

CHAPTER SAMPLER

Business Continuity Plan

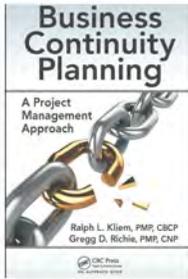
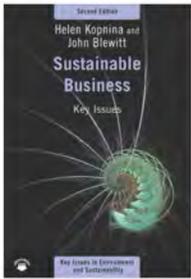


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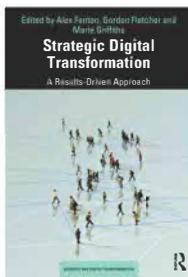
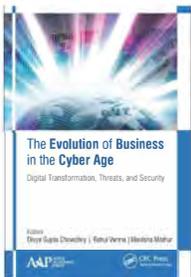
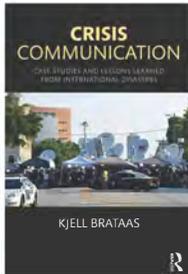
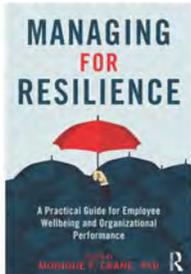
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9 Creating a sustainable business practice

Government regulation and policy

It is often believed that the EU is far greener and far more culturally sympathetic towards the environment and sustainability than the US. China and India are investing heavily in renewable energy and planning to phase out their coal production facilities. In November 2016, the world's largest solar energy farm or power station became operational in the southern Indian State of Tamil Nadu. In December 2015 China pledged to reduce its emissions of major pollutants by 60 per cent. China is already the world's largest producer of and market for solar panels. America's refusal to ratify the 1997 Kyoto Protocol on climate change and withdrawal from Paris Agreement, its enthusiastic embrace of GMOs, fracking (the hydraulic fracturing of underground areas to extract shale gas), and its continuing dependency on 'Big Oil' seem to confirm this picture.

In Europe, the application of the Precautionary Principle has generally made environmental regulation more risk averse than the US and public opinion tends to support this approach. However, American regulations regarding the handling of potentially carcinogenic substances are far stricter than in the Europe. However, it is not unknown for US companies to respond quickly and publicly to consumer fears related to GMOs. Since 1999, McCain Foods, the world's largest producer of chips (French fries), has adhered to a policy that its foods would not include GMOs. Other major US-based companies have been at the forefront of promoting the assumed environmental and other benefits of GMOs. More recently, environmental policy and regulation in the US and EU reversed positions, with European regulation becoming more relaxed than those the US in some areas. However, President Trump in the US has reversed or 'paused' many of the clean air and water regulations, implemented by his predecessor Barack Obama to protect public health, including a regulation preventing toxic metals such as arsenic and mercury power plants being discharged into public waterways by power plants.

In recent years a number of key sustainability principles have to varying degrees gained acceptance in a wide range of international treaties, regional agreements, and the legislation of nation-states. These agreements and regulations aim to control the environmental impacts of businesses, government bodies, and other

organizations within a broad framework of a free market global capitalism, which often attenuates their potential effect. These principles address:

- environmental sustainability;
- social equity and human rights;

and include:

- the Polluter Pays Principle;
- the Precautionary Principle;
- the Participatory Principle.

Polluter Pays Principle

In 1972 the OECD introduced a principle stating that those organizations that pollute the natural environment should pay, through either fines or taxation, for the measures needed to reduce or clear up that pollution. Since then much environmental legislation in the US, Japan, and the EU has virtually become synonymous with the Polluter Pays Principle.

The Precautionary Principle

The Precautionary Principle usually follows the definition published in the 1992 Rio Declaration on Environment and Development namely that ‘where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation’ (UN 1992). However, the Precautionary Principle has been quite controversial and has not gained broad agreement on any one definition, interpretation, or even on its value as a way of informing risk regulation. Cass Sunstein (2005) of Harvard Law School has been a persistent critic suggesting that the principle can impede innovation, development, and effective regulation without necessarily offering the degree of protection its supporters claim. However, the UNGC argues that, considered as a means for generating preventative rather than remedial action, the principle does have important benefits for business, such as:

- environmental clean-up often costs a great deal of money and harms brand image;
- investing in unsustainable production and poor environmental methods gives sub-optimum returns;
- R&D in environmentally friendly products can have significant long-term benefits.

The Rio+20 Earth Summit reviewed the Precautionary Principle as a result of the wide range of interpretations and debates it has engendered, but it still remains

of paramount importance to the future of sustainability in business and elsewhere as a means of inducing developers and innovators to reflect deeply on what they are doing.

Extended Producer Responsibility

Since 2002, the OECD and national governments have refined and extended the Precautionary Principle so that manufacturers and businesses are more effectively liable for the environmental damage they cause. This extended principle encompasses the whole produce life cycle including both upstream and downstream impacts. The OECD defines Extended Producer Responsibility (EPR) as a concept where:

. . . manufacturers and importers of products should bear a significant degree of responsibility for the environmental impacts of their products throughout the product life-cycle, including upstream impacts inherent in the selection of materials for the products, impacts from manufacturers' production process itself, and downstream impacts from the use and disposal of the products. Producers accept their responsibility when designing their products to minimize life-cycle environmental impacts, and when accepting legal, physical or socio-economic responsibility for environmental impacts that cannot be eliminated by design.

(OECD Extended Producer Responsibility Fact Sheet)

In the US the application of EPR has mainly concentrated on hazardous materials or products that have low recycling rates such mercury switches and fluorescent lamps, but in the future EPR may also include paper and packaging. Some studies have suggested that over 70 per cent of American households have access to paper recycling facilities (Eaton 2015) and those that argue for a business-led EPR system for packaging and printed paper argue that many companies have a significant financial interest in recycling more. However, a 2016 survey by the Pew Research Center (DeSilver 2016) discovered that 28 per cent of Americans felt their local communities encourage reuse and recycling, 22 per cent felt their communities did the opposite and the remaining 50 per cent say their community's recycling norms are modest.

The Participatory Principle

The Participatory Principle, and similarly the Precautionary Principle, requires public engagement, consultation, and debate on social, economic, and particularly environmental policy, practice, and implementation. Participation is a key feature of democratic environmental and sustainability governance. For instance, EIAs, a formal process of evaluating the impacts a proposed business, construction, or other project may have on society and the environment, often require public participation through consultation. Unfortunately, these consultations are

often accused of falling short of a genuinely meaningful public involvement in decision-making processes. Sometimes, the rather inadequate attempts by governments and businesses to enter into dialogue with local communities, NGOs, and other civil society bodies may be the product of a lack of skills and capacity rather than will, intention, or a basic understanding of how dialogues should proceed, be managed, or integrated into wider business procedures.

Environmental management systems

Eco-Management and Audit Scheme

In the last thirty years there has been a considerable increase in the number of new environmental policy instruments such as eco-taxes, market-based initiatives, voluntary agreements, and environmental standards such as Europe's Eco-Management and Audit Scheme (EMAS) and informational devices such as eco-labels in OECD countries.

An environmental management system (EMS) is a tool for managing the impacts of an organization's environmental impacts by providing a clearly structured approach to planning and implementing environment actions.

EMAS is an EU voluntary environmental management initiative that has been operating since 1993 and is designed to improve a company's environmental performance, articulating a belief that a proactive approach to environmental challenges is a sign of a successful and responsible organization. Participation in the scheme is available to any public or private sector organization that wishes to reduce its environmental impacts and improve its overall environmental performance. EMAS can cover multiple sites within a single EU country and by 2017 nearly 4,000 organizations and about 9,200 sites had registered with the scheme worldwide. The independent nature of EMAS ensures its reliability and validity. Organizations are required to publicly disclose the nature of their performance against a series of performance criteria and indicator statements. When an organization secures EMAS accreditation it can display the EMAS logo to promote its commitment to be environmentally responsible and a good corporate citizen. For SMEs a simpler scheme has been devised.

The EMAS Easy methodology covers all the EMAS requirements as well as those produced by ISO, a global federation of national standards bodies, namely its ISO 14001. EMAS Easy is based on an eco-mapping concept that encompasses a business's location and internal processes, offering participating organizations a clear and distinct set of guidelines, aids, prompts, and tables.

Many published evaluations of EMSs have consistently demonstrated that they have a positive impact on a firm's environmental performance. For instance, EMAS has led to improvements in many companies' pollution control, environmental

planning, and has had indirect and beneficial environmental impacts on waste, packaging, transportation and, to some extent, the supply chain and R&D. The adoption of EMAS may also lead to improvements in innovation capacities and overall competitiveness. Many studies have shown how reducing environmental impacts, energy consumption, waste, and so on can significantly reduce costs and can increase the market valuation of the company. Other benefits include: better risk management, efficiency savings, better relations with local communities, improved public image, assured legal compliance, new business opportunities, improved quality of workplaces, and reduced carbon emissions.

Unfortunately, SMEs are often unaware of their own specific environmental impacts as well as changes to environmental legislation and regulation. However, many companies operating in an international setting adopt EMSs as a way of demonstrating their external legitimacy, and, in the case of many Chinese companies, as a way of gaining entrance to international markets.

Sustainable supply chain management

A supply chain is a system including businesses, information, and resources linking raw materials, components, or services from a supplier to a business that fashions them into an end product and then delivers them to the end customer.

In a globalizing world, many companies have extended and diverse supply chains. Such long and complex supply chains increase the risk of reputational and commercial damage when a link in that supply chain is involved in unethical practices. Outsourcing and offshoring has exacerbated these dangers and certain states can have quite relaxed labour and environmental standards. Many well-known brand names, such as Nike and Apple, have suffered reputational damage when suppliers have been shown to use sweatshop labour or have used raw materials emanating from conflict and human rights abuses areas.

The electronics industry, and particularly those companies involved in producing digital media and communications technologies, have in many cases responded swiftly to allegations that rare earth metals – including tantalite, cassiterite, wolframite, gold, or their derivatives – used in manufacturing processes originate in war zones like those in the Congo.

Public debates and campaigns by NGOs like Greenpeace on ‘conflict minerals’ have led Hewlett-Packard, IBM, Cisco, and Apple to review their supply chains, often in cooperation with NGOs or as a member of the Electronics Industry Citizenship Coalition (EICC). Other companies such as Nintendo, which according to *Ethical Corporation* magazine still use conflict minerals in its game consoles, have (at the time of writing) still to act; otherwise they are in danger of losing credibility, especially in Europe, as a good corporate citizen despite the success of their products.

Complex supply chains are particularly vulnerable to ‘natural’ disasters too. When floods devastated Thailand in 2011 causing 800 deaths and costing the Thai economy US\$45 billion, the price of hard drives rose steeply in high street stores for months afterwards as two thirds of manufacturers are located in this region. Hitachi, Dell, and HP all felt the impact and this caused CEOs to start talking the language of sustainability too. When dealing with supply chain vulnerability they should require their suppliers to adhere to rigorous environmental, social, and employment standards. Many businesses are now linking the increasing incidence of extreme weather events to anthropogenic climate change.

Reviewing the supply chain inevitably involves working with stakeholders, including other companies dependent on the same or similar supply chains, and such networking has proven to be an effective way of reducing business risk and improving performance. Many large companies work with NGOs or environmental consultancies to do this. In 2013 Coca-Cola announced it would extend its partnership with WWF to 2020, having already improved its water efficiency by 20 per cent and reduced its carbon emissions. The intention is to go further and to reduce the embodied carbon in its drinks by an additional 25 per cent. The company intends to work with the WWF to review its manufacturing processes, packaging, delivery methods, refrigeration, and ingredient sourcing. This will entail cooperation across the company’s entire supply and value chain. However, such action is not necessarily easy to accomplish. Many companies will almost certainly experience internal and external barriers to greening the supply chain. These barriers may include cost, inadequate regulation (lack of the proverbial ‘level playing field’), inadequate management information systems and/or management of the transformation of materials, and poor supplier commitment.

However, jointly dealing with uncertainties and environmental issues in a proactive and positive manner can and does produce effective, trusting, cooperative relationships among all those firms in the supply chain. Sustainable supply chain management is clearly a complex activity requiring a conscientious and critical appreciation of ecological and ethically focused business practices. Linton et al. (2007:1080) write:

Sustainability stretches the concept of supply chain management to look at optimizing operations from a broader perspective – the entire production system and postproduction stewardship as opposed to just the production of a specific product. . . In addition sustainability introduces less quantifiable considerations relating to the natural environment and in some cases social issues – what the business ethicists and the accounting fields refers to as the triple bottom line.

Localizing production, reducing transportation times and distances, and shifting consumption practices to support local business and local food growing can render supply chain management less complicated and make it inherently more sustainable. With globalization, production is often distributed in many places thousands of miles apart and foodstuffs are often transported huge distances, which inevitably increase carbon consumption and reduce economic opportunities for small local

businesses, retailers, and growers. Working in partnership with environmental NGOs enables firms to draw on established and credible knowledge and expertise. As Peter Senge told the *Harvard Business Review* (quoted in Prokesch 2010:71):

People don't trust the business-as-usual mind-set – for good reason. I don't think it's so different in the U.S. If a credible NGO certifies your product, your brand can gain hugely if you are willing to change your practices. NGOs can also provide knowledge. No business knows what Oxfam knows about the plight of farmers or what WWF knows about biodiversity and watersheds. The best businesses don't just hire the sharpest people; they also keep expanding their expertise by partnering with NGOs that have deeper and broader knowledge.

Change management

Change management is the strategy to manage employees, teams, and organizations in order to achieve the required business outcome. Change management incorporates the organizational tools that can be utilized to help individual and companies to make successful personal transitions resulting in the adoption and realization of change. Change management becomes important when organizations undertake projects or initiatives to improve performance or address key issues such as sustainability or transition to circular model of production. Entire corporations' processes, job roles, organizational structures, and types and uses of technology may be affected. To ensure that change management is effective, efficient, and appropriate an organisation's management team will need to undertake a considerable amount of prior thought and preparation. One technique that is frequently being used particularly when the change management process will be engaging with a number of factors and possibilities is multiple-criteria decision analysis (MCDA), which is encompassed within the broader field of operations research. Structuring complex problems, creating criteria for analysis and evaluation is a proven way of making successful and informed decisions about which path, set of tools or approach that is most suitable for the organisation. Businesses often employ specialised software focussing on making decisions and research has shown that MCDA has made significant contributions to development environmental management frameworks and sustainability assessments (Cinelli et al. 2014). And finally, a report by the consultancy SustainAbility (2014) argues that transparency can improve decision-making, corporate performance, and help companies to create a sustainable future. To this end it has developed a Transparency Advancement Tool.

The Natural Step

The Natural Step (TNS) framework for strategic sustainable change, education, and communication, sometimes referred to as a Framework for Strategic Sustainable development (FSSD), starts from a scientifically based definition of sustainability centred on four key principles (or four system conditions) (Figure 9.1).

In a sustainable society, nature is not subject to systematically increasing

- concentrations of substances extracted from the Earth's crust;
- concentrations of substances produced by society;
- degradation by physical means.

In that society people are not subject to conditions that systematically undermine their capacity to meet their needs. TNS methodology is based on systems thinking and is an important tool for organizational planning and for mainstreaming sustainability in business and society. Importantly, it provides a way for businesses to see risks as potential opportunities and its ABCD analytical approach facilitates a clear apprehension of a sustainable business model. The four-phase ABCD analytic refers to:

- *Awareness* – aligning the business around a common understanding of sustainability.
- *Baseline mapping* – of the major inputs, outputs, and impacts of the business and how they can be managed more sustainably in accord with the four system conditions.
- *Creating a vision* – inviting decision-makers and stakeholders to create a persuasive long-term vision for a sustainable business.
- *Down to action* – encompassing step-by-step implementation, prioritization of goals, and evaluation of progress and necessary modifications.

In a sustainable society, nature is not subject to systematically increasing...

-  ...concentrations of substances extracted from the Earth's crust,
-  ...concentrations of substances produced by society,
-  ...degradation by physical means,

and, in that society...

-  ...people are not subject to conditions that systematically undermine their capacity to meet their needs.

Figure 9.1 The Natural Step (source: www.thenaturalstep.org, permission of Scott Perret)

TNS employs a technique known as backcasting, which is a cooperative, non-hierarchical methodology requiring widespread engagement with many stakeholders and a capacity to learn socially from others. At the end of the backcasting process an action plan is usually developed that will form the basis for implementation and future R&D. In this way, backcasting forms an important element of TNS's strategic framework for sustainable change. Many companies, such as IKEA, Interface, Scandic Hotels, Mitsubishi, McDonald's, Volvo, Panasonic, Dow Chemical, Electrolux, and others have successfully adopted TNS to improve their sustainability performance and profile (Natrass and Altomare 2001). Local governments and neighbourhood communities have also engaged successfully with TNS process. There is also a close relationship between EMAS, ISO 14001 and TNS for both the ISO and EMAS certification schemes provide additional structure when applying TNS principles which, for some critics, are primarily educational guides to facilitating structural and cultural change within organizations and the wider society. Its fundamental educative message is one of planetary limits and ecological citizenship.

Eco-labels

EMSs and certification schemes now exist for most business sectors and with these schemes come logos, kitemarks, and other publicly visible marks of quality, authenticity, and responsibility. When comparing similar products, eco-labels can inform sustainable purchasing decisions because they confirm a product has met a wide range of environmental performance criteria.

An **eco-label** is a voluntary identification of the product developed by governments, manufacturers, and third-party organizations.

The first eco-label scheme, the Blue Angel, was launched in Germany in 1978 but today the eco-labelling approach to environmental certification is practised globally. A wide range of eco-labelled products exhibit 'green', 'biological', 'organic', 'fairtrade', or 'sustainable' symbols or claims. Not surprisingly, environmental performance labels and declarations vary greatly and the growing number of environmental claims made by companies led the US Federal Trade Commission (FTC) to issue 'Guides for the Use of Environmental Marketing' ('Green Guides') to provide detailed and accurate information and guidance on claims for biodegradable, compostable, recyclable, recycled, ozone-safe, and climate-neutral products.

In Europe, the EU's Ecolabel voluntary scheme was launched in 1992 and participation in the scheme enables a company to use the Ecolabel on a specific group of products. By 2016, 1,998 licences had been awarded with the logo appearing on 38,760 products. The largest number of EU Ecolabel licences has been awarded in France, Italy, and Germany. The criteria

underpinning them enable businesses to engage meaningfully with the attempts to fashion the circular economy.

In the North American construction industry, the Leadership in Energy and Environmental Design (LEED) certification scheme has led the field for some time, although it now faces competition from the rival Green Globes scheme. This means that there is no overall agreement on a single definition of what makes a building 'green' or green enough, although a high rating such as in the UK being awarded a Building Research Establishment Environmental Assessment Methodology (BREEAM) 'Excellent' or 'Outstanding' is generally recognized as very valuable and does bring with it considerable green kudos. In the US, Joel Makower, founder of GreenBiz.com, has noted that prior to LEED anyone could say what made a building green but now, at least for buildings, LEED has established a comprehensive set of standards and has been credited with the sharply increased demand for green building. By creating a unified standard, it has enabled product manufacturers, architects, developers, city planners, landlords, and tenants alike to speak the same language and operate on the same playing field. LEED has now certified over 20,000 construction projects and according to GreenBiz the new LEED performance and transparency requirements is likely to be a global incentive for construction firms to be more sustainable.

Although eco-labels appeal to and are highly valued by green consumers and have certainly raised general public awareness, the market share for eco-labelled products remains fairly small. Without engaging in other more conventional marketing practices, which are concerned with product and brand positioning, price, place, and general promotion, there is a danger that potential new markets for green products may not be created to the degree they should be. In the report *Signed, Sealed. . . Delivered?* published by SustainAbility in 2011 there is a recognition that the proliferation of eco-labels, combined with some corporate game playing, probably requires a rethinking of what eco-labels are, what they should do, and how they should do it. The report states (SustainAbility 2011:44):

If the move to a more sustainable world requires new trading relationships and new forms of consumption – such as services, sharing, re-use, and yes, less consumption – a product-by-product focus may end up missing the larger point. Too much focus on any one product may distract from the greater imperative to keep production and consumption within environmental limits and to ensure sustainable livelihoods for all.

We urge a shift towards a new, systems-focused model based upon increasingly demanding and pre-competitive standards, above which brands compete, collaborate, and partner with civil society to embed these standards into business models and to transform supply chains and consumer behaviour – and where civil society and government evolve more effective and efficient ways of holding business accountable. Interestingly, the WWF has noted that for many business executives the value of eco-labels lie more in increased operational effectiveness than in promoting sustainability.

Sharing networks

The US Green Business Network, like others with similar titles in different countries and regions, help a growing numbers of businesses, investors, and consumers make connections and share good practice. The US Green Business Network certification demonstrates a commitment that a company is environmentally responsible and committed to social change. Many of the texts available in the growing market in green or sustainable business handbooks, toolkits, and how-to manuals also offer valuable and easily accessible information.

The Environmental Sustainability Knowledge Transfer Network (ESKTN) aims to foster the more effective use of material and energy resources by UK businesses. The ESKTN supports the development and implementation of new innovative technologies and processes aiming to facilitate a transition to a low carbon, and resource and energy efficient economy. Knowledge transfers occur through connective relationships between businesses, universities, other research organizations, and government agencies. Similar networks exist internationally and ambitious projects in fashioning new cultural commons are not unknown. In January 2008 the Eco-Patent Commons was launched by IBM, Nokia, Pitney Bowes, and Sony in partnership with the WBCSD with the aim of encouraging businesses to share knowledge innovation, protect the environment, and nurture future collaboration.

It works in a similar way to Creative Commons with donator patentees covenanting not to assert their patent rights so long as the patent is used for environmentally beneficial purposes. However, companies can terminate agreements, not support the patent donated, and not actually pledge anything specific, which are probably the reasons why over hundreds of eco-friendly patents have been pledged by a variety of well-known firms from different industrial sectors, although it seems that four large firms have filed the majority of the patents. Many of these relate to environmental clean-up or clean manufacturing and are only marginally relevant to environmental protection or mitigating climate change impacts. Nonetheless, those patents that have been filed seem to be more valuable than many of those that have just been pledged. Businesses, though, are cautious about such sharing. As Hall and Helmers (2011) note, these patents:

tend to be more derivative of previous technologies and narrower than other patents in their class, suggesting that they are not for very radical inventions. In fact, in our reading, patents in the commons protect relatively narrow technical solutions to specific problems rather than complex technologies. This also implies that they might be useful on their own and not require complementary patents not contained in the commons. Because they are usually distant from the firm's technology (patent) portfolio, one reason for pledging them may be that they are not very valuable to the firm holding them.

The idea of creating a global cultural and knowledge commons is a key element in moving towards sustainability but businesses are also keen to protect their

own intellectual property and their actual, or anticipated, competitive advantage. A more radical and promising initiative is that of the Open Source Ecology Network.

Networks and sharing are therefore key ways by which businesses and other organizations generate and apply new knowledge, build capacity, and collaboratively address the many ‘wicked’, complex, and interconnected problems that beset us. To do this, though, requires the development of mindsets attuned to the needs, values, skills, strategies, and commitments to being a collaborative capacity builder. These commitments as Weber and Khademian (2008) suggest probably include:

- a commitment to governance that makes due recognition of the need for government regulation rather than accommodating laissez faire market freedoms;
- a commitment to govern and operate in a cooperative and innovative manner;
- a commitment to recognizing that change agents, coordinators or leaders need not necessarily always come from official or elite business or government circles;
- a commitment to networks as mutual aid partnerships with the wider society;
- an understanding that performance, capacity and accountability are inseparable;
- a commitment and passion for genuine collaboration and meaningful co-operation.

Networks differ in their size, the density of relations, degrees of cohesiveness, interconnectivity within subgroups, and the extent to which they may be centralized. All these factors can influence the way the network operates and the effectiveness with which it tackles complex problems. It is no wonder that it isn’t easy being green. So, when attempting to answer a question like ‘what is a green business?’ the answer is necessarily a complex one too.

Corporate reporting

Sustainability must not only be practised but must be *seen* to be practised. Many people argue that firms should publicly account for and report on what they do, what at other times would have been treated as externalities. Environmental pollution was frequently considered by business to be an ‘externality’ and not really its business. Today pollution and other externalities are definitely a company’s business and corporate reporting now includes information on the social, environmental, and other impacts and most importantly on the improvements companies have undertaken. This accounting and reporting, of course, needs to be accurate, measured, and verified otherwise allegations of greenwashing could cause reputational damage whether or not they are borne out by the facts.

Consequently, many companies issue regular bulletins on their social responsibility and sustainability performance, going into considerable detail in their annual corporate sustainability reports. Shareholders need to be convinced their investment is worthwhile not least because bad labour practices, failure to comply with government regulation, or poor environmental performance can swiftly and negatively impact upon the financial bottom line. Unless a company is fully transparent in its reporting processes and procedures it is very difficult for shareholders and other stakeholders to have a clear view of a company's health. Corporate reporting is now the norm in Europe and the USA, although the quality and detail of this reporting does vary. KPMG has reported a dramatic increase in corporate reporting in the Asia Pacific region and it is now mainstream business practice throughout the world. Among the world's largest 250 companies, the corporate reporting rate is 93 per cent.

For the global consultancy PWC, corporate reporting is often not taking into account the complexities of the modern business world and a new integrated reporting model needs to be developed but, for PWC, first a number of barriers to change need to be addressed:

- stakeholders tend to perceive and analyse parts of the whole rather than the whole system;
- the current focus is too firmly on data, rather than people, culture, and behaviours;
- more disclosures tend to be bolted onto the old model rather than recast in a new model on the basis of what's important and relevant;
- there is inertia about the complexity of changes that could increase liability.

At the core of corporate reporting is financial reporting which, at the very least, needs to apply generally accepted accounting principles (GAAP) but also needs to cover governance, executive remuneration, corporate responsibility, and sustainability. It must also include critical contextual and non-financial information that aids understanding, such as market position, performance and future prospects, known as narrative reporting (PWC 2011). Integrated or systemic (as opposed to analytic) reporting connects information on all of these elements, thereby presenting an organization's performance holistically. Business performance cannot be separated from the wider society, the environment, or the economy. The International Integrated Reporting Committee (IIRC) has developed a framework, the Integrated Reporting Framework (IRF), that largely does this and reflects the social, economic, and environmental context in which the firms operate.

KPMG believes that, although few companies currently generate integrated reports, such reporting will increase in the future. In 2013 the Sodexo Group, a global leader in quality of life services, issued its first integrated report reporting on the progress it has made (Barrett 2014). Sodexo's CSR website provides a great deal of information in an attractive and accessible manner, including videos, graphs, diagrams, key performance figures, testimonials, and case studies.

Table 9.1 A comparison of analytic and systemic approaches to corporate reporting

Analytic approach	Systemic approach
Concern with definition of parts	Concern with understanding the whole
Focus on elements rather than their interaction	Focus on interaction of elements
Focus on internal structure of the system	Equal focus on the internal structure of the system and its interaction with the wider business environment
Produces a static model	Produces a dynamic model
Tries to disguise complexity	Encompasses complexity

Source: Adapted from PWC (2011:9).

Global Reporting Initiative (GRI)

The GRI, referred to in the Introduction, was set up in 1997 to provide organizations with a comprehensive voluntary sustainability reporting framework. GRI is currently used around the world by over 11,000 companies and has witnessed a steady take-up by companies involved in oil, gas, mining, and pharmaceuticals. In May 2013 GRI issued its fourth iteration (G4), shifting its focus away from levels of sustainability to value chain materiality. Its design is now more user-friendly and universally applicable to all organizations. The G4’s emphasis on what is material encourages organizations to provide only information that is of critical relevance to businesses and their stakeholders, with disclosure coming in two forms – core and comprehensive. The general and specific standards that were revised for G4 pertain

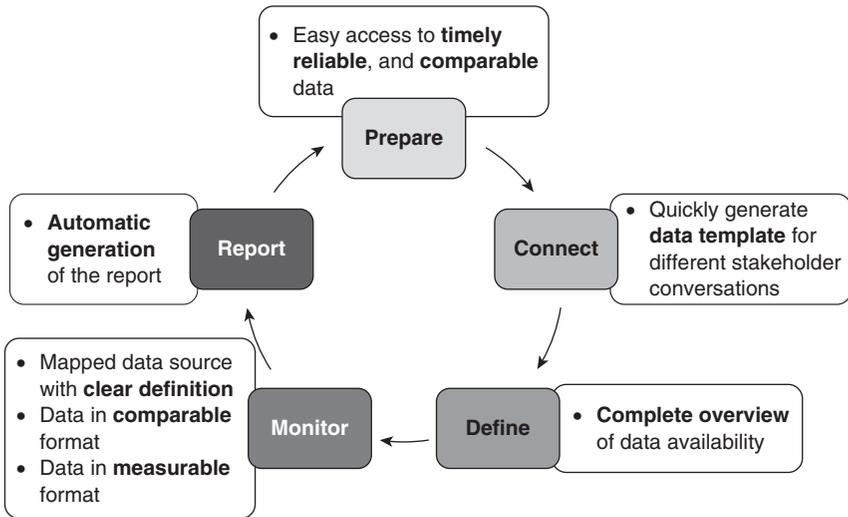


Figure 9.2 GRI reporting (GRI, permission granted)

to the supply chain, governance, ethics and integrity, anti-corruption, public policy, GHG emissions, and energy. GRI guidance comes in two parts, namely Reporting Principles and Implementation, which, recognizing the importance of clear communication, includes advice on presentation and report formats. GRI is also closely aligned with other frameworks including the OECD Guidelines for Multinational Enterprises, the UNGC's Ten Principles, the UN Guiding Principles on Business and Human Rights, and the ISO 26000 guidelines on social responsibility.

GRI has had considerable entrepreneurial successes in promoting sustainability reporting and the triple bottom line but there are some critics who doubt whether GRI and similar initiatives, such as SustainAbility's biennial reports or KPMG's triennial surveys, do actually offer sufficient conditions for organizations wishing to effectively contribute to global sustainability. It also advocated a significant role for business in the formation of the SDGs and now offers guidance to business on how they can develop and align what they with the SDGs goals and targets. Milne and Gray (2013:24) write:

Through the practice of incomplete TBL (aka sustainability) reporting many organizations seem to confuse narrow and incomplete, partial reporting with claims to be *reporting on being sustainable*, actually *being sustainable*, or more commonly, with claims to be *moving towards sustainability*. These claims, we contend, are further exacerbated through the institutional developments [which] may amount to little more than soothing palliatives that, in fact, may be moving us towards greater levels of un-sustainability.

Not surprisingly, scepticism of corporate intentions continues as increasingly sophisticated and detailed reporting is contrasted with regular revelations of corporate secrecy and wrongdoing, bribery, price fixing, inadequate R&D disclosure, aggressive mergers and acquisitions, or failure to compensate for past actions. Many critics suggest that corporate reporting can still mask corporate malpractice and some of the giants of the pharmaceutical industry who profess adherence to GRI guidelines, such as Pfizer, have sometimes been singled out for sharp criticism (Goldacre 2012). Pfizer's efforts to prevent 'counterfeit' drugs appearing on the market is often perceived as simply a way of maintaining their own commercial dominance even if it is at the expense of human health in the developing world. It took fifteen years for some Nigerian families to receive compensation for the death of their children from meningitis after a controversial drug trial conducted by a Pfizer subsidiary, despite becoming the subject of a bestselling book by John Le Carré and a Hollywood movie, *The Constant Gardener*, released in 2005.

Green accounting systems and investment strategies

For all the GRI and other schemes' failings, many businesses have become more sensitive to the need to act in a socially responsible and sustainable manner. Progress may be relatively slow and subject to barriers and hesitations that retard momentum, but increased transparency and increasingly accurate reporting does enable actual and potential investors to screen companies and direct their funds to those

companies that do act sustainably. NGOs such as Friends of the Earth and other groups such as the Climate Institute and the Asset Owners Disclosure Project have campaigned vigorously in recent years for ethical, green, and socially responsible investment. The Global Initiative for Sustainability Ratings (GISR), a joint initiative of Ceres and the Tellus Institute, was launched in May 2013 with the intention of creating a standard for sustainability ratings that would help mainstream sustainability concerns in the financial markets and so hopefully direct investment capital towards companies making a genuine effort to go green. TNS has a similar scheme known as the Gold Standard Benchmark for Sustainable Business.

It has also been estimated that there are possibly over one hundred sustainability ratings currently in existence including those compiled by very well-known brands such as the Dow Jones Sustainability Index and the FTSE4Good Index. Many reports and surveys indicate that an increasing number of institutional investors, such as pension funds, are contemplating switching their resources away from oil, coal, gas, alcohol, gambling, and arms to more sustainable enterprises. The Global Compact 100 Index tracks the stock market performance of a representative group of GC companies on both adherence to the Ten Principles and leadership commitment and profitability. The deciding issue in many cases, despite the attractiveness of a more value-driven investment strategy, is simply maximizing or at least optimizing ROI. Importantly, research by the Morgan Stanley Sustainability Institute in 2015 showed that investing in sustainability usually meets and often exceeds the performance of comparable but less ethical traditional investments.

In 2013 the ethical research firm Eiris showed that the money held in UK green and other ethical funds had increased to £12.2 billion and other research has shown that ethical investors are fairly heterogeneous. There seems to be a wide variation in the degree to which an investor is willing to sacrifice an improved financial return for ethical performance (Berry and Yeung 2013). Currently, nearly half of the UK population say they want to make a positive difference with their money but significantly half do not even know that ethical or sustainable financial products exist. The magazine *Ethical Consumer* provides an up-to-date guide to ethical and green investment. Investors will frequently screen out the very worst firms in preference to selecting the very best for this reason. However, there has recently been a growing global interest in the principles of Islamic finance in many parts of world. The Islamic Bank of Britain, a Sharia-compliant retail bank, states that each of its financial products 'are derived from trade, entrepreneurship and risk-sharing in which the customer and Islamic bank work together as partners towards a mutually profitable end', that is, in a fair, ethical, and socially responsible manner. Interest payments on loans are not Sharia compliant, so the Islamic finance principles of co-ownership, or Musharaka, with leasing, or Ijara, are applied to the banks' mortgages. This means that the bank and the customer purchase the property in partnership. The customer will then pay rent on the bank's share in the property. Thus, as Joel Makower (2013:28) writes, the world of ethical finance and investment is not simple and it is necessary to be realistic:

Few investors – particularly the large pension funds and other institutions that can move financial markets – have viewed sustainability as a relevant

investment criterion. Even when shown studies that sustainability leaders outperformed their peers on key financial indicators and ratios, including stock price, most analysts and fund managers haven't been impressed. Only hard core 'socially responsible investors' new to the theory.

Accompanying the movement for green and more ethical investment is a growing interest in green accounting backed by such global brands as Walmart, Tesco, Google, and some big oil corporations. Puma, the sportswear company, estimated the financial value of the ecosystem services it benefits from – water, GHG emissions, land use, etc. – as being about US\$145 million. Other companies have followed suit and have initiated actions in support of this recognition. For example, Dow Chemical has worked with Nature Conservancy to enable this financial valuing of nature to inform its decision-making processes. In 2015 Dow issued its two part Valuing Nature Goal consisting of: (1) by 2020, all capital, real estate, new business development and new product development projects will be screened using the company's Nature's Future Value assessment tool to measure the value of ecosystem services; and (2) by 2025, Dow pledges to deliver \$1 billion in value 'through projects that are both good for business and better for nature'.

There are growing numbers of green accountancy firms and academic interest in the field fuelled by the work of Tim Jackson, John Elkington, and others who have persuasively advocated the need for new methods of sustainability accounting and for governments to move away from economic growth measures such as GDP and GNP, which simply measure the volume of economic activity irrespective of whether this activity damages people or the environment. Sustainability accounting in business aims to create and provide high quality information systems, which will help a company become sustainable. It is necessarily related to corporate sustainability reporting, which is basically a means of communicating performance to stakeholders and the general public.

Putting a price tag on nature or appending a financial valuation to ecosystem services does engage business, although it also enrages many others who feel the natural environment should not be subjected to the dictates of a profit and loss account. The financial valuation of forests, fresh water, air quality, and chlorinated hydrocarbon (CHC) and GHG pollutions which harm the atmosphere's ozone layer and contribute the climate change, makes a great deal of sense when this is presented to CEOs in terms of billions, or more likely trillions, of dollars. Global sustainability tools, standards, and protocols are essential guideposts for businesses and communities but are often inadequate, fiercely debated, or undermined and too frequently ignored. Nevertheless, the development of new business models, using sensitive financial valuation criteria, could conceivably deliver both biodiversity and ecosystem service benefits while promoting private investments, entrepreneurship, and wider corporate social responsibility. The TEEB business guide offers a number of small case studies of corporate engagement to demonstrate this. For example, British American Tobacco (BAT) has widely promoted improved, and profitable agricultural practices including soil and water conservation, a responsible use of agrochemicals, environmental standards in tobacco

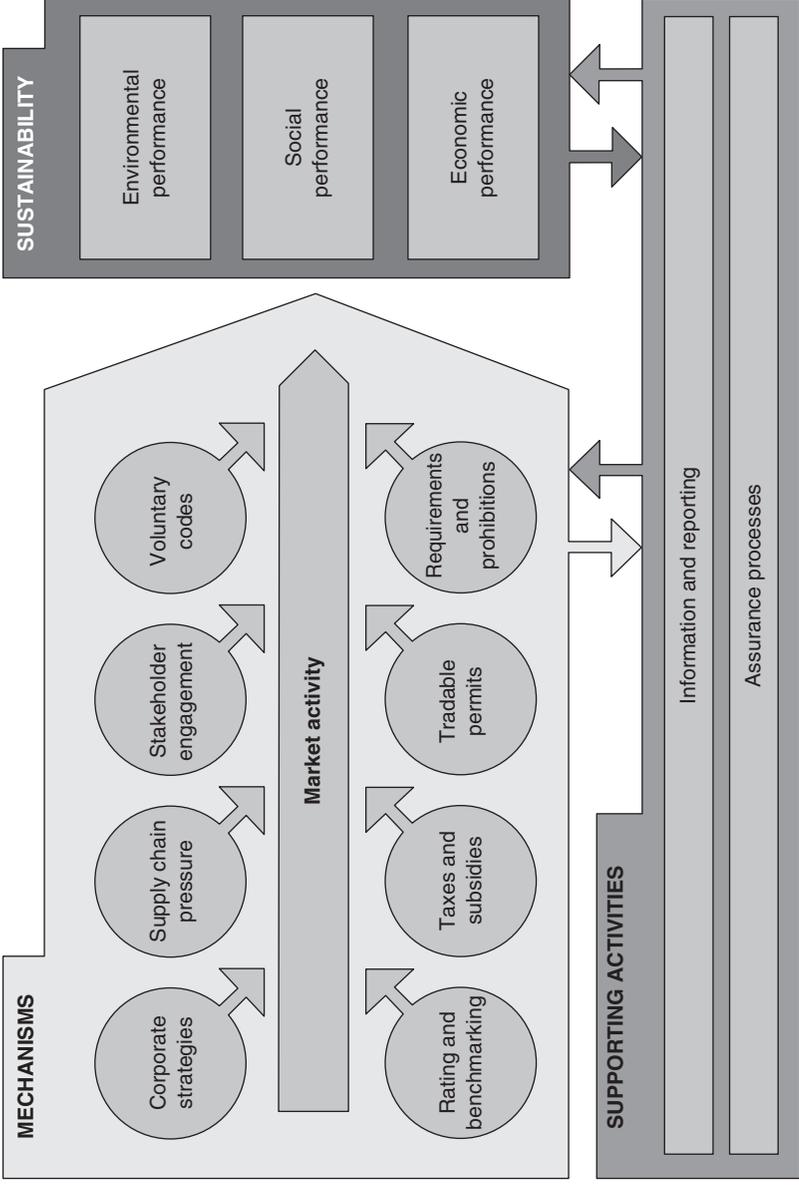


Figure 9.3 A market-based approach to sustainability (source: adapted from TEEB for Business Coalition Prospectus, 2012)

processing, and local and sustainable afforestation measures that help farmers who need wood for tobacco curing. Even though BAT has won numerous awards for CSR and sustainability reporting, many people question the ethics of a company whose product is harmful to human health and potentially lethal. In addition, critics argue that there is a long way to go before green accountancy and the accounting profession in general is able to move beyond thinking predominantly in terms of creditors, investors, lenders, and market-based mechanisms to resolve the many environmental problems that have been caused by the market itself (Figure 9.3).

Case study: Intel and a conflict-free supply chain

In 2009, Intel asked its suppliers to complete a survey on the origin of metals used in its supply chain. The results demonstrated there was great variance in the amount of information suppliers knew about the metals used in their supply chains. In response to this finding, in 2009, Intel conducted its first on site conflict minerals smelter review; this was also the first to be conducted in the electronics industry. By May 2017, Intel states that there are now 247 smelters compliant with the audit requirement over four mineral categories (gold, tantalum, tin, and tungsten) and they are listed on the CFSP website. More facilities will be added once they have completed the audit process. A total of 92 per cent of the total smelters and refiner have either received a conflict-free designation from an independent third party audit program or begun participating in such a program. To ensure a holistic approach is taken to conflict minerals, Intel is committed to collaborating with industry stakeholders and others on conflict minerals. Intel has convened conferences and workshops on the topic and has also promoted cross-sector collaboration. For example, Intel convened a 'Responsible Gold Sourcing Summit', which aimed to promote responsible sourcing in the gold supply chain. On a local level, the company has also sent staff to the Eastern DRC to gain firsthand insight on the issue.

Intel has learnt that in order to address the issue of conflict minerals, collaboration with stakeholders is necessary. By doing this, the company has gained invaluable knowledge, which has helped it understand the operating characteristics of each smelter and determine the gaps in its ability to trace the source of ore from specific mines and countries.

Source: Intel (2017)

Key terms

Audit schemes, corporate communication and reporting, eco-labels, ethical investment, green accounting, regulation.

Discussion questions

- 1 How can government motivate green business through regulation?
- 2 To what extent should the greening of business be left to businesses alone?

- 3 How can EMSs facilitate change management practices within business?
- 4 How can green accounting systems and ethical investment make businesses more sustainable?
- 5 How can complex supply chains be managed more sustainably?
- 6 Why are there so many different reporting systems? Is this a problem?

End of chapter summary

This chapter has explored a number of practical actions and strategies businesses, governments, and communities can adopt in creating more sustainable economic and commercial arrangements. All actions, tools, frameworks, and strategies that exist, such as government regulations, environmental systems, eco-labelling schemes, sustainability reporting initiatives and green accounting processes, for businesses and society tend to change. There are plenty of examples of good practice but not enough and they really need to be scaled up to make the powerful impact they must. Communicating all this as both a distinct possibility and as a credible way of doing business is developing through increasingly effective corporate reporting, green accounting, and ethical investments. Governments can aid and further motivate these changes through passing green legislation and regulation. In addition, consumers can adopt more responsible and greener practices themselves too.

Class activity: companies meeting SDGs

Evaluate the best way a company can best address and report meaningfully on their attempts to help meet the SDGs.

(For full instructions, see the eResource.)

1

Why You Need Business Continuity and Business Preparedness

As noted in the preface, commerce has become more complex, thanks in part to technology and political and social cross-fertilization—the Butterfly Effect. The flutter of a butterfly’s wings can impact conditions somewhere else on the other side of the globe. Alternatively, a Black Swan event occurs, unanticipated, with devastating consequences, and being rationalized later—the impact may be immediate but the consequences linger.

WHAT ARE BUSINESS CONTINUITY AND BUSINESS PREPAREDNESS?

Business continuity (BC) is the discipline of developing, deploying, and maintaining strategies and procedures to ensure that critical business processes prevail by increasing the likelihood of responding to, and recovering from, an event crippling or threatening to destroy the existence of a business entity. In a sense, BC can be translated as “Before Catastrophe”; it makes sense to put the discipline in place in advance of events having a significant impact. Unfortunately, many companies only do so after it is too late.

Some people think that BC is nothing more than risk management. While it does require applying risk management, BC is much broader than risk management. It requires taking a systemic, holistic perspective; risk management plays an integral, salient role but not the only one.

Business preparedness (BP) is a subset of BC. It requires developing plans for a company to recover from an event having a significant impact on processes it deems critical to its survivability. These plans serve as a roadmap for guiding stakeholders, whether people or organizations, to recover from a serious event.

DRIVERS FOR BUSINESS CONTINUITY

A number of specific drivers have increased interest in BC, and rightfully so.

Global Sourcing

It is no secret that the economy has transitioned to an unprecedented global scale. For example, manufactured parts may consist of elements extracted from across the globe, from mineral resources, such as bauxite and lithium, pulled from the mines of Chile or Afghanistan, respectively. Information technology enables the spread of knowledge and data throughout the globe, too, revolutionizing the service industries, from banking to medicine. Global sourcing has also led to complex outsourcing arrangements enabling companies to deliver the necessary products and services to their customers. As products, and the processes making them, become more complex, global sourcing requires not just physical resources but also expertise to deliver the final product or service. Not surprisingly, therefore, a significant disruption can impact a company's ability to deliver its products and services.

Trans-Global Alliances and Partnerships

It is not uncommon for multinational corporations to form relationships rivaling those existing among nation states. These relationships involve two or more parties to provide goods and services not normally achievable operating alone. These relationships often involve some element of both cooperation and co-optation, meaning they are friends and rivals at the same time. Despite being competitive, it may be advantageous to work together. Nonetheless, there is a need for relying on the ability of each party to deliver. For example, if an event affecting one partner occurs, then it

affects the other parties, exemplifying a symbiotic relationship. It is imperative, therefore, that the parties adopt business continuity disciplines—if for no other reason than to preclude the failure of one party to deliver.

Terrorism, War, and Political Turmoil

Let's face it: Companies that span the globe are no longer isolated from the socio-political turmoil existing across the globe. Terrorism, war, and political events not only have severe consequences locally, but also globally. Regional conflicts involving terrorism, war, and political turmoil can disrupt communications and transportation channels, for example, which cause a price rise in resources, from oil to copper. It can also make performing business difficult when a company has to escort its procurement people under armed guard in a developing country. A coup d'état or even a violent takeover of a government in a remote developing country can disrupt a company's supply chain however slightly and have a financial impact.

Regulations and Nationalizations

This driver is closely allied to the previous one. As the number of countries across the globe has multiplied over the last 20 to 30 years, the probability and the impact of an event elsewhere can affect the survivability of one or more companies. Many developing countries, regardless of location or size, may contribute labor or nonlabor resources while transitioning to a stable socio-political system. Their internal turmoil may lead to an environment not conducive to business. For example, a popular revolutionary movement can result in a regime change that demands a greater share of resources and share in the revenue if the foreign company wants to continue to operate in its country. Even in developed countries, such as the United States, the political climate can lead to greater regulation, such as International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR), affecting business. The consequences may impact or disrupt processes, resulting in higher prices and thereby reduce a company's ability to remain competitive.

Fragile Supply Chain

In some cases, the global supply chain has become such a complex web that assessing the impact of a significant disruption becomes quite a challenge.

Multiple tiers of suppliers can add to the challenge. An airplane part, for instance, made in India to satisfy an offset agreement, may involve a large number of multi-tier suppliers. What is the impact on a supply chain if Pakistan and India go to war? What region in India where that part is made does the conflict impact? What must a company do to continue to deliver the necessary goods and services to its customers?

Complex Transportation and Information Webs

Along with the growth of globalization of the economy comes a greater complexity. Having many varying degrees of relationships and the flattening of hierarchies comes with the challenge of knowing when a problem arises and determining its many impacts on those relationships and other entities. Ascertaining the cause can pose a challenge for a business delivering or receiving a product or service. Think of the formula often used in communications to calculate the complexity of relationships arising when adding new people or other entities:

$$\text{The Number of People} \times (\text{The Number of People} - 1)/2$$

Say you have 10 people $\times (10 - 1)/2 = 45$ communications relationships.

Now add 20 more people:

$$30 \times (30 - 1)/2 = 435 \text{ communications relationships!}$$

As you can see, the complexity increases dramatically. For example, someone in a relationship spreads a rumor and it spreads like wildfire among the others. Different interpretations of the rumor occur, and few people can tell the difference between the truth and exaggeration.

You can apply the same principle to transportation and information webs. Breakdowns in the delivery of a product or service can have uncontrollable ramifications. Add more business entities to the web and the consequences become more complex.

Interdependence and Integration of the Global Economy

Related to the last point, but on a more macro level, international trade is more tightly interwoven than ever before. Think of it. Before Richard Nixon became president of the United States, trade with the then Soviet

Union and Red China would have been unthinkable. Since that time, a great thaw has occurred and, in many respects, the economies among all three countries have a complex economic relationship whereby the economic weakening or collapse of one can impact businesses in the other two countries. Should the relationships deteriorate or cease, businesses that depend on such relationships need a plan to recover.

Rise of International Capital

Without getting into the polemics between capitalism and communism, Karl Marx predicted in his earlier writings that a resurgence of international capital would lead to a collapse of the world economy. Whether a collapse is coming is unknown. However, clearly international capital is flowing in and out of countries, having a tremendous impact, positive or negative. Businesses must prepare themselves for such eventualities, for example, the value of a nation's currency changes or takes flight where a subsidiary exists. Such changes can translate into a decline in business which, in turn, could impact the delivery of a good or service to another business located somewhere across the globe.

Insurance Costs

Unless they are a Fortune 100 firm, with a large financial war chest sitting in a bank somewhere, many companies lack the ability to self-insure, meaning when something negative happens they absorb the consequences. With myriad challenges and risks, from political instability to global warming, occurring in the world, many businesses assume that nothing will happen to them—that the government will bail them out or they can buy insurance to cover everything. True, they may be able to purchase insurance while premiums are inexpensive. Once the event occurs, however, these premiums often rise. The best proactive approach is not to rely solely on self-insurance or insurance but to establish plans enabling a company to recover from disaster and correspondingly reduce premiums. Many insurance companies look to having BP plans, factoring them to reduce annual premiums.

Litigation

Related to more government laws and regulations, a lawsuit is enough to put an end to companies, especially when a judgment is ruled against

them. Many businesses think the likelihood of a lawsuit occurring is remote. However, there are certain areas in which they are particularly susceptible to lawsuits, such as human resource policies and manufactured goods, which, depending on the country, such as the United States and Canada, can result in severe damages to a company. BC should determine the most vulnerable lawsuits from a legal perspective to determine the risk to their firms.

There are, of course, many other drivers demonstrating the need for BC. The essence of all these drivers is, however, globalization and its reliance on an intricate weaving of technology and business processes to deliver products at an unprecedented level of speed and quality. The slightest hiccup can choke everything.

LET'S GET REAL

Unfortunately, many people believe that the business events previously described are scare tactics and hyperbole. However, consider these statistics. According to CRED International Data Base, the number and frequency of natural disasters have been increasing dramatically from just 903 in the 1970s to over 4485 in the 2000s (Hawthorne 2011).

Imagine if the “big one” hits the Los Angeles (LA) area. Can you imagine the impact, financially, politically, and socially? Not just in LA, but elsewhere in the country? LA is a major port and financial center and a disastrous impact there in the region cannot help but affect many other parts of the country, even the globe. Moreover, this potential event is imminent. The probability of a major earthquake striking LA in the next 30 years is 97% and it can happen sooner than you might expect (Matlack 2010). Here's another sobering statistic demonstrating the integration and interdependence of the world economy: According to a survey by the Business Continuity Institute, 85% of respondents said they were affected by one or more supply chain disruptions and 20% of those companies were affected by earthquakes and tsunamis in Japan and New Zealand (Spandanuta 2012).

The list of events, at various levels of scalability and magnitude, are endless. That is why good BP planning is critical for resiliency. Here is just a sample list of some natural and artificial events that could impact your business and they do not even have to occur locally; Figure 1.1 shows that

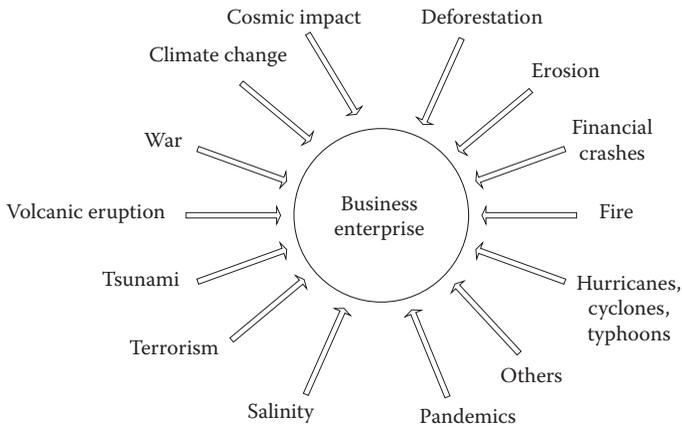


FIGURE 1.1
Potential events impacting an enterprise.

the events can come from many directions and can occur in coordination with one another.

- Climate change
- Cosmic impacts
- Deforestation
- Earthquakes
- Erosion
- Financial crashes
- Fire
- Hurricanes, cyclones, typhoons
- Pandemics
- Salinity
- Terrorism
- Tsunamis
- Volcanic eruptions
- War

Here are also some recent events to refresh your memory, many of them having an impact on businesses across the globe:

- 1991 – Mt. Pinatubo eruption
- 1996 – Khobar Towers

- 2001 – Attack on World Trade Center and Washington, D.C.
- 2004 – Madrid Train Bombings
- 2004 – Tsunami hits Southeast Asia
- 2005 – Hurricane Katrina
- 2005 – London public transportation bombing
- 2007 – Virginia Tech campus shootings
- 2008 – Unprecedented hurricane and tornado outbreaks
- 2009 – H1N1 Influenza global pandemic
- 2010 – Haiti earthquake
- 2010 – Eyjafjallajokull volcanic eruption
- 2011 – Earthquake in Honshu, Japan
- 2012 – Hurricane Sandy
- 2013 – Typhoon hitting Philippines

TIME TO PRETEND

Now take some time to imagine whether any of the events might occur that affect your business, regardless of your location. If any of these events occur, how would your company recover?

Here are just some things to toy with in your mind, to think about on how your business might be impacted by an event no matter where you are located.

- A 7.3 earthquake hitting St. Louis
- A 7.8 earthquake striking Caracas, Venezuela
- A 7.9 earthquake wrecking the locks of the Suez Canal
- A category 5 hurricane smacking into Washington, D.C.
- A levee failure occurring in the Sacramento Delta of Southern California
- A major drought devastating the agricultural industry of Southern California
- A major drought impacting the agricultural regions of Chile
- A major landslide occurring after significant volcanic activity at Mt. Rainier
- A major tsunami smashing into Honolulu
- A massive blackout affecting the entire Northeast

A meltdown occurring at the Diablo Canyon nuclear power plant at San Luis Obispo, California

A pandemic arising out of the Midwest United States due to a rare animal flu that mutates into a virus deadly to people

A terrorist seizing a tanker in Puget Sound and running the vessel into the Port of Tacoma, causing not only a major oil spill but also significant damage to the piers

A tsunami in British Columbia after a 7.0 earthquake in the Pacific Ocean

An outbreak of the swine flu (H1N2) occurs, originating in Southeast Asia and, due to air travel, spreads rapidly throughout the West Coast of the United States

Several large tornado cells crushing Chicago

The Po River in Italy overflowing after a heavy downpour

Alternatively, perhaps one or more mundane, immediate events such as the following can impact your company's survival:

A disgruntled employee entering your office with a high-powered rifle and killing two of your key employees

An employee diagnosed with tuberculosis (TB) coming into your office and causing other employees to refuse to come to work

An employee, perhaps intentionally or accidentally, introducing a computer virus that destroys all data on your servers

You having a massive heart attack or stroke and being unable to communicate with employees on how to manage your business

Your business is destroyed by fire

A natural or manufactured area disaster causes loss of vital people and information

Naturally, most or none of these events will impact your business. However, an event is looming in the background. That is the exception rather than the rule. However, what if one of them did occur? Are you prepared to recover? No one would have thought that sale of credit default swaps would lead to a massive crash in the world's economy. No one thought the financial security breach at Target would turn the credit card business on its head. Both did. The point is not to scare you but rather to impel you to act, soon if not now, to ensure the resiliency, that is, the survivability, of your company.

ADDITIONAL INSIGHTS

Here are some additional insights to think about.

One, no guarantee exists any of the events described previously will happen and, if so, will affect your business. Neither we nor anyone else short of a clairvoyant can predict the future. Correspondingly, no guarantee exists that any of these events will *not* occur.

Two, no way exists to predict where or when such events will occur, albeit certain areas of the world have a greater proclivity for certain disasters over others, for example, earthquakes and tsunamis in the Pacific Northwest.

Three, companies that prepare for an eventual event have a greater chance of survival than companies that do not. Few companies survive a major event unless they have prepared for it through response and, just as importantly, recovery.

Four, failure to prepare is akin to relying on luck or embracing the opportunity to fail. Hoping that an event will not happen or pretending that the odds of being hit are remote is, at best, a gambler's wish. The key question is not pertaining to luck or probability, but what to do when a negative event happens.

Five, being prepared is not just for Boy Scouts. Companies preparing to respond and recover from an event have a better likelihood or probability of being in a better competitive position.

TAKING ACTION USING PROJECT MANAGEMENT

Many projects fail to meet the basic goals of completing on time, within budget, and fulfilling requirements. Some projects may meet one or two of the goals; fewer meet all three goals. Business continuity projects rarely deviate from this track record as well. Quite frequently, these projects start with only a vague idea of what to achieve in the midst of facing an unrealistic schedule and a very limited budget. In the end, the projects more often than not result in a missed opportunity for making a company or other entity more resilient. In this book, an approach is described that has proven effective in completing business continuity, specifically business preparedness, efficiently and effectively.

GETTING STARTED CHECKLIST

Question	Yes	No
1. Have you thought about how the following drivers have affected the resiliency of your company? Global sourcing Trans-global alliances and partnerships Terrorism and war Regulations and nationalization Fragile supply chain Political and military turmoil Complex information and transportation webs Interdependence and integration of the global economy Insurance costs Litigation Complexity and dynamism of the business environment		
2. Have you thought about how the following events can have an impact on your company? Climate change Cosmic impacts Deforestation Earthquakes Erosion Financial crashes Fire Hurricanes, cyclones, typhoons Pandemics Salinity Terrorism Tsunamis Volcanic eruptions War		
3. Have you assessed how your company has been impacted by previous events, for example, Hurricane Katrina?		

11

HOW ORGANISATIONS AND LEADERS CAN BUILD RESILIENCE

Lessons from high-risk occupations

Dr. Amy B. Adler and CPT Dr. Kristin N. Saboe

By now you will have a fairly good understanding of resilience and that it is an important characteristic that includes being able to withstand stress and bounce back from adversity. Arguably, nowhere is the need for this characteristic more evident than in occupations that place extreme stressors on employees. Occupations that encompass the work of first-responders, like the police and fire-fighters, and the military routinely and repeatedly require individuals to perform in extreme and sometimes unpredictable conditions.² Individuals working in these high-risk settings have to perform even when faced with exposure to potential danger to themselves and others, or to potentially traumatising experiences.

In this chapter, we will describe how high-risk occupational settings, such as the military, attempt to maintain and develop the resilience of their workforce. We will touch on several aspects that are important for the promotion of resilience including policy, assessment, training and organisational culture, and we will describe their relevance to all organisational settings.

The impact of potentially traumatic experiences occurring in the workplace

These potentially traumatic experiences can impact employees in terms of mental health, physical health, their relationships and their performance. Numerous studies have documented the link between experiencing traumatic events and greater risk of post-traumatic stress disorder (PTSD), a diagnosis that includes four symptom dimensions: intrusion symptoms, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity (American Psychiatric Association, 2013).

Studies estimate that 13 per cent of police officers may have PTSD (Robinson, Sigman & Wilson, 1997), and 17 per cent of firefighters (Bryant & Harvey, 1995).

In a more recent study of rescue and recovery workers at the World Trade Center site, approximately 12 per cent had PTSD two to three years after the terrorist attacks (Perrin *et al.*, 2007). By integrating results of several studies with service members returning from combat in Iraq and Afghanistan, Kok and colleagues (2012) reported there was a 6 per cent PTSD prevalence rate for all deployed personnel, and a 13 per cent rate for those in infantry units (units more directly at risk for encountering threat). Other mental health outcomes include anxiety, depression and alcohol problems (Thomas *et al.*, 2010). Another problem associated with these kinds of experiences is an increased risk for anger and aggression (Adler *et al.*, 2011; Rona *et al.*, 2015; Thomas *et al.*, 2010). Anger and aggression are associated with disruptions to both the employee's work and personal relationships. Therefore, high-risk workplaces can take a toll on marriages (Riviere *et al.*, 2012) and on being able to function at work (Herrell *et al.*, 2014).

Physical health is also affected. These physical symptoms include back pain, joint pain and stomach complaints and can be found in both the short term – as in the example of soldiers who have been home from combat for a couple of months (Hoge *et al.*, 2007) and long term, meaning even decades later. In a study of Vietnam veterans 20 years later, for example, Boscarino (1997) found increased risk of circulatory, digestive, musculoskeletal and other medical conditions associated with exposure to combat stress.

Resilient individuals may be less likely to experience these reactions or may recover more quickly, but it is important to acknowledge that everyone has a point at which their resilience may falter. This is especially the case in high-risk occupations where the normal stressors of work and life can be compounded by potentially traumatic experiences. Thus, employees in high-risk settings may experience significant difficulties sustaining their resilience. To meet the unique demands of high-risk occupational settings policy, assessment, culture and training must come together to support the employee's resilience. The practices of high-risk occupational settings are transferable to all organisations wishing to support the resilience of their employees.

Policy, assessment, culture and training functioning together to support the resilience of employees in high-risk occupations

Policies are the formal mechanisms that organisations use to create goals, standards and expectations. Without these, managers will not necessarily be able to recognise whether or how a particular programme should be implemented or whether it is a priority of the organisational leadership. Policies in support of organisational actions that foster resilience are at the foundation of a resilience-oriented organisation.

There are numerous examples of how policies can play a role in promoting resilience. In the US military, for example, after years of managing two wars simultaneously, a “dwell time” policy was instituted. “Dwell time” was the official requirement to allow personnel returning from a combat deployment to remain at their home unit for a particular period of time before being eligible to deploy again. The purpose of this was to allow personnel a chance to recover adequately and support their resilience in the face of subsequent deployments (Bliese *et al.*, 2011). The UK’s harmony guidelines are the equivalent and research has demonstrated that when deployment schedules are consistent with these guidelines, UK military personnel have better mental health (Rona *et al.*, 2014).

If and when mental health training is rolled out is another example of an organisational policy that promotes resilience. In the US Army, for example, a policy requiring post-deployment mental health training was issued, enabling a standardised approach to mental health training. The decision to roll-out this training was fueled by two factors: first, a study demonstrating the efficacy of the training had just been completed (Adler *et al.*, 2009); Second, researchers had just returned from conducting an anonymous assessment of soldiers deployed to Iraq. This assessment not only provided the leadership with a snapshot of the mental health problems in the force, but also suggested that the training be rolled out as a potential counter measure. The training, called *Battlemind*, went on to be instituted across the Army. The example demonstrates how policies can emerge from a well-timed identification of a need, demonstration of a validated intervention and a recommendation to senior leaders (Hoge *et al.*, 2011). We will return to the topic of training after discussing the importance of assessment.

The importance of assessing workforce wellbeing and resilience

In high-risk occupations, assessment is an important tool for being able to understand the resilience of individuals, teams and even the organisation as a whole and the adverse effects of stressor exposures. Ideally, routine assessment of personnel working in high-risk settings allows for the detection of early signs of distress and allows for the timely intervention at the individual or group level.

Importantly, assessment is critical to determining who is in need of intervention. Assessments designed to identify those in need of additional support can be described as a kind of mental health ‘check-up’. The benefits of this type of assessment are that the individual being assessed gets personalised attention and an individualised plan can be developed to help support them.

Routine and robust assessment of organisation and employee wellbeing are a great way to inform policy and identify the impacts of policy changes on employee wellbeing. The example highlighted in Box 11.1 demonstrates how regular assessment and research can alert the organisational leadership to a problem and how a policy can be established to address the problem. While the organisation’s

BOX 11.1 CHARACTERISING MENTAL HEALTH PROBLEMS FOLLOWING COMBAT

A prototypical example of how assessments are informative is rooted in the U.S. Army's experience with psychological screening. In particular, this case study highlights the importance of giving assessment *timing* careful consideration when it comes to screening for mental health issues for those in high-risk occupations. In 2004, researchers from the Walter Reed Army Institute of Research surveyed soldiers returning from a year of combat in Iraq. The survey was part of a mental health screening designed to identify at-risk soldiers who were in need of follow-up care. The survey was conducted in the week following their return from deployment and was not anonymous because the goal was to identify at-risk soldiers.

Results from the screening found that rates of mental health problems were significantly lower in the unit being screened than those that had been reported in other surveys conducted with comparable troops of soldiers (Hoge et al., 2004; Thomas et al., 2010). These other surveys were anonymous and typically conducted after the soldiers had been home from combat for about 3 months. The question emerged as to why the screened group had such uncharacteristically low rates. There were two possible but competing explanations: (1) the timing of the survey was earlier than during other studies; and (2) the surveys were not anonymous whereas the survey in the symptomatic units was anonymous.

So the team went back and surveyed the units again several months later, linked up the survey responses with the soldiers' responses from the first week and looked at the patterns. While anonymity was associated with a small increase in symptom reporting, the results were startling when it came to comparing how soldiers reported symptoms over time: 3 to 5 times as many soldiers reported symptoms of mental illness several months later compared to the initial screen (Bliese et al., 2007). While the data could not determine for certain why the increase in symptoms occurred, the likely explanation is that individuals may not have noticed their symptoms until garrison life resumed and then they had ample opportunity to notice that they were not adjusting as smoothly as they thought they would.

Results were provided to senior leaders in the U.S. Army and within weeks, the Department of Defense issued a new requirement to screen service members returning from a combat deployment not just at reintegration immediately following their return home from deployment, but also between 3 and 6 months after returning home (Bliese, Adler, & Castro, 2011).

This example demonstrates several critical points about characterising challenges from which all organisations, not just the military, can learn. First,

the Army was able to identify a potential issue early because there was an active research programme that provides real-time assessments of employee experience. This active research programme ensured that employee well-being was being assessed in order to proactively identify potential threats to well-being and resilience. Second, leadership was willing to translate lessons learned into action. In this example, senior U.S. Army leaders were receptive to feedback regarding the wellbeing of their employees, and they responded with a change in policy to ensure that employee health would be supported. This evidence-based policy provided a specific approach for potentially improving mental health outreach for employees coping with extreme work demands and also sent a message to the Army as a whole that employee health was an organisational priority.

problems were not solved, this example still illustrates how research, assessment and policy can function together.

What to consider when assessing wellbeing and resilience

Frequent measurement. In the case of individual assessment after a potentially traumatic exposure, frequency of assessment should be considered since symptoms may be problematic and may take time to resolve (Bisson, Brayne, Ochberg & Every, 2007). It may also be useful to consider that some individuals may experience difficulties in functioning in the short run, or may experience a worsening of symptoms over time. Others may have few if any reactions to the traumatic event or may have an initial reaction and recover quickly.

Making comparisons. Assessments may be for the purpose of getting an overall report card of how the organisation or team is going as a whole in terms of wellbeing. If the goal is to get a snapshot of the group, then the assessment needs to be conducted with teams throughout the organisation. Assessment of multiple teams allows policymakers to get a sense of team resilience relative to one another. Similarly, if assessments occur at the organisational level it is important to have comparisons to other organisations within a particular sector. For example, if paramedics working at the Springfield Hospital on average report the experience of high stress, but paramedics working in other equivalent hospitals indicate lower stress levels, that might be an indication that there is something about a particular hospital that would be worth addressing further, rather than concluding that the stress level is due exclusively to the occupation.

Timing of assessments. The timing of assessments also needs to be considered, as identified in the above case example. If employees are about to embark on a

potentially difficult or high-risk mission, then an organisation may wish to measure initial wellbeing (prior to exposure) and gather a follow-up assessment post-exposure. This approach functions most clearly in organisations where the exposures are defined in time (e.g., pre and post military deployment). For organisations where there are on-going exposures (e.g., fire fighters) it is more appropriate to assess employees on commencement and then routinely thereafter.

Addressing reporting bias. A major challenge for assessments is reporting biases. Individuals can be motivated to over or under report their experience of mental health issues for several reasons. In some work-place settings, a predominant issue is underreporting. For example, there might be a mistrust about how information gathered via assessment will be used, how records are kept, or who will be able to see the information provided. The good news is that these problems can be reduced if the organisation is upfront about these issues and provides safeguards to protect the privacy of employees. The use of psychologists for conducting assessments is recommended to manage these important challenges. Psychologists are trained in the administration of mental health assessment and in the management and security of sensitive mental health information. Psychologists are trained to communicate the safeguards relating to assessment information and explain the various ways that employee confidentiality is protected.

The importance of an organisational culture that supports resilience

A culture that promotes organisational resilience ensures that the mental health and wellbeing of employees is everyone's responsibility, not just the responsibility of health care providers. However, if mental health and wellbeing is everyone's role this means that managers and employees at all levels need to be provided with the appropriate training to initially identify mental health problems in themselves and others. Moreover, people need to know what steps to take when potential issues are identified. Strategies to achieve this are outlined in more detail in Chapter 5.

Making wellbeing everyone's responsibility has one very critical benefit. Employees in high-risk occupations are typically good at functioning under stress given that they have passed initial rigorous screening and training. Thus, they may end up concealing early warning signs of problems (with or without a formal assessment). There are a handful of individuals, however, who may notice nuanced changes: family members, colleagues and supervisors. Each of these key informants needs to know what to look for and empowered to take the steps to provide proactive support. For example, the US Air Force has developed a guide to leaders about how to identify signs of distress in subordinates and including symptom checklists called "*Leader's Guide for Managing Personnel in Distress*" (2007) (Shubert *et al.*, 2008). In order to sustain a culture that promotes resilience in employees,

the individuals, family members, colleagues and supervisors need to work together and to see themselves as responsible for supporting one another. Organisations can enable these critical players by training their employees and leaders on the indicators of stress reactions, physical and psychological issues, and resources available to assist those in need.

An additional path is to integrate this responsibility into the actual formal responsibilities of managers. Just as managers are formally required to undertake project management in the service of particular deliverables, they can also be required to support the resilience of their team members by undertaking required training, responding to early warning signs that may indicate a mental health problem in staff (e.g., decline in performance) and ensuring that appropriate strategies and policies are in place to support team wellbeing. Including employee wellbeing as a formalised part of the managerial role also means that the wellbeing of staff is a factor considered when making other decisions (e.g., staffing needs, project timelines, resource availability).

A second issue relating to culture is the language used when discussing mental health and the way leadership approaches mental health. Language and approach can set the tone for how employees experience, react and recover from their unique job challenges. For instance, seeking help from a mental health professional for psychological trauma is ideally akin to seeking help from a physician for a torn ligament from an occupational accident. Creating a culture that views mental health problems as an occupational hazard as opposed to a sign of individual weakness or inadequate performance increases feelings that employees are supported and understood by their organisation. This topic is addressed in detail in Chapter 5.

The role of leaders in promoting a resilient culture is also critical. Leaders at all levels can serve as a role-model for resilience and modelling resilient behaviour. Whether the leader chooses to embrace the concept of resilience or dismiss it, the occupational culture will reflect the leader's perspective.

While considerable research has focused on relatively global leadership styles such as transactional and transformational leadership (Bass, 1985), a growing field of research is examining not just styles of leadership, but also specific types of leader behaviours that promote resilience and wellbeing for the unique demands of high stress occupations. These studies have demonstrated that even controlling for global leadership skills, the addition of very specific health-promoting leadership behaviours are linked with better outcomes for the employees (Adler *et al.*, 2014).

There are several sets of leader behaviours that are being explored. In studies being conducted with the US Army, specific leader behaviours have been associated with better resilience. Studies with US soldiers on combat and non-combat deployments have found that leadership behaviours that promote sleep are associated with better outcomes such as sleep quality and morale (Gunia *et al.*, 2015). These behaviours are not complex nor evidence that the successful leaders were experts

in the scientific literature on sleep; rather these behaviours included things as simple as: asking service members about their sleep habits, encouraging personnel to get adequate sleep particularly before important missions that require long hours, and emphasising adequate sleep as an important planning factor. The exciting finding here is that these kinds of behaviours are doable and within the scope of what leaders can achieve, making these behaviours relatively easy targets for training.

In similar research, we examined the extent to which leaders followed US Army doctrine in managing the psychological stress of their soldiers during military operations and whether behaviours consistent with this doctrine resulted in benefits to team members. This doctrine, called Combat Operational Stress Control, provides information on strategies to address stress associated with deployment, and identifies leader behaviours that can promote mental health and resilience under stressful combat-related conditions (Adler *et al.*, 2014). We asked soldiers to rate their leaders on a range of these behaviours, such as: “Encourages soldiers to seek help for stress-related problems,” “Demonstrates concern for how families are dealing with stress,” “Intervenes when a soldier displays stress reactions such as anxiety, depression or other behavioural health problems”. We found that when soldiers reported that their leaders engaged in these kinds of behaviours, soldiers reported better mental health. This relationship was evident even after accounting for differences in the global leadership skills of their leaders, the degree to which they had experienced stressful combat-related events, and their military rank. Again, these results are intriguing because the findings suggest that there is additional benefit to be gained when leaders demonstrate specific behaviours focused on promoting health in their teams.

Cumulatively, these behaviours create a culture that values relationships and effective coping for stressful and demanding occupations. There is also evidence to suggest not only do these specific behaviours displayed by leaders assist individual wellbeing, but they also promote group-level cohesiveness, performance, and perceptions of readiness (Saboe, Anderson & Sipos, 2015).

Training resilience: some strategies used in high-risk occupations

High-risk occupations also promote resilience through training. Just as an organisation might train an individual to perform the specific tasks required of a job, training coping strategies supports resilience where there is an expectation of exposure to potentially traumatic or difficult events.

In this chapter, when we refer to training, we mean a range of topics, including job-related training, psycho-education, mental health training and mental skills training. These concepts are inter-related and reinforce one another. We want to clarify up front, however, that from our perspective it is essential that the organisation ensure the training is effective. There are many training options available,

and it is essential to distinguish between good-sounding ideas that are not evidence-based and effective ideas validated by research. Chapter 14 includes a review of the current evidence supporting resilience training and what to consider when selecting training for your organisation (see also vanHove *et al.*, 2015, for a meta-analysis of resilience training in work settings).

We will briefly review some of the training strategies used in high-risk occupational settings that have demonstrated a level of effectiveness in building resilience. We focus on a few main concepts: cognitive-behavioural education, imagery, attention control, mindfulness and social fitness. Each of these concepts overlap and can be integrated into one larger training programme.

Cognitive-behavioural education. Most resilience training programmes are based in cognitive-behavioural therapy. The fundamental concept in this therapy is how individuals think about their experiences influences how they respond emotionally and behaviourally. For example, if we get cut-off in line at the petrol pump, how we interpret that behaviour matters. If we think, “that person is trying to take advantage of me and is a jerk”, then we may feel angry and physiologically hyper-aroused (e.g., increase in heart rate and breathing rate). However, if we think that person may have a reasonable explanation (maybe the person had a bad day, maybe they did not see us, maybe things are a bit more stressful for them than for us right now because they have young kids in the car with them), then we may feel vaguely irritated, but mostly patient and calm. In turn, these emotions (anger or patience) are likely to result in different behaviour. The angry individual may confront the driver, honking loudly and escalate the situation; the patient individual may use the time to listen to the radio, be relieved that this is the worst inconvenience of the day, and stay relaxed.

The fundamental concept here is that how we think about events is critical, and this processing entails several key points. First, people have a confirmation bias. If they expect to see negative outcomes, they will interpret the world in such a way that confirms what they expected to see. To people with a negative confirmation bias, getting cut-off at the petrol pump would reinforce their understanding of the world as a hostile and unfair place. Without this confirmation bias, the episode may be ignored.

Second, people may have stable patterns of interpreting events and these patterns may be generally unhelpful because they do not promote flexible thinking. Some individuals tend to interpret *others* as the cause of most problems and rarely look for how they may have contributed to an incident. This kind of pattern tends to reinforce feelings of anger and outrage. Other individuals may look at *themselves* as the cause of most problems, and these individuals may end up feeling guilty and depressed. Learning about the way we typically think about the negative and even positive events can be useful in identifying and challenging these patterns.

Our research team conducted an evaluation of how useful these skills were; 88 US Soldiers were taught these cognitive-behavioural concepts and then went

through a rigorous training scenario in which they were “captured” by “opposing forces” and endured difficult conditions over the course of several days. Afterwards, the majority of these soldiers reported that they had used their new resilience skills to help them endure. In particular, they reported using skills that provided specific steps for problem-solving and putting things into perspective. As one soldier noted, “*Resilience training has helped me be more optimistic in life, especially through difficult training . . .*” This training, based on the Penn Resiliency Program and adopted by the US Army, helps build the competency of optimism (addressed in detail in Chapters 2 and 4), an essential characteristic of resilience (Reivich, Seligman & McBride, 2011).

The field of sport psychology, has adopted many of the fundamentals of cognitive behavioural education and used them to help individuals enhance their performance. The techniques taught in sport psychology to promote performance optimisation also involve classic skills such as goal setting, imagery and attention control.

Imagery. Imagery involves imagining a scenario and playing it out in your mind using all sorts of sensory cues – not just visual ones. The best imagery scenarios incorporate imagined sounds, smells and touch. It is also important that the imagery includes imagining a positive outcome to help prevent a self-defeating mindset.

The following case example describes the use of imagery in combination with relaxation in resilience training developed for Swedish police officers in recruit training.

Attention control. Attention control is regulating your focus and attention despite distractions. We have all had moments where our minds are racing and all we need to do is focus on the task at hand. Attention control optimises our performance by teaching us to not focus on the “noise” in our environment – the distractions – such as nonrelevant thoughts. Instead, attention control trains individuals to tunnel attention to the specific activity that will achieve the desired and present goal. For example, if firefighters need to focus on clearing a building but are instead distracted by thoughts about flashing lights or blaring alarms, they will unlikely be as effective. Distraction comes naturally to us because our powerful minds are constantly scanning our environment to maintain a level of awareness. This is great if our job is to stay alive in the jungle, and we need to scan for predators, but if we are trying to focus on a complex task it is not necessarily a good use of our attention or cognitive energy. For employees in high-risk occupations, attention control is a critical skill for performing their job, reacting appropriately to the unexpected, and maintaining resilience.

Mindfulness. Another way to keep the mind on track is through mindfulness, or focused attention on the present moment without judgement or mental elaboration.

BOX 11.2 POLICE RECRUITS RECEIVE IMAGERY TRAINING

Bengt Arnetz, a professor at Wayne State University in Detroit, Michigan, worked with 75 police officers in Sweden in their final term at the police academy (Arnetz et al., 2013). First, Arnetz and colleagues asked cadets to complete a baseline survey and then they randomly assigned half the cadets to receive preventive imagery training and the other half to receive training as usual. The cadets in the preventive imagery training condition received 10 sessions, 90 minutes each. Preventive imagery training meant guiding participants through a description of real-world scenarios using potentially stressful on-the-job examples while participants practiced relaxation techniques. Scenarios included dealing face-to-face with a suspect holding a gun and encountering a multi-vehicle accident with severely injured people. The high-stress scenarios were based on what experienced officers had said new police officers were likely to encounter in their first year of policing.

As part of these preventive imagery training sessions, trainers discussed adaptive coping strategies and the cadets practiced using their relaxation techniques to help manage their physiological responses to the scenarios; cadets also mentally rehearsed following police tactics. This combination of mental skills allowed for the recruits to become more familiar with potentially stressful events at work and to practice managing their reactions to these events.

Three weeks before graduating, and after the preventive imagery training was completed, the cadets were surveyed again. Results showed that those in the preventive imagery training reported better mental health, fewer stomach complaints and better sleep. But what about after they had been in the real world for a year? Did the training still help them?

Eighteen months later, after a year of policing, the police officers in the study completed another questionnaire, and the results were clear. Police officers who had received the training in imagery were still doing better. Their mental health had continued to be better, they had fewer stomach complaints and their sleep was better than before they had been trained whereas the year of policing was taking a toll on the police officers in the training as usual condition. These police officers were reporting worse mental health, more stomach complaints, and their sleep was worse. There were also indications that levels of prolactin, a biomarker of physiological stress, were better in the cadets who went through the imagery training than those in the control condition.

Then Arnetz and his colleagues went one step further (Arnetz et al., 2009). They invited 25 of the original participants to come back a year after

the training to take part in a critical incident simulation. In all, 18 participants returned, and this included officers from both study conditions. The participants went through a live and highly credible simulation of responding to a robbery. Was there any difference in how the two groups responded? Police officers who had gone through the imagery training had better mood and less heart rate reactivity than the police officers who had not gone through the training. And there was a difference in performance, too. An expert observing from the rooftop rated the police officers on a range of dimensions, including tactics, communication and self-control. The expert did not know which police officers had gone through the imagery training. Based on this objective evaluation, the police officers in the imagery training condition performed better than their untrained counterparts.

While the research did not show improvements in all physiological markers, the number of participants was small, and the training condition may have benefitted from a kind of placebo effect since the training as usual condition did not receive any special attention, these studies are still important. They are important because they demonstrate that it is possible for mental skills training to result in improved mental health in employees entering high-risk professions, and that these benefits may have physiological and performance implications.

Training individuals in mindfulness, or other types of meditation, has been shown to boost mental health outcomes (Goyal *et al.*, 2014) and build mental skills such as working memory and attention (Jha *et al.*, 2010). Working memory and attention, skills associated with mindfulness, are linked to an increased ability to engage in reason, judgement and emotion regulation. While most of the research on mindfulness has been conducted with clinical populations, there is emerging evidence that mindfulness can also promote job performance, wellbeing and mental acuity (Allen & Kiburz, 2012; Brown & Ryan, 2003; Dane & Brummel, 2013; Weinstein, Brown & Ryan, 2009).

So do you have to be a meditation guru to receive a benefit from mindfulness? Research shows that while even a little practice in mindfulness can yield measurable effects, individuals do not need to sign up for a vacation in a cave to be one with their thoughts. In a series of implementation studies, Amishi Jha, a professor of neuroscience at the University of Miami, and her team have found that soldiers who are trained in mindfulness have improved working memory and attention even during the high-stress phase of preparing to leave for a military deployment. During the pre-deployment phase, soldiers who practiced mindfulness were able to maintain neurocognitive functioning, while soldiers who did not, experienced a drop in concentration and attention (Jha *et al.*, 2015). In other words, the deploying

soldiers were resilient to the stressors normally experienced during pre-deployment thanks to mindfulness.

Social resilience. Up until now, this chapter has emphasised individual skills associated with resilience. Resilience is not just an individual skill and the topic of *social* resilience deserves special mention. John Cacioppo, a professor of Cognitive and Social Neuroscience at the University of Chicago, defines social resilience as the “capacity to foster, engage in, and sustain positive relationships, and to endure, recover from, and grow as a result of life stressors and social isolation (p. 44)” (Cacioppo, Reis & Zautra, 2011). In high-risk occupations, a small team typically takes on even greater importance because individuals are dependent on one another for their wellbeing and even survival. Thus, ensuring that individuals are able to recognise the importance of their social network, establish practices that enhance their social network, and know how to look out for one another is an important part of social resilience. Social resilience is also an essential method for combating isolation and loneliness. While there are many threats to resilience and psychological health in general, being socially isolated and lonely are two unique threats that scientists have recently identified as particularly harmful.

Cacioppo and others have documented the physiological correlates of loneliness, including its link to elevated stress hormones (Adam *et al.*, 2006), elevated blood pressure (Hawkley *et al.*, 2006), and cardiovascular disease (Caspi *et al.*, 2006). Furthermore, Cacioppo and colleagues have documented examples of how loneliness can be contagious. In a social network, when one individual begins to feel lonely, other individuals near to them in the network are at heightened risk for loneliness as well. Thus, it is to the group’s advantage to treat loneliness and social isolation as a threat to the whole and not just as an individual concern.

Cacioppo has pioneered a resilience-training programme designed to enhance social fitness with Army units (Cacioppo *et al.*, 2015). In this study, platoons were randomly assigned to receive training in social fitness or a comparison training (Afghan cultural awareness). Results based on surveys that were conducted following a week of training found that soldiers in the social fitness condition, when compared to the comparison training group, reported greater improvements in social cognition that included increases in skills like empathy, perspective taking and hardiness, and reduced loneliness. Interestingly, it was not simply that soldiers in the social fitness condition were generally happier about everything. While they reported increased social connection with their work teams, they *did not* report that their relationships beyond the work setting were enhanced. This suggests that the training had a specific effect on work relationships. If you would like to read more about how the social group can benefit resilience, Chapter 10 deals with this topic in considerable detail.

The role of leadership in resilience training. Managers are in a unique position to reinforce the lessons engendered in resilience training. Our team has conducted

surveys with a US Army brigade and found that the more team leaders are seen by their subordinates as invested in the training (ensuring time to schedule the training, participating in the training and referring to the training content during the duty day), the more soldiers perceive resilience training to be valuable and the better the unit's climate.

Senior leaders play an important role in ensuring that resilience-promoting programmes are formally established. By placing this information in policy and regulations, senior leaders can institutionalise the behaviours and expectations that can help individuals bounce back and cope with adverse situations. In this way, policy can reward resilience and encourage skill development.

What managers can do: lessons from high-risk occupations

In this chapter, we have highlighted the role of policy, assessment, training and leadership in developing an approach to promoting resilience within high-risk occupations. We now highlight what managers might consider if they are responsible for developing a resilience programme in their organisation.

Policy

- **Ensure policies and doctrines are consistent.** Establish policies regarding programme implementation, assessment and programme evaluation to ensure that the organisation's initiatives are correctly aligned.
- **Be aware of clear protocols for supporting employees.** Ensure that you are aware of the organisation's procedures for supporting employees. If there are none, then raise this as an organisational priority and ensure appropriate support procedures exist.

Assessment

- **Conduct a needs assessment.** What are the current indicators of resilience or resilience problems? What are the risk factors? What should be targeted? Who should be targeted?
- **Determine assessments that can be used to track employee and team resilience.** What ongoing, periodic assessments can be used or developed to track changes over time and identify potential difficulties for early intervention?

Culture

- **Develop a common language.** Be sure that assessment initiatives, training programmes, and organisational values and policy are in alignment and use common terminology that reinforces one another.

- ***Make the resilience and mental health of employees everyone's responsibility.*** Consider how to skill-up managers and employees to identify potential warning signs, risk factors and the organisation's procedure for supporting employees.

Training

- ***Examine resilience programmes already in place.*** Are these programmes addressing the organisation's needs? What is the evidence that these programmes are effective? Are the programmes being implemented correctly and to acceptable standards?
- ***Determine the resilience training that needs to be implemented.*** What skills should this training target? How can the training be optimally effective? Should training be targeted for certain at-risk individuals or be universal to leverage group support and communication?
- ***Integrate resilience training and other skills into existing occupational initiatives.*** Identify opportunities to build on the training such as through recruit training, during professional education and schooling, and prior to or following key occupational incidents. For example, if there is a tough, realistic training event, ensure that employees are primed to use resilience skills during these training tasks. Many high-risk occupations engage in post-incident reviews with the team, and these reviews can integrate resilience skills in processing the occupational incident.
- ***Identify the role that leaders play in training implementation and how they can reinforce training objectives.*** How can leaders optimise the impact of training? How can leaders be prepared to make the most out of training and demonstrate resilience-specific behaviours?
- ***Ensure high-quality training.*** Implement effective training tested within the specific occupation, conduct programme evaluations, refresh the training at regular intervals and conduct quality control checks on the training to reduce drift.

Final thoughts

Resilience is essential in high-risk occupations. While demanding and realistic training is critical to building a resilient workforce, there are many other components that can reinforce and sustain resilience. Integrating efforts from policy and training into work culture and through leadership can build a compassionate and strong occupational environment that sustains the team, enabling committed professionals to accomplish their work and support one another.

KEY MESSAGES FROM THIS CHAPTER

- Organisations that do a good job at maintaining employee resilience are proactive in assessment, training and policy development to support resilience.
- Assessments that examine wellbeing are an important tool for determining the impact of stressors on resilience, identification of problems with employee resilience and how employees may benefit from resilience training.
- Organisations need to make employee resilience everyone's responsibility via an organisational culture that supports mental health. This means providing managers and employees at all levels with the tools to recognise potential warning signs and to respond appropriately. It can also mean making the mental health of employees a formalised part of the managerial role.
- Resilience training for employees needs to be carefully selected based on what the occupational risks are and associated training needs. Resilience training should be evaluated to ensure that it is effective in the context of the organisation.

Notes

- 1 The views expressed in this chapter are those of the authors and do not reflect the official position of the Walter Reed Army Institute of Research, the U.S. Army, or Department of Defense.
- 2 Most of the examples in this chapter come from the military however many of these examples have parallels in other high-risk occupations like the police, fire fighting, and other first responders.

References

- Adam, E. K., Hawkey, L. C., Kudielka, B. M. & Cacioppo, J. T. (2006). Day-to-day dynamics of experience– cortisol associations in a population-based sample of older adults. *Proceedings of the National Academy of Sciences of the United States of America*, 103, 17058–17063.
- Adler, A. B., Bliese, P. D., McGurk, D., Hoge, C. W. & Castro, C. A. (2009). Battlemind debriefing and battlemind training as early interventions with soldiers returning from Iraq: Randomization by platoon. *Journal of Consulting and Clinical Psychology*, 77, 928–940.
- Adler, A. B., Britt, T. W., Castro, C. A., McGurk, D. & Bliese, P. D. (2011). Effect of transition home from combat on risk-taking and health-related behaviors. *Journal of Traumatic Stress*, 24, 381–389.
- Adler, A. B. & Castro, C. A. (2013). An occupational mental health model for the military. *Military Behavioral Health*, 1, 41–45.

- Adler, A. B., Saboe, K. N., Anderson, J., Sipos, M. L. & Thomas, J. L. (2014). Behavioral health leadership: New directions in occupational mental health. *Current Psychiatry Reports*, 16, 484–491.
- Allen, T. D. & Kiburz, K. A. (2012). Trait mindfulness and work–family balance among working parents: The mediating effects of vitality and sleep quality. *Journal of Vocational Behavior*, 80, 372–379.
- American Psychiatric Association (2013) *Diagnostic and statistical manual of mental disorders* (5th edn). Washington, DC: Author.
- Arnetz, B. B., Arble, E., Backman, L., Lynch, A. & Lublin, A. (2013). Assessment of a prevention program for work-related stress among urban police officers. *International Archives of Occupational and Environmental Health*, 86, 79–88.
- Arnetz, B. B., Nevedal, D. C., Lumley, M. A., Backman, L. & Lublin, A. (2009). Trauma resilience training for police: Psychophysiological and performance effects. *Journal of Police and Criminal Psychology*, 24, 1–9.
- Bass, B. M. (1985). *Leadership and performance beyond expectation*. New York: Free Press.
- Bisson, J. I., Brayne, M., Ochberg, F. M. & Everly, G. S. (2007). Early psychosocial intervention following traumatic events. *American Journal of Psychiatry*, 164, 1016–1019.
- Bliese, P. B., Adler, A. B. & Castro, C. A. (2011). Research-based preventive mental health care strategies in the military. In A. B. Adler, P. B. Bliese & C. A. Castro (eds), *Deployment Psychology: Evidence-Based Strategies to Promote Mental Health in the Military* (pp. 103–124). Washington, DC: American Psychological Association.
- Bliese, P. D., Wright, K. M., Adler, A. B., Thomas, J. L. & Hoge, C. W. (2007). Timing of post-combat mental health assessments. *Psychological Services*, 4, 141–148.
- Bliese, P. D., Thomas, J. L., McGurk, D., McBride, S. & Castro, C. A. (2011). Mental health advisory teams: A proactive examination of mental health during combat deployments. *International Review of Psychiatry*, 23, 127–134.
- Boscarino, J. A. (1997). Diseases among men 20 years after exposure to severe stress: implications for clinical research and medical care. *Psychosomatic Medicine*, 59, 605–614.
- Brown, K. W. & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84, 822–848.
- Bryant, R. A. & Harvey, A. G. (1995). Posttraumatic stress in volunteer firefighters. Predictors of distress. *Journal of Nervous & Mental Disease*, 183, 267–271.
- Cacioppo, J. T., Adler, A. B., Lester, P. B., McGurk, D., Thomas, J. L., Chen, H. & Cacioppo, S. (2015). Building social resilience in soldiers: A double dissociative randomized controlled study. *Journal of Personality and Social Psychology*, 109, 90–105.
- Cacioppo, J. T., Reis, H. T. & Zautra, A. J. (2011). Social resilience: The value of social fitness with an application to the military. *American Psychologist*, 66, 43–51.
- Caspi, A., Harrington, H., Moffitt, T. E., Milne, B. J. & Poulton, R. (2006). Socially isolated children 20 years later: Risk of cardiovascular disease. *Archives of Pediatrics & Adolescent Medicine*, 160, 805–811.
- Dane, E. & Brummel, B. J. (2013). Examining workplace mindfulness and its relations to job performance and turnover intentions. *Human Relations*, 67, 105–128.
- Goyal, M., Singh, S., Sibinga, E. M. S., Gould, N. F., Rowland-Seymour, A., Sharma, R., Berger, Z., . . . Haythornthwaite, J. A. (2014). Meditation programs for psychological stress and well-being: a systematic review and meta-analysis. *JAMA Internal Medicine*, 174, 357–368.
- Gunia, B. C., Sipos, M. L., LoPresti, M. L. & Adler, A. B. (2015). Sleep leadership in high-risk occupations: An investigation of soldiers on peacekeeping and combat missions. *Military Psychology*, 27, 197–211.

- Hawkey, L. C., Masi, C. M., Berry, J. D. & Cacioppo, J. T. (2006). Loneliness is a unique predictor of age-related differences in systolic blood pressure. *Psychology and Aging, 21*, 152–164.
- Herrell, R. K., Edens, E. N., Riviere, L. A., Thomas, J. L., Bliese, P. D. & Hoge, C. W. (2014). Assessing functional impairment in a working military population: The Walter Reed Functional Impairment Scale. *Psychological Services, 11*, 254–264.
- Hoge, C. W., Adler, A. B., Wright, K. M., Bliese, P. D., Cox, A., McGurk, D., Milliken, C. & Castro, C. A. (2011). Walter Reed Army Institute of Research contributions during operations Iraqi freedom and enduring freedom: from research to public health policy. In C. E. Ritchie (ed.). *Combat and Operational Behavioral Health* (pp. 75–86). In M. K. Lenhart (Series ed.). *The Textbooks of Military Medicine*. Washington, DC: Department of the Army, Office of The Surgeon General, Borden Institute.
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I. & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351*, 13–22.
- Hoge, C. W., Terhakopian, A., Castro, C. A., Messer, S. C. & Engel, C. C. (2007). Association of Posttraumatic Stress Disorder with somatic symptoms, health care visits, and absenteeism among Iraq war veterans. *American Journal of Psychiatry, 164*, 150–153.
- Jha, A. P., Stanley, E. A., Kiyonaga, A., Wong, L. & Gelfand, L. (2010). Examining the protective effects of mindfulness training on working memory and affective experience. *Emotion, 10*, 54–64.
- Jha, A. P., Morrison, A., Dainer-Best, J., Parker, S., Rostrup, N. & Stanley, E. (2015). Minds “At Attention”: Mindfulness training curbs attentional lapses in military cohorts. *PLoS ONE, 10*, 1–19.
- Kok, B. C., Herrell, R. K., Thomas, J. L. & Hoge, C. W. (2012). Posttraumatic stress disorder associated with combat service in Iraq or Afghanistan: reconciling prevalence differences between studies. *Journal of Nervous & Mental Disease, 200*, 444–450.
- Perrin, M. A., DiGrande, L., Wheeler, K., Thorpe, L., Farfel, M. & Brackbill, R. (2007). Differences in PTSD prevalence and associated risk factors among World Trade Center disaster rescue and recovery workers. *The American Journal of Psychiatry, 164*, 1385–1394.
- Reivich, K., Seligman, E. P. M. & McBride, S. A. (2011). Master resilience training in the U.S. Army. *American Psychologist, 66*, 25–34.
- Riviere, L. A., Merrill, J. C., Thomas, J. L., Woilk, J. E. & Bliese, P. D. (2012). 2003–2009 Marital functioning trends among U.S. enlisted soldiers following combat deployments. *Military Medicine, 177*, 1169–1189.
- Robinson, H. M., Sigman, M. R. & Wilson, J. P. (1997). Duty-related stressors and PTSD symptoms in suburban police officers. *Psychological Reports, 81*, 835–845.
- Rona, R. J., Jones, M., Hull, L., MacManus, D., Fear, N. T. & Wessely, S. (2015). Anger in the UK Armed Forces: Strong association with mental health, childhood antisocial behavior, and combat role. *Journal of Nervous and Mental Disease, 203*, 15–22.
- Rona, R. J., Jones, M., Keeling, M., Hull, L., Wessely, S. & Fear, N. T. (2014). Mental health consequences of overstretch in the UK Armed Forces, 2007–09: A population-based cohort study. *The Lancet Psychiatry, 1*, 531–538.
- Saboe, K. N., Anderson, J. & Sipos, M. (2015, April). Multilevel assessment of how leader-behaviors promoting resilience improve unit performance. Presented at Society for Industrial-Organizational Psychology annual conference. Philadelphia, PN.
- Shubert, J., Ritchie, E. C. (Col.), Everly Jr, G. S., Fiedler, N., Williams, M. B., Mitchell, C. S. & Langlieb, A. M. (2008). A missing element in disaster mental health: Behavioral health surveillance for first responders. *International Journal of Emergency Mental Health, 9*, 201–214.

- Thomas, J. L., Wilk, J. E., Riviere, L. A., McGurk, D., Castro, C. A. & Hoge, C. W. (2010). Prevalence of mental health problems and functional impairment among active component and national guard soldiers 3 and 12 months following combat in Iraq. *Archives of General Psychiatry*, 67, 614–623.
- vanHove, A. J., Herian, M. N., Perez, A. L. U., Harms, P. D. & Lester, P. B. (2015). Can resilience be developed at work? A meta-analytic review of resilience-building programme effectiveness. *Journal of Occupational and Organizational Psychology*, 89, 278–307.
- Weinstein, N., Brown, K. W. & Ryan, R. M. (2009). A multi-method examination of the effects of mindfulness on stress attribution, coping, and emotional well-being. *Journal of Research in Personality*, 43, 374–385.

Top-Level Communication and Management Priorities

The head of a company or organization is literally put to the test if a crisis occurs that involves employees, customers, the media or the public. How he or she handles it will have a profound effect on the outcome of the crisis, and top management communication therefore needs to be addressed before a crisis occurs.

Fortunately, there is lots to learn from previous disasters:

- Respond quickly and appropriately.
- Take responsibility.
- Go into reaction mode.
- Keep your perspectives.
- Be visible.
- Avoid speculation.
- Focus on the situation and the audience, not yourself.
- Empower your employees.
- Make sure victims are prioritized.
- Commit to communicate.

Preparing a CEO for crisis management includes discussions about possible negative outcomes that may result from the crisis, for example, the fact that the CEO personally, as well as the company or organization, will be criticized and scrutinized. There might also be campaigns attacking the management, the company or its employees – by targeting company mailboxes or through campaigns on social media.

It is vital that the CEO of a company or the head of an organization in trouble does not focus on his or her own situation. As Bill Salvin, president and founder of the consulting company Signalbridge explains, ‘The audience doesn’t care how inconvenient it is for *you* to work on a cell phone, they want the head guy on the ground so he can move heaven and earth to help them in their time of need’ (Salvin, 2013).

THE CEO ON SOCIAL MEDIA

Top managers with a profile on Twitter or a personal blog can be an effective voice in crisis communication and a proof of concrete and visual leadership. There are several examples of CEOs tweeting with compassion after a tragic event, such as the head of Air Asia, Tony Fernandes, who posted this message on Twitter shortly after one of their flights had crashed: ‘I am touched by the massive show of support especially from my fellow airlines. This is my worst nightmare. But there is no stopping.’ Other leaders might choose other platforms. Prime Minister Jens Stoltenberg of Norway posted several personal messages on his Facebook page in the days following the terror in Oslo and on the island of Utoya, and he received much praise for the way he shared his thoughts and feelings.

Video can be an effective form of communicating CEO involvement, and the International Air Transport Association (IATA) therefore advises an airline to

consider posting a broadcast-quality video statement by the CEO on its website and/or YouTube, in which he/she confirms key facts and outlines the airline’s immediate priorities, with appropriate messaging. This would ensure that the CEO is ‘visible’ early in the response, without necessarily exposing him/her to media questions at a point where confirmed information is scarce.

(IATA, 2016)

A visible leader can also assist in reinforcing important messages. CEOs and mayors often have a large pool of followers on Twitter and Facebook, and when they retweet or share a post, it reaches new and important audiences.



FIGURE 8.1 With 370,000 followers on Twitter as of July 2017, the mayor of Calgary, Naheed Nenshi, has the potential of reaching a vast audience. He actively amplified messages from @cityofcalgary and @CalgaryPolice during the flood in the summer of 2013. *Source:* City of Calgary.

THE CEO AS A SPOKESPERSON

In addition to possibly having a voice on social media, the head of a company or organization, almost without exception, needs to give a statement about a crisis on TV, on radio or in the press. To do this in a professional manner, it is vital for him or her to have gone through some type of media training. If not, tension and nervousness might hinder important messages and shine a bad light on the crisis management process. There is no doubt that rehearsing and exercises are ‘insurance’ for personal reputation, and media training is an investment that will always be beneficial.

In addition to following the advice on handling the media earlier in this chapter, the CEO needs to think thoroughly about which words to use to describe the situation and what is being done to mitigate it. Rehearsing and dry-runs are key preparations for an interview to be successful, and senior communications staff should advise the CEO of possible angles and questions.

A crisis situation is not the time to be funny or to play – knowingly or not – with words describing the scene. That was not the case when the head of the company responsible for a train accident in Canada (described in Chapter 1) was asked what had happened. Even though everyone knew that the cause was that 72 tank cars carrying crude oil had *blown up*, his response was: ‘I think we blew it ... we blew it big time’ (CBC News, 2013).

THE DIFFICULT TASK OF APOLOGIZING

“
Apology is the atomic energy of empathy. Apologies make bad things start to stop happening.

James E. Lukaszewski, President, The Lukaszewski Group (personal communication)

One of the most challenging tasks a CEO will face when handling a crisis is the art of giving a genuine apology. Sometimes because they do not want to, and occasionally because they are forced to, there are many examples of companies and top managers fumbling with what should be a relatively easy task – and one that is expected. It also has a financial and reputational side, and according to an article by Michael Shmarak about corporate America, a genuine and immediate apology ‘can save them billions in business and heaps of embarrassing PR blowback’ (Shmarak, 2017).

As we have seen earlier, how words are chosen also plays an important role in how an apology is perceived. Some CEOs give statements like ‘I am sorry if I offended anyone’ or ‘I am sorry if you feel that way.’ That does not work. Shmarak therefore recommends that a genuine apology must include responsibility, sympathy and accountability, and that a full statement of apology must include the following six elements:

1. Acknowledge what you did wrong.
2. Take responsibility for your actions.

3. Acknowledge the impact your actions had on others.
4. Apologize for having caused pain or done damage.
5. State your future intentions and repair the damage.
6. Above all else, do not make excuses.

STAFF CARE

An important task for top management is to take care of the staff who are handling the crisis. This is easier said than done, as lengthy meetings, business continuity and financial questions often occupy many hours for a leader dealing with a crisis. However, visible leadership also *within* an organization is valued and should be prioritized. It does not take much, and a surprise visit to the communications team to cheer them on and give encouragement goes a long way in providing support. Handing out bags of candy or making sure they get pizza when hungry are other ways for the top manager to show his or her commitment. Praising staff in public and in media interviews is also a winning gesture.

More serious is the fact that communications teams and other internal staff handling a crisis might need psychological follow-up after the crisis has subsided. Traditional first responders usually get a chance to see a psychologist or have a debrief, but those who respond digitally should also be considered. At the same time, looking after personnel in this way will build resilience and make the organization even better prepared for another crisis.

CHOOSING YOUR WORDS

Crafting a quote for a press release or deciding key messages for an interview, a speech or a funeral takes time, knowledge and a mastery of words. If possible, senior communications advisors should write and rewrite, adjusting words and sentences until they bring about exactly the feeling the victims, the journalists or the public need to hear.

There are many excellent speeches given by CEOs from around the world, but I choose to end this chapter with the last sentences from Norwegian Prime Minister Jens Stoltenberg's

introduction to the press conference on the evening of July 22, 2011:

We must never give up our values.

We must show that our open society can pass this test too.

That the answer to violence is even more democracy.

Even more humanity.

But never naivety.

We owe this to the victims and their families.

BIBLIOGRAPHY

- CBC News. (2013, July 9). *CBC.CA*. Railway chair defends safety record. Retrieved from www.cbc.ca/player/play/2396202194
- IATA. (2016, December). *iata.org*. Retrieved from www.iata.org/publications/Documents/crisis-communications-guidelines.pdf
- Salvin, B. (2013, July 17). *Signalbridge*. Retrieved from <http://signalbridge.blogspot.no/2013/07/tragedy-at-lac-megantic-rail-chiefs.html>
- Shmarak, M. (2017, May 9). *ragan.com*. Retrieved from www.ragan.com/Tomorrow/Articles/For_a_genuine_apology_go_back_to_the_basics_52725.aspx

CHAPTER 2

Helping Entrepreneurs and Small Businesses Make the Digital Transformation

SUGANDHA SONI CHOPRA^{1,2}

¹*Rama University, Management, EWS-4111, AWAS Vikas-3, Panki Road, Kalyanpur, Kanpur, U.P. – 208017*

²*676-A, Near Canara Bank, Gandhi Nagar, Jammu – 180004, India, E-mail: sugandhasoni101984@gmail.com*

ABSTRACT

The main focus of this chapter, draw attention to that in what way entrepreneurs of Small and Medium Enterprises (SMEs) with inadequate potentials and restricted assets operated digital transformation in their companies. We think carefully about qualitative research on digital transformation, including the movement of E-Commerce experience by 7 SMEs on the Alibaba digital program. We relating to obtaining a process in this chapter that targets to mark out and make clear in what way SMEs entrepreneurs, withhold up from the digital platform good turn supplier, work digital transformation by managerial cognition replacement, managerial social money growth, business group building, and institutional capacity building. This chapter enlarged our understanding of both digital entrepreneurship and digital transformation. It also shows the new capability to gain a correct into in what way digital platform good turn suppliers can help SMEs aspect and strive to gain.

2.1 INTRODUCTION

With the changing scenario of the state, today, many dimensions in the society are also changing, and this is actually leading to many evolving practices when the situation entails to choosing of a career. It draws on previous days that people hand to hand only one notion of finishing their education and focusing a proper 9 to 5 job with a fixed salary increase each year. But now the youth or rather the mindset of the society is really changing, with the finest of the startup companies which are truly economic impact in the society. Nuti (2017) says, “there was happiness for me to see my small businesses to grow up and meeting imaginative entrepreneurs.” He has given some examples:

1. A boutique store manager, can immediately see target customers and giving the priority and offer them digital loyalty discounts at the point of sale.
2. Seeing the neediness of the customer, a restaurant manager can instantly see – what’s selling – and what’s not – to make real-time changes, from the shop, at the market, or at home.

The digital transformation, its all right information hidden by it, can actually be a smooth, highly-beneficial process. Again he explained that his company understands the move to a real economy better than other company. With the boon of the internet, we undergo our business to present a new, Omnichannel world, where people selling and purchasing by online and phone. Today, we could help our customers travel over this world. Helping small businesses make this process is decisive. According to the census bureau of the US, small businesses account for 60% of all new jobs. This is very impressive; companies with fewer than twenty workers account for the selective perception of completely the U.S. companies. Although quite a relevant point yet during the discussing U.S. recovery body had more view endpoints like:

- The new budding companies would be creating the majority of net new jobs enhancing the economy.
- The local people would be more involved in such a small-scale business, as the residents of the areas and neighborhoods.

- The quality of living in a society is thoroughly enhanced and uplifted by this new age small startup companies.
- It is also believed that the global economic status would have much stronger and deeper roots within the ground with the spread and growth of the small-scale business houses, with proper strategies been applied.

2.2 BACKGROUND

As with entrepreneurship, entrepreneur too has been having multiple ways by various researchers, varying in the aspects or attributes under study. Entrepreneurship is a multiplex process of selection and adaptation that happens over a prolonged ahead of time, of days or years, as against the perception of a sequence of unrelated activities. Montanye (2006) considers it as a fact price, product innovation, and risk-based to what place entrepreneurial reimbursements are tied to apprehensions and benefits. Entrepreneurship-related activities arise from a separate's perception about the alive of market opportunities, capacity, and economic viability of those business opportunities. Uddin and Bose (2012) describe economic and monetary union benefits to entrepreneurship through contributions to innovative market and industry diversifications, development of novel technology, the creation employment, and an overall surge in productivity enhanced the standard of life, decrease in poverty and better social positioning.

Digital transformations go beyond process redesign and technology implementation and involve structuring of new business operations to facilitate and leverage the core competence of an organization through digital technology (Susarla et al., 2012). Social technologies like social media marketing are transforming the structure of social relationships in both the consumer and the enterprise space offering new ways for collaboration. Scholars emphasize the needy digital ages in which the IT strategy of a company is not only considered functional-level strategy but integrated with the business strategy. The major technological trends related transformation in the contemporary literature described social, moving, analytical, and cloud computing. Digital technologies have become a source of disruption infant industries as they are changing business models and processes, and even affecting the rules of business.

2.3 MAIN FOCUS OF THE CHAPTER

2.3.1 STATEMENT OF PROBLEM, OBJECTIVES, AND METHODOLOGY

With the new innovations and the fast growth of technology, it is surely believed that the new age entrepreneurship and digitalization would surely continue to bring much better transformations in the scenario of business and new industries. The impact from the tenant for years has been more on consumer-oriented industries such as it is the music industry, the consumer products, the publishing industry, retailing, financial companies, and largely the manufacturing industry. So, it estimated that it would be quite a benefit-oriented clause to adopt the organizational changes which are more perspective oriented and follow the technology trends. The objectives are as follows:

- The main thing in the present research is to analyze the present status of how digital natives are helpful for entrepreneurs and small businesses (SMEs).
- Determining the drive towards enhancing technology upgrading through digitalization transformations lean manufacturing companies starting from small to medium.
- Analyzing the better opportunities focused on proper digitalization for complete be-all and end-all-sized manufacturing companies in the coming few years.
- The study would help in facing challenges been encountered in the procedure if hi-tech digitalization of the small-scale industries.

This is the new age form of research technology which is now mostly adopted researched is found on secondary data collection, which is attached to the needed and syllabus study materials. Various books, journals, research papers dealing with the concerned topic and relevant websites have been considered order taker study effective one, and believed that it would help in a deductive nature in future (Chopra, and Yadav, 2018).

2.3.2 NEW WAYS OF ENTREPRENEURSHIP AND DIGITALIZATION

2.3.2.1 TECHNOLOGY ENTREPRENEURSHIP

Technology entrepreneurship is an accepted academia. Therefore, those call provision and advancement, which recent developments have completed in the condition of digital currencies (Zhao and Collier, 2016). People would like to management development of discussion between entrepreneurs, policymakers, and researchers on the effect of digitization on entrepreneurship, and set a future analysis aims and possible achievements, according to the recent definition of terms.

2.3.2.2 NEW FORM OF TECHNOLOGY ENTREPRENEURSHIP

This is not easy to decide whether people are still an inner part of the original invoices bondage because of not being present of a characterization of technology entrepreneurship. It is a fusion of entrepreneurship and technology-based revolution (Giones and Brem, 2017). Similarly, this entrepreneurship aims to explore chances connected to advances in science and engineering.

2.3.2.3 DIGITAL TRANSFORMATION FOR ENTREPRENEURS

The digital age and the plethora of digital channels obtainable have generated so many chances for entrepreneurs and Small and Medium Enterprises (SMEs). They have more ability than ever to attain business victory, should they determine to combine technology into their business representation. Digitalization is not something that you execute once and not remember about. This is so energetic that an organization must look at the business plan steady. The plan must be proactive and comprise paces on what way to reinvent its digital extend to come up with the predict technological advances (ICAEW, 2016). All necessary objects that an entrepreneur should basis on when thinking about transformation are:

- To increase the consumer incident by taking command, as much as feasible, of their consumer's interactions with the company through their OmniChannel experience.

- To judgment, look at your business and your consumer's digital trip so that you assess whether you are conveying a frictionless experience.
- To make sure all your requests, whether a website, marketing, or E-Commerce platform, is modernizing and connects your consumer's requests. This will make sure that any future modernizes to digital badges can be done swiftly and efficiently.
- To investing people who have digital abilities as usual up-ability yourself.
- To have a digital-first attitude at the top down. Transformation must be imported from the CEO of the business right down to each staff member.
- To uninterrupted path and monitor digital development through metrics and KPIs.

2.3.2.4 DIGITAL BUSINESS

Present time, digital badges mainly are handed down in a context of concerned with business optimization, integration/convergence, disturbance, and digital transformation. This is an incalculable amount that the communal business, marketing orientation and – as people can never fear the human relations that risks being ignored the further occurrence of something of the latest technologies and the digitalization – humanization. A key bit of it all is facts – put at work, which needs a concerned with Information Management approach – and carrying value to generate more value, throughout the ecosystem.

2.3.3 DIGITAL STRATEGIES THOSE TRANSFORM

The capability to re-imagine the business digitally/is the firm decision in big part without problems digital plan helped by leaders who encourage a culture able to become different and originate the new. These kinds of business consist earlier technology change and development; there is something unusual to digital changing is that leaders can take the risk to become a cultural audit as digitally proceeded companies need latest levels of competitive advantages. Employees willing to job for businesses that are extremely performed in digital development; this is equally important

for all age classes. Company leaders must have born this in the brain in sequence to attract and to keep the best talent (Kane et al., 2015).

- **Digital Strategy Provides Power to Digital Maturity:** At the early parts of which we say digital maturity, only 15% of respondents from organizations – a workplace where digital has altered procedures, business models and talent engagement – say that their workplace has without the problem and logical digital plan among the digital maturing, above 80%.
- **The Strengths of a Digital Transformation Strategy:** Digital strategy is developed in transforming business. This is a mature organization.
- **Digital Organizations Who Matured Build Ability to Realize the Strategy:** According to overall findings, at the previous parts of digital maturity the capability to mental concepts that how digital badges can influence the business is an adroitness not having the quality in so many commercial businesses.
- **Employees Impress By Digital Leaders:** Employees willing to job for digitally authorized organizations, companies through age classes from 22 to 60. Employees are looking for the highest quality digital chances/and businesses which they have to do continuously for retaining the digital work and entice them.
- **The Possibility of Loss Becomes a Cultural Norm:** The digitally maturing workplace is more relax-able to take possibilities than less digitally mature employees. To make their workplaces less risk, business leaders have to accept non-success as something that must exist for success. Business leaders necessary also address the probability that workers may be just as the possibility of loss-averse as their managers and will require help to become brave.
- **The Digital Aims are Led From the Uppermost Point:** Organizations, who are maturing, are nearly two times as like as less digitally mature business institutions to have a one-person or unit leading the attempt. Employees of digital maturing workplaces are full of assurance for their leaders regarding digital fluency. Digital movement, however, doesn't want mastery of the technologies. Instead, it needs the capability to fulfill the importance of digital technology for the time ahead of the organization.

2.3.4 MODES OF DIGITAL TRANSFORMATION

2.3.4.1 CREATING A STRATEGY THAT TRANSFORMS

This may be the best ways to come near to turn the long-established strategy development method on its head/when developing a progressive digital strategy. Mennecke et al., (2007) would preferably begin by considering commerce and business and then effort backward. There is the probability of a new solution which is creating by new ability, and required solution stimulates demand for advanced abilities. For the sample, Mennecke et al., (2007) mark to the seasoning and flavor constructor McCormick & Company. McCormick re-finds Flavor Print, an algorithm defining the flavors of the company as an aim of fifty data points, after given the priority of personalizing and digital hi-tech capability to supply it.

2.3.4.2 THE CULTURE OF DIGITAL BUSINESS TRANSFORMATION

Digital revolution is conducive by a culture, is an authentication mark of mature companies. This kind of organizations has a strong natural bias to behave in an appropriate way to motivate risk-taking, encourage alteration, and growth collaborative work environments. Charki et al., (2018) said, “Culture needs to support collaboration and creativity,” which targets the outcomes related to the action of an undertaking social web at a cosmetics company in Europe.

2.3.4.3 LEADING THE DIGITAL TRANSFORMATION

Respondents more than half, from digitally developed organizations, say that one person or company led the digital program at their companies. In 2018, Charki et al., say that “It is very important for Managers to go above and say – Digital is excellent and does it” and “Managers required to do it themselves and perform boldly themselves.” Leading by lesson is a bit of the performance. There are various human beings who engage by Twitter and other social platforms, but then also stand in the presence of 100 people and be genuine. All-day long, people come back and forth at the interval almost and physical platforms. Employees of digitally developed workplaces are confident of their leaders’ they have the capacity to play

that digital game. Their leaders have adequate skills to guide the digital strategy, say more than seventy-five percent of defendants from these companies. Only 90% add that their chiefs understand digital development and technologies.

2.3.5 WHY DIGITAL TRANSFORMATION IS THE GREAT ACCELERATOR FOR SMES?

The key vision from the address is that there is no “correct way” for digital revolution – the finest businesses had a broader strategy in area, but the target was on strategic shape-shifts; the small emphasis of small change rather than a big, group-wide overhaul. For SMEs, the internet has been of an extent level; non-selective in its influence/and conduct forth a gesture of the chance for all companies. It means even the little of businesses can take part in a world phase, growing more mature, providing that propel the borderline and bringing forward latest change. While golden opportunity plentiful, the shift has come an arrangement of provocations as businesses discover themselves with a broader, global ruthless landscape. This small change has also shifted suppositions, with a requirement to construct an experience that not only is online/but lives and respire digital.

2.4 SOLUTIONS AND RECOMMENDATIONS

2.4.1 OVERCOMING THE CHALLENGES OF DIGITAL TRANSFORMATION FOR SMES

Digital transformation is generating unprecedented golden opportunities for development and innovation. For decades, broad companies have carried the ruthless benefit in terms of extent, transportation, and the capability to reply fastly to changing market state. At present, the work surfaces are turned off. Improvement in technology is attending small scale companies with remarkable chances to obtain a foothold in markets previously controlled by large workplaces. Cloud computing is comfortably reachable to small-scale companies, and its pliability and absence ahead investment make it an ideal fit for businesses travel over new ground. It also separates require for recurrent, costly software improves/and has inbuilt security.

Move-ability makes it less essential for businesses to layout on office rentals, with platforms and cooperation tools accessed from smartphones, desktops, or tablets. And corporeal mail hi-technologies are now being right-sized, so small-scale businesses have entrance to superior, quicker, more fertile technology non-segregated with brilliant digital platforms (Miller, 2016).

2.4.2 START-UP – INNOVATION INSPIRING BUSINESS TRANSFORMATION

According to World startup report, the world had almost 140, 000 startups businesses, of which more than 15% were found outside America, at the ending of the previous year. McKinsey Institute Research foretells that by 2025, more than 45% of the Fortune Global 500 will be founded in energetic, appearing markets contrast to 17% in 2000. In 2025, it approximates 15,000 companies will have \$1 – B plus in yearly revenues contrast to 8,000 in 2010, and 40% of recently developed broad companies will be located in the appearing world. A software company – “The Business Performance Innovation (BPI) Network” with Tech Mahindra, specializes in consulting, business re-engineering solutions, digital transformation and with TIE (The Indus Entrepreneurs), a non-financial gain global entrepreneurs network of 14,000 contributors to the other side of 17 countries, this is a thought of leading enterprise groups.

2.4.3 ADVANTAGE AND BUSINESS BENEFITS OF DIGITAL TRANSFORMATION

Digital transformation hand over the sorts of benefits certainly that businesses long-established benchmark. When thoughts about your own business, though remember that digital transformation is about alteration and benefits may take in new areas, such as:

- Increased customer betrothal and make better customer conversion;
- Improved customer, supplier, and employee cooperation;
- Make superior grade control processes;
- Flexible in a work;

- Personalization of products;
- Co-production of products and services.

2.4.4 CONCEPTUAL MODEL, FINDINGS, AND STRATEGIES

Recently the approach of the clustering of services is really helping in focusing on different issues from a holistic and better viewpoint, for the planning committees the production planning, decimation, and profits sharing with the proper use of knowledge, are the basic attitude behind the idea of clusters learning. So, it is much more in store by giving much priority of planning knowledge rather than focusing on issues, and this is seen as a standard grade rate towards the success of these companies all-around the globe. The focal point is on the utilization of the advanced equipment as a successful way of medium starting from the lower levels of technology which includes the traditional industries and handicrafts too (Alikhani et al., 2013). There are some findings and strategies shown below:

- RDS (Rural Development Strategy) development of rural entrepreneurship; “first to attract more business, secondly to retain.”
- To generate a rural development strategy, this would include both the hierarchical approach towards a structured settlement and also the integrated rural development of sustainable development in the area.
- It would help in the employment strategies of the rural people giving them proper income and accelerating their prospects.
- It would also help in the appropriate financial and communal services through the interface of rural areas.
- An immense growth in the tourism industry.
- Planning, designing, and implementation of diverse schemes for the provision of public services in rural areas.
- The cluster approach to the development, i.e., developing the industrial clusters, technology clusters, and rural knowledge clusters.
- Rerating knowledge-based society with all amenities, strengthening the infrastructures in the rustic areas.
- Evolution of new age-enhanced technologies in rustic areas.

- Beholding the traditional technologies in rural areas with advanced and new technologies.
- More focus on participatory management in rustic areas.
- It would be beneficial if the components of a constructive culture can be applied to the evolution of the entrepreneurship in rustic areas through various educational programs and advocacy.

2.5 FUTURE RESEARCH DIRECTIONS

The limitations of this research follow from the nature of the study. Other than the general limitations of a qualitative, semi-structured interview-based scholarly paper, within a less developed research field, as well as the respondents' biases towards their understanding, helping entrepreneurship, interpretation of digitalization and organizational changes related to digital transformation, most of the arguments in this chapter are in need of further grounding in relevant theory. The understanding of digital modification strategies and the organizational change processes involved is also contingent on the researcher's limited, restricted, and prior knowledge and bias towards the literature on the subject. The qualitative nature of the study also separates the feature of the generalization of the consequences. In future research on digital transformation, it would be fascinating to further traverse the cultural features of digital modification in businesses, not just the more 'technical' or 'process-related' characteristics of the phenomenon, which was mainly done in this research.

2.6 CONCLUSION

The above study talks about the new age and modern technical analysis and its effect on the small and medium-sized institutions a fact which is the face of business in this fast pacing world. It would help in more explorations of transforming challenges to victories and help these institutions and the employees with understandable and skills for betterment. In this chapter, I have been cautious to mention to institutions as digitally developed rather than already mature. The digital modification of business is the latest phenomenon, and no institute has still arrived at the conclusion state nor clearly stated describe it. But the outlines are becoming understandable, as are the applications that precede institutions forward.

KEYWORDS

- **digital entrepreneurship**
- **digital transformation**
- **entrepreneurs**
- **small and medium enterprises (SMEs)**
- **start-up innovation**

REFERENCES

- Alikhani, M., Khodayari, J., Dehnavi, M., & Verijkazemi, J., (2013). *A Conceptual Model of Entrepreneurship Development and Employment of Rural New Approach* (Vol. 1, No. 5).
- Charki, M. H., Boukef, N., & Harrison, S., (2018). *The Successful Implementation of an Enterprise Social Media Platform is a Technical and Cultural Task*.
- Chopra, S. S., & Yadav, A., (2018). *Women Innovation and Entrepreneurship in Jammu* (Vol. IX, Special Issue, e-ISSN: 0976–7967, p-ISSN: 2319–2322).
- Giones, F., & Brem, A., (2017). Digital technology entrepreneurship: A definition and research agenda. *Technology Innovation Management Review*, 7(5), 44–51. <http://timreview.ca/article/1076> (Accessed on 28 August 2019).
- ICAEW, (2016). *Digital Transformation-the Next Steps: A Business Guide to Digital Change Management*.
- Kane, G. C., Palmer, D., Phillips, A. N., Kiron, D., & Buckley, N., (2015). *Strategy Not, Technology, Drives Digital Transformation*.
- Mennecke, B., Roche, E. M., Bray, D. A., Konsynski, B., Lester, J., Rowe, M., & Townsend, A. M., (2007). *Second Life and Other Virtual Worlds: A Roadmap for Research*. 28th International Conference on Information Systems (ICIS). Available at SSRN: <https://ssrn.com/abstract=1021441> (Accessed on 28 August 2019).
- Miller, S., (2016). *Why Digital Transformation is the Great Accelerator for SMEs*.
- Montanye, J. A., (2006). Entrepreneurship. *The Independent Review*, 10(4), 547–569.
- Nuti, B., (2017). *Helping Entrepreneurs and Small Businesses Make the Digital Transformation*.
- Susarla, A., Oh, J. H., & Tan, Y., (2012). Social networks and the diffusion of user-generated content: Evidence from YouTube. *Information Systems Research*, 23(1), 23.
- Uddin, M. R., & Bose, T. K., (2012). *Determinants of Entrepreneurial Intention of Business Students in Bangladesh* (Vol. 7, No. 24).
- Zhao, F., & Collier, A., (2016). *Digital Entrepreneurship: Research and Practice*.

5 Managing the digital transformation of an organisation

Tim Griggs, Marie Griffiths and Gordon Fletcher

Preface

In order to successfully introduce strategic transformation into an organisation, a structured and systematic approach to organisational change is required. HINGE planning, which describes an iterative process of Horizon Scanning, Internal Audit, New Business Models, Gap Analysis and Evaluation, is presented in this chapter as a tool for practically managing change as part of an organisation's digital transformation. Drawing on the combined experiences of the editors and authors of this chapter, the approach acknowledges the constraints within which all organisations operate and the need for organisational fluidity in order to keep pace with external changes. HINGE offers a phased approach to digital transformation that incorporates continuous development and multiple iterations. We further evidence the benefits of the HINGE approach with a case study from the lead author's own organisation. The lead author of this chapter is Tim Griggs, Associate Director of Arup, who leads its Advanced Digital Engineering group across the north of the UK. Arup, like many organisations, is currently in the throes of its digital transformation 'journey', and Tim is best placed in offering his insight, war stories and lessons learned.

5.1 Change

The lessons learned so far from previous chapters is that change is an inevitable and a constant aspect of all organisational activities. There is also the realisation that invariably some competitors are always in some way ahead of your own current situation. There is also an inevitable legacy within the organisation that may be seen as a handbrake on future progress and on bringing the types of change that the organisation wants to realise. A further tension can often be found within an organisation, as senior management's desire for strategic change can be at odds with more grassroots pressures for short-term improvements (Dodd & Favra 2006). This internal tension for change can itself be the greatest barrier to realising a change that everybody wants (Gunduz & Semercisz 2012). With this general combination of challenges the key question is how to positively manage the organisation to take forward their digital transformation and – as a further benefit and additional challenge – to introduce a culture of innovating. It may also be worth highlighting at this point that these tensions and challenges to digitally transform are not saved for the larger or mid-sized businesses but can be felt in smaller organisations as well.

Chapter 1 highlighted the importance of organisational alignment around the key focus of its mission and vision. The importance of emphasising the existing qualities found inside the organisation also supports the creation of a more holistic alignment. Central

to managing digital transformation and the organisation itself is the need to recognise and adhere to the value being expressed by this alignment through all types of strategic decision-making but most importantly with the most difficult of decisions. Beyond the adherence of a central mission and vision, everything else within the organisation should be open to consideration and change.

Many of the high-profile examples used throughout this book come from organisations that have failed to keep pace with digital transformation in their own sectors such as Kodak, HMV and many High Street retailers. These are also examples of organisations that were not open to the possibility of comprehensive internal organisational process, cultural and or structural change.

Acknowledging that change is constant and accelerating within the external VUCA world, Bennet and Lemoine (2014) emphasise the need for actions and projects that are tightly scoped, employ SMART (Specific, Measurable, Acceptable, Realistic and Time-bound) objectives and have shorter timelines. The implied urgency that comes with this approach is challenging to some organisations where the need to complete an objective in the 'right' way is a quality that is at the core to their culture (Hansen et al. 2011). Even when employing SMART objectives sometimes getting it 'right' needs to be of lesser importance to an approach that is focused on delivering a 'rapid' response. In the context of digital transformation, we suggest, a more appropriate definition for the 'A' in the SMART acronym is 'agreed' and 'R' is 'rapid' in the sense of having shared agreement and organisational alignment within the transformation project coupled with a sense of urgency to move projects along.

With the wide combination of pressures weighing on the organisation there is a risk that not recognising which task to do first will effectively neutralise everyone into inaction. HINGE is introduced here as a method of planning action that takes stated strategic goals and, through the internalising of external stimulus, produces actionable objectives. Taking this approach also supports the creation of an innovating organisation looking forward, that is permeable to ideas and that is changeable in ways that can meet shifting demands and needs. HINGE enables the setting of SMART objectives for specific transformational actions that operationalise the organisation's strategic goals. We present HINGE as an iterative process to facilitate transformation within an innovating organisation (Heinze et al. 2018)

5.2 HINGE: planning for transformation actions

The HINGE planning model for digital transformation (Figure 5.1) is developed from the collective experience obtained through a range of digital transformation projects and decades of working with technology startups and evolving SMEs. It is no coincidence that the HINGE diagram above is circular – it reconfirms the need for HINGE to be revisited and repeated regularly.

Although the acronym suggests a specific order of activities that itself implies a specific logic, each step may be done in a different order to reflect existing understandings or incomplete actions within a transformation project. Irrespective of the starting point, the actions that are undertaken in a HINGE cycle will take their impetus from a strategic decision. A major challenge facing many organisations going through transformation is the tendency to set out projects with wide scope, lots of deliverables and long deadlines. This tendency reflects a traditional approach to project management that bundles up multiple problems and may be a result of overly vague strategic decisions and objectives.

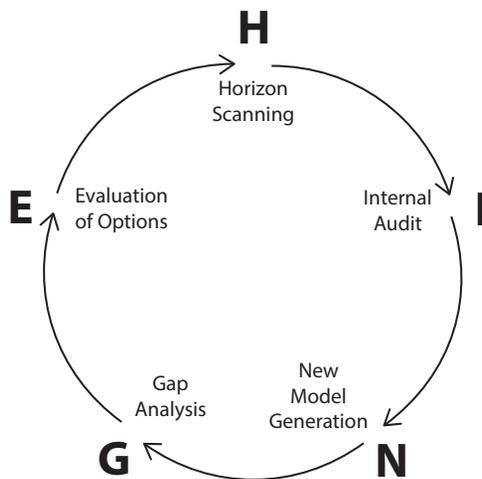


Figure 5.1 HINGE digital transformation model

Source: From Heinze et al. 2018

Large-scale transformation projects mean that while the intended outcome will bring benefit to the organisation, it may have lost some of its relevance over the intervening time-frame. Significant changes to the underlying organisational system will tend to fall into this scale of work. The advantage of HINGE is that the monolithic problem-solving can be broken down into smaller constituent parts and produce a larger number of HINGE cycles that can be potentially realised in parallel as well as producing more immediate quick wins across the organisation (Senge & Sterman 1992).

Strategic goals that are too specific offer less opportunity for internalising external stimulus or significant innovation. However, there may be a place for a small number of rapid HINGE cycles around, for example, the evolution or updating of specific business models within the organisation. This balances the need to maintain ‘business as usual’ against the need to change in order to keep pace with competitors. By utilising a tight HINGE cycle the organisation necessarily looks out into the VUCA world for insight. By maintaining a narrow scope the levels of risk being introduced into the organisation can be managed by setting out achievable activities that bridge existing gaps.

The strategic decision that works well combines two features. The most useful strategic decision captures a specific direction or change in combination with the broader – and more usual – aspirational desires of the organisation. This approach translates into decisions such as “Increase market share in the Point-of-Sale sector with a new customer-oriented online design tool”, “Reduce overall licensing costs to suppliers by developing a complete digital research tool internally” or “Improve customer retention by offering a one-stop online high quality print service”. These examples are all real strategic decisions that have been defined by SMEs and consequently have shaped projects scoped for delivery over a two-year period. Drawing these type of goals into the HINGE cycle then provides a way of turning strategy into tangible actions and projects.

The steps in the HINGE cycle are:

- **Horizon scanning:** Evaluate the external environment – discover what is happening and what is on the horizon
- **Internal audit:** Assess the internal environment – what systems are in place, what skill sets are available, what is working and what can be improved
- **New models:** Define new business models by leveraging improved levels of digital maturity
- **Gap analysis:** Evaluate the current and future state of the organisation with specific emphasis on your data, people and skills
- **Evaluation of options:** Testing and evaluating the different options available

The outcome of a HINGE cycle is the selection of one option for action that brings the strategic decision closer to being achieved.

5.3 Arup's digital transformation – a case study

Arup is an international firm of engineers, designers and consultants that has helped shaped the built environment for over 70 years. This contribution has been evident in challenging and complex projects that demand the highest level of problem solving and engineering skill. In many senses the company are pioneers of their craft, right back to solving the complex structural engineering challenges of the Sydney Opera House using computer modelling for the first time. But in many senses, they remain a traditional engineering firm, and a walk through any Arup office worldwide would find groups of engineers huddled around whiteboards or large print-outs of their latest project, marking up amendments by hand. Of course, this is a huge generalisation, and much of the work Arup does has already been digitised, but as industries, both engineering and construction lag somewhat behind and have an urgent need to transform, with Arup being no exception.

In 2017 the Arup Group board recognised this challenge, describing it as “an urgent and important task”, and set about developing a global digital transformation strategy, which they released at their annual general meeting (AGM). It was simple and effective and remains the cornerstone of their digital transformation strategy today, but progress has been slower than they had hoped. Their strategy focused on four core goals:

- 1 To automate work
- 2 To become a data-driven organisation
- 3 To develop digital products
- 4 To be the leading digital advisor in the built environment

This was underpinned by a number of groups, councils and leaders tasked with developing and implementing initiatives to deliver these strategic goals. However, after launching the global digital strategy at the AGM in 2017, the transformation programme failed to take off, and a year later (at the 2018 AGM) it was acknowledged that the ‘starter pistol’ had been fired too early and that a number of key organisational changes and realignments needed to happen before the programme could begin in earnest.

5.3.1 Lessons learned

There were a number of key lessons learned through the initial development of the transformation programme, and these lessons have directly informed the programme's onward development. The first lesson was that firing the starter pistol in 2017 with little in the way of an agreed programme of activity or initiatives to immediately follow meant that momentum was lost. The staff had got excited by the initial buzz and potential for transformational change but quickly found other things to occupy their energies. In essence, it was business as usual and digital transformation went from 'an urgent and important task' to 'that thing we were going to do'. Another by-product of firing the pistol too soon was that many parts of the organisation went off in their own direction developing initiatives and programmes at a local level without guidance from the centre, leading to confusion and disharmony. The grassroots transformation initiatives did not always reflect the intentions set out by the overall strategic goals.

These mismatches between grassroots action and organisational goals also tapped into another lesson learned. By their very nature, Arupians are inquisitive, technically capable and highly skilled, with an ability to pick up new things very quickly. As such many fell into one of two camps in their response to the digital transformation strategy – either 'it doesn't apply to my specialist area' or 'I'm already doing it'. The strategy was proving itself to be essentially a people challenge. With the hearts and minds of many still to be convinced, winning them over became the most urgent and important task. Understanding the importance of the strategy was not just because the board had said it was a priority. For one camp it was the need to realise that digital transformation was already far more than an ill-defined existential threat in their area of operations. For the other camp, it was discovering that they needed help doing it better, faster or more efficiently – with greater strategic alignment.

What Arup had failed to do was sufficiently articulate the opportunities for digital transformation – new business models, agility, immersive outcomes, automation of process-heavy tasks, freedom to focus on creativity and more. But the organisation had also not created the burning platform in that failing to adapt could potentially make the firm irrelevant, or worse, redundant in the modern world. There was also a need for understanding context within different parts of the organisation. Communicating these push and pull factors required different mixtures for different audiences.

A further lesson learned was that in order to think differently, different perspectives are needed. Of course, in transforming a highly successful firm like Arup, the senior leaders that enabled that success have a key role to play. But often fresh thinking from outside is needed to help articulate the reasons for transforming and to develop the initiatives needed to deliver the change. This was recognised in 2018, and a number of key strategic hires were brought into Arup. The commitment to valuing this external perspective was underpinned by a newly formed and dedicated group whose full-time roles were to deliver the global transformation programme, sponsored by board-members in each region, with buy-in from business and office leaders in each Arup office across the firm. By bringing in fresh and respected industry leaders with a dedicated remit to digitally transform the firm, the new Arupians were better able to articulate the need to change and show what has been successful elsewhere. With the sharing of new ideas and thinking the new team began to get the buy-in they needed to transform the firm.

A final but key observation from this process is that scratching beneath the surface of an organisation often reveals that digital transformation is already happening at a grassroots

level, despite it not being formalised. In the absence of any direction from the centre, Arup engineers had begun to figure out the answers for themselves. Across the globe, staff began to teach themselves to code, they sought internal funding to try new software and new techniques for solving problems, and they were being supported by their leaders. These early approaches were inevitably somewhat piecemeal and un-coordinated, but the global digital strategy launched in 2017 gave staff the permission to try new things and to start to transform in their own way and at their own pace, with some success. These many starting points were an unintended consequence of not launching a fully defined mature transformation programme. With hindsight there has been benefit in allowing staff to find their own way, and new pockets of digital activity, transformation and best practices are being identified across the firm.

5.4 Learning from the Arup experience

Digital transformation is essentially firstly a people challenge – it requires that people are on board with the need to change. Communicating this need to change will be based around a combination of push and pull factors that are specific to each organisation (Sanchez 2018). Different rates of development within the organisation will also mean that the messages communicating the need to change must match their audience. Pull messages emphasising the benefits of strategic transformation are going to appeal to more digitally mature audiences. Push messages may be needed to challenge the thinking of less digitally mature audience. A mixture of push and pull message are needed to explain the proposed change.

People are also key to gaining momentum for the strategy, otherwise it may fail to get off the ground. The wider the extent of the practice and thinking around digital transformation across the organisation the greater the opportunities that will be possible. Grassroots change should be encouraged where it can align with overall strategic direction of the organisation as a way of empowering people while also enabling them to focus on actions that produce high-value productivity. As more people recognise the benefits of transformation, the faster those aspects of the transformation will become business as usual.

Communicating the thinking, direction and purpose that underlies transformation is important. A significant challenge for any organisation – but particularly medium and large organisations – is to create an environment in which the strategic direction of the organisation is understood and, hopefully, shared. This also relates to the increasing expectations among younger employees that their organisation will act ethically and transparently. Sharing and continuing to discuss a vision for change is a key part of this thinking.

Scratching beneath the surface of the organisation's activities may reveal more grassroots digital activity and change. This is particularly in organisations like Arup where inquisitive and technically capable staff always look to push the boundaries of the specialisms. As a result it may not take much to pull these parts of the organisation towards a new digital future. But this fostering of pockets of digital excellence should be undertaken cautiously in order to ensure that those with the essential skills and breadth of experience are being brought along with the overall strategic direction of the organisation.

The people of the organisation are also a consideration when the need for external insight is recognised. Arup's approach was to hire new senior people into roles specifically relating to digital transformation. Other options could also be considered, including the use of graduate recruitment to bring new ideas into the organisation. Working more closely with other organisations including universities can bring the development of closer

working relationships that incorporate knowledge transfer in combination with graduate recruitment. Some organisations make use of external consultants to bring in new ideas and concepts. The cost of using consultants generally prevents this option from being used in most startups or small businesses.

The HINGE planning model offers a mechanism for obtaining understanding of external changes and development by systematically bringing this insight into the organisation within the specific context of operationalising strategic goals. An organisation that can gain early efficiencies by automating existing tasks has the capacity to deploy existing employees with the tasks relating to HINGE, including the externally facing horizon-scanning task.

Key takeaways

- Managing digital transformation within an organisation is firstly and primarily a people challenge
- Multiple push and pull factors exist within every sector for doing strategic digital transformation
- Communicating the purpose of the transformation is key to its success
- The messages being communicated should vary between audiences
- Do not transform your current business processes, look forward
- A shared vision: digital transformation must be strategic and aligned across the organisation
- Grassroots transformation should be encouraged when it aligns with overall strategy
- Projects should be managed through short cycles with highly defined, quickly delivered outcomes that bring value to the organisation
- Consider the 'A' in the SMART acronym as 'agreed' to ensure a harmonised shared agreement and organisational alignment within the transformation project

References

- Bennet, N., & Lemoine, J. (2014) "What a difference a word makes: Understanding threats to performance in a VUCA world", *Business Horizons*, 57(3), 311–317, <https://doi.org/10.1016/j.bushor.2014.01.001>
- Dodd, D., & Favora, K. (2006) "Managing the right tension", *Harvard Business Review*, Dec, <https://hbr.org/2006/12/managing-the-right-tension>
- Gunduz, E., & Semercisz, F. (2012) "The relationship between competitive tension and strategic innovation", *Procedia – Social and Behavioral Sciences*, 58, 29–30, Oct, <https://doi.org/10.1016/j.sbspro.2012.09.975>
- Hansen, M., Pernille, A., Pernille, K., & Lars, L. (2011) "Rapid adaptation in digital transformation: A participatory process for engaging IS and business leaders", *MIS Quarterly Executive*, 10.
- Heinze, A., Griffiths, M., Fenton, A., & Fletcher, G. (2018) "Knowledge exchange partnership leads to digital transformation at Hydro-X Water Treatment, Ltd", *Global Business and Organizational Excellence*, 37(4), 6–13.
- Sanchez, P. (2018) "The secret of leading organizational change is empathy", *Harvard Business Review*, December, <https://hbr.org/2018/12/the-secret-to-leading-organizational-change-is-empathy>
- Senge, P., & Sterman, D. (1992) "Systems thinking and organizational learning: Acting locally and thinking globally in the organization of the future", *European Journal of Operational Research*, 59(1), 137–150.