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Chapter 12
Exploring Ethical Decision Making in Responsible Innovation: The Case of Innovations for Healthy Food

Vincent Blok, Tjidde Tempels, Edwin Pietersma, and Léon Jansen

Abstract In order to strengthen RI in the private sector, it is imperative to understand how companies organise this process, where it takes place (throughout the entire company or on specific levels), and what considerations and motivations are central in the innovation process. In this chapter, the questions of whether and where normative considerations play a role in the innovation process, and whether dimensions of RI are present in the innovation process, are addressed. In order answer these research questions, a theoretical framework is developed based on Jones's theory of ethical decision making and Cooper's stagegate model of innovation management. In order to answer the research questions, a specific case of innovations that contribute to public health is explored, namely, that of food companies that participate in a Front-of-Pack (FoP) logo for healthier food.

As the use of healthy food logos does not necessarily have a positive impact on sales and profits (Jansen LAM, De Vos S, Blok V. Motives of retailers for healthy food innovation and communication about healthy food choices. Conference paper at the MVI conference, 25–26 August 2015, The Hague, 2015), it is expected that in the decision-making process, as part of their innovation process, companies make several trade-offs between economic, technical and moral factors (Jahromi MJ, Manteghi N, Procedia Technol 1:490–495, 2012). As the social-ethical values at

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stake in corporate innovation processes have remained to a large extent unexplored in research on innovation management, the aim of this chapter is to identify the motivations and barriers for companies embracing and continuing a FoP logo for healthier food, and to assess whether ethical considerations play a role in this innovation process. From the findings in this research, it will become clear that although the studied companies participated in a programme for healthy food and thus are responsive to the needs of society, and although the companies feel (partially) responsible for public health, ethical considerations do not play a central role in the operational innovation process. Instead, technical and economic considerations seem to prevail in the operational innovation process. Furthermore, none of the procedural dimensions of RI seems to be present at this level in the innovation trajectory. It is argued that this may be an indication that the ethical decision-making process for RI is not located at the level of the operational innovation process itself, but is something that might be located on a higher strategic level in the company. It is at this level that the moral decision is taken to adopt the FoP logo and to engage in the RI process. The findings cast a new light on the discourse on RI in general, and in the private sector in particular.

12.1 Introduction

In the wake of increasing lifestyle-related diseases like obesity, heart diseases and diabetes type 2, citizens, governments and civil society organisations are becoming increasingly concerned with the 'obesogenic' character of modern society. Over the past years, both governments and the general public have become increasingly aware of the impact that food consumption has on both public and individual health; a growing number of food consumers in western society no longer look only at the physical properties of food products, but are increasingly interested in the social, ethical, nutritional and environmental aspects of food (Van Loo et al. 2014).

In order to be responsive to the changed demands of society regarding healthy food, companies in the food sector are gradually taking responsibility for public health. Over the past years, the food industry has taken up a role in the prevention and mitigation of public health issues. These efforts move beyond general corporate social responsibility (CSR) practices, in which research and development (R&D) and innovation are often neglected, and primarily concern new product development[1]; a significant amount of the food sector's R&D budget is allocated to the reformulation of food products in order to reduce or substitute 'unhealthy' ingredients like sugar, saturated fatty acids and salt in food products (Roodenburg et al. 2011). These efforts can be understood as responsible innovation (RI), because, when innovating responsibly, corporate actors do not primarily try to achieve private economic goals, but rather to contribute to the solution of the grand challenge of lifestyle diseases (cf. Von Schomberg 2013).

[1] A comparison between CSR and RI is beyond the scope of this chapter. For this, see Pelle and Reber 2015.

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Although numerous companies have joined in this innovation process for healthier food and take responsibility for societal problems, empirical research about RI in the private sector is scarce (Blok and Lemmens 2015; Blok et al. 2015). There is still little known about what drives companies to engage in the development of responsible innovations and whether these innovation processes can be characterised as responsible (cf. Stilgoe et al. 2013). In order to strengthen RI in the private sector, it is imperative to understand how companies organise this process, where it takes place (throughout the entire company or on specific levels), and what considerations and motivations are central in the innovation process.

In this chapter, the questions of whether and where normative considerations play a role in the innovation process, and whether dimensions of RI are present in the innovation process, are addressed. In order answer these research questions, a theoretical framework is developed based on Jones's theory of ethical decision making and Cooper's stage-gate model of innovation management (Jones 1991; Cooper 1990). The stage-gate model helps to elucidate how the innovation process is set up and where the key decision points are located, whereas Jones's theory can help to elucidate whether and where ethical considerations play a role in the decision-making process. Mapping the operational innovation process in this way makes it also possible to assess whether process dimensions of RI – anticipation, reflexivity, inclusion and responsiveness – are present in the innovation process (cf. Owen et al. 2013).

In order to answer the research questions, a specific case of innovations that contribute to public health is explored, namely, that of food companies that participate in a Front-of-Pack (FoP) logo for healthier food. FoP logos are used on food products to inform consumers about the healthier options in a product group. Food companies can only carry such logos when they meet a certain set of nutritional criteria, which are determined by the organisation behind the specific FoP logo (Jansen and Roodenburg 2015). When joining such a programme, or when existing criteria are tightened, companies are pushed to innovate for healthier food products in order to enable them to achieve or keep the logo.

As the use of healthy food logos does not necessarily have a positive impact on sales and profits (Jansen et al. 2015), it is expected that in the decision-making process, as part of their innovation process, companies make several trade-offs between economic, technical *and* moral factors (Jahromi and Manteghi 2012). As the social-ethical values at stake in corporate innovation processes have remained to a large extent unexplored in research on innovation management, the aim of this chapter is to identify the motivations and barriers for companies embracing and continuing a FoP logo for healthier food, and to assess whether ethical considerations play a role in this innovation process.

The remainder of this chapter is structured as follows: in Sect. 12.2, a theoretical framework is developed based on a literature review in the field of ethical decision making, RI and innovation management. In Sect. 12.3, the methodology is set out. The results are analysed in Sect. 12.4 and, in the final section, a conclusion is provided, as well directions for future research.

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From the findings in this research, it will become clear that although the studied companies participated in a programme for healthy food and thus are responsive to the needs of society, and although the companies feel (partially) responsible for public health, ethical considerations do not play a central role in the operational innovation process. Instead, technical and economic considerations seem to prevail in the operational innovation process. Furthermore, none of the procedural dimensions of RI seems to be present at this level in the innovation trajectory. It is argued that this may be an indication that the ethical decision-making process for RI is not located at the level of the operational innovation process itself, but is something that might be located on a higher strategic level in the company. It is at this level that the moral decision is taken to adopt the FoP logo and to engage in the RI process. The findings cast a new light on the discourse on RI in general, and in the private sector in particular.

12.2 Literature Review

Because the exploration of the ethical decision-making process regarding RI for public health is the central goal of this chapter, the literature review starts with ethical decision making, followed by theories regarding RI and innovation management processes.

12.2.1 Ethical Decision Making

There is a wide variety of models of ethical decision making, but Jones's process-based four-stage model (1991) is considered to be one of the most inclusive and comprehensive (Crane and Matten 2010). According to Jones, ethical decision making takes place in four steps: (1) recognising moral issues; (2) making a moral judgement; (3) establishing moral intent and (4) engaging in moral behaviour (Jones 1991).

The process of ethical decision making starts with *the recognition of a moral issue*. A moral issue is present when a person freely engages in an action that could harm or benefit others. This means that many decisions have a moral dimension, but, in order to engage in ethical decision making, an actor has to recognise that he is dealing with a moral issue. An actor has to realise that his voluntary choice or action will affect other human beings. In the context of the development of food products, this can for instance refer to the awareness that certain ingredients can have a negative impact on consumer health. An ethical dilemma can arise when economic considerations of profit have to be weighed against societal interests (Nathan 2015). When a moral issue is not recognised, the decision-making process takes place according to other rationales, like for instance that of economic rationality (Jones 1991).

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The second step in the model is *making a moral judgement*. It is in this stage that an actor takes a position regarding the moral issue at hand (e.g. whether the discrimination of a disabled co-worker is problematic, or whether investing in weapon industries that deliver weapons to dictatorships is a right decision). The outcome of this judgement is dependent on the stages of an individual's moral development, e.g. to what extent he holds the law in high regard, the kind of ethical principles to which he adheres and whether he is willing to uphold these principles. How this decision is made is also shaped by national, cultural and organisational characteristics (Jones 1991).

The third step is *the establishment of moral intent*. After making a moral judgement, an actor might know the 'right thing to do' and even have the intention of acting accordingly, but nevertheless decide not to act upon it when weighing the moral factors against other considerations (e.g. company interests, self-interest) (Jones 1991). A senior manager in a firm might know that it is morally wrong for his company to violate national environmental regulations and may have the intention of changing company policies, but may be hesitant to act upon it as he fears that doing so will negatively impact the profit of the firm and his position as a manager.

The fourth and final step is when an actor actually *engages in moral behaviour*, which can be understood as acting upon the established moral intent (Jones 1991). Assume that the senior manager in our earlier example did establish moral intent and proceeded to act upon the company's violation of environmental regulation. If he established a plan to stop the pollution and executed it, then he would be engaging in moral behaviour.

Apart from these four central steps, Jones identifies two central elements that can influence this process of decision making, namely, the moral intensity of an issue and organisational factors. Moral intensity can have an impact on each stage of the decision-making process and consists of six elements: magnitude of consequences, social consensus, probability of effect, temporal immediacy, proximity and concentration of effect (Jones 1991). The moral intensity of an issue can for instance be higher when the issue is perceived to affect a greater number of people, or if there is social consensus that certain moral wrongs are greater than others. In the context of food innovation, one can imagine that moral intensity would be higher if certain ingredients turned out to be toxic than if ingredients could have an unhealthy impact when consumed in high doses (salt, sugar, saturated fats). In addition, Jones posits that the last two stages of the decision-making process can be influenced by organisational factors, like group dynamics, authority and socialisation processes within the corporation. Job descriptions, reward systems and corporate culture can shape an inclination to engage in (un)ethical behaviour (Nathan 2015; Jones 1991).

Jones's model can be used to ascertain whether a moral issue is recognised and whether this ultimately leads to a company's engagement in moral behaviour. This idea of engaging in moral behaviour is closely connected to the framework of responsible innovation, which is often considered to be morally laudable behaviour (Von Schomberg 2013). If ethical decision making can be embedded in the RI framework, it becomes possible to assess where the normative junctures are located in the innovation process.

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12.2.2 Responsible Innovation

Von Schomberg defines RI as "a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products in order to allow a proper embedding of scientific and technological advances in our society" (Von Schomberg 2013: 19). However, RI is not only achieved through interactive and transparent processes. In the debate on RI, it is possible to distinguish between two different approaches. The first leading approach is that of Von Schomberg, whose interpretation can be understood as a substantive approach to RI (Blok et al. 2017). Innovation should be an interactive and transparent process, and in line with the *normative goals* of society. In the context of the European Union, such *normative anchor points* are for instance: social justice, sustainable development, a competitive social market economy and a high quality of life. *Responsible* innovation should hence comprise these anchor points.

The other key approach to RI is that of Owen et al. (2013). Although Owen et al. (2013) consider the normative discussion on RI to be important, they argue for a deliberative and more *procedural* approach to RI. In the procedural approach, the RI norms are not set in stone, and the direction and shape of the innovation can still be influenced by public demand and changes in the environment (Stilgoe et al. 2013; Blok et al. 2017). Owen and colleagues' framework consists of four dimensions: anticipation, reflexivity, inclusion and responsiveness.

Anticipation in RI is about identifying potential intended or unintended impacts of innovation. These are not limited to the (in)direct impacts directly related to the function of the product itself, but also include the effects that an innovation could have on the economy, the environment or social relations. Anticipatory procedures are recognised if companies have activities in their innovation process to identify such impacts and subsequently use this knowledge in their decision-making process (Owen et al. 2013).

Reflexivity is focused on the role of the innovator. It requires the innovator to think about his broader role in society and reflect critically on his practices, activities, assumptions and knowledge. For companies, this also requires a reflection on values and motivations that drive their business activities and how this impacts society (Owen et al. 2013).

Inclusion is about including a wide range of stakeholders in the innovation process. This process goes beyond the inclusion of traditional stakeholders (shareholders, consumers and so on) and opens up innovation processes to a wide range of societal actors. If diverse actors are included, different perspectives enter the innovation process, making it possible to better understand the perceived risks and benefits of an innovation to society (Owen et al. 2013).

Responsiveness in RI refers to the ability of an innovating company to adapt or change its "shape or direction in response to stakeholder and public values and changing circumstances" (Stilgoe et al. 2013: 5). The innovating company should be willing to change the course of its innovation on the basis of societal concerns and public input.

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This short overview of the RI concept shows that there should be many normative junctures in the RI process (cf. Owen et al. 2013). In this respect, the process can be understood as an ethical decision-making process, guided by Owen and colleagues' four dimensions. However, it remains unclear where these normative junctures are located in the course of the innovation process. In order to assess this, a clear insight is needed into how the innovation process is set up. Cooper's stage-gate model of innovation management (Cooper 1990, 2008) may help to map the decision-making process and to identify the procedural dimensions of RI in the operational innovation process.

12.2.3 The Stage-Gate Model of Innovation

There are many models in the field of innovation, but a process-based model is relevant for this study as its objective is to ascertain where in the innovation trajectory the ethical decision making takes place. An innovation management approach that is much used in both theory and practice is Cooper's stage-gate model (1990, 2008). In Cooper's model, the innovation process is divided into stages and gates, where each gate has a set of specified deliverables and criteria that the process has to meet before moving to the next (working) stage (Cooper 1990). Each stage consists of one or more activities where information (e.g. technical, financial, market, operational data) is collected and analysed. The results of this stage are used as input in a decision gate. A decision gate can be understood as a Go/Kill decision point, where it is decided whether or not to move a project on to the next gate. Screening criteria in such decision gates are often economic or technical in nature, based on costs, technical feasibility and consumer perception (Cooper 2008; Nathan 2015). Through this process, an innovation moves from an initial product idea to the eventual launch of the product on the market.

The stage-gate model can be used to assess how the decision-making and the innovation process take place in a company, and what criteria play a role in deciding to continue or stop an innovation process. The stage-gate model has also been identified as an approach that can be used within the RI context (cf. Macnaghten and Owen 2011). Instead of including only technical and economic criteria in the gates, the moral criteria from the four dimensions of RI can also be included. This means that possible societal risks and the impact of the product on social relations would be taken into account in the decision-making process (Macnaghten and Owen 2011; Nathan 2015).

12.2.4 Theoretical Framework: Innovation and Decision Making

Based on the above-discussed theoretical perspectives, the following theoretical framework is proposed that can be used to explore the ethical decision-making processes within an operational innovation process in the RI context (Fig. 12.1).

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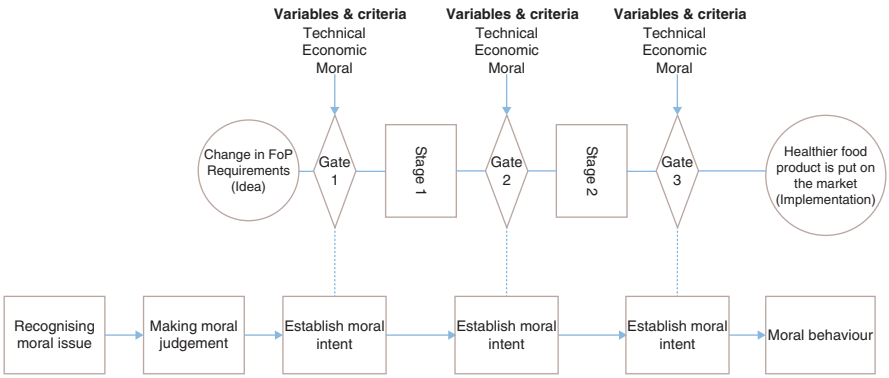

Fig. 12.1 Framework for ethical decision making in the operational innovation process (Note: *FoP* Front-of-Pack)

It is assumed that the ethical decision-making process starts in the early stage of the innovation process, for instance the ethical decision to innovate for healthy food. This generally starts with the idea for the development of a new product or the reformulation of an existing product. Before or synchronous with this process, it is assumed that the first two steps of ethical decision making – recognising a moral issue and making a moral judgement – take place. The next steps in the innovation process are linked to the process of establishing moral intent in the ethical decision-making process. It is here that various variables and criteria of an economic, technical and moral nature are used to decide whether or not to continue the innovation. The process of establishing moral intent is hence a process that can take place over multiple stages and gates. If in the end the responsible product is put on the market, the moral intent is translated into actual moral behaviour. This entire process can be influenced by both moral intensity and organisation factors. Although the moderating variables of moral intensity and organisational factors are likely to have an impact on this process, they do not determine the location of ethical decisions in the model, and consequently they have been left out of the model in this study.

12.3 Materials and Methods

In this research, an explorative qualitative approach is used to explore *whether* and *where* the ethical decision takes place in innovation processes for healthy food, and whether the procedural dimensions of RI are present in the operational innovation process. As there is limited research on this specific element of RI, an exploratory qualitative approach is warranted. In order to narrow down the scope of companies that are engaged in RI for healthy food, the companies selected for this study are involved in FoP nutrition logos. Products bearing such logos often contain less

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saturated fat, sugar and/or salt and encourage consumers to make healthier choices. In order to meet the requirements for displaying such FoP nutrition logos on their products, companies have to invest in internal or external R&D and innovation for healthy food.

Given the wide variety of FoP logos, this study zooms in on the Dutch Choices Logo, which is a European FoP logo of the Choices International Foundation. Choices' logo criteria are based on national and international dietary guidelines. In order to display this FoP logo, products have to meet nutritional criteria of a specific food product group, which are set by a scientific committee. Every 4 years, the criteria for the logo are updated, and this can be a push for companies to innovate and make their products healthier (Roodenburg et al. 2011).

The subsequent case selection focused on larger companies (> small and medium enterprises) in the Dutch food industry that were participating in the Dutch Choices Foundation's FoP programme and marketing one or multiple products for which the criteria for the FoP logo had changed. The Netherlands was a useful location to collect data as it both has a mature food industry and is the country in which the Choices Foundation first started its FoP nutrition logo initiative. Six companies that fitted these criteria were approached to participate. Two companies declined because of time considerations. Therefore, the explorative case study consisted of three Dutch food innovating and producing companies and one Dutch retailer with private label products bearing the logo.

Based on the literature review, a questionnaire with open questions and closed questions was developed to structure the interviews. Audio-recorded interviews were conducted with key actors in the companies' operational innovation process, as this allows the participants to share experiences, explain the innovation process within their company and elaborate on the key considerations in the decision-making process (e.g. economic, technical and moral considerations). In order to ensure non-biased and structured data collection, an interview protocol was used. One of the researchers conducted four semi-structured interviews with one employee from each company. Employees were interviewed about their company's considerations in the innovation process, the barriers they encountered when confronted with new criteria for the FoP logo, the structure of the innovation process (e.g. inclusion of stakeholders), as well as their perceptions on corporate and personal responsibility for health and the impact of their products on public health. All interviews were transcribed. A summary of the transcription was sent back to the interviewees to enable them to make changes, adjustments or corrections. Subsequently, the transcriptions were analysed.

In addition, company documents (annual reports, CSR reports and company websites) were studied to obtain information on each company's perception of corporate responsibility for health and to get an overview of each company's CSR efforts (Boeije 2010). Combining the findings from the interviews with the data from the company documents triangulates the findings and helps to determine how the innovation process takes place and what considerations and barriers play a part in the decision-making process.

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Table 12.1 Overview of case studies

	Company type	Number of product categories involved in the choices programme	Food and health in CSR strategy	Interviewee function
Company 1	Brand owner	Multiple	Yes	Nutrition manager
Company 2	Brand owner	Multiple	Yes	R&D manager
Company 3	Brand owner	Single	No	Marketing manager
Company 4	Private label (retail)	Multiple	Yes	Quality advisor

For reasons of data sensitivity, the data were coded. An overview of the cases is provided in Table 12.1. It shows the type of company, whether it produces food bearing the FoP logo in one or more product categories, whether a food and health-related CSR strategy is publicly available and the function of the respondents interviewed.

12.4 Results

In order to understand ethical decision making in the operational innovation process for healthy food products, first the companies' general position on CSR and public health is explored and subsequently the relation between their CSR strategy and their adoption of FoP logos for healthier food. Having identified the motivations and barriers for a company embracing the FoP logo for their products, the study focuses on the operational innovation process itself and possible moral considerations in the process.

12.4.1 CSR in Relation to FoP Logos for Healthier Food

12.4.1.1 Companies' Position on CSR and Public Health

An analysis of company documents (website, CSR reports, annual reports) provides general insights into the companies' position with regard to societal and environmental responsibilities, but shows as well how the companies view their particular responsibilities for public health.

Company 1 views sustainability and justice as core values in its business operations, which it aims to put into practice in both social and environmental programmes. As regards health, it is clear that the company is aware of the impact of its food and beverage products on society. It makes clear that it realises that, because of its market position and large consumer base, its products can have a significant

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impact on consumer health, and therefore it takes responsibility for public health. It takes action by contributing to research on the relation between nutrition, health and disease, by informing consumers about the nutritional values of its products and by developing new healthier food products. In doing so, it seeks to promote a healthier lifestyle and combat lifestyle-related diseases. This was confirmed in the interview. Its CSR strategy is focused on sustainability in general, in which health and nutrition targets play a central role.

In *Company 2*'s CSR strategy, it is clear that the company seeks to contribute to the solution of global challenges such as the growing world population, food supply and scarcity of natural resources. With regard to public health, the company makes a clear commitment to tackling malnutrition and diseases like obesity. In order to take up this challenge, it wants to be transparent about the nutritional values of its products, develop healthier food products, and inform and educate people about food intake and physical exercise. This was confirmed in the interview. Nutrition/health is one of the main pillars of their CSR strategy.

Compared to the previous two cases, *Company 3* has a fairly limited CSR strategy. No CSR reports or annual reports were publicly available, as it is part of a larger MNE, so the company's website and the interview were the only sources of information. On the company website, only a short section is dedicated to the company's efforts on environmental sustainability and how the company tries to reduce its environmental impact by changing the production process. The website does not articulate a public health-related CSR strategy or a clear perspective on responsibility for consumer health. During the interview, a more nuanced picture appeared. According to the respondent, the company has a sustainability programme and it continuously challenges itself to produce in a more sustainable way, for instance by improving its packaging. The respondent further confirmed that nutrition and health are not part of its CSR programme. Nutrition and public health "is in the first instance part of our business strategy and is high on the agenda of the innovation strategy." One of the objectives of the company is to reduce the number of calories in its products and to communicate this to its consumers, but its innovations for healthier food are primarily part of the business case for healthier food, rather than a corporate *responsibility* for public health.

Lastly, *Company 4* has again a more inclusive CSR strategy. The company considers itself to have a responsibility for society and future generations. The CSR strategy touches not only upon both social and environmental themes like sustainable resources, connecting with the local community, reducing food waste, but also upon the theme of food and public health. It states that the company has a role to play in stimulating both consumers and employees to eat healthily and live a healthy life. This position on CSR and public health was also confirmed in the interview. In order to achieve its goals, the company participates in public–private projects that seek to improve healthy consumption and a healthy lifestyle, through information and education on health within the company, and by healthy innovating of its own food and beverage products. *Company 4*'s ambition is to enable grocery shopping without worries, implying that it wants to communicate healthier choices to its consumers (Table 12.2).

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Table 12.2 Companies' positions on CSR and public health

Company	General CSR strategy	Public health-related CSR	Examples of public health efforts
Company 1	Wealth generation through business should go hand-in-hand with sustainability and justice. Thus, the company is committed to improving both the environment (e.g. reduction of carbon footprint) and sustainable practices of consumers, contractors and the company itself.	Clear recognition that food and beverage products can impact consumer health. Improving public health is a central part of the company's CSR strategy, as it aims to contribute to solving problems like obesity and malnutrition.	Reformulation of food products (salt, sugar, fat)
			Contribute to programmes that educate on healthy diets and lifestyle
			Contribute to research on the relation between nutrition, health and disease
			Food labelling
Company 2	Contribute to the solution of global challenges such as the growing world population, food supply and scarcity of natural resources.	Contribute to the solution of global health challenges such as food security and obesity.	Reformulation of food products (salt, sugar, fat)
			Contribute to programmes that educate on healthy diets and lifestyle
			Food labelling
Company 3	No inclusive CSR strategy. Only a short reference is made to improving environmental sustainability in the production process.	No food and public health-related topics or responsibilities are discussed as part of the CSR strategy.	Food labelling
Company 4	The company sees a clear responsibility for current society and future generations. This is translated into diverse CSR efforts that touch upon both societal and environmental themes.	Healthier consumption is one of the main topics in the CSR programme. Stimulating a healthy lifestyle and healthy eating habits among consumers and employees is considered to be important.	Reformulation of private label products (salt, sugar, fat)
			Contribute to programmes that educate on healthy diets and lifestyle
			Food labelling

Note: *CSR* corporate social responsibility

This short overview makes clear that, in three out of four cases, there seems to be a general perception of (partial) corporate responsibility for public health. Apart from *Company 3*, all other companies discuss the relation between their products and consumer health and recognise the (in)direct impact that food and beverage products can have on public health; they should provide healthier products and increase the opportunities for consumers to make a healthier choice. At the same time, the companies hold that consumers are themselves responsible for their own healthy food consumption. According to all companies, consumers are primarily

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responsible for their food consumption, and the companies can help them by providing healthier options and by helping them to make the right choice.

12.4.1.2 CSR and FoP Logos

In order to identify the relation between their general position on CSR and public health on the one hand, and their use of FoP logos on the other, respondents were asked to reflect on this relation. According to *Company 1,* both its CSR strategy and the FoP logo for healthy food are congruent with each other. "I think that there are many similarities, that we both [company CSR strategy and FoP logo] just want to communicate in a transparent way to consumers what is in our products and what is the healthier choice." Although the company performs this ambition more in the background, the FoP logo does it in a more explicit way. At the same time, the respondent said that the company was not reactive to particular changes in the criteria of local FoP logos, as *Company 1* is an MNE operating in different countries with different markets. Different countries have different logos, different criteria and different time schedules for tightening the criteria, whereas the company proactively plans its innovations years ahead and for all products in a specific category. In its innovation strategy, it works therefore with its own targets regarding salt, sugar and fat reduction, which partly overlap with the criteria of the FoP logo for healthier food in the Netherlands. It considers that its own criteria for innovations for healthier food are much more important than those provided by local FoP logos, partly because of the local diversity among logos. Comparable forms of proactiveness can be recognised in the case of *Companies 2* and *3.*

Company 2's position on CSR and public health is explicitly linked with the FoP logo for healthier food, because the criteria of the FoP logo are part of its corporate nutritional criteria, and its ambition is to have the logo on as many of its products as possible. At the same time, it acknowledges that it also produces less healthy food products. According to *Company 2*, these 'pleasure products' have another goal and function: "We don't claim that these products are good for you; they are pleasure products that fulfil a particular function. You shouldn't eat these products every day and we also don't try to sell them that way." For *Company 2*, it is not necessary for all its products to be healthy; rather, it offers a healthier product next to the regular variant. *Company 4* also has the ambition to have the FoP logo on as many of its products as possible in order to communicate that its products meet the criteria. At the same time, *Company 4* argues that it focuses on products that are relatively easy to reformulate in order to receive the logo, the so-called low-hanging fruit. Only for *Company 3* is there no link between its position on CSR and public health and the FoP logo for healthier food. Because it sees that the market for healthy food products is increasing, its innovation strategy is to reduce the number of calories in some of its brands and product types, namely, the ones that consumers choose because of taste *and* low calories. If it meets the criteria of the FoP logo for healthier food and can use the logo, that is great, but it is not a necessary condition.

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Table 12.3 Overview motivations and barriers for the adoption of the FoP logo

	Motivations	Barriers
Company 1	Consumer communication about healthier choices	Effects on product quality
	Company image	Confusion because of too many logos on one product (aesthetics)
	Company growth	Decision power of larger countries/ consumer markets
	Anticipating changes in rules and regulations	
Company 2	Company image	Effects on product quality
	Company growth	Effects on price
	Responsibility as a leading brand/ frontrunner in innovation	Negative impact on shelf life
Company 3	Consumer communication about healthier choices	Effects on product quality
		Effects on price
	Company image	Negative consumer perception of FoP logo
	Company growth	Negative impact on shelf life
Company 4	Consumer communication about healthier choices	Effects on product quality
		Effects on price
	Remain competitive with competitors that use the FoP logo	

12.4.1.3 Motivations and Barriers for Adopting the FoP Logo

In Table 12.3, an overview of the motivations and barriers for the adoption of the FoP logo for healthier food is provided.

The majority of the companies indicated that the adoption of the FoP logo was driven by the perceived positive contribution of the logo to the company's image, the positive impact on the company's competitive position and improved consumer communication. *Company 1* for instance stated that its main reason for displaying the FoP logo is "to help consumers to make the choice of healthier products easier." "We are involved in product improvements, but if consumers do not know it, then you don't help people to choose these products." A logo that is easy to understand "provides education to consumers because it makes clear what a healthier choice is." They saw several advantages in making the product healthier, as they stated that "it is important for our image to collaborate with the initiative" and consider it to be "the only way to grow as a company." *Company 2* believes it to be its "role as producer to use the logo as often as possible in order to provide responsible products for the consumer." However, market considerations seem to prevail, as making a healthier product could create an advantage over competitors; "in the end it is all about the consumer preferring our products." "If health plays a role in this – which it does for consumers – then we create a better business." In addition, it considered the collaboration with the FoP logo to be a tool to communicate a positive message to both consumers and NGOs. For *Company 3*, the main reason for participating was "to contribute to healthier choices for consumers," and it argued that "the logo helps to communicate the company's position on health to consumers." From a

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market perspective, it also deemed it attractive to make a healthier product, "for where there are such demands, there are possibilities for commercial gain." *Company 4*, the retail company, indicated that it displays the logo on its private label products "to inform our customers about healthier choices." To do this in the right way, it opted for the FoP logo for healthier food. Another reason for adopting this particular logo was that its competitor also adopted it on its products. "If we develop a private label, we look at referent products. If they carry the logo and we don't, that isn't good." Although *Company 4* feels responsible for healthier food on the one hand (Sect. 12.4.1.3), it is on the other hand only involved in actual innovations for healthier food if its competitors do as well. In this respect, therefore, it seems to be rather reactive.

As regards barriers to the adoption of FoP logos for healthier food, these relate primarily to the technical feasibility/unfeasibility of complying with the criteria, the quality (taste, preservation) and the price of the product (*Companies 1, 2 and 3*). *Company 1* stated: "If a gain in health comes at the cost of taste, it simply does not work ... if products don't taste good or don't sell then there won't be a contribution to public health." In a case where it removed the logo, *Company 2* pointed out that this was because "the change in criteria was too large and the consumer would have noticed the huge change in taste." This relation between costs and taste as a barrier to making healthier products is also recognised by *Company 3*. It argued that a significant decline in taste is a reason for losing the logo for that particular product. As decline in taste would have a negative impact on sales, several companies would be inclined to remove the logo. The retailer (*Company 4*) saw similar barriers, but, as its strategy is to copy its competitors, its reason for refraining from using the logo is when its competitor's referent product stops carrying the logo. *Company 1* also indicated another barrier related to the fact that it produces for the European market. If the criteria in a small country/consumer market like the Netherlands are tightened, but not in larger countries/consumer markets, the larger countries take the decision on whether and to what extent recipes will be reformulated, and the smaller countries have to follow. This could be one reason for a product in the Netherlands losing its logo.

The general position regarding CSR and public health, the relation between CSR and FoP logos for healthier food, and motivations and barriers for the adoption of FoP logos for healthier food having been outlined, the next section focuses on the innovation process and ethical decision making in the operational innovation process.

12.4.2 Ethical Decision Making in the Innovation Process

12.4.2.1 Assessing the Innovation Process

The interviews made clear how the innovation process was set up within the different companies. Respondents were asked about all process steps taken to reformulate a product after a change in FoP logo criteria. In all four companies, a kind of

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stage-gate innovation process is initiated, with central gates in which Go/Kill decisions are made. For the majority of the companies, this process really seems to be a closed and internal company process. NGOs like *Foodwatch* are informed by the companies, and these NGOs also influence the innovation agenda, but they are not involved in the operational innovation process. Apart from the FoP logo for healthier food that provides the initial criteria, no other stakeholders (NGOs, consumers and so on) are involved in the decision-making processes in the operational innovation process. Having outlined the structure of their company's innovation process, the respondents were asked whether ethical considerations played a role in the decision-making process during the operational innovation process.

12.4.2.2 Recognising the Moral Issue

The starting point of the ethical decision process is the recognition of a moral issue. Besides the general position on companies' corporate responsibility for public health (Sect. 12.4.1.1), information was collected during the interviews. Respondents were asked whether a FoP logo for healthier food can help or harm people and whether making a product healthier can help or harm people. They all agreed that both a FoP logo and making a product healthier can help people and have a positive impact on their lives. As Jones stated that a moral issue is present when help or harm can ensue for someone, it can be concluded that the respondents realise that they are dealing with a moral issue, namely, that food and specific nutrients can have a positive or a negative impact on public health.

12.4.2.3 Making a Moral Judgement

The second step in the ethical decision-making process is to make a moral judgement. Moral judgements were identified via statements during the interview, and responsibilities stated on the company website, CSR reports and annual reports were considered as well. In addition, the respondents were asked about their conceptions of responsibility for health. Most respondents agree that consumers are primarily responsible for their food consumption, yet also hold that the company has (partial) responsibility for public health by producing healthier products and by informing consumers about healthier choices (see Sect. 12.4.1.1).

Combining the findings of Sects. 12.4.1.1 and 12.4.1.3 about the motivations for adopting a FoP logo for healthier food, it becomes clear what moral judgements have been made by the companies. *Companies 1*, *2* and 4 take the position that responsibility for health is a personal responsibility of consumers, but they also recognise that their food products indirectly have an impact on public health. Consequently, they perceive their responsibility for public health mainly as a responsibility to be transparent about what they put in their products and to provide healthier products, in order to enable the consumer to make the right (healthier) choice. Based on these results, it can be concluded that *Companies 1*, *2 and 4* make

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a moral judgement and proceed to the phase of establishing a moral intent. In the case of *Company 4*, there seems to be an ambiguous morality. On the one hand, it recognises the moral issue and does see its responsibility in providing healthier food, but, when it comes to using the FoP logo, it uses it only when its competitors do so. It argues explicitly that it does not use a FoP logo when its competitors do not use it, and thus only innovates for healthier food when its competitors do. In the case of *Company 3,* morality does not seem to play a major role, as it argues that its innovations for healthy food result mainly from increased consumer demand. Economic motivations seem to be more persuasive than moral considerations, in particular in this case.

12.4.2.4 Establishing Moral Intent

In the process of establishing a moral intent, stages and gates in the innovation process have to be identified where companies weigh moral factors with other factors. *Company 1* stated that "all projects are proposed in a project plan where we have to state what sustainability-related gains there are, such as health improvement or water reduction. This has to be approved in order to start the project." This makes clear that the company weighs several factors in this phase, including moral factors like the contribution to public health. The operational innovation process has several stages and gates after the project planning and approval phase, but there is not a juncture where moral criteria are weighed against other factors. According to the respondents, the criteria in each gate are project dependent. These criteria regarding taste and texture are established in the project planning phase. In general, it seems to be the case that the logo is dropped – and, with this, innovations for healthy food are *not* executed – when the taste, texture or price of the products have changed significantly. *Company 2* operates in a similar fashion. The company investigates the current formulation, the new criteria and the corresponding deviation. The respondent stated that "we start the project if the deviation is small and we expect that we can compensate without a significant cost price increase." "We will not start the project if we are sure that it affects the quality too much." Here, moral considerations do not seem to play a role. The same goes for *Companies 3* and *4*. *Company 3* starts with a plan in which it "considers the amount of calorie reduction and the influence on taste and price." Nevertheless, the respondent argued that lower calorie level is a boundary condition to proceed: "the starting point is that it has to be healthier." Given that *Company 3* focuses primarily on the business case for healthy food, moral intent does not seem to play a major role in this case. In the retail company (*Company 4*), the innovation itself is done by an external company, but the testing is done both internally and externally and here taste is the prime concern as well. Again, these considerations seem to be of a more technical and economic nature. Except for compliance with existing rules and regulations, regular risk assessments and food safety considerations, the four procedural dimensions of RI are not recognised in the operational innovation process.

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12.4.2.5 Engaging in Moral Behaviour

In all cases, the companies engage in moral behaviour only when they develop a healthier food product that is actually brought to market. This only happens when economic and technical criteria have been met as well.

With this, it becomes clear that all four companies seem to recognise the moral issue (the impact of food on health) and make a moral judgement (that the company has a responsibility to develop healthier products and to inform consumers about healthier choices). Except for *Company 1*, which considers the contribution of the innovation to public health during the operational innovation process, in the following process of establishing moral intent, moral considerations or ethical criteria do not seem to play any role in the operational innovation process. In the other companies, the criteria for continuing the innovation are based mainly on economic criteria (impact on price and taste) and technical criteria (impact on shelf life, maintaining the structure of the product). There is no involvement of CSR departments in the actual decision-making processes during the operational innovation process. In any case, the eventual moral behaviour of the company – the development of actual healthier food products – is heavily influenced by non-moral criteria in operational innovation processes; economic and technical criteria are a necessary condition for the actual performance of moral behaviour. This may be explained by the fact that improved health – operationalised by the criteria of the healthy food logo – is the starting point of innovations for healthier food, whereas technical feasibility and economic performance are seen as necessary conditions to proceed with innovation.

12.5 Conclusion and Discussion

This chapter focused on the question of whether and where normative considerations play a role in the innovation process, and whether procedural dimensions of RI are present in the innovation process. In order to answer these questions, the position towards CSR and public health and the decision-making process within the operational innovation process of four Dutch food companies were explored. All four companies participated in the FoP nutrition logo of the Dutch Choices Foundation and have been confronted with changes in the criteria for the logo that create a push towards innovating specific food products.

From the findings in this research, it becomes clear that, although the companies in this study are participating in a programme that aims to tackle public health problems and thus are responsive to the needs of society, and although the companies feel (partial) corporate responsibility for public health, ethical considerations do not seem to play a central role in the operational innovation process itself. The results show that, in the innovation process, several factors such as price and expected impact on quality are weighed in the decision to continue an innovation project for

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healthy food, but moral factors like the impact on public health are not mentioned as criteria or considerations for (dis)continuing the innovation.

This absence of moral criteria in the operational innovation processes runs contrary to the theoretical expectations developed in Sect. 12.2; it was expected that moral considerations would be applied throughout the entire innovation process. This can be considered to be a first indication that ethical decision making does not take place throughout the entire innovation process – this confirms earlier research (Blok et al. 2015) – but might be located at a higher or strategic level in the company. The hypothesis seems to be legitimate that in a first type of case, as in *Company 1,* the processes of recognising the moral issue, making a moral judgement and establishing moral intent have already been established at a higher decision level within the company. When the decision is made, the process of establishing moral intent is continued at the operational level. In a second type of case, as in *Company 2*, the moral intention to contribute to healthy food innovations is the starting point of its innovations as well, although technical feasibility and economic performance are seen as necessary conditions to actually proceed with the innovation. In a third type of case, as in *Company 3,* the moral intention seems to be absent; its innovations for healthy food are primarily part of the business case for healthy food, rather than a corporate *responsibility* for public health. In all three types however, technical feasibility and economic performance seem to be a necessary condition for the continuation or not of healthy food innovations.

To understand what kinds of considerations play a role in the strategic decision-making process, the decision-making process at company board level should be explored. Because displaying healthy food logos does not necessarily have a positive impact on sales and profits (Jansen et al., *working paper),* it is likely that moral considerations of (partial) responsibility for public health are weighed at the strategic level in the company against considerations of consumer demand, stakeholder pressure, competitor behaviour and legislation, resulting in the decision to adopt the logo and start the innovation process. This initial decision could provide the input for the operational innovation process.

This study's findings suggest the need for a revised model of ethical decision making in innovation processes for healthy food products (Fig. 12.2). The new conceptual model suggests how the recognition of a moral issue, the making of a moral judgement and the first step in establishing moral intent happen prior to the operational innovation process. It is at this stage that moral considerations are likely to play a central role, whereas in the operational innovation process itself pure technological and economic considerations like product quality and costs take precedence.

The findings also cast a new light on the discourse on RI. Although the food products that carry the logo can be considered to be responsible innovations because they contribute to the solution of the grand challenge of public health (cf. Von Schomberg 2013), the RI process dimensions do not seem to be present in the operational innovation process. As no moral criteria surface in the operational innovation process, there is little anticipation and reflection on possible impacts on public health; nor are there any other stakeholders involved and engaged in the operational

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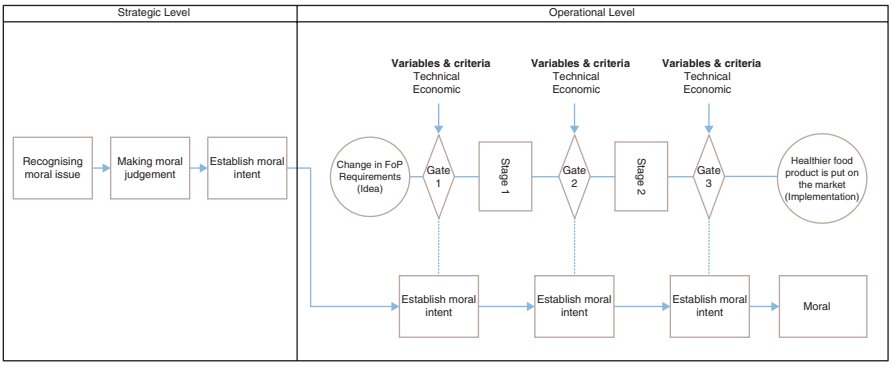

Fig. 12.2 Revised conceptual framework for ethical decision making in the innovation process (Note: *FoP* Front of Pack)

innovation process. This raises on the one hand the empirical question of whether the procedural dimensions of RI – anticipation, reflection, inclusion and responsiveness – are in fact present at the higher or strategic level in the company, and on the other hand the normative question of whether these RI dimensions *should* be present in strategic and operational innovation processes in order for such processes to be considered responsible innovation. We leave the question here of whether innovations that contribute to the solution of grand challenges but do not meet the RI process criteria should be considered as responsible innovations. This study's findings suggest that there might be a difference or even a discrepancy between considerations in decision making on the strategic and on the operational level. This has implications for the debate on RI in the private sector, as most current RI frameworks are about ethical governance during the entire innovation process (including both the strategic and the operational level).

There are several limitations to this study as well. First of all, an adapted version of Jones's theory is used in order to locate the junctures of ethical decision making. Including only the four core variables of Jones's model and omitting moderating variables like moral intensity and organisational factors may mean that factors that mitigate the considerations and motivations during the operational innovation process have been missed. Furthermore, the study may be only limitedly representative of the market because of the small number of cases and the specific focus on the Dutch food industry.

Although the current study is exploratory, it does provide first insights into the operational innovation process of innovations for healthier food in the Dutch food industry. Thus, it opens up new directions for future research. As the four case studies are exploratory rather than explanatory, the current findings can be used to guide new research. It will be relevant to find out (1) whether in other companies ethical considerations are absent from the operational innovation process, (2) whether a decision-making process for healthier food innovation takes place at the strategic level in a company and what considerations play a role at this level and (3) whether

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the four RI dimensions surface at the strategic and/or the operational level of innovation processes in other sectors. Furthermore, (4) another question is whether the integration of the four RI dimensions in strategic and/or operational innovation processes can stimulate and guide future innovations for healthier food.

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Chapter 13
Questioning the Normative Core of RI: The Challenges Posed to Stakeholder Engagement in a Corporate Setting

Merel Noorman, Tsjalling Swierstra, and Dorien Zandbergen

Abstract Responsible Innovation (RI) is a normative conception of technology development, which hopes to improve upon prevailing practices. One of its key principles is the active involvement of a broad range of stakeholders in deliberations in order to better embed innovations in society. In this paper, we examine the applicability of this principle in corporate settings and in smaller scale technological projects. We do so in the context of a case study focused on an innovation project of a start-up organisation with social aspirations. We describe our failed attempts to introduce RI-inspired stakeholder engagement approaches and articulate the 'reasonable reasons' why the organisation rejected these approaches. We then examine the methods that the organisation adopted to be responsive to various stakeholders' needs and values. Based on our analysis, we argue that there is a need for the field of RI to explore additional and alternative ways to address issues of stakeholder commitment and inclusion, in order to make RI's deliberative ideals more applicable to the rapid, fluid, partial, and provisional style of deliberation and decision making that we found in corporate contexts.

13.1 Introduction

Responsible Innovation (RI) is basically a normative conception of technology development, which hopes to improve upon prevailing practices. RI is both described in terms of substantive norms regarding the outcome (sustainability, etc.) or – more usually – in terms of procedural norms regarding the process. If the latter, some

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