>

Namibia Statistics Agency, Otjozondjupa Census Regional Profile, 2011.

Namibia Statistics Agency, The Namibia Labour Force Survey 2014 Report, 2015:
http://www.ilo.org/wcmsp5/groups/public/---africa/---ro-addis_ababa/---ilo-pretoria/documents/publication/wcms_368595.pdf

OECD, Better Skills, Better Jobs, Better Lives: A Strategic Approach to Skills Policies, 2012:
<http://dx.doi.org/10.1787/9789264177338-en>

OECD, Learning for Jobs. OECD Reviews of Vocational Education and Training: Options for China, 2010:
<http://www.oecd.org/china/45486493.pdf>

Pearce, D., Atkinson G., Mourato, S., Cost-Benefit Analysis and the Environment Recent Developments, 2006:
http://www.lne.be/themas/beleid/milieueconomie/downloadbare-bestanden/ME11_cost-benefit%20analysis%20and%20the%20environment%20oeso.pdf

PricewaterhouseCoopers, The Healthcare market in Brazil, 2013: <http://www.pwc.com.br/pt/publicacoes/setores-atividade/assets/saude/healthcare-tsp-13.pdf>

Quiry, P., Le Fur, Y., Salvi, A., Dallochio, M., Vernimmen, P., Corporate Finance: Theory and Practice (3rd Edition), 2011.

Republic of Namibia, National Human Resource Plan (2010-2025), 2012:
http://www.npc.gov.na/?wpfb_dl=203

Solidaridad Berenschot, Africa en vogue – the opportunities and challenges of textile & apparel market sourcing in East Africa, 2014: http://www.solidaridadnetwork.org/sites/solidaridadnetwork.org/files/uploads/Africa%20en%20Vogue_Solidaridad_Berenschot_2014_small.pdf

UNIDO–Scania, Partnering for Employment and Economic Revival of Iraq’s Industrial Manufacturing Sector, 2013: https://www.unido.org/fileadmin/user_media/Services/PSD/UNIDO_business_partnerships/Scania_2013.pdf

World Bank, Bangladesh – Skills and Training Enhancement Project, 2015:
<http://www.worldbank.org/projects/P090807/skills-training-enhancement-project?lang=en>

World Bank, China Economic Update – June 2014, 2014: https://www.worldbank.org/content/dam/Worldbank/document/EAP/China/China_Economic_Update_June2014.pdf

World Bank, Labor force, total, 2015:
<http://data.worldbank.org/indicator/SL.TLF.TOTL.IN/countries/BD?display=graph>

World Bank, Meeting the skills gap: lessons from the private sector, 2015:
<https://www.letswork.org/meeting-the-skills-gap-lessons-from-the-private-sector/>

World Bank, Recognizing Prior Competence: Increasing Skilled Manpower in Bangladesh, 2014:
<http://blogs.worldbank.org/endpovertyinsouthasia/node/1015>

World Bank, Secondary school enrolment (% gross), 2015:
<http://data.worldbank.org/indicator/SE.SEC.ENRR/countries/OE-XM-XN-XT?display=graph>

World Bank, Skills and Training Enhancement Project – Project Information Document, 2010:
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/05/25/000334955_20100525030054/Rendered/PDF/535490PAD0P090101Official0Use0Only1.pdf

World Bank, Tertiary school enrolment (% gross), 2015:
<http://data.worldbank.org/indicator/SE.TER.ENRR/countries/OE-XM-XN-XT?display=graph>

World Bank, Working together for jobs, 2015:
<http://www.letswork.org/working-together-for-jobs/>

World Bank, World Development Indicators 2014, 2014: <http://data.worldbank.org/products/wdi>

World Health Organization, A universal truth: No Health Without a Workforce, 2013: http://www.who.int/entity/workforcealliance/knowledge/resources/GHWA-a_universal_truth_report.pdf?ua=1

World Trade Organization, Clothing – Merchandise Trade by commodity, 2015:
<http://stat.wto.org/StatisticalProgram/WSDBStatProgramSeries.aspx?Language=E>

Photo credits

Cover:	Hape Holding AG
Page 2:	DEG photo archive/Christian Berg
Page 4:	KfW photo archive/photothek.net
Page 30:	KfW photo archive/Florian Kopp
Page 41:	KfW photo archive/auslöser photographie
Page 42-43:	KfW photo archive/photothek.net
Page 48-49:	Engro Corporation Ltd.
Page 64-70:	Hape Holding AG
Page 79-80:	Hospital Sírio Libanês
Page 86:	KfW photo archive/photothek.net
Page 91:	JMS Holdings Ltd.
Page 100-105:	Ohorongo Cement (Pty) Ltd.
Page 112:	KfW photo archive/photothek.net
Page 122:	KfW photo archive/Ruben Ortiz



ClimatePartner^o
climate neutral

Print | ID 53214-1512-1007





EDFI – European Development
Finance Institutions, ASBL
Rue de la Loi, 81A
B-1040, Brussels, Belgium
edfi@edfi.eu
www.edfi.be



DEG – Deutsche Investitions- und
Entwicklungsgesellschaft mbH
Kämmergasse 22
50676 Cologne, Germany
info@deginvest.de
www.deginvest.de