

Chapter 7

Towards a Business Case for Responsible Innovation



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Abstract There is still work to be done in conceptualizing how responsible innovation applies to business. Lessons can be drawn from adjacent fields of inquiry such as sustainability-oriented or social innovation. However, the central challenge of developing a business case for responsible innovation requires additional insights into how responsible innovation may support companies in generating competitive advantage, and what levers can be effectively employed to engage business. This final chapter summarises the most important lessons learned from the contributions to this volume. Based on these insights, the authors develop the outlines of a business case for responsible innovation. In doing so, they show that responsibility and innovation can mutually strengthen each other. Such a synergy between responsibility and innovation may help to maintain trust in business' ability to drive desirable social change while improving innovation performance.

Keywords Responsible innovation · Business case · Corporate responsibility · Competitive advantage

7.1 Introduction

In the broadest sense, the purpose of a business case is to make relevant decision-makers aware of a new business opportunity, educate them as to how an organization can seize this opportunity, and justify the costs and potential risks of taking action against the benefits to be expected. A compelling business case also needs to present a range of options, with reasons for rejecting or carrying forward each proposed option. As such, a business case is necessarily also a platform for deliberation on the merits of both the business opportunity presented and the options

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proposed for seizing the opportunity. This chapter proposes this kind of business case for responsible innovation (RI) as food for thought to practitioners and academics alike. As such, this chapter strives to provide a framework for readers to reflect on how the concept of responsible innovation applies to their day-to-day practice.

We first summarise key lessons learned from the chapters in this volume and develop the foundations of RI in a business context. Building on these insights, we elaborate on RI as a business opportunity. We then propose six distinct but mutually supportive pathways for leveraging RI to ensure a social license to operate, maintain consumer trust, secure competitive advantage, enhance innovation performance, and build capacity within organizations. We conclude by highlighting open questions and presenting a glimpse of the road ahead towards a business case for responsible innovation.

7.2 Foundations of a Business Case for Responsible Innovation

The chapters in this volume illustrate that RI is emerging as a new field in the continuing discourse on the role and responsibility of business in society (Martinuzzi et al. 2018). It has the potential to advance this discourse in light of two key competitive factors: innovativeness in the context of an increasingly intensive race for the “next big thing”, and trust (of customers, employees, investors and other stakeholders) in business. The first relates to the accelerating race to innovate in order to stay competitive in a rapidly changing world (Stata 1994; Schwab op. 2016). The second concerns the need to maintain public trust through innovations that generate social value in addition to economic returns (Pirson et al. 2017; Lewicki et al. 1998). Both aspects are equally important in developing a business case for RI.

The concept of RI is embedded in an ongoing debate on the broader responsibility of business towards society and the environment (Bansal and Song 2017; Carroll 2015). Concurrently, it relates corporate responsibility (CR) to one of the core functions of many companies: innovation is for many a key requirement to stay competitive in light of ongoing digitalization, globalization and rapidly changing markets (Crossan and Apaydin 2010; Mone et al. 1998; Dess and Picken 2000). Eight of the ten most valuable publicly traded firms in the world in 2018 were technology companies, with a combined market value of over US\$5trn (Forbes 2018). At the same time, especially innovation-intensive and technology companies face increasing expectations that they will contribute to coping with the technological, social and political impacts generated by their innovations. For instance, Youtube, Facebook and other platforms are part of a controversial and continuous social debate as to whether and to what extent they should assume responsibility for the contents their users publish on their platforms (The Economist 2018; The Guardian 2017).

Concurrently, Google is under continuous pressure to demonstrate what their company credo, “Don’t be evil”, means in practice, and whether it is socially and ethically acceptable to provide an adapted search engine for the Chinese market that leverages their technological know-how but may enable illiberal governments to monitor what information their citizens can access (Bloomberg Businessweek 2018; Fortune Magazine 2018).

The current speed of innovation goes hand in hand with a general drop in trust in societal institutions such as governments and media, but also companies (Pirson et al. 2019). This leads many people to be wary of new technologies. With the fall of trust, many now lack full belief that the overall system is working for them. In this climate, people’s societal and economic concerns, including globalization, the pace of innovation and eroding social values, turn into fears, spurring the rise of populist actions, on the one hand, and anti-business sentiment, on the other hand (Gardels and Berggruen 2017). For instance, the Edelman Trust Barometer (2017), an annual survey of more than 33,000 respondents across 28 countries, revealed that 51% of respondents were concerned about the pace of innovation and 22% expressed fear that technological innovations were happening too quickly and leading to changes that were not good for them. In this context, about two thirds of respondents did not believe information shared by the CEOs of companies was credible, and expected business to lead through action rather than words. In this vein, 75% of respondents agreed that companies can and should take specific actions that both increase profits and improve the economic and social conditions in the community where they operate (Edelman 2017). That is, companies are expected to create shared value (Porter and Kramer 2011) and take on responsibility beyond the boundaries of their organization that is commensurate with the power they wield over consumers’ lives. In light of this “techlash” (a combination term used to designate a societal backlash against technology), companies are increasingly called upon to take measures to ensure that the benefits of innovation are not overtaken by detrimental social and environmental impacts (Voegtlin and Scherer 2017). While the chapters in this volume have shown that there is still considerable debate about the exact nature of such measures, there is a consensus that they should refer both to the innovation process (how companies innovate), and its marketable results (products, services and business model innovations) (Lubberink et al. 2017; Stilgoe et al. 2013).

The issues raised above are not mundane questions. What is more, these questions also apply to Small and Medium Sized Enterprises (SMEs), especially in highly innovative sectors (Halme and Korpela 2014; Auer and Jarmai 2018). The cases of Yoti and AppNps, presented in Chaps. 2 and 6 of this volume, aptly show that innovations originating in SMEs also engender new concerns, e.g. in relation to data privacy, or the potential long-term toxicity of new materials. These cases also illustrate how SMEs that leverage new technologies to provide new services can cope with these challenges to ensure that their innovations ultimately improve people’s lives.

Companies need not start from scratch on the journey towards embedding RI (van de Poel et al. 2017). The discourse on responsible business is mature, and many instruments are already available to companies for discharging their responsibility towards society (Iatridis and Schroeder 2016). RI can draw on more than three decades of experience with practices such as sustainability reporting (Hahn and Kühnen 2013), technology assessment (Grunwald 2014), human-centered design (Buchanan 2001), open innovation (Bogers and West 2012) and many others. Chaps. 3 and 4 of this volume show how RI can leverage the thinking and instruments developed in adjacent areas, notably sustainability-oriented innovation and social innovation (also see Lubberink et al. 2017). Chap. 3 shows how the focus on designing for sustainability and anticipating impacts can inform RI in SMEs, and Chap. 4 highlights the potential of collaborative interactions between innovative companies and communities. Both chapters present cases where businesses have reconnected with the communities they serve, while becoming more prosperous and successful. Often this leads to both immediate benefits for the business but also sets the framework for a long-term strategy that could potentially initiate and support both social and environmental change (Goodman et al. 2017; Gurzawska et al. 2017).

The fundamentally value-based nature of responsible innovation has been a tenet throughout the book. RI is by definition a normative, values- and purpose-driven concept, which requires the alignment of economic, societal and environmental business goals. As concluded in Chap. 6 of this volume, innovative SMEs have to decide for themselves what they consider as their responsibility towards society, and how much this decision is based on success measured in economic terms. As such, the trail-blazers in the realm of RI (some of them have been presented in this volume) are united in that they acknowledge an intrinsic motivation to engage with RI, going beyond short-term profit generation. Other drivers for engaging with RI may derive from external pressure exerted upon companies (e.g. legal pressure or funding and financing requirements), or mediated through direct stakeholder relationships that firms maintain (e.g. with peers, communities, or consumers). The lesson we learn from this is that the exact configuration of a business case will depend on determining the right fit between the drivers of responsible innovation (see Table 7.1) within the company, the measures it is willing to take, and the authenticity and effectiveness of both in light of the external environment and the relationships that companies engage in (Schaltegger and Wagner 2011; Goodman et al. 2017).

Finally, the individual contributions in this volume have shown the breadth and diversity of the discussions around RI in academia, but also the policy and business sectors. The cases presented in the individual chapters show that implementing RI in day-to-day practice is challenging and requires the continuous identification, combination, and review of instruments available to business for discharging their responsibility (Iatridis and Schroeder 2016; Fisher and Rip 2013). A broader business case will have to acknowledge these challenges. Responsible innovation engenders both costs and benefits. Striving for balance between the two ultimately determines the business case for responsible innovation.

Table 7.1 Drivers of responsible innovation derived from the chapters of this volume

| | Driver | Description |
|---|---|--|
| Internal drivers (= moral standards & economic motivations) | Intrinsic motivation of key individuals | Moral standards of high-level decision-makers within firms, which evolve around the morality of products and services, their effects on human beings and social issues within global value chains |
| | Economic motivation of key individuals | Perceived instrumental value of RI for generating added value for the company through a range of aspects such as risk reduction, cost efficiency, reputational effects, market differentiation or market development |
| External drivers (= external context factors) | Cultural setting | Ethical and belief systems prevalent in specific regions, communities and/or countries |
| | Legal frameworks | Regulations pertaining to innovation processes and outcomes (particularly in highly regulated industries, such as healthcare) |
| | Funding and financing requirements | Inclusion of RI criteria in relevant public funding programmes or as a basis for obtaining finance |
| Relational drivers (= stakeholder relations & public relations) | Social license to operate | Maintenance of the ongoing acceptance of companies, their innovations and practices by its stakeholders as well as the general public |
| | Best practice | Implementation of generally accepted operating procedures for innovation management in a given sectoral or industry context |
| | Reputation | Maintenance of a generally positive public perception of the financial, social and environmental impacts attributed to the company over time |

7.3 Leveraging Responsible Innovation to Create Business Opportunities

Companies already successfully engage with many practices that fall under this umbrella term. However, these practices are frequently disjointed, distributed across business functions or unconnected to the core of innovation within companies (Lubberink et al. 2017). RI is an opportunity for companies to integrate these elements and practices in a coherent framework for better management of innovation processes and better results, for the mutual benefit of companies, society and the environment (Stilgoe et al. 2013). The potential business benefits of engaging with RI are many, and include enhanced trust, creativity, openness to new business opportunities beyond the boundaries of the company, and improved capacity for engaging with peers, consumers and communities, as well as reduction of risk and uncertainty in increasingly fast-paced innovation cycles. Chaps. 5 and 6 of this volume illustrate concrete cases of how RI can help companies realize these benefits and thereby turn responsible innovation from ‘a drain on company resources’ into ‘competitive advantage’.

Drawing on these specific cases, we outline six pathways that companies may leverage to pursue business opportunities in the spirit of RI. This includes capacity building as prerequisite for leveraging RI, respect for ethical limitations, an inclusive approach to innovation, the careful balancing of interests, anticipation of (potential) impacts, as well as broadening one’s perspective to consider systems dynamics which affect and are affected by the company.

7.3.1 Capacity Building for Responsible Innovation

Responsible innovation requires building up new skills and capacities within companies. In many cases, it can also mean linking and combining the capacity already present within different parts of a company. Especially at the beginning of their responsible innovation journey, managers need to be clear as to the purpose and motivation behind engaging with RI practice in order to limit complexity and clearly identify learning opportunities. In this vein, it is useful to consider whether companies wish to leverage RI to review and improve their internal processes towards achieving their goals, i.e. internal orientation, or whether they wish to respond to expectations held by stakeholders and the general public, i.e. external orientation (see Fig. 7.1).

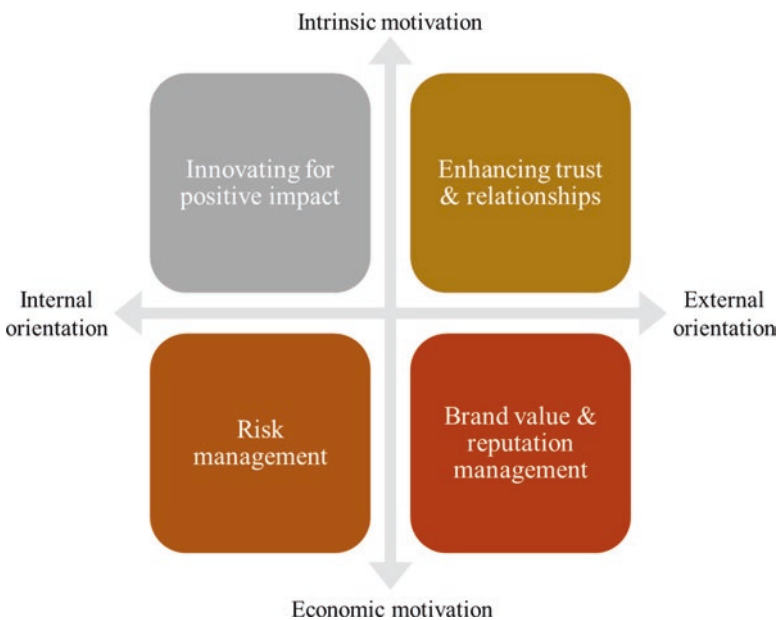


Fig. 7.1 Business objectives related to RI in light of motivation and orientation of the organisation

Where the motivation to engage with RI derives from intrinsic moral convictions, the achievement of company objectives is tied to optimizing innovation processes to generate solutions that maximize positive societal impacts while minimizing detrimental effects. This is frequently the case for social enterprises pursuing a specific social purpose (see Chap. 3 of this volume). For high-risk or socially contested areas of innovation, RI may be all about enhancing trust and relationships between the company and its stakeholders. For companies with a primarily economic motivation, business opportunities arise from leveraging RI for risk management, and brand value & reputation management. Defining a clear purpose enables companies to pilot RI approaches and learn from the experience.

In addition, companies wishing to engage with RI may want to assess their current practices and policies against RI principles to identify strengths and areas of improvement. Building on the (sometimes tacit) knowledge already present in companies presents a chance to leverage RI for organizational learning. To support such self-assessment processes, the EU-funded COMPASS project has developed a comprehensive self-check tool¹ translating the concept of responsible innovation into concrete corporate practices and policies. This allows for an adaptable judgement of company strengths and weaknesses with regard to RI. Lessons learned from applying the tool are complemented with incentives for continuous improvement, such as positive scoring and alignment to a road mapping method for developing strategy in line with RI.

7.3.2 *Respecting Ethical Constraints*

Many companies feel the pressure to innovate ever faster to stay competitive. For citizens, the speed of development of new products, services, technologies and business models can be overwhelming. Policy makers struggle to provide the frameworks and rules that can maximise the potential of innovation for the common good while effectively dealing with the risks and the ethical concerns they raise. This creates grey areas and uncertainty (Stern 2017).

Ethical frameworks can help deal with this problem by outlining the values, concerns and limitations that research, development and innovation should respect. Ethical constraints can vary in different cultural and legal contexts – ignoring ethical constraints, however, poses the risk of losing social license to operate. This is why, maybe counterintuitively, ethical constraints are good news for innovation. They provide guidance in a space of uncertainty and ensure that new technologies are not only acceptable, but also desirable for society.

Some companies profit from pre-existing sectoral and industry ethical guidelines. However, companies in sectors where such guidelines are not yet established or are insufficient for their purposes need not give up. As the example of the nanotechnology company AppNps (see Chap. 5) illustrates, investing in the creation

¹<https://innovation-compass.eu/selfchecktool>

of ethics guidelines that go above and beyond legal compliance can support employee retention and prevent resistance to innovations in socially contested areas.

7.3.3 *Taking an Inclusive Approach*

Almost all creativity that goes into innovation is geared toward solving problems. Many companies have already learned that diverse teams and diversity in management can be great drivers of creativity, which are better at solving problems than homogeneous ones. When it comes to innovating for users and application areas outside the company, involving those affected can be equally effective in enhancing creative thinking and problem solving. This is illustrated by the example of the smart meter company *ambiact* (see Chap. 5). The case specifically points to cost savings that can be realized through early user involvement, by speeding up the overall process from idea to marketable product.

Concepts like social innovation, open innovation and lead-user innovation have provided methods for leveraging this potential for companies. What RI adds to the equation is the ambition to make involvement inclusive, meaningful and beneficial, not only for the innovators, but also for the diverse stakeholders involved in open and lead-user processes (Bessant 2013). Considering both sides as equally important and striving for true co-creation can help overcome innovation barriers and increase societal acceptance, desirability and accessibility of innovation outcomes. In addition, the inclusion of societal actors outside the immediate target group of innovations may point to completely new application areas for existing technologies or enable the identification of new customer groups that were not previously reached (Heeks et al. 2014).

7.3.4 *Balancing Interests*

A proactive approach to balancing interests is critical for realizing business opportunities from RI for three reasons. First, different groups and individuals may have very different expectations toward innovations and those that develop them. While some may hope to directly benefit and see an improvement of some sort in their life, others may worry about unintended consequences (such as the potential for weaponization of new technologies or potentially harmful long-term effects to health). Second, many societal challenges, such as climate change or social equity, are contested issues, which limits the ability of stakeholders to find common ground when defining what is responsible. When consensus is lacking, ambiguities arise and innovations are likely to encounter a ‘techlash’ rather than societal acceptance. Third, openness and inclusiveness in innovation processes pose new challenges in light of the prevalent conception of innovation, which holds that innovations are rooted in information asymmetries in the market. Companies may therefore have

marked incentives not to engage with stakeholders in sensitive innovation processes. All of these concerns are valid and need to be proactively addressed.

Chap. 6 of this volume illustrates how continuous engagement and dialogue between researchers and cybersecurity companies over an extended period was an important precondition for establishing trust, acceptance, and openness around innovation processes. RI encourages innovators to take both company and stakeholder needs and concerns seriously. This means communicating with partners and stakeholders on equal terms – for instance by explaining technologies-in-use rather than in abstract technical terms. It also means being transparent and accountable about how innovations are created, implemented and scaled. This creates trust and limits the risk of rejection of innovations at a late stage of development or market deployment.

7.3.5 *Anticipating Impacts*

Technology impact assessment is a well-established practice in many companies. However, such assessments are often one-time exercises at a relatively advanced stage of innovation processes, when significant costs have already been incurred. Systematically embedding impact assessment into all stages of the innovation process can help to recognize risks and potentially detrimental impacts at an early stage (Grunwald 2014). The case of carpet manufacturer Mission Zero (see Chap. 5) aptly illustrates how companies can be economically successful while designing for low (or even zero) negative impact.

However, anticipating impacts is not just about avoiding harm but also about actively seeking business opportunities in areas where innovations can do the most good. Involving users and other stakeholders in evaluating potential risks and impacts beyond purely technical concerns is an important part of this (van den Hoven 2013). Failing sooner and earlier in the innovation process can help avoid sunk costs and redirect innovation processes toward those fields where innovators can make a positive contribution to society (Doorn 2013). This idea is at the heart of the following pathway, co-designing systems.

7.3.6 *Co-designing Systems*

Asking the question “Where can the key competences of my company create the most positive impact?” can be a source of inspiration and new business opportunities. Some of the most radical and successful innovations have come from re-designing whole systems, rather than from improving existing products or technologies. The sharing economy, for instance, does not rely on new innovative products but has redefined the way products and services are distributed, consumed, and paid for.

Co-designing innovations at the systems level helps to find holistic solutions for complex problems. Looking beyond the boundaries of a company's core business also opens up new spaces for innovation and can help identify new business opportunities. For instance, the Business and Sustainable Development Commission, a high-level forum of leaders from business as well as other private sector and civil society organizations, has examined economic systems with high potential for transformative innovations with significant societal impact. The report identifies 60 market opportunities related to food and agriculture, cities, energy and materials, as well as health and well-being. The business case for companies to address these areas is strong: at least US\$12 trillion in new business opportunities are expected (Business and Sustainable Development Commission 2017).

Co-designing systems may present the most disruptive approach for a company when following RI, and the co-design of systems is the most challenging pathway included in this chapter, as it requires knowledge of global trends and system dynamics (Stata 1994; Herrera 2015; Business and Sustainable Development Commission 2017). In addition, it requires managers to engage with a much more complex system of relationships and responsibilities, many of them not under the exclusive control of any one company (Voegtlin and Scherer 2017; Schönherr et al. 2017).

7.4 Open Questions and the Road Ahead

This chapter has provided a synthesis of the lessons learned from the individual contributions in this volume, and has developed the outlines of a business case for responsible innovation. However, open questions remain.

There is work to be done to fully appreciate the potential tension between the ethical, social, and environmental mandate of RI and the profit-oriented rationale of micro-economic decision-making. For instance, Chap. 2 of this volume shows that the job of translating the principles of RI into business-relevant language and concrete managerial practice is far from accomplished. Chaps. 5 and 6 allude to potential returns of implementing RI for competitive advantage while also acknowledging that win-win situations are not guaranteed, or even likely to arise in all areas. There are cases where a business case for responsible innovation may not materialise because of marked conflicts between the adoption of RI and commercial interests. The direct and indirect impacts of innovation are difficult to quantify, and economic returns frequently depend on the behaviour of external stakeholders, such as customers, peers, and regulatory bodies. In addition, innovations may become transformative game changers, which may entail societal effects that cannot be foreseen with any certainty.

While the contributions in this volume provide an overview of the breadth of the discourse around RI in a business context, there are significant gaps in what we know about what is required to build a comprehensive business case for responsible innovation. Future research will need to expend some effort on clarifying the impor-

tance of factors such as industry sector, firm size, organizational culture, governance structure, regulatory framework, and others that have been shown to be relevant for embedding responsibility into industry. An examination of such factors in relation to drivers of innovation (see Table 7.1) will require particular attention. A key aspect that needs to be considered when discussing the business case for RI refers to the context that sets incentives and boundaries for company action, not only including regulation and legislation, but also customs and culture, which can shape the way RI is perceived and implemented.

Open questions also remain in light of the shared responsibility between a multitude of actors involved in innovation. Future work might, for instance, examine the interfaces and value chains where industry and societal groups jointly negotiate the meaning of responsibility. The opportunities related to a more networked understanding of RI that goes beyond the focus on individual companies dominating the discourse may help to fully appreciate the potential of a more collaborative approach to RI, and provide new avenues for eliciting how both the costs and benefits can be shared across the actors involved in innovation processes and outcomes as the emerging discussion on a business case for responsible innovation evolves.

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