

Chapter 5

RI – A Drain on Company Resources or a Competitive Advantage?



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Abstract Responsible innovation (RI) is an approach to business that can both incur and save costs. Some company leaders are concerned that it is yet another administrative and financial burden on their commercial operations. Others can see its financial advantages, e.g. avoiding the development of products the market will not accept, or reducing costs through sustainability measures. Building on the corporate responsibility and management advice literature, this chapter indicates a number of areas where RI can create a competitive advantage for SMEs. Real life case studies provide examples of reduced costs, reputational gains, employee retention, faster market entry, access to previously unavailable stakeholders, higher acceptability of end products, and higher innovation potential through diverse employees. Success cannot be guaranteed, but the willingness of an SME to innovate in areas that have positive societal impact in addition to profits can bring business benefits.

Keywords Responsible innovation · Profits · Competitive advantage · Corporate responsibility

5.1 Introduction

There are many reasons to start a business. The UK's 'No. 1 starting a business resource' lists 10. Reason 6 states that: "It can be very profitable" (Akselberg 2018). However, actual survival rates of small businesses are low. In the UK, 40% of small businesses do not survive the first 5 years (Lobel 2016).

One of the main causes of business failures is cash flow problems (ibid). For new businesses, it is therefore essential to use funds wisely. Anything that looks like a cost without a benefit will be avoided, and for good reason; small businesses need

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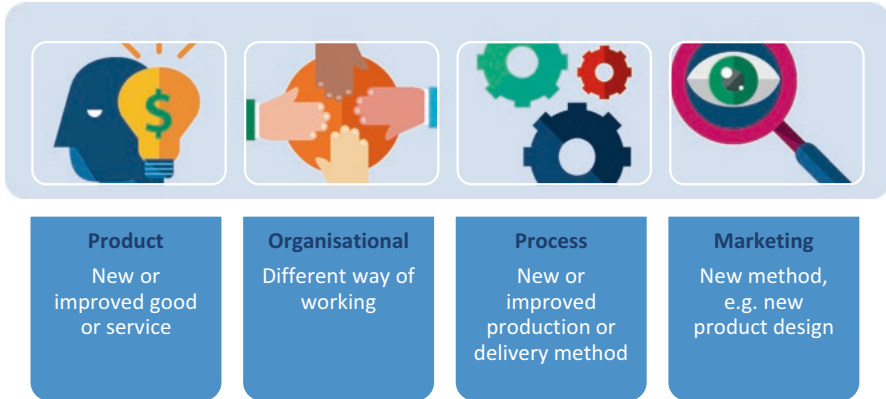


Fig. 5.1 Types of innovation

to concentrate even more than large corporations on spending money thriftily to avoid the cash flow trap.

Is the approach of Responsible Innovation (RI) a good business investment? As noted in previous chapters, RI invites researchers and innovators to engage with society to identify social and ethical impacts of the technologies they are developing, as well as to contribute innovative solutions to societal needs.

RI only applies to innovator companies. This means that RI will not be relevant for about half of European businesses. According to the latest Eurostat innovation statistics (Eurostat 2017), 49.1% of businesses reported innovation activity in the relevant period (2012–2014). The highest innovation levels were observed in Germany (67.0% of all enterprises), and the lowest in Romania (12.8%).

Four types of innovations are distinguished in these European statistics: product innovation, organisational innovation, process innovation and marketing innovation (see Fig. 5.1 and Sect. 2.2 in Chap. 2 of this book).

The following will introduce case study examples for each innovation type, which show how the application of RI principles can lead to a competitive advantage (either through savings or additional profits).

5.2 Product Innovation and RI

Innovative products is a term which can be used for both goods and services. Products have to be either entirely new to the market or a significant improvement on an earlier version. Typical examples of innovative goods are food, books, refrigerators, cars, computers, or fashion items. Typical examples of innovative services are flights, hotel nights, education, physiotherapy treatment or accountancy advice.

One can already see that innovation will be easier in some areas (e.g. cars) than in others (e.g. books). To provide focus for our question (is RI a good business investment?), it pays to ask about what happens in *irresponsible* innovation and the consequent impact on business.

Irresponsible innovation produces new products without due care for detrimental consequences:

Our history is littered with the unintended consequences of innovations from destruction of stratospheric ozone by chlorofluorocarbons, to birth defects associated with thalidomide and mesothelioma associated with asbestos inhalation, to the near collapse of the global financial system in 2008, in which the innovation of complex financial products, such as the ‘toxic’ collateralized debt obligations... played no small part (Owen et al. 2013a).

As can be seen from this quote, innovation with highly detrimental consequences can occur both in goods (e.g. pharmaceutical products) *and* in services (e.g. finance). For example, as a result of the tragic birth defects and unnecessary deaths caused by the thalidomide disaster in many countries in the 1950s and 1960s, new rules for pharmaceutical testing and registration were issued, i.e. new responsibilities were added to existing procedures. This did not avoid the compensation payments required from the relevant companies, nor the massive reputational losses worldwide.

The near collapse of the global financial system in 2008 also had major detrimental effects on the industry worldwide. “Consumer trust in the sector plunged ... [and] extensive regulation designed to clamp down on opaque investment banking practices, [hit] profits and [caused] a number of lenders to retreat from the sector”(Dunkley 2015).

Companies will want to avoid loss of life or well-being caused by product innovations for ethical reasons, but also for reasons of profitability. A promising angle for presenting the competitive advantages of applying RI is therefore the context of *risky* new goods or services. Risky can mean that disasters might occur, as in the above infamous scenarios, or it can mean that the product or service will not gain the trust of consumers and will therefore not be in demand, or may not receive official approval. An often cited example for the latter is the Dutch government’s effort to move all patients’ health records to an electronic system, an effort which was abandoned in 2011 due to major privacy concerns among citizens. At this point, 300 million Euros had already been invested (von Schomberg 2013). Whilst this failed investment will have been carried by the tax payer, a bad investment in an SME can reduce its survival chances significantly, given that one of the main causes of business failures is cash flow problems, as noted earlier. At the same time, Forbes count *lack* of investment as one of five reasons for businesses losing money (Kappel 2017). Hence, a balance between the two has to be found.

In this section the example of a technology perceived as risky is nanotechnology. The short case study will high-light a company, which invests in research and innovation whilst trying to reduce the chances that the market will reject the investment.

5.2.1 *Product Innovation and RI in Nanotechnology*

Nanotechnology is an enabling technology that has high rates of disapproval and distrust amongst the general public. Studies have found that the potential dangers of the technology are seen to override the potential benefits by many members of the public; in other words, according to a considerable section of the public, the technology has more disadvantages than advantages (Peter D. Hart Research Associates 2009). Using the food sector as an example, Vandermoere et al. (2011) write:

In spite of great expectations about the potential of nanotechnology, this study shows that people are rather ambiguous and pessimistic about nanotechnology applications in the food domain.

As the European discussion around biotechnology has shown, high rates of pessimism cannot be aligned with commercially profitable product development using new technologies. For instance, the Court of Justice (2018) of the European Union ruled in July 2018 that organisms modified through new gene-editing tools are considered to be genetically modified and therefore fall under the 2001 GMO Directive). As a result, investment in gene editing and its product will be constrained in Europe.

Researchers and innovators have repeatedly expressed a concern that Europe will lag behind the United States and China in biotechnology developments, most recently after the ruling of the EU Court of Justice (Perets 2018).

The following section describes the case of a science-based spin off company, and its attempts to gain the public's trust for a nanotechnology product.

5.2.2 *Nanotechnology Company applying RI*

Responsible innovation in a business context (cross-ref to Chap. 2) introduced the company Applied Nanoparticles SL (AppNps) (Busquets-Fité et al. 2017) to readers of this book. AppNps main business is the commercial exploitation of a patent named BioGAS+. BioGAS+ uses iron nanoparticles to optimize anaerobic digestion processes. When added to organic waste it can increase the production of biogas. Renewable biogas can be used as a replacement for non-renewable natural gas and thereby contribute to sustainable energy use.

In contrast with genetically modified organisms, there are no specific regulations for nanotechnologies or nanomaterials at the European level. They fall under various other categories, for instance, Cosmetic Products, Novel Foods, or Medical Devices (EU Science Hub 2017). A *Code of Conduct for Responsible Nanosciences and Nanotechnologies Research* provides non-legally binding guidance (European Commission 2009).

AppNps decided to be pro-active about this legal uncertainty and focus on risk avoidance, which means employing safety by design approaches. According to several shareholders of AppNps:

It is well known that there are no specific regulations for nanotechnologies or nanomaterials at EU level. Instead, the manufacture, use and disposal of nanomaterials are covered, at least in principle, by a complex set of existing regulatory regimes... The consequence of this ... is legal uncertainty. In the current legal framework and social context, companies need to develop safe and sustainable nanomaterials, and applying RI principles is the best way we found to achieve it (Busquets-Fité et al. 2017).

5.2.2.1 What Does That Mean in Practice?

AppNps has developed a vision which is supported by a tailor-made Code of Conduct. The Code includes articles about worker health and safety, as well as innovative articles, for instance about the relationship with suppliers, customers and society. Through continued engagement with relevant stakeholders, facilitated by the regular, transparent disclosure of information, the company anticipates providing a product that meets society's needs whilst generating a profit.

One problem AppNps shareholders have noticed with the diffusion of RI is that:

[E]stablished professionals often ... think that they are already 'responsible', and look at this [RI] movement with sympathy and condescendence, while young nanotechnology scientists ... are more eager to adopt a responsible approach and realize that technology is never value-neutral, but always value-laden. They accept their moral responsibility (to critically reflect on the wider socio-ethical context of their work), and are thus ready to understand RI as a political tool. They only need the proper innovation environment (ibid.).

The AppNps shareholders believe that education of young scientists is the key to bringing RI into companies. The company is involved in educational efforts through their participation in EU-funded projects and writing up its experiences as, for example, in the case study summarized here.

5.2.2.2 Are Benefits in Evidence?

The 13 shareholders of the company believe that their vision, which incorporates a commitment to RI, helps them retain talented employees who might otherwise be easily head-hunted. The vision of the company is to make use of the opportunities that nanotechnology presents to generate wealth, but to pay special attention to sustainability and the minimization of deleterious side effects at the same time.

Responsible conduct of business operations is a theme that management consultancies increasingly promote for talent recruitment and retention. Forbes calls corporate social responsibility an underutilized asset:

Beyond benefits, compensation and work-life balance, there's an underutilized asset called corporate social responsibility, or CSR, that can attract and keep employees engaged at your company (Hattar 2018).

Deloitte believes that positive corporate impact, i.e. making the world a better place, can help recruit talented employees:

As employees increasingly look for meaning and social impact in their corporate jobs, companies are seeking—and finding—ways to link talent development and rewarding, purpose-driven work, for both employee engagement and competitive advantage (Eggers et al. 2015).

AppNps can already state with confidence that an RI-linked approach to business helps retain talented employees. The company also hopes to gain the public’s trust for its nanotechnology product through transparent information channels and public engagement. To date, it has not experienced resistance to the nanotechnology product BioGAS+.

5.3 Organisational Innovation and RI

Organisational changes involve different ways of working, for instance with new groups. Two organisational innovations will be introduced here, one leading to a product which has high appeal to the consumer through a university endorsement, and one which allows SMEs to adhere better to government requirements for stakeholder inclusion.

5.3.1 Collaborative Design for Biomechanical Devices

Universities are locations where cutting-edge research is undertaken. From the first-carbon positive houses to world-leading security systems for airports (*The Telegraph* n.d.), the groundwork and occasionally the implementation of many innovations is carried out by universities. At the same time, universities often suffer from a lack of impact of their ground-breaking research. In medicine, this implementation gap is described as the complex road from bench to bedside (Goldblatt and Lee 2010).

The term ‘translational research’ was created mostly by research funders to emphasize that even the best research has no impact on society if the theoretical know-how cannot be *translated* into helpful products and services (Woolf 2008). Universities have implemented various mechanisms to support start-ups, both within the institution (Houser 2014) and in the surrounding communities. One example is given in Box 5.1.

Earlier RI analysis involving SMEs have emphasized the importance of inclusion and end-user involvement (Stahl et al. 2017). If prospective end users are involved in product development, products can reach the market earlier and with higher acceptance levels, as shown in the success story of the ambiact presented in Box 5.2.

Box 5.1: Universities supporting start-ups – Northern lights, now propeller (<https://propellerhub.co.uk/>)

Northern lights/propeller is an enterprise incubator at the University of Central Lancashire. It started its operations in 2006 and has gone from strength to strength.

In 2013, Prime Minister David Cameron visited to meet young entrepreneurs and take part in a question and answer session with business people. He also announced a financial boost to the Government's Start-Up Loans scheme, which benefited the funding available through Northern Lights (UCLan Cyprus 2013).

In 2015, the Northern Lights Business Incubation Unit was awarded the title of Best Business Enabler of the Year at this year's Lancashire Business Awards (UCLan 2015).

The main offers of northern lights, now propeller, for early-stage innovators are 24/7 office facilities, sector-specific mentoring programs, links to local and national businesses, partnering events, financial and legal advice and the creative innovation zone (<https://www.uclanfcci.co.uk/creative-innovation-zone.html>).

Box 5.2: An RI success story – The ambiact (Frenken et al, 2018)

The ambiact is a smart meter for social alarm systems. It is designed as a plug-adaptor and can be placed between the power outlet and any commonly-used appliance, such as a television, radio, or kettle. If not used for an unusually long time for the individual at risk, as previously defined, an alarm is raised. The developers of the ambiact included end-users throughout the entire design process in a co-design approach. Once the product had entered the market, they concluded:

Early engagement of stakeholders saves on costs: The engagement of future customers into the development process, starting during the initial idea phase and ending with cooperative product design, saved costs and time. The prototype itself was developed by adhering to acceptability factors for the customers. The continuous interviews during the field trials helped to identify potential problems, including around visual acceptability/impact of the product. Overall, the ambiact was developed from an initial idea to the final product in only three years with the involvement of a “work force” of volunteer end-users.

Fig. 5.2 Rehab Angel

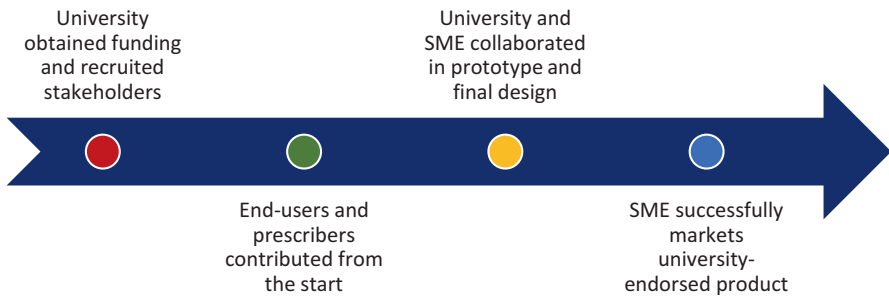


Fig. 5.3 Stakeholders involved in the Rehab Angel development

The case discussed here involves the co-operation of four stakeholder groups to create the Rehab Angel, an angled device used mostly for knee rehabilitation purposes (see Fig. 5.2). The inclusion of all stakeholders, including an SME, in product innovation led to benefits for all, which would have been much more difficult to achieve for each partner individually (Richards 2017).

The development of the Rehab Angel in the UK involved university researchers, an SME, end-users with knee problems as well as prescribers (e.g. physiotherapists). In combination these four groups achieved a result which was university-endorsed, yet business-marketed.

In an initial study, the university researchers identified a lack of evidence of the exact nature and ‘dosage angle’ of interventions used by clinicians. They then explored the use of squatting using decline boards and aimed to determine the optimum angle and the most effective regimen (Richards et al. 2008). As a result of initial publications, they were able to obtain prototype funding and recruit stakeholders, in particular end-users and prescribers, to the project. The SME joined the development early on and benefitted from the exposure to academic research.

This collaboration removed many of the latent issues around the innovation pathway, since key knowledge holders and product production systems were brought into the delivery of the project from the outset, see Fig. 5.3. At the end of the development circle, the SME was able to market the product successfully.

The benefits, including the commercial benefits, of this new collaborative way of working (through organisational innovation) are as follows.

The SME gained:

- access to cutting-edge scientific knowledge in their area of operations
- access to end-users who trusted the university's procedures to ensure safe studies with users
- university reports and independent peer reviewed papers to allow evidence-based marketing of the product

The university gained:

- societal impact, given that the SME successfully marketed the researched product, a new requirement for researchers at UK universities (Hefce 2014)
- the satisfaction that their ground-breaking research work will benefit patients
- new sources of co-funding through SME involvement in university activities

This shows the wider and longer-term benefits of broadening participation in a collaborative RI process between universities and businesses.

5.3.2 *Widening the Work Force*

Research and management literature from around the world shows that the involvement of women in the work force unlocks potential and improves performance (Joshi n.d.), (Devillard et al. 2016) A Gallup publication summarizes the reason for this effect very simply: "Men and women have different viewpoints, ideas, and market insights, which enables better problem solving." (Badal 2014). It is estimated that achieving 30% of women in leadership positions creates this effect (Heskett 2015). Studies have also shown that the increasing inclusion of staff from ethnic minorities in the workforce has positive impacts on profitability (Cox 2018).

As these are relatively uncontentious claims with significant existing media coverage and policy goals, the following focuses on more ambitious inclusion goals, namely the inclusion of disabled people in the work force of SMEs.

The "on my own" app (Vulterini 2018) was funded through an EU grant and developed in collaboration between socially responsible hotels and a range of partners. Its aim is to train people 'on the job' in the hospitality sector so that those with Down's Syndrome could work in the industry.

People with learning disabilities are harder to train on a job than those without, and they need more assistance and support to do a job well. To help trainers undertake this task, the app focuses on time management, work tasks and work tools, customised for each individual user. Pictures, videos and voice messages are used. The training profiles available are for: assistant cook, chambermaid, café waiter, restaurant waiter, breakfast waiter, receptionist, beach attendant and spa receptionist.

People with Down's Syndrome are, of course, theoretically able to undertake jobs in the hospitality industry, but previously this was not always practically feasible. For example people with Down's Syndrome often could not work autonomously, and required reminding of task content and timing on a regular basis. The "on my own" app is set up in such a way that a person trained on the job can – with the help of the app – undertake it with considerably less supervision and more autonomy.

Responsible innovation is about promoting diversity in the work force (European Commission [n.d.-a](#)), which this example clearly adheres to. However, the central question of this chapter is whether RI can create a competitive advantage for SMEs.

Hotels are almost always SMEs (with >10 and < 250 employees (European Commission [n.d.-b](#)) and in most European countries quota systems exist for the involvement of disabled employees.

Quota systems for private and/or public enterprises or institutions can be found in the majority of EU countries (the exceptions are DK, EE, FI, LV, NL, SE and UK). Their basic target is to stimulate labour demand by committing employers to employ a certain share of employees with disabilities. Typically, the stipulated share ranges between 2% (ES) and 7% (IT) of the workforce. (Fuchs [2014](#))

It is no surprise that the app was designed under Italian leadership, given that the quota is highest in Italy (7%). This shows a problem-solving spirit under conditions of 'external pressure' (quota). Collaborating with academics and NGOs, as in this case, can reduce the industry costs of fulfilling the external requirement. As noted earlier, the advantage of using the "on my own" app for staff with learning disabilities is the significant reduction of supervisor time. This makes the app an example of where RI aligns with creating advantages for SMEs under conditions of requirements from the government. Costs (training and supervision) could be saved while a quota target is achieved.

5.4 Process Innovation and RI

A process innovation usually involves "a new or significantly improved production or delivery method" (OECD Glossary [n.d.](#)) which saves costs or increases consumer appeal or demand.

Responsible innovation is inextricably linked to sustainable-oriented research and innovation. Both are approaches which aim to increase the positive impact of innovation on society whilst minimizing the negative impact on the environment. Several theorists of RI, in particular Owen et al. and von Schomberg, believe that sustainability considerations should always be part of RI considerations.

According to René von Schomberg ([2013](#)), RI consists of three elements: ethical acceptability, sustainability and societal desirability. The most widely cited academic work on RI points to the necessity of respect for future generations. Sustainability is key to showing such respect. As Owen et al. write:

Responsible innovation is a collective commitment of care for the future through responsive stewardship of science and innovation in the present (Owen et al. 2013a, b).

Process innovations, which are focused on reducing negative environmental impact, are often called “green innovations”, and defined as “new or modified processes, techniques, systems, and products to avoid or reduce environmental harm” (Marchi 2012). A successful case is given below.

5.4.1 *Mission Zero*

The highly ambitious “Mission Zero” of carpet manufacturer Interface is a good example (2017), with its mission introduced as early as the 1990s, for completion in 2020. Although Interface has over 3000 employees and operates on a global scale, it “operate[s] much like a small to medium-sized enterprise (SME) from an organizational and structural perspective.”(ibid). For instance, Interface use a bottom-up management style without hierarchically and rigidly defined roles, and without formalized role training and career structure, thereby gaining time efficiencies. Its approach to green innovation therefore mirrors efforts undertaken by SMEs.

Two elements of this case study are important. First, the goals, and second, the innovation approach. The goals of Mission Zero are summarized in the following table (Table 5.1) (ibid).

The most important element of the innovation approach to Mission Zero was the setting up of the co-innovation team. The team uses the time and energy gained through the non-formalization of roles to encourage employees to “undertake discretionary activities above and beyond typical working practice, such as coming up

Table 5.1 Mission zero at interface

Mission zero goals	Description of goals
1. Eliminate waste	Eliminating waste in all forms – Material waste, wasted time and wasted effort
2. Benign emissions	Eliminating waste streams that have negative or toxic effects on natural systems
3. Renewable energy	Reducing energy demand and substituting fossil fuels with renewable ones like solar, wind and biogas
4. Closing the loop	Redesigning processes and products so that all resources used can be recovered at end of life and reused, closing the technical or natural loop
5. Resource efficient transportation	Transporting people with minimal waste and emissions. This includes consideration of plant location, logistics and commuting
6. Sensitising stakeholders	Creating a community within and around Interface that understands the functioning of natural systems and our impact on them
7. Redesign commerce	Redesigning commerce to focus on the delivery of service and value instead of material. Encouraging external organizations to create policies and market incentives

with new ideas, identifying resource needs, or reviewing established processes and products.”(ibid) The authors of the case study commented that “the co-innovation team’s utilization of organizational slack for innovative activity demonstrated one of the benefits of a high-slack environment for innovation”, namely the time and energy available.¹ The most significant progress was made towards waste elimination (goal 1), benign emissions (2), renewable energy (3) and resource efficient transportation (5).

It was mostly waste reduction and energy savings, which led to the 2013 Interface statement that 480 million US dollars were saved through Mission Zero since 1994 (ibid.)

A project launched as part of Mission Zero in 2013 (Net-works) by Interface led a member of the co-innovation team to comment that “this project has greatly exceeded expectations, and it has gained an unexpected global recognition for its sustainability aspects.” (ibid) This global recognition includes, to date, six prizes and awards, including the European Business Award for the Environment. According to the project’s website (<http://net-works.com>):

Net-Works™ redesigns global supply chains to create sustainable and scalable solutions that reduce marine plastic, increase fish stocks and improve the lives of marginalised coastal communities living in biodiversity hotspots of developing countries. We connect these communities to global brands via a fair and inclusive business model that delivers ‘less plastic, more fish’.

Most of the Net-works operations are in the Philippines and Cameroon, with an expansion to Indonesia planned. From the first step (collecting discarded plastic fishing nets to avoid major marine pollution), the project expanded into setting up community savings and credit associations, and supply chains for seaweed carrageenan. The latter reduces over-fishing by creating a second means of income for local communities previously dependent entirely on fishing. The former applies the principles of fair trade and inclusive business to create livelihoods in disadvantaged communities.

This short case study shows how cost savings *and* global recognition can be achieved through green innovation by linking the aims of RI into a company’s innovation processes.

Credit for the achievements of Interface has to be given to its founder Ray Anderson (2009), whose Ted Talk on the Business Logic of Sustainability succinctly makes the main points on the beneficial linkages between business advantages and sustainability. In the 12 years the Ted Talk account covers, net greenhouse gas emissions of Interface were down by 82%, sales increased by two-thirds, profits doubled and water usage decreased by 75%. These successes gave the company a “marketplace differentiator” (ibid.), and, Anderson says:

¹The authors also noted that the lack of clear development paths meant that some employees “felt disengaged and underappreciated in their roles”, ibid.

We have found Mission Zero to be incredibly good for business. A better business model, a better way to bigger profits. Here is the business case for sustainability. From real life experience, costs are down, not up, reflecting some 400 million dollars of avoided costs in pursuit of zero waste ... And this dispels a myth too, this false choice between the environment and the economy. Our products are the best they've ever been, inspired by design for sustainability, an unexpected wellspring of innovation. Our people are galvanized around this shared higher purpose. You cannot beat it for attracting the best people and bringing them together. And the goodwill of the marketplace is astonishing. No amount of advertising, no clever marketing campaign, at any price, could have produced or created this much goodwill. Costs, products, people, marketplaces – what else is there? It is a better business model.

5.5 Marketing Innovation and RI

Marketing innovations change the look and feel of a product to achieve higher consumer ratings. The following case example is about packaging and is again related to sustainability. Packaging can be understood as a process innovation (an innovative change of the product's delivery method) or as a marketing innovation, given the strong importance of packaging for marketing a product.

The ways in which packaging can contribute to marketing has been explored by academics and in management circles. For instance, Rundh (2005) has advocated the use of packaging innovations to create competitive advantages. Vernuccio et al. (2010) argues that packaging is a tool beneficial to marketing, logistics, and ethics. Meanwhile, a variety of industries use packaging as a major marketing tool (Drinkpreneur 2016), and promote innovations for a range of reasons, for instance consumer convenience, product safety, or waste reduction, including cost savings (Cuneo 2017).

It would be beyond the scope of this chapter to explain in depth the complexity of sustainability solutions for packaging. This has been beautifully done in a TED Talk by Leyla Acaroglu (2013). Here, one example will be used, namely yoghurt pots, which are one of the most environmentally unfriendly forms of packaging. Yoghurt pots are single-serving foods and the small size and mixed materials make the single serving package highly unattractive for recycling (Wu 2014). The small size problem cannot easily be tackled in a time when the numbers of single person households are increasing considerably. In 2015, for the first time there were significantly more single-households in the EU than any other household type (Koessl 2017). However, some innovators are tackling the diversity of material mix, although solutions are difficult to find. Regarding sustainable packaging, *The Guardian* newspaper notes that “we were closer to an answer 30 years ago: what on earth happened to milkmen and bottle deposits? Now we live in an absurd age where a packet of crisps can have seven layers of wrapping” (Hall 2017).

German company Desto offers a light-weight, white plastic container for yoghurts, stabilized through a paper banderol, ready for separate recycling by 'green' consumers (Optipack n.d.). Whilst this may look like a success story, a sustainability expert in Germany explains that consumers do not seem to be separating the three components properly for recycling (paper, plastic, aluminium top), leading to a worse waste result than the traditional yoghurt pot. At the same time, people are buying the innovative pot in an effort to contribute to sustainable consumption (Lemke 2018).

What can be learned from this example regarding RI?

1. Consumers are buying innovative packaging which is designed to be more sustainable; there is a market.
2. Waste can be reduced through innovative packaging, e.g. the plastic content of the Desto container is significantly lower than the standard pot. As a result, material costs can be saved.
3. As noted above, employee attraction and retention can be improved with commitments to social goals. Sustainability is one of the top goals. Research found that employee pride, the perception that sustainable operations care for their employees and the link to personal value systems are the main reasons for this phenomenon (Network for Business Sustainability 2013).

There is clearly room for movement in the packaging sector, which is relevant to almost all product businesses. Sustainable packaging could achieve a considerable advantage for innovators whilst simultaneously achieving RI goals.

5.6 Conclusion

This chapter has described a range of business advantages for SMEs who engage in research and innovation responsibly. They are summarized in the Fig. 5.4.

Innovative SMEs have to decide for themselves. Do they want to innovate responsibly through their operations or not? This decision cannot be based solely on whether this makes businesses more profitable. Successful examples have been shown, but no guarantee is possible. The closest one can argue is that SMEs, which subscribe to responsible innovation, are more likely to attract and retain talented staff. Job satisfaction is higher when employees can be proud of their company. The rest depends on the context and on the willingness of the SME to innovate in areas that have positive societal impact in addition to profits. The possibilities are endless, from more sustainable packaging to reaping the benefits of an increasingly diverse work force. It is the initiative that counts and this has to come from SMEs themselves.



Fig. 5.4 Business advantages of implementing RI

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