

# IMPROVING THE INNOVATION PROCESS IN A LARGE CORPORATE: A CASE STUDY FOR RENEWI.

**MASTER THESIS**  
STRATEGIC PRODUCT DESIGN

**ELISA BLOEM**

*Graduation report*  
*February 20th, 2023*

# **IMPROVING THE INNOVATION PROCESS IN A LARGE CORPORATE: A CASE STUDY FOR RENEWI**

## **AUTHOR**

Elisa Bloem

## **MASTER THESIS**

MSc. Strategic Product Design  
Faculty of Industrial Design Engineering  
Delft University of Technology

## **IN COLLABORATION WITH**

Renewi plc | [Eindhoven]

## **GRADUATION COMMITTEE**

Chair | Prof. dr. Hultink, E.J.  
Faculty of Industrial Design Engineering | TU Delft  
Department [MCR]

Mentor | MSc. Coelen, J.  
Faculty of Industrial Design Engineering | TU Delft  
Department [MOD]

Company supervisor | Mul, E.J.  
Innovation Manager | Renewi, The Netherlands

**FEBRUARY, 2023**



## PREFACE

This thesis is made possible through the opportunity given by the Business and Development Group of Renewi. First and foremost, I would like to express my gratitude towards Ernst-Jan Mul, who was my company supervisor during this project. You were always open to my ideas, gave sharp feedback, and opened doors for me to important stakeholders in the project. You trusted me with this project and gave me a lot of freedom to explore different opportunities.

Moreover, I would like to thank all people from Renewi who participated in my research. You took the time to be involved during interviews and co-creation sessions. You helped me to gain knowledge on the innovation process at Renewi and other activities at the company. It's safe to say I have learned a lot about waste and recycling processes during the past few months. A special thanks go to Yob Woud and Daneel Geysen, who provided insides into the innovation process through the lens of the current boosters of innovation. As innovation manager, you played an important role in my research process.

Next, I would like to show appreciation to people outside of Renewi who agreed to conduct an interview with me. Thank you for being so open about the innovation process of the companies you work for. During online and physical meetings, you taught me about different forms of innovation processes at big corporates.

From within the faculty, I would like to thank my supervisory team Erik-Jan Hultink and Jeroen Coelen from the TU Delft. Erik-Jan, I appreciate how you were always joyful and comforted me throughout the process. Besides, you urged me to spend enough time on the research phase. During the qualitative research I did, you kept on saying "you'll be thankful later.". After finishing the lengthy process of transcribing and coding, I was indeed thankful for the time I spent on it. Jeroen, I really enjoyed your way of coaching which included lots of inspirational papers, podcasts, and mentoring. You were always very enthusiastic about my graduation topic and your excitement is contagious.

At the end of this preface, I would like to express my gratitude to the people standing closest to me. Thank you for the time you invested in providing me with support throughout this project and engaging in meaningful discussions with me.

Enjoy reading!

**ELISA BLOEM**

20.02.2023

# EXECUTIVE SUMMARY

The world is facing a climate crisis. We are polluting the earth with high CO<sub>2</sub> emissions and waste. In addition to this, the human population is ever-growing. This results in a demand for more products, which will create even more waste. Products that are predominantly made of raw materials. Meanwhile, the global economy is only 7,2% circular and this situation is getting worse year after year.

While on the one hand, there is a desire for raw materials, and on the other hand, there are ever-growing piles of waste, there is an opportunity to meet the two. The growing desire for repurposing waste streams creates fruitful ground for businesses that focus on waste stream innovation, like Renewi. Renewi currently enables the circular economy by giving new life to used materials. It positions itself as the leading waste-to-product company in the world's most advanced circular economies. To stay a leader in recycling and the production of secondary materials, an ambitious goal is created, called Mission 75. This goal is to recycle 75% of Renewi's collected waste in 2025. This is 10% more compared to 2020, where 64,7% of the collected waste was recycled. The only way to get to this 75% is through improving current activities and being innovative. By all means, after reaching Mission 75 the goal will without doubt rise to 80% or 85%.

Being an innovative company calls for having a proficient innovative process. This process entails a dynamic workforce keen to engage in innovation activities and is well-informed about ongoing activities. Being innovative is one of Renewi's core values. Yet, the current innovation process doesn't work optimally, while it is challenging to spread an innovation mindset across a large, geographically widespread company with various working

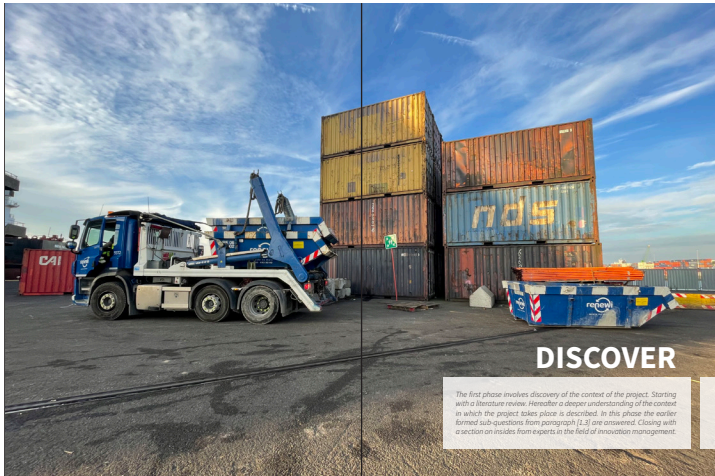
cultures. This paper endeavours to contribute to this objective by addressing the research question: *"How can the innovation process of Renewi be improved to enable the company to recycle more and at a higher quality?"*.

Sub-questions divide the research question into smaller components and address inquiries related to Renewi's organizational structure and current innovation activities and innovation roles at the company. Further, they examine the innovation process with its key stakeholders and their roles. Data about each component are collected through qualitative interviews with key stakeholders in the innovation process. The data is analyzed and thereafter synthesized using the Grounded Theory Method (GTM). Four concepts emerged from the GTM that function as a basis for the final design. The model is a systematic representation of a possible future for Renewi, with an improved innovation process.

Finally, this thesis presents a roadmap towards an improved innovation process at Renewi. Through a revised organizational architecture, the right innovation attitude, and structured knowledge management. A corresponding strategy document explains the horizons in more detail including the goals, key stakeholders, and actions for each horizon. The horizons are the following: [1] Activate the ambassadors, [2] Navigate the intelligence network, and [3] Beyond Renewi's borders. These horizons guide Renewi to be a leader in circular innovation by capturing the full business potential of Renewi's ideas, securing internal and external knowledge, and functioning as an attractive innovation hub for promising innovation projects and talents from outside.

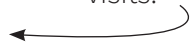


## READING GUIDE



Pages showing a picture of one of Renewi's sites are the start of a new phase of the project. Phases are corresponding to the phases within the Double Diamond approach. Each of these pages provides an introduction to the phase that follows.

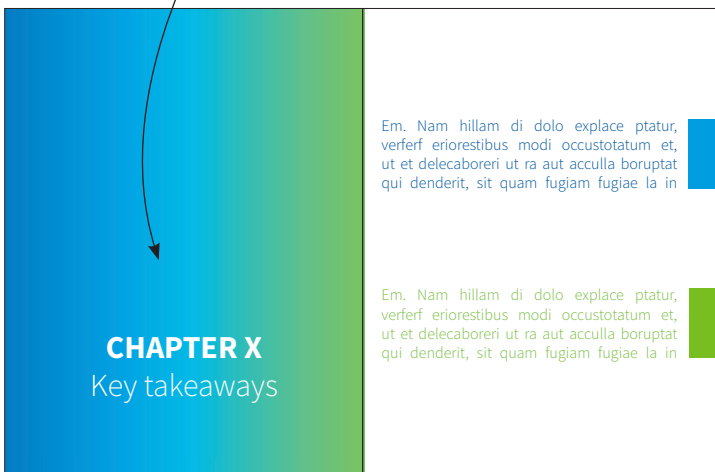
All the images displayed on these pages were captured by me, taken during site visits.



Pages showing a picture with a coloured grade are the start of a new chapter. Each of these pages provides an introduction to the chapter that follows.



At the end of each chapter a page like this shows a conclusion and the key takeaways of that chapter.



Blue notes combined with a blue box in the margin indicate information that provides extra background on the topics.

Green notes combined with a green box in the margin indicate information that talks about the process or a specific step in process.

# TABLE OF CONTENTS

## INTO

Preface	03
Executive summary	04
Reading guide	05

## 01 INTRODUCING THE PROJECT

1.1	Call for secondary materials	10
1.2	Enabling the circular economy	10
1.3	Accelerating innovation at Renewi	12
1.4	Structuring the design process	13

## DISCOVER

## 02 UNDERSTANDING THE CONTEXT

2.1	Literature review	20
2.1.1	Definition of the innovation process	21
2.1.2	Theoretical review of the innovation management measurement areas	22
2.2	Inside in Renewi's (innovation) business	28
2.2.1	Renewi's organizational structure	28
2.2.2	Innovation activities and innovation roles	31
2.2.3	Key stakeholders in the innovation process	35
2.2.4	Roles of the key stakeholders in the innovation process	35
2.3	Insides in innovation processes at big corporates	36

## 03 RESEARCH APPROACH

3.1	Qualitative research	40
3.1.1	Qualitative research set-up	40
3.1.2	Interview guide	40
3.1.3	Data collection	41
3.1.4	Position in the field	41
3.2	Data analysis and synthesis	41

## 04 DEFINE RESEARCH RESULTS

4.1	Building the model for the innovation process at Renewi	48
4.1.1	The model for an improved innovation process	48
4.1.2	Concepts and their corresponding categories	49
4.2	Discussing the four concepts	51
4.2.1	Managerial encouragement	51
4.2.2	One way of working	56
4.2.3	Properly allocated resources	65
4.2.4	Continuous learning	70
4.3	Research discussion	75
4.4	Research validation	76




	<b>DEVELOP</b>	
<b>05</b>	<b>FROM CONCEPTS TO FUTURE SCENARIO</b>	
	5.1 Design approach	82
	5.2 Three design scenarios	82
	5.1.1 Design scenario 1: Creating an ecosystem	84
	5.1.2 Design scenario 2: Guiding communities	86
	5.1.3 Design scenario 3: Renewi's football team	88
	5.3 Choosing a design scenario	90
	5.4 Validation from stakeholders	92
	5.5 Renewi a leader in circular innovation	97
<b>06</b>		
	<b>DELIVER</b>	
	<b>DELIVERING THE DESIGN</b>	
	6.1 Future vision	104
	6.2 Strategic roadmap	104
	6.3 Tactical roadmap	104
	6.4 Strategy document	108
<b>07</b>	6.4.1 Horizon 1: Activate the ambassadors	111
	6.4.2 Horizon 2: Navigate the intelligence network	119
	6.4.3 Horizon 3: Beyond Renewi's borders	125
<b>08</b>	<b>CONCLUSION &amp; DISCUSSION</b>	
	<b>DESIGN DISCUSSION</b>	
	7.1 Connecting research with design	136
	7.2 Design validation	138
<b>09</b>	7.3 Design limitations	139
	7.4 Future recommendations	149
<b>10</b>	<b>PERSONAL REFLECTION</b>	
	8.1 Personal reflection on the design process	143
	8.2 Personal reflection on the project	144
	<b>GLOSSARY</b>	146
	<b>REFERENCES</b>	147
	<b>APPENDIX</b>	152



# 01

**INTRODUCING THE  
PROJECT**





Chapter 1 starts with an introduction of the need for secondary materials to understand the context and relevance of the paper. In addition, this chapter provides an explanation of how Renewi enables the circular economy to meet its needs. The next section discusses how this project adds to Renewi's goal to enhance the circular economy. This involves the creation of the research question, towards which all research and design efforts during the project are directed to find an answer. The chapter concludes with a presentation of the approach that is used to structure the design process.

## 1.1 CALL FOR SECONDARY MATERIALS

The world is facing a climate crisis. The global economy is currently only 7,2% circular and this situation is getting worse year after year. This means that only 7,2% of all used materials on the planet are cycled back into global economy after the end of their useful life (Circle Economy, 2023). Without an urgent and concerted effort, this will prove catastrophic for future generations (United Nations, z.d.). In November 2022, the world population reached 8 billion people (United Nations, Department of Economic and Social Affairs, 2022). This rapid growth in population causes an increasing supply of waste, which puts pressure on our planet (IEA, 2022).

Meanwhile, a higher human population on our planet results in a higher demand for products that are predominantly made of raw materials. In addition, the number of suppliers for raw materials is decreasing (Ministry of Infrastructure and Water Management, 2021). While on the one hand, there is a need for raw materials, on the other side, we have ever-growing waste streams, there is an opportunity to meet the two. This opportunity is recognized by many, such as research from the Dutch Ministry of Infrastructure and Water management states; “A circular economy can be an important instrument to tackle the current triple planetary crises on climate, biodiversity, and pollution. By keeping resources in the loop for longer, we’ll avoid emitting greenhouse gases caused by the energy needed to make products.” (2021). The Circular Gap Report 2023 (2023) states that 90% of materials are either wasted, lost, or remain unavailable for reuse for years as they are locked into long-lasting stock such as machinery and buildings. The growing desire for repurposing waste streams creates fruitful ground for businesses that focus on waste stream innovation, like Renewi.

## 1.2 ENABLING THE CIRCULAR ECONOMY

To become a leader in recycling and secondary materials production, Renewi creates an ambitious goal, called Mission75. This goal is to strive to recycle 75% of Renewi’s collected waste in 2025. This is a difference of 10% extra recycles compared to 64,7% in 2020. Plus, a subgoal to increase Renewi’s EBIT by 20 million in these five years. The only way to get to this 75% is through improving current activities and implementing innovations. Creating new products from promising waste streams, implementing new recycling methods, or enabling new processes to increase the recycling rate of Renewi could all add to this. Renewi currently enables the circular economy by giving new life to used materials, see figure 1. It positions itself as the leading waste-to-product company in the world’s most advanced circular economies. For this, they focus exclusively on gaining value from waste (Renewi, 2022). The circular economy drives Renewi’s business model. However, to stay the leading waste-to-product company, Renewi needs to keep moving forward. Renewi seizes to do this by focusing on three strategic pillars; leader in recycling, leader in secondary materials production, and selectively grow market share, which can be read more about in section 2.2.1.

# Renewi's role in the circular economy



Figure [1], Different processes at Renewi.



### 1.3 ACCELERATING INNOVATION AT RENEWI

An increase in Renewi's recycling rate adds to Mission 75, see figure 2, and therefore to the circular economy in the countries where they operate. To achieve this, the company must adopt new innovations. Renewi's innovative character is reflected in its brand name, where the "i" represents innovation. Innovation is not without reason a key factor that drives the company's value. Figure 7 illustrates an overview of all Renewi's value drivers. However, Renewi's current innovation process is not optimal, failing to fully realize the potential of its ideas. Thus, the company needs to revise their innovation process to increase its recycling rate. This thesis answers to the following research question.

How can the innovation process of Renewi be improved to enable the company to recycle more and at a higher quality?

Renewi distinguishes three main groups of people that each has a crucial role in Renewi's innovation process: the operational level, the innovation teams, and the internal investors. For both the operational level and the innovation teams, programs are created to stimulate an innovative mindset and contribute their knowledge about innovation, whereas the investor group is left out. Therefore, the preference lies in a focus on investors for this project. However, this research starts with a zoomed-out view of the innovation process to get a complete interpretation of the problem before focusing specifically on a particular group. Appendix [A] shows the initial project brief created at the start of the project.

To be able to get a good overview of the problem, five sub-questions support the research question:

- What does the organizational structure look like at Renewi?
- What innovation activities and innovation roles did Renewi obtain over time?
- What does the current innovation process look like?
- Who are the key stakeholders in the innovation process?
- What are the roles of these stakeholders in the innovation process?

## 1.4 STRUCTURING THE DESIGN PROCESS

To structure the design process of this graduation project, it uses the approach of the Double Diamond. A model popularised by the British Design Council (2005). The two diamonds represent a process of exploring an issue more widely or deeply (divergent thinking) and then taking focused action (convergent thinking). Figure [3] shows a visualisation of the design process for this project. The process includes frequent iterations to avoid risk and builds confidence in the ideas produced, which makes it an iterative process. Besides, the use of iterating loops will help correct errors early on. Three design principles are important to keep in mind within this approach. First, putting people at the centre of the problem to really understand their needs, strengths, and aspirations.

Second, helping people gain a shared understanding of the problem and ideas by communicating inclusively and visually. Lastly, getting inspired by what others are doing during co-creation and collaboration.

For this project, emphasis lies on the research phase. This is done to properly frame the problem at Renewi before designing solutions.

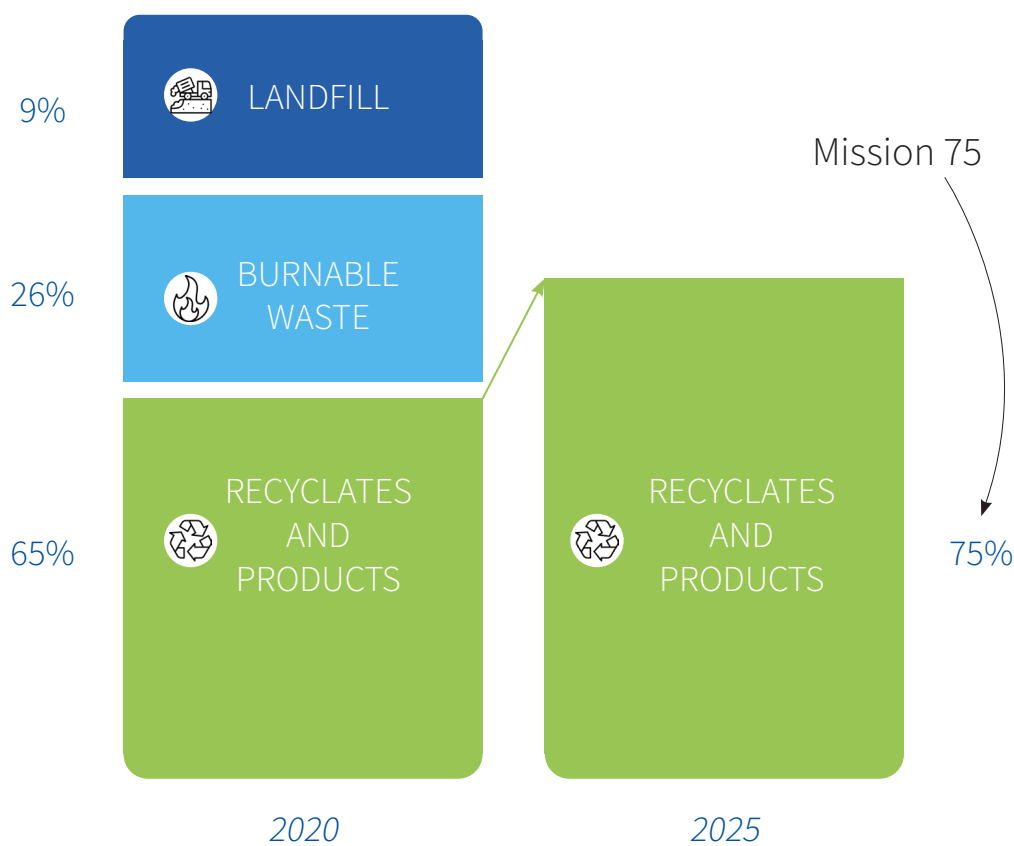


Figure [2], Visual representation of Mission75: Percentage recyclates and products to burned waste and landfill in 2020 compared to 2025.

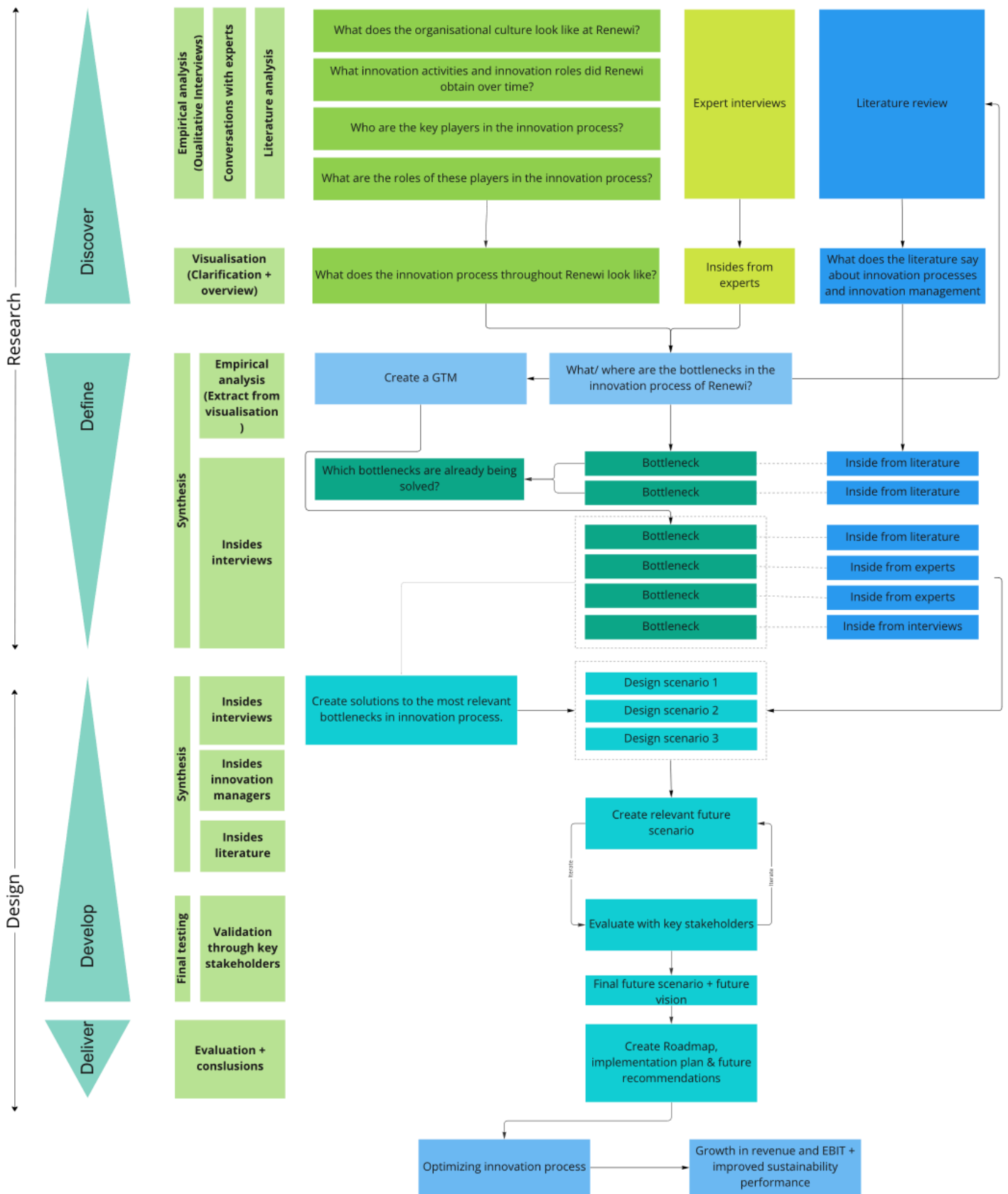


Figure [3], Detailed Double Diamond approach.



## CHAPTER 1

### *Key takeaways*

Nowadays we face difficult challenges. The world population is vastly growing and only 7,2% of the global economy is circular. This results in ever-growing waste streams. The growing desire for repurposing waste streams creates fruitful ground for businesses that focus on waste stream innovation, like Renewi. Renewi currently enables the circular economy by giving new life to used materials. To become a leader in recycling and secondary materials production. For this, an ambitious goal is created, called Mission75.

An increase in the recycling rate of Renewi adds to the circular economy in the countries where they operate. To increase this recycling rate Renewi needs to implement new innovations. Therefore, this project focuses on the optimization of the innovation process to accelerate innovation at Renewi.

The overall research question is formulated:  
*How can the innovation process of Renewi be improved to enable the company to recycle more and at a higher quality?*

This paper dives into this question by describing the following topics: Renewi's organizational structure, innovation activities and innovation roles Renewi obtained over time, the current innovation process and its key stakeholders, and the roles of these stake-holders.

The paper is structured using the double diamond method using four stages: discover, define, develop, and deliver.





*Collecting waste in the port of Rotterdam*





# DISCOVER

The first phase of the double diamond involves discovering the context of the project to answer the earlier formulated sub-questions. This discovery is done through three elements: an extended literature review, obtaining insides into Renewi's business, and expert interviews. All to get an answer to the research question: How can the innovation process of Renewi be improved to enable the company to recycle more and at a higher quality?. Section 2.2, 'An inside in Renewi's (innovation) business', gives answer to the sub-questions presented in section 1.4.

To understand the problem semi-structured interviews are conducted with people that are affected by the innovation process. Primary research is done by conducting informal interviews, whereas later interviews are in-depth qualitative. The focus is on identifying parts of the innovation process and revealing how people behave in this process. Interviewees are carefully selected from four main groups involved in the innovation process. Stratified sampling is used where the four groups are formed based on relevant characteristics towards the innovation process.






**02**

**UNDERSTANDING  
THE CONTEXT**





After an introduction to the context, project assignment, and project approach, chapter 2 discusses the context in which the project is executed. First, it gives a literature review of the innovation process. This includes a short review of four bodies of literature on the topic of innovation processes most relevant to this research. Hereafter it provides a definition of ‘an innovation process’ and a theoretical review of the Innovation management measurement areas. Next, the chapter describes Renewi’s (innovation) business, which sheds light on the earlier formulated research sub-questions. The sections in this part are respectively: Renewi’s organizational structure, innovation activities and innovation roles, key stakeholders in the innovation process, and roles of the key stakeholders. The chapter closes with insides from experts on the innovation processes at big corporations.

## 2.1 LITERATURE REVIEW

An extensive body of literature on the topic of innovation processes is written. To cope with this vast amount of literature, this paper compares the most relevant review papers. Table [1] shows the four most relevant papers. Relevancy is based on the publishing journal and the times the paper is cited compared to the year it is written. Adams et al. (2006) present a seven-factor framework which elaborated on innovation activity. Crossan and Apaydin (2010) synthesize a comprehensive multi-dimensional framework of organizational innovation. Hidalgo and Albors (2008) identify the fundamental innovation management techniques focusing on the improvement of company competitiveness by means of knowledge management. Tidd (2001) reviews research on the relationships between organization performance, environmental contingencies, and organization configurations. Frameworks of the literature from Adams et al. (2006) in 'Innovation management measurement: A review' and Crossan and Apaydin (2010) in 'A multi-dimensional framework of organizational innovation: A systematic review of the literature' shows the most relevance for this thesis.

Here relevancy is based on a significant overlap between the proposed models and the final model presented in this paper. Appendix [B] and [C] show a visualization of the frameworks in contrast with the model built in this paper. The greatest connection to the model built in this paper is the model proposed by Adams et al. (2006). One could therefore argue to take the framework from Adams et al. (2006) as a basis for the theoretical review of this paper. Their framework discusses the so-called Innovation management measurement areas, see figure [4]. The framework categories presented in the framework function as a basis for the literature review. The framework categories are complemented with compatible information from additional research papers. First of all, a definition of innovation is given.

Titel	Author (s)	Model/ Framework	Journal	Cited
<i>'Innovation management measurement: A review'</i>	Adams et al. (2006)	Innovation management measurement areas	International Journal of Management Reviews	2299
<i>'A multi-dimensional framework of organizational innovation: A systematic review of the literature'</i>	Crossan and Apaydin (2010)	Multi-dimensional framework of organizational	Journal of Management studies	4248
<i>'Innovation management techniques and tools: a review from theory and practice'</i>	Hidalgo and Albors (2008)	-	R&D Management	503
<i>'Innovation management in context: environment, organization, and performance'</i>	Tidd (2001)	Innovation, environment, and performance model	International Journal of Management Reviews	1284

Table [1], Most relevant review papers in innovation management and innovation processes.



### 2.1.1 DEFINITION OF THE INNOVATION PROCESS

Innovation is widely regarded as a critical source of competitive advantage in an increasingly changing environment (Dess and Picken, 2000; Tushman and O'Reilly, 1996). However, the vast body of literature about innovation hinders a clear definition of the term 'innovation'. Therefore, a composed definition of innovation is proposed by Crossan and Apaydin (2009). This definition is drawn from the concept of innovation described in the European Commission's Green Paper of Innovation (1995, pp. 1-2). Crossan and Apaydin, however, replaced the word 'successful' with 'value-added' as they saw it as a barrier to defining innovation before implementation. It reads as follows: "Innovation is the production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome." [N1]

Globe et al. (1973) report for managing the uncertainty of innovation, it is critical to have an efficient process. They say: "The innovation process is complex, comprising a myriad of events and activities some of which can be identified as a sequence and some of which occur concurrently, and it is clearly possible that innovation processes will differ to some degree, across organizations and even within organizations on a project-by-project basis." (Cordero, 1990) mentions the importance of measuring the complex process that has an influence on the organization's innovation capability. He talks about measuring this to enable optimal management of the innovation process. Adams et al. (2006) tried to fill this gap by creating a framework which does this. The question they aim to answer is, what inhibitors or accelerators of innovation management exist and how are they measured? The next section gives an answer to this question.



[N1] A statement from Crossan and Apaydin (2009) to describe the earlier given definition of innovation: "This definition captures several important aspects of innovation: it includes both internally conceived and externally adopted innovation ('production or adoption'); it highlights innovation as more than a creative process, by including application ('exploitation'); it emphasises intended benefits ('value-added') at one or more levels of analysis; it leaves open the possibility that innovation may refer to a relative, as opposed to the absolute, novelty of an innovation (an innovation may be common practice in other organizations but it would still be considered as such if it is new to the unit under research); and it draws attention to the two roles of innovation (a process and an outcome)."



## 2.1.2 THEORETICAL REVIEW OF THE INNOVATION MANAGEMENT MEASUREMENT AREAS

Adams et al. (2006) construct a framework against which managers can evaluate their business's innovation activity. Innovation activity is seen as the extent to which an organization is nominally innovative or in what way innovation is embedded throughout the organization. This framework is used to identify areas for improvement in the innovation process. The seven-factor framework exists of categories that are specified in terms of the required organizational capabilities to make and manage change. Within each framework category a set of measurement areas is identified (inputs, knowledge management, innovation strategy, organization and culture, portfolio management, project management, and commercialization), see figure 4. These seven framework categories describe inhibitors or accelerators of innovation management and innovation processes.

Framework category	Measurement areas
Inputs management	People Physical and financial resources Tool
Knowledge management	Idea generation Knowledge repository Information flows
Innovation strategy	Strategic orientation Strategic leadership
Organization and culture	Culture Structure
Project management	Risk/return balance Optimization tool use
Portfolio management	Project efficiency Tools Communications Collaboration
Commercialization	Market research Market testing Marketing and sales

Figure [4], Innovation management measurement areas (Adams et al., 2006).

### Inputs Management

Inputs management involves resourcing of innovation activities and includes factors such as human resources, financial resources, physical resources, and tools for forming new ideas into implemented processes, products, or strategies. For the innovation process to be deemed sufficient, it is essential that these factors maintain a state of balance. Adams et al. (2006) describe human resources are measured as the number of people committed to an innovation task. Damanpour (1991) elaborates on the diversity of experience and skills to be a favourable factor in innovation outcomes. Further, research and development (R&D) is frequently used as a measure of input. Nevertheless, it is discussed that for the innovation process, R&D should be seen as only one of several inputs. However, it shows not to be a very useful measure for small and medium-sized enterprises, which may not have a (formal) R&D department (Kleinknecht 1987). In addition to this Hipp and Grupp (2005) discuss R&D as not being a useful measure for service industries, due to the tendency of low R&D intensity in these industries. Since R&D is not necessarily a useful measure for service industries and high levels of R&D intensity are not automatically evidence of improved innovation practice, this paper is not focusing on R&D practices. Be that as it may, sufficient funding is an important input into the innovation process concentrated on by many in the literature (Adams et al., 2006).

Further, Adams et al. (2006) talk about a considerable amount of attention going to the tendency of an individual to innovate. Although multiple researchers made attempts to develop methods measuring this, Adams et al. debate the difficulty to measure this. Physical resources are a broad category that captures a range of inputs from all kinds of facilities. Calantone et al. (1999) talk about using a screening process which gives guidance in the process for eliminating projects that use a considerable number of resources without being justified by current business strategy. Lastly, the use of systems and tools is a useful input. Bessant and Francis (1997) and Cooper et al. (2004) empathize with the importance of this input. The range of tools employed can encompass those designed to foster creativity and others utilized for implementing systems of quality control.

## Knowledge Management

Knowledge management is an essential aspect of innovation and competitiveness in modern organizations. It involves the creation, capturing, and sharing of information and ideas that drive innovation capabilities. Knowledge management concerns the management of implicit and explicit knowledge held by the organization as well as the process of using and gathering information, thus Davis (1998) and Nonaka (1991). Hidalgo and Albors (2008) underline the value of knowledge. They consider knowledge nowadays as an economic driver in today's economy. Organizing knowledge in a wise way can have high returns on investments as a return (Getz and Robinson, 2003).

A key aspect of knowledge management is idea generation, which encourages employees to share their thoughts and contribute to the overall knowledge base of the organization. Scholars express their thoughts about the importance of a sufficient number of ideas as a stable factor in the innovation process. Cooper (1988) talks about ideas as raw materials for innovation that are relatively inexpensive to generate yet have a significant impact on ultimate success or failure. It is the managers challenging task to be aware of the innovative potential of their employees. Polanyi (1966) draws attention to the capital of tacit knowledge of these employees about the production and/or service processes of the organization. Capturing these ideas is important, as it allows the organization to store, analyze, and build on them. Adams et al. say, *"If knowledge is fundamental to innovation, then it should be possible to measure the accumulated knowledge of the firm, its knowledge repository."* Storing knowledge allows the organization to safeguard itself against loss, such as through employee turnover or technological failures. Despite this, Figueroa and Conceição (2000) emphasize the absence to safeguard and manage intellectual property within many corporations. In addition to this, Brown and Duguid (1991), discuss the importance of evaluating and monitoring the innovation process. New product and process efforts can absorb big amounts of resources with no sure payoff. That is why they need to be evaluated throughout their development and the information should be kept for future revision. Consistently, Clegg et al. (1999) notice developed skills and knowledge getting lost after finishing projects.

These scholars agree that companies should be cautious to make the same mistake while spending scarce resources on reinventing previously resolved solutions. Figueroa and Conceição (2000) say larger companies with heavy structures, internal regulations, and profound bureaucracy suffer significantly from the unawareness of activities across units or groups. The absence of not knowing what other units are doing results in missed business opportunities. To prevent the loss of knowledge, organizations need to develop processes and systems that ensure that knowledge is accessible, transferable, and protected.

The flow of knowledge within an organization is critical to its success, as existing knowledge can be built on for future innovation. However, many organizations have trouble transferring information and knowledge from one organizational unit to another (Clegg et al., 1999). He mentions product and process innovation involving synthesizing and reusing existing knowledge and information. Furthermore, to allow the development of innovative concepts and spark ideas it is important that information flows within and into the firm. Adams et al. (2006) distinguish three approaches to measuring information flow. First, measures of the internal information gathering process. Second, measures of contacts with consumer information. Third, measures of the connections that innovation teams maintain with sources and external organizations. Through the examination of these three approaches, the dissemination of information within the organization can be quantified and improved.

## Innovation strategy

An innovation strategy is important to a well-working innovation process because it provides a roadmap for the organization to follow in order to achieve its innovation goals. Sundbo (1997) argues that conscious decisions must be taken regarding innovation goals to achieve consistency between innovation activities and an overarching organizational strategy. The innovation strategy defines the direction, priorities, and objectives of the organization's innovation efforts, ensuring that resources are aligned and focused on the most impactful opportunities. Li and Atuahene-Gima (2001) argue that the evidence for a fixed innovation strategy is subjective and may cover evaluations of an organization's priority for new product development (NPD), such as resource allocation. According to Saleh and Wang (1993), the three main components an innovation strategy can be used for are persistent commitment to innovation, proactiveness, and risk-taking. This includes responsibility from top management for innovation within the organization, as well as communication and specifying a direction for innovation. Cooper (1984) indicates the success of innovation in the strategy that top management adopts. According to Adams et al. (2006), the foundation of an innovation strategy is comprised of basic strategic orientation and strategic leadership.

Strategic orientation is described as the link between the overall business goals and the innovation strategy. It can be distinguished into two types. First, those where an innovation strategy can be measured in the organization. This can be measured in multiple ways, such as through explicit expression in for instance an innovation strategy (Miller and Friesen, 1982), commitment to dedicated funding (White 2002), and identifiable roles for new products and services (Cooper and Kleinschmidt 1990). The second type of measure concerns strategy as a guide for innovation throughout the organization.

Strategic leadership is described as a strong vision for innovation (Pinto and Prescott, 1988), a clear allocation of resources, and a long-term commitment to innovation (Cooper et al., 2004). Podsakoff et al. (1990) acknowledge a strong vision is crucial to the success of innovation. They emphasize that a clear and strong vision is tied to a deep understanding of where the organization is headed and a vivid picture of its future direction. In addition to this, West (1990) talks about a clear shared vision of innovation increases

the effectiveness of a company's innovation activities. Senior management is responsible for communicating and developing a vision for innovation (Damanpour, 1991). This group should adopt an attitude towards change and be supportive of innovation within the organization. The support for innovation from a managerial attitude can be measured by expectation, practical support, and approval of attempts to introduce ideas into the work environment (Adams et al., 2006). Furthermore, Wyld and Maurin (2009) empathized that a firm's management should encourage experimentation, create champions, and incentivize employees that drive innovation initiatives. Villaluz and Hechanova (2019) created a model in which a direct impact of leadership on innovation is seen. They talk about an innovation culture being created when a leader role model is supportive of innovation by acting in a certain way. A few factors in this are already briefly described above, such as encouraging employees to innovate and communicating the innovation vision. Supplementary, rewarding and evaluating innovation efforts and proving structures and systems to facilitate innovation are added.

The connection between the overall business goals and the innovation strategy (strategic orientation), along with strong leadership (strategic leadership), is necessary to make innovation a reality. Nonetheless, according to Hope Haily (2001), it's important to note that transitioning towards an innovation strategy often requires years of investment in energy and resources before a transformation in this area can be initiated.

## Organization and culture

An organization's culture is reflected in the actions and behaviour of staff. It is the shared social knowledge within an organization regarding the rules, norms, and values that form the attitude and behaviours of its employees (Colquitt et al., 2009). In addition to this, Snow and Hrebiniak (1980) talk about an organization as a group of people working together to achieve a purpose that cannot be achieved by an individual working alone. An organization's culture plays a critical role in the success of an innovation process. Tidd (2001) emphasises the uncertainty and complexity of the environment affecting the type, degree, organization, and management of innovation. He says better results arise when the fit between these factors is greater.

In the literature, a sizable amount of work is found on psychological and situational factors having a positive influence on innovation in organizations. Amabile et al. (1996) and Ekvall (1996) write about the work environment, including both cultural and structural elements, making a difference in a firm's level of innovation. West and Richter (2009) discuss innovativeness as being more likely to occur in a work environment where coming up with creative and novel outcomes is encouraged. Building a culture of innovation should be about creating a climate and infrastructure which affects employees to express actions and thoughts needed for innovation (Dobni, 2008). A supportive work environment that encourages exploration and risk-taking is essential for fostering a culture of innovation. Organizations should provide freedom to explore creative possibilities while at the same time having sufficient control to manage innovation in an efficient and effective manner. According to Zien and Bucker (1997), it is necessary to establish a safe environment where employees can experiment freely without having their innovation outcomes restricted. In addition to this, Lorenz and Valeyre (2005) discuss 'learning type' organizations stimulating the ability of their employees to be flexible and innovative.

Furthermore, Ernst (2002) talks about the characteristics of a dedicated project group assigned to the innovation tasks: dedicated project leader, multidisciplinary, inter-functional cooperation and communication, responsibility for the process, and team autonomy.

It is generally discussed that group and individual autonomy have a positive influence on the innovation process (Amabile, 1998). Further, organizational innovation is negatively affected by centralization. Centralization is described as the degree of decision-making authority by a firm's top management and the concentration of emphasis on following procedures and rules in role performance (Burns and Stalker 1961; Damanpour 1991). Maduenyi et al. (2012) described centralization as the decision-making power being set aside at the top level. On the contrary, decentralized is described as decisions being delegated to lower levels. Motivating and improving the morale of employees is also important, as employees who are passionate about their work and engaged in the innovation process are more likely to contribute new ideas and be more productive. Motivation and morale can be measured on the level of the individual, a group, or the complete entity (Abbey and Dickson 1983). Cormican and O'Sullivan (2004) talk about motivation and best practices for effective product innovation management. They say the interests of employees can be aligned with that of the organization by individuals responding to reward systems.



## Project Management

Good project management helps ensure the innovation process is efficient and effective by providing structure and a clear direction. Project management is concerned with the processes that turn the inputs into marketable innovation (Adams et al., 2006). Innovation processes are inherently complex, and as a result, there is a considerable chance innovation processes differ to some degree. Differences can be seen across organizations and within organizations on a project-by-project basis. Nevertheless, scholars throughout the literature agree on several major components of innovation project management. Using tools, project efficiency, collaboration, and communication. The success of project management is measured in the efficiency of revenue, duration, or cost of the project (Adams et al., 2006) or in speed (Hauser and Zettelmeyer, 1997). Globe et al. (1973) recognize that having an efficient process that can manage the many aspects of innovation is critical. To accomplish efficiency in organizations pursuing to innovate, organizations are recommended to make use of tools and techniques to facilitate innovation efforts and to enact formal processes for innovation.

Besides, good project management facilitates communication and collaboration among team members, promoting the exchange of ideas and ensuring all stakeholders are aligned towards a common goal. According to Jassawalla and Sashittal (1999), there are several characteristics of internal collaboration that positively impact project management. These include transparency and a focus on creating synergy, high levels of commitment from team members, and an awareness of the importance of the project by all participants. These factors can help ensure the project is managed effectively and efficiently. Based on the research of Damanpour (1991), there is a strong positive correlation between innovation and internal communication. Internal communication, defined as the dissemination of ideas within an organization, contributes to a positive team dynamic and promotes diversity.

It can be perceived through the amount and frequency of meetings, the extent of communication amongst different units/ groups, and the degree to which people from different functions are in contact. Cormican and O'Sullivan (2004) talk about communication as a necessity and vital for product innovation, particularly if team members are not physically together. For them, collaboration and communication are success factors in product innovation management. They describe it as "*an information transformation process where information is gathered, processed, and transferred in a creative way.*". By fostering open communication and encouraging the exchange of ideas, organizations can increase their capacity for innovation and drive progress.

## Portfolio Management

Sufficient portfolio management helps an organization to prioritize and allocate resources effectively to the most promising projects. Kester et al. (2011) describe portfolio management as *“The set of activities that allows a firm to select, develop, and commercialize a pipeline of new products aligned with the firm’s strategy that will enable it to continue to grow profitably over the long term.”* By using a systematic approach to evaluate and manage their innovation portfolio, organizations can ensure that their innovation efforts align with their overall business strategy and goals. Portfolio management is increasingly important due to the speed at which resources are used in the innovation process and the demand for these to be managed (Cebon and Newton, 1999). The future shape of the organization is made through portfolio management and making technological, strategic, and resource choices (Cooper et al. 1999). Evaluation and resource allocation is mostly done under uncertain conditions during the process of selecting innovation projects (Adams et al. , 2006). In such situations, portfolio management can lead to improved decision-making to avoid over-investing in low-potential projects and under-investing in high-potential projects. Kester et al. (1990) emphasize that portfolio decision-making can be best understood when considered as an integrated system of processes. Using both project termination and project selection decisions along with few other decisions. Hall and Nauda (1990) argue that clear selection criteria embedded in a systematic process guide can help optimize the use of limited resources and enlarge an organization’s competitive position. Multiple models are created to evaluate these processes based on return on investment (Bard et al., 1988), mathematical tools to maximize the output (Schmidt and Freeland, 1992), and more qualitative factors involved in decision-making (Hall and Nauda, 1990). Ultimately, good portfolio management helps organizations to maximize the return on their innovation investments, while minimizing waste and risk, leading to improved outcomes and a more successful innovation process.

## Commercialization

Commercialization can be seen as the process that is also called implementation, which can mean taking an innovation to market (Chakravorti, 2004) or convincing production managers to implement a series of new techniques (Single and Surgeon, 1996). It involves taking a concept from the laboratory, prototype or testing stage and transforming it into a viable product or service that can be sold to customers. The commercialization process includes activities such as market research, product development, securing funding, building a team, and establishing a sales and marketing strategy. It is important for the growth and survival of an organization to successfully introduce new services and products into the market. Adams et al. (2006) state that the area of commercialization appears to be the least developed of the issues involved in innovation management.

[N2] Insides from these framework areas serve as input for the design approach discussed from chapter [5] onwards. However, the final step of the innovation process, commercialization, is significant, it is not explored further in the rest of this paper.

## 2.2 INSIDE IN RENEWI'S (INNOVATION) BUSINESS

To get a complete understanding of the context in which this project is executed, this section elaborates on Renewi's current business. First, it describes what the organizational structure of Renewi looks like. Second, it illustrates innovation activities that Renewi obtained over time. Ending with an explanation of the key stakeholders in the innovation process and their roles. Starting with a short statement from Renewi on their business.

Renewi describes itself as creating value at the heart of the circular economy. It generates revenue from collecting and processing waste and by selling the recycles and secondary materials they produce. Their focus is shifting towards the downstream end of the value chain in line with market value – from collection to processing. Renewi plans to deliver more and higher quality secondary raw materials and biofuels. This focus on creating products from waste differentiates them from many large competitors, who typically draw revenues from incineration activities (Renewi, 2022).

### 2.2.1 RENEWI'S ORGANIZATIONAL STRUCTURE

Renewi is created five years ago, by combining Van Gansewinkel and Shanks. It is already operating for over 100 years and currently has 162 sites in multiple countries. Renewi is operating in The Netherlands, UK, France, Portugal, and Hungary. Where it is the market leader in the Benelux. The company is listed on both the London Stock Exchange and Euronext Amsterdam. Currently, about 6600 employees are working at Renewi. Each year Renewi processes 12.4 mT of waste of which 8.4 mT is recycled. With their activities, 3.1 mT CO<sub>2</sub> emission is avoided last year.

Within Renewi there are four different divisions: Commercial Waste in The Netherlands (CWNL), Commercial Waste Belgium (CWBE), Mineralz & Water (M&W), and Specialities, see figure 6.

Commercial waste comprises waste collecting, processing, and secondary materials production across both the Netherlands (CWNL) and Belgium (CWBE). Key activities include the processing of wood, aggregates, plastics, paper products, and organic waste. Mineralz & Water comprises our Mineralz activities, processing, and cleaning bottom ash, fly ash and other soils. It also includes our gravel, sand, filler, and clean water production processes at ATM, which thermally cleans soil and contaminated water and processes packed chemical waste via pyrolysis. Specialities comprises three business elements: UK Municipal public private partnership (PPP) contracts, Maltha glass recycling and Coolrec – our specialist WEEE recycling business (Renewi, 2022).

Figure 5 shows Renewi's strategy based on three market-facing priorities to build their leadership position in the circular economy:

1. To be the leader in recycling
2. To selectively gain market share
3. To be the leader in secondary material production



Figure [5], Renewi's strategy

Besides Renewi’s core strategy, different strategies emerge for the four different divisions, including one for each business element in specialities: the UK, Maltha and CoolRec. Differences within the strategies can be caused by differences in priorities for each division and different laws and legislation. Additionally, six individual strategies are being developed on the innovation themes using knowledge from people all over the company. These innovation strategies give direction for the innovation vision and function as a decision-making tool for senior leadership.

Renewi as an organization is mostly focused on operational excellence. Therefore, it is not strange that the operational level amounts to a big per cent of the employees. Continuously improving logistics, recycling lanes, and operational processes is daily business for people working at one of 162 sites.

This is closely associated with the recurring ‘niet lullen maar poetsen’ mentality that is caused by the strong operational nature of the company, thus an external advisor from Tekkoo.

Further, Renewi holds an interesting combination of hierarchical and non-hierarchical organizational features. For instance, senior leadership presents itself as approachable and is open to hearing about problems lower down the chain. However, problems don’t always reach higher management because there are many people in between where information can ‘get stuck’. Besides, a gap exists between the operational level and the business which can result in communication problems. However, in my experience, people are approachable and open to conversations. Figure [6] shows the organizational chart of Renewi to get a feeling for the organizational structure of the company.

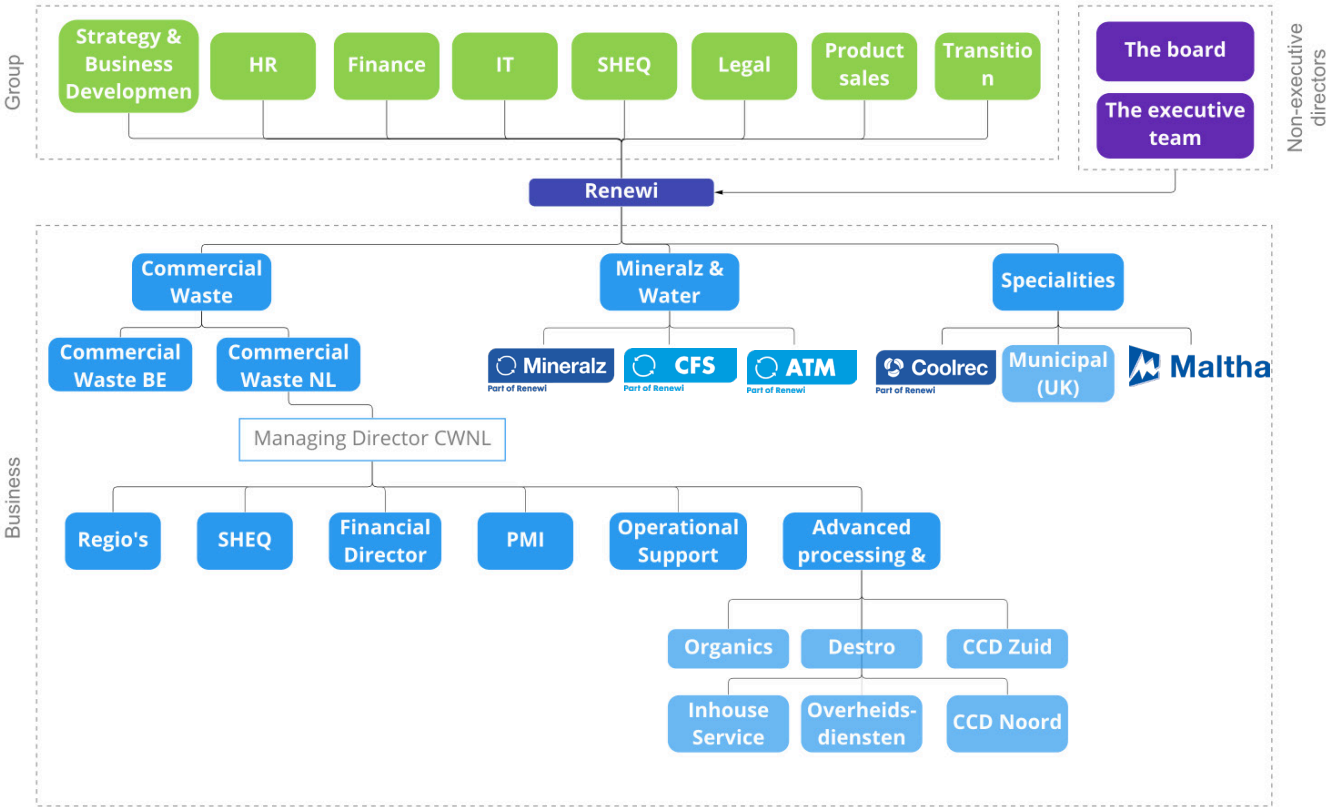


Figure [6], Organizational chart of Renewi.





Figure [7], Renewi's core values.



### 2.2.2 INNOVATION ACTIVITIES AND INNOVATION ROLES

Figure 8 shows an overview of innovation activities and innovation roles implemented at Renewi since the first innovation manager is hired and the innovation ball really started rolling. The timeline shows a two-step process where an acceleration in innovation occurs with the arrival of a new Managing Director of CWNL. The y-axis of the figure shows the phase Renewi is in looking at innovation, the implementations, the timeline, and the level at which people are acting. Note that the second phase starts with the arrival of the acceleration and the third phase begins with the implementation of this project. The bottom part of the figure shows the creation and appointment of different innovation roles that have to do with innovation throughout the company. The next page describes all elements in detail.

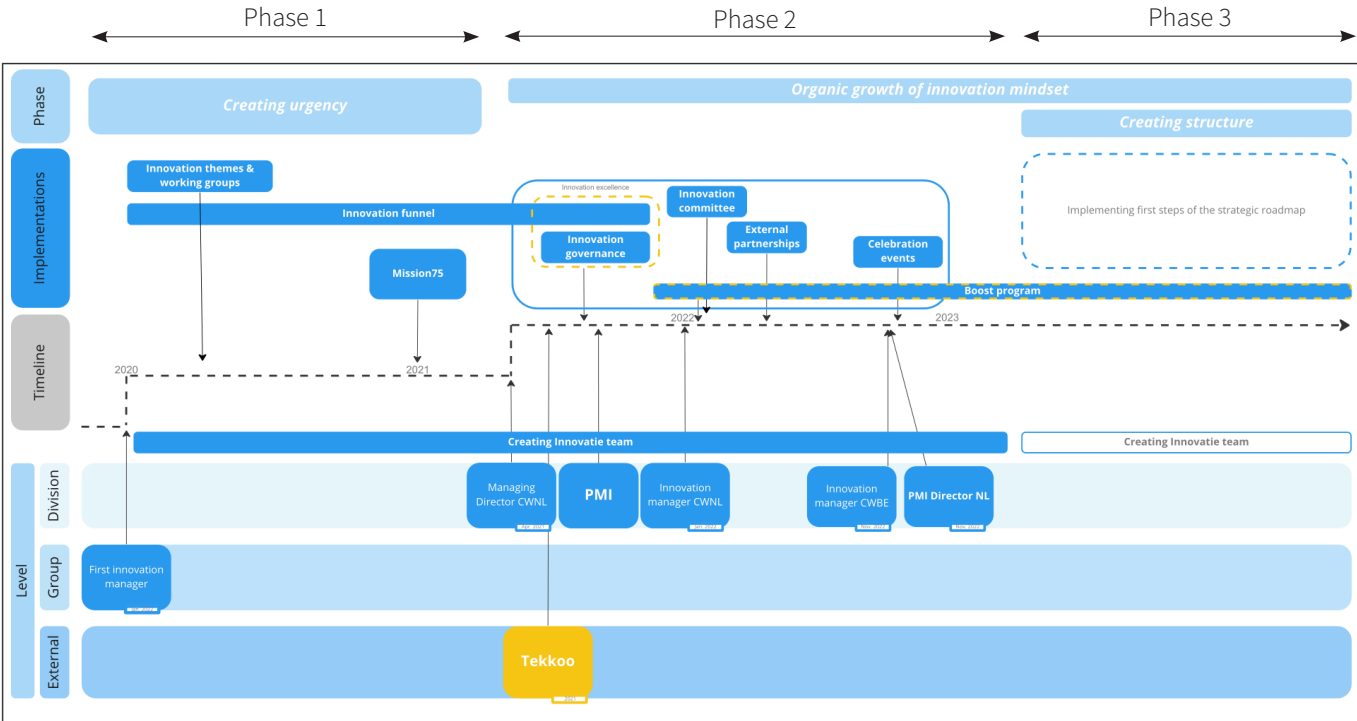


Figure [8], History of innovation at Renewi.

### Innovation themes and working groups

Currently, six innovation themes exist. These themes are carefully constructed by looking at promising waste streams and future trends. Working groups create a strategy for each corresponding innovation theme. These working groups are diverse groups of people from all over the company who have knowledge of the theme. Further, innovation managers play an important role in putting together these strategic roadmaps with the obtained knowledge from a working group. Disclaimer: the creation of these roadmaps is a work in progress. Some are difficult to put together due to different goals in different divisions.

### Innovation funnel

Renewi’s innovation funnel is based on Cooper’s stage-gate model, see figure 9. This model is used to analyse a business case, its risks, resources, and forecast to determine the best course of action. As the figure shows the model exists of five stages: search field, ideas development, concept development, detailed development, and implementation. The main goal of the innovation funnel is to identify and validate assumptions in the market, business, and technology domains as effectively as possible. At the end of each stage, the business cases are evaluated during a go/no-go moment. Thereby the innovation projects are de-risked quickly, and from a myriad of options the best “What and Why” can be chosen with clear argumentation.

### Mission 75

By means of Mission75 Renewi strives to recycle 75% of the collected waste in 2025 compared to 64,7% in 2020. With the subgoal to increase Renewi’s EBIT by 20 million. The mission is created at the beginning of 2021 to make people enthusiastic about innovation and provide a unanimous story about innovation throughout the company. It fits perfectly in one of the pillars of the sustainability strategy, namely ‘enable the circular economy’, see figure 5. In April 2021 the first Mission75 live event was launched. Since then, Mission75 live events are regularly organized. At these events, people from multiple divisions talk about the innovation project they are working on. From starting an innovation project to running the business.

### Innovation Excellence

Together with an external design agency called Tekkoo, Renewi created an innovation funnel and structured governance for the company. This combined call for Renewi’s innovation excellence.

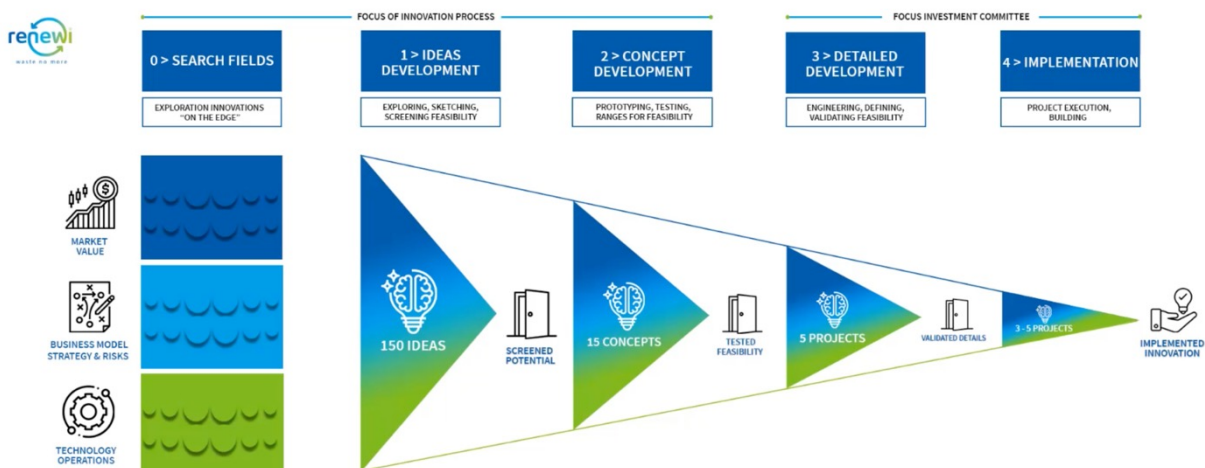


Figure [9], Innovation funnel of Renewi.

## The Boost program

To reach the ambitious goal of recycling 75% of its collected waste, Renewi must accelerate its innovation activities. That is where the Boost program comes in. The Boost program is an innovation acceleration program composed and executed by an external design agency called Tekkoo. This program creates an atmosphere in which an innovation team can develop an idea and is equipped with the resources they need to do so. Figure 10 gives a visualisation of these interdisciplinary innovation teams (a start-up) and their relationships with investors, the ecosystem, and shareholders. The Boost program is an innovation process that includes a series of steps that Renewi takes to develop and implement new ideas, products, and processes. As said before, the program includes a stage-gate model. Within one Boost cycle, the innovation team is guided through one of the stages. At every gate, a new investor comes in. The current investor from that moment functions as a shareholder. Shareholders of the company have a stake in the success of the company and support the team. On average the duration of a Boost program is about 4 to 5 months. Further, the innovation team is supported by an ecosystem that provides training, tools, and a network to maximise chances for success. Currently, the Boost program is only launched in CWNL. The conscious decision to first launch the program in only one of Renewi's divisions is made for the reason of first organizing innovation in a structured way before expanding. If processes and structures are clear, the program can expand throughout the whole company.

However, because of excitement from employees from Belgium and an open-minded Managing Director at commercial waste The Netherlands (CWNL), a few people from commercial waste Belgium (CWBE) also joined the program. There are plans to implement the program throughout the rest of the company in the upcoming years.

The Boost program has five principles:

1. We commit to our purpose and goals
2. We know our customers and it is our priority to solve their needs
3. We speed up by giving clear mandates in a simple process
4. We focus to get from assumptions to business and stay flexible on the way
5. We trust our teams to push an innovation autonomously

Currently, eight start-ups have run through the program, which is about twenty to thirty employees of Renewi that attended the Boost program. By directly starting with their own innovation project, people learn about innovation by working on it. As one of the consultants from Tekkoo says: “The Boost program is not a goal, it’s a vehicle, a means that ensures people to structurally work on innovation.”

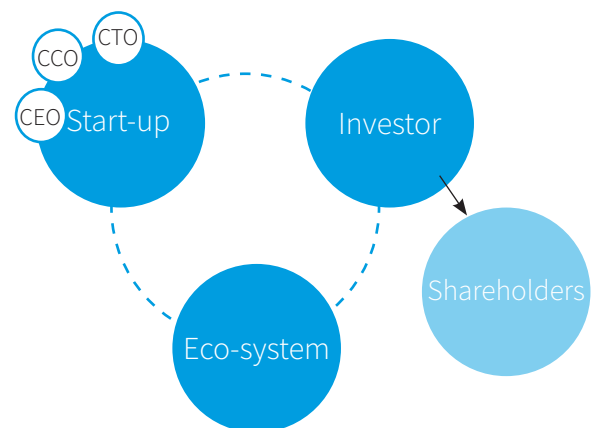


Figure [10], Roles in the Boost program.



### External Partnerships

External partnerships in the ‘innovation activities’, aim at partnerships in the field of innovation. Circular Factory, for instance, is a program initiated by Blue City and Tekkoo to support start-ups setting up full-scale factories for their sustainable product. Renewi is a partner in this project and advises these start-ups with its expert opinion on waste collection and recycling. This partnership is created to strengthen the innovation climate around the circular economy internally and externally. Besides this, Renewi takes a position as a thought leader in external organizations and events. This helps them at one side to accelerate their innovation from the external side. On the other side, it helps people from Renewi get exposure to start-ups to inspire people with a start-up approach, mentality, and fresh ideas.

### Celebration events

Celebration events, first called innovation garages, are events that are held two or three times a year to gather all people having to do with innovation. They stimulate an innovation community throughout the company and connect people on the topic of innovation. During celebration events, for instance, guest speakers can bring knowledge about innovation, or a case is presented by one of the innovation teams and worked on by participants.

### Innovation governance

A governance is created to guide people through the innovation funnel, see figure 11. The governance exists out of investors and an advisory group. Investors are mandatory to select the process eligible for further development, by arranging the investments and resources. The innovation committee gives non-binding advice to the investors before progressing to the detailing phase. Advisors support investors to select projects, however not via a direct mandate.

### Innovation Committee

The innovation committee can be consulted by the investors before innovation projects proceed to the detailing phase.

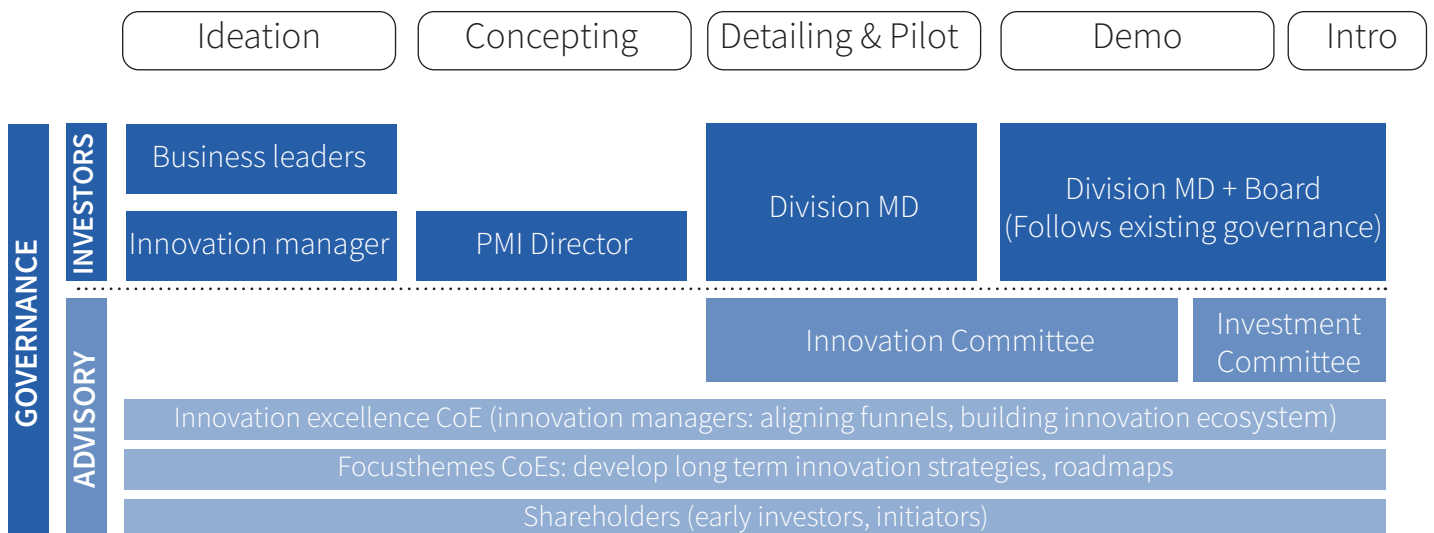


Figure [11], Governance of Renewi

### 2.2.3 KEY STAKEHOLDERS IN THE INNOVATION PROCESS

The key stakeholders of the innovation process are divided into four groups: the innovation team, investors, ecosystem, and external parties, see figure 12. The stakeholders in the ecosystem can be divided into five categories: innovator, innovation manager, on the sides, operations, and business development. Section 2.2.4 explains the roles of each stakeholder.

### 2.2.4 ROLES OF THE KEY STAKEHOLDERS IN THE INNOVATION PROCESS

As shown before, figure 12 gives an overview of the key stakeholders in the innovation process. The following section describes the stakeholders.

#### Innovation team

These interdisciplinary innovation teams exist of three members. Each member gets the role of CEO, CTO, or CCO. Teams always include a person from sales to stimulate the creation of client relationships, a person who is more into the technical side of the project, and a coordinating CEO. Once the team is formed it is treated as a start-up. The innovation team is in the lead of the start-up and takes responsibility to build the business for which it needs resources and investments.

#### Investor

The primary responsibility of investors is to provide resources to innovation teams. In order to maximize the benefits of an investor, it is important for teams to exercise caution in their selection of an investor. Investors are authorized to choose which projects are deemed suitable for further development. They are also involved at the conclusion of each stage gate and can provide guidance throughout the entirety of the Boost program.

#### Ecosystem

The ecosystem consists of all people that have to do with the innovation project, however, are not directly included in the Boost program.

#### Innovator

An innovator is a person that came up with an idea that is executed in the innovation projects in the Boost program. An innovator is not always part of the innovation team due to time constraints. Because this person is in the beginning often the one with the most knowledge on the topic, they stays included in the project.

#### Innovation manager

Innovation managers have a significant role in the innovation process. They are the only ones at Renewi who act on innovation within their initial role. Therefore, they are now the boosters of innovation and a central place to go to with questions. Due to the relatively new role as an innovation manager, it is yet to be determined more clearly what other tasks it includes.

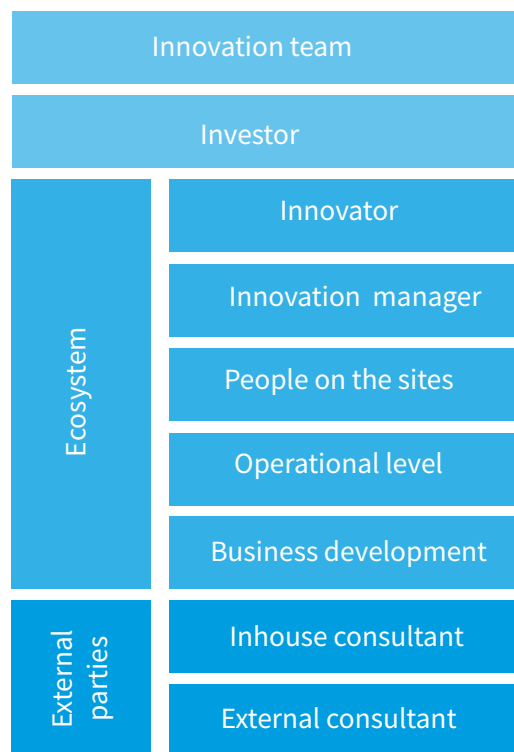


Figure [12], Key stakeholders in the innovation process

## 2.3 INSIDES IN INNOVATION PROCESSES AT BIG CORPORATES

### People on the sites

Renewi has about 162 sites, all differing in size and activity. Most of these sites have a site manager who keeps an overview of all activities and via whom innovation activities go.

### The operational level

A large part of Renewi exists of operational employees. People in this group are finally the ones who will execute innovation activities such as tests and pilots.

### Business development

The business development team includes widespread roles from the Group innovation manager to the Director of Public Affairs to the Groups Sustainability Reporting Lead. The business development team operates on a group level, meaning they are positioned in the middle of all divisions. The team is led by the Director of Strategy Business and Development.

### External party

Tekkoo is an external party that created and implements the Boost program. For the implementation of the Boost program, a few consultants of Tekkoo act as trainers to train the innovation teams and investors on their roles within the process. After a few Boost cycles, the trainers from Tekkoo mostly train people from Renewi to become trainers for the next Boost cycles. This happens to transfer full control over the Boost program to Renewi. The people of Renewi who are trained to be a trainer, also act as coaches, experts, facilitators, and ambassadors of the program and innovation throughout the company.

Interviews with four experts in the field of innovation give a broader perspective of innovation activities in different companies. The interviewees are an innovation manager from ABN AMRO, an innovation consultant from Deloitte, an innovation manager from NS, and a lead of the innovation factory of Rabobank.

The interviews give insides into the following categories: positioning of innovation in the company, innovation themes, use of models, innovation in the business structure, and collaboration on innovation activities. Appendix [D] shows a visualization of the specific insides each interviewee gave per category.

The most remarkable insides are:

- All companies have different positioning of innovation in the company
- Interviewee 4 talks about turning costs made on failed innovation projects into failure knowledge
- Three out of four experts talk about the use of something similar to innovation themes.
- Three out of four experts talk about the use of a stage gate model
- All companies make use of a set group of people responsible for innovation
- There is no set way of collaborating on innovation activities for the four companies

Furthermore, every individual interviewed made reference to the low success rate of innovation. One interviewee proposed that those responsible for managing innovation should possess a willingness to terminate their own ideas. Other participants identified challenges in the innovation process, including the difficulties of scaling, engaging with clients, and securing budgetary resources. In addition, the significance of human capital, the importance of sharing lessons derived from failure with a wider audience, and the need to instill belief in the project among team members were all mentioned. Finally, a few comments were made regarding the slow pace of innovation projects, which can be attributed to the fact that they are not typically given top priority. To overcome this, individuals are given the opportunity to allocate internal hours for time spent working on innovation projects.



## CHAPTER 2

### Key takeaways

The innovation management measurement framework from Adams et al. (2006) describes key elements in the innovation process. A literature review is conducted using these key elements.

#### The elements are as followed:

- Inputs management
- Knowledge management
- Innovation strategy
- Organization and culture
- Portfolio management
- Project management
- Commercialization

#### Renewi's organizational structure:

- 6600 employees
- 162 sites throughout multiple countries
- 4 divisions

Further...

- Renewi processes 12.4 mT of waste
- ...of which they recycle 8.4 mT
- ...which avoided 3.1 mT CO2 emission 2021

#### Renewi's strategy based on three market-facing priorities to build their leadership position in the circular economy:

1. To be the leader in recycling
2. To selectively gain market share
3. To be the leader in secondary material production

The first innovation manager is hired 3 years ago. Since then, innovation grows throughout the company. Including hiring an external consultant called Tekkoo who consults in establishing an innovation funnel, innovation governance, and an innovation accelerator program. The latter is called the Boost program in which innovation teams are formed that works on an innovation project through a stage gate process. Further, a Product, Management and Innovation department is created.

Lastly, insides in innovation processes at big corpotates show they focus on the **5 following aspects:**

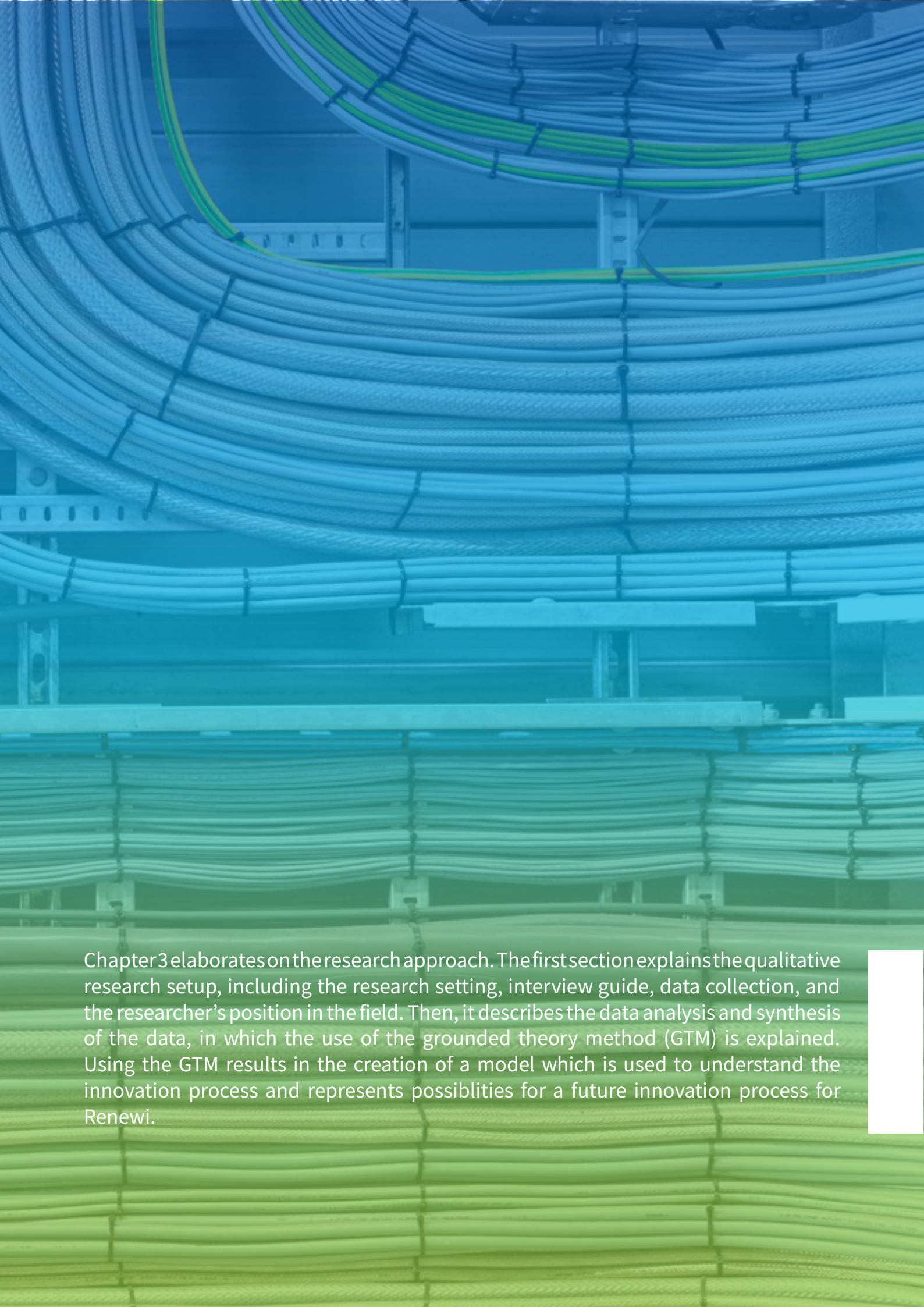
1. Good positioning of innovation within the company
2. Working with innovation themes
3. Use of models
4. Embed innovation in the business structure
5. Internal collaboration on innovation activities



**03**

**RESEARCH  
APPROACH**





Chapter 3 elaborates on the research approach. The first section explains the qualitative research setup, including the research setting, interview guide, data collection, and the researcher's position in the field. Then, it describes the data analysis and synthesis of the data, in which the use of the grounded theory method (GTM) is explained. Using the GTM results in the creation of a model which is used to understand the innovation process and represents possibilities for a future innovation process for Renewi.



### 3.1 QUALITATIVE RESEARCH

#### 3.1.1 QUALITATIVE RESEARCH SETUP

The unit of analysis is spread over multiple levels of the company to create a wide interpretation of the innovation process from people that are closely linked to this process. Multiple interviewees were selected through stratified sampling as there is an aim to analyse the complex collection of perspectives on this topic throughout the company. By analysing a well-spread-out group of interviewees a complete interpretation of the innovation process is formed before focusing on a particular group of individuals. Figure 13 shows four groups of individuals that are categorized by the different roles they play in the innovation process. The roles found in figure 13 are not necessarily the same as the roles participants fulfil in their regular job at Renewi. The interviews are divided into two rounds, where the first round focuses exclusively on gaining information about the innovation process and the second round focuses on the validation of designed concepts and co-creation of the final design. The latter is further described in the design process in chapter 5.

#### 3.1.2 INTERVIEW GUIDE

Appendix [F] shows the interview guide used as a basis for the semi-structured interviews in round one. Questions are focused on gaining knowledge on the innovation process and the attitude of the interviewee towards innovation at Renewi. Information given by interviewees is used to create a detailed overview of the phenomenon. The interview guide consists of 16 questions ordered in five four sections following the first four sub-questions. Throughout the research, questions turned irrelevant are eliminated from the interview guide for the following interviews. On the other hand, seemingly relevant topics were incorporated into the next set of interviews.

Innovation team		2
Investor		2
Ecosystem	Innovator	1
	Innovation manager	2
	People on the sites	3
	Operational level	3
	Business development	4
External parties	Inhouse consultant	1
	External consultant	2
	Innovation experts	5

Figure [13], Overview of the amount of interviewees per category.

## 3.2 DATA ANALYSIS AND SYNTHESIS

### 3.1.3 DATA COLLECTION

Two methods of data collection are used to collect insights into the innovation process: conducting 19 semi-structured interviews and analysing company documents.

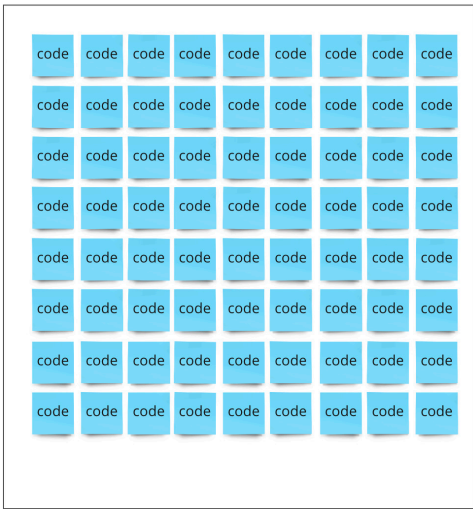
Semi-structured interviews are conducted on a basis of a formal interview guide, see appendix [E]. By using an interview guide leading questions can be minimized and sincere questions can be asked (Maxwell, 2005). Company documents provided insights into the newly created approach to the innovation funnel, governance model, and the Boost Program. All interviews, except for interviews from the operations subgroup, are recorded. To avoid any premature interpretations of these interviews extensive and descriptive notes were taken. From every group of interviewees, one or two interviews are transcribed. Interviews were one-on-one and lasted between 20 and 80 minutes each. Most interviews are held in person with exception of three due to unfavourable circumstances.

### 3.1.4 POSITION IN THE FIELD

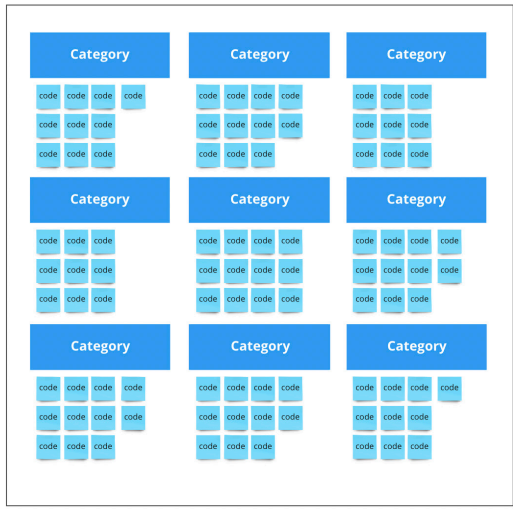
The relationship between the interviewer and interviewees is one in which they didn't know each other. The interviewer had not been an employee of the organization before starting the interviews and observations. A lack of knowledge about the topic created an open attitude towards all answers given in the interviews. However, it could have sped up the process if the interviewer had more information about certain matters. Knowledge about the topic within the setting of Renewi was limited for the first round of interviews. For the second round of interviews and the co-creation sessions, a substantial amount of knowledge was gathered from both literature studies as insights from employees of Renewi. In the co-creation sessions, the interviewer's participation was involved in the sense of giving examples to which the interviewees had to respond.

In this research, a theory is built to create a model which helps to improve the innovation process at Renewi. This theory is built by analytically researching the data collected from the interviews using the Grounded Theory Method (GTM), see figure 14. This research method includes three types of coding: open coding, axial coding, and selective coding (Corbin and Strauss, 1990). To start one or two interviews of each of the five groups is transcribed and coded, appendix [H] shows an example of the way interviews are transcribed and an overview of how many interviews are transcribed. During open coding interactions, events, and actions that have a direct or indirect influence on the innovation process (the phenomenon) are detected. These codes are given conceptual labels and are compared with others for differences and similarities. This is followed by axial coding where categories and subcategories of conceptually similar themes are made.

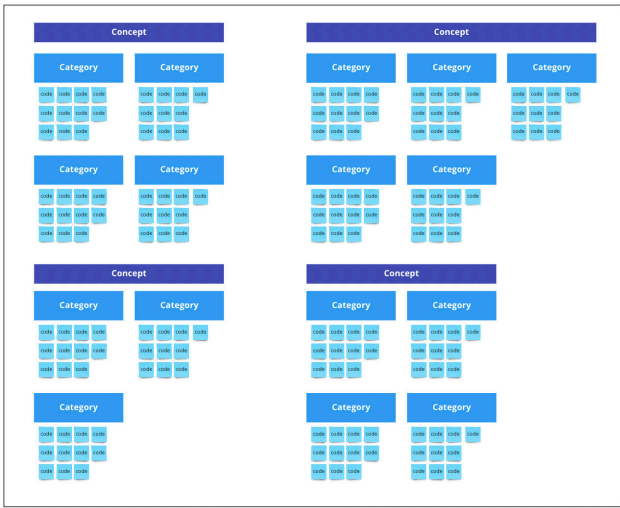
Below an example of coding with corresponding steps in figure 14 is given. Some interviewees talk about "Limited excess to information" and "No central depository". Both codes have a negative influence on the innovation process (step 1). These codes, together with others are given the category "Capturing knowledge" (step 2). Grouped together with other categories a concept is created called "Properly allocated resources" (step 3). In total four concepts are created which all include several categories. Afterwards, relationships between the subcategories are detected to give a deeper understanding of the functioning of the built model (step 4). Lastly, the categories are linked to each other and to the main goal of this project: to create an improved innovation process (step 5). The final model is a systematic representation of a possible future world for Renewi. An elaborate description of the model can be read in section [4.1.1]. This process is done on post-its in Miro, after which a Miroboard functions as a database with all the information from the interviews, see appendix [I].



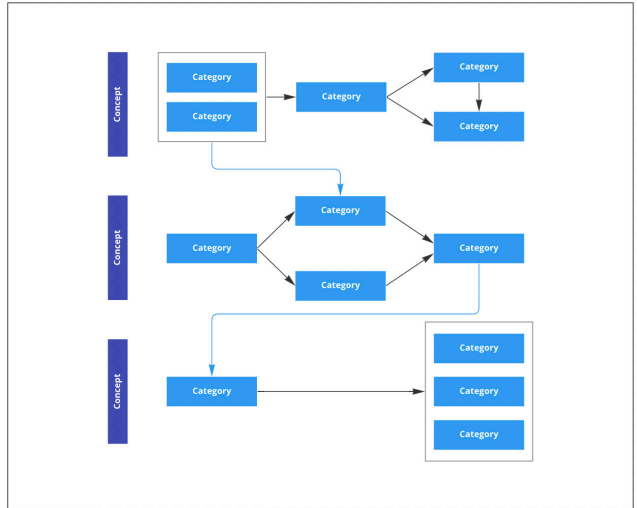
[1] Open coding



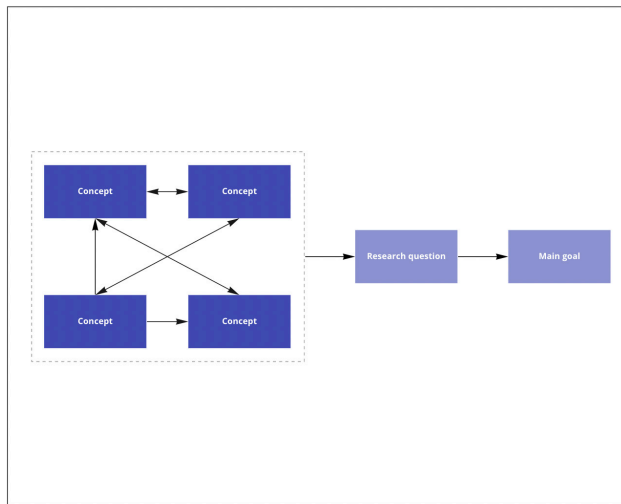
[2] Axial coding



[3] Selective coding



[4] Connecting the categories



[5] Creating the model

Figure [14], Grounded Theory Method and creating a practical model



## CHAPTER 3

### *Key takeaways*

The research approach starts with an data analysis. The researcher collects qualitative data through interviews and examination of company documents. The interviewees are selected using stratified sampling with participants from various divisions and levels within Renewi and can be categorized into innovation teams, investors, ecosystems, or external parties. The data is then synthesized using the grounded theory method. This method involves building a theory to create a model for improving the innovation process at Renewi. This includes steps such as open coding, axial coding, selective coding, conducting the subthemes, and constructing the model.





*Renewi's site: Amersfoort*





# DEFINE

The second phase, define, helps to define the challenge of the project by using the gathered insights of the discovery phase. Using the Grounded Theory Method (GTM) raw data is turned into a practical model.

The model is a systematic representation of a possible future for Renewi, with an improved innovation process. Bottlenecks in the current innovation process are identified and used in the next phase.




# 04

## RESEARCH RESULTS







After reading about the method used for the interpretation of the qualitative data chapter 4 discusses the results derived from the data. Starting with an explanation of the created model through the grounded theory. Followed by a statement envisioning how this model functions in Renewi's future. Next, the chapter provides an explanation of the four concepts and their corresponding categories. Insides from the interviews form the explanation per category. It ends with a critical look a the research described in the research discussion and validation.

## 4.1 BUILDING A MODEL FOR THE INNOVATION PROCESS AT RENEWI

This section explains how the model in figure 15 is built. It first explains the four concepts and their corresponding categories. Thereafter, it discusses the categories according to the interpretation of the collected data. At the end of each section, a table represents an explanation of all categories and a corresponding illustrative quote.

[N3] All quotes used in this report are translated from Dutch to English. They are translated by me, a MSc student of the TU Delft practising English CEFR level C2. All interviews are done myself, after which I translated the quotes drawn from the interviews. The quotes are freely translated within the context it is said to understand the scope of what is meant. The Dutch translations of all quotes are shown in appendix [R].

### 4.1.1 THE MODEL FOR AN IMPROVED INNOVATION PROCESS

A theoretical model that seeks to understand Renewi's innovation process is developed by dissecting the phenomenon into its constituent parts, referred to as categories. Several categories combined create a concept. Ultimately four concepts emerged from the grounded theory. The final model, depicted in figure 15, on the next page, provides a systematic illustration of a potential future scenario for Renewi. The concepts shown on the left side of the model are named **managerial encouragement**, **one way of working**, **properly allocated resources**, and **continuous learning**. By effectively managing these four categories, the innovation process can be optimized, leading to improved recycling practices that result in increased revenue and EBIT for Renewi and a higher sustainability performance. The four concepts represent activities that have a positive impact on the innovation process, which should not be mistaken for activities inherent to the current innovation process.

Starting at the concept left top, one way of working has a positive influence on managerial encouragement because people in a leadership function have a better understanding of how to give guidance to their teams. Vice versa, when

people get guided in the right attitude towards innovation, managerial encouragement, they are more likely to work in a structured way, one way of working. Here you see that managerial encouragement has a positive influence on one way of working. In addition to this, one way of working has a positive influence on continuous learning since this one way of working will enhance categories like giving feedback, being informed, and being committed to innovation activities. Contrarily, continuous learning has a positive influence on one way of working whereas people learn how to work alike. Managerial encouragement has a positive influence on properly allocated resources in that people in leadership functions will allocate the resources next to giving encouragement to work with them. Further, properly allocated resources had a positive influence on one way of working since proper resources enable this one way of working. Lastly, continuous learning has a positive influence on properly allocated resources considering that the organization learns about the distribution of resources with time. The more time has passed, the more attempts there are done to properly allocate resources, and the more the organization has learned about if the right choices. This results in better allocation of resources for the next time. Each time the organization learns for the last time.

[N4] The decision for the names of the themes is based on combined elements that came forward during the data collection and knowledge obtained from the literature.



### 4.1.2 CONCEPTS AND CORRESPONDING CATEGORIES

Figure 16 shows an overview of the four concepts with their corresponding categories. The categories are based on the grouping of codes derived from the data, see. Several categories are grouped together based on their characteristics. Together they form a concept. Appendix [P] shows the relationships between the concepts to give a deeper understanding of the functioning of the model. These categories can each be adjusted separately but influence the extensive model as a whole.

[N5] A few subthemes that emerged from the data were in the first place framed in a negative way. Examples of these subthemes are too many tasks and under occupation, lack of feedback, and loss of knowledge. To prevent confusion in the model all subthemes are framed neutrally. Respectively the subthemes changed to availability of time, giving feedback, and capturing knowledge. As a consequence of this, all relations between the subthemes turned positive. Therefore the model is a representation of a preferable situation and not a representation of the current situation of Renewi. In appendix [P] shows a visualization of the extended model including the relationship between the categories of different concepts is shown.

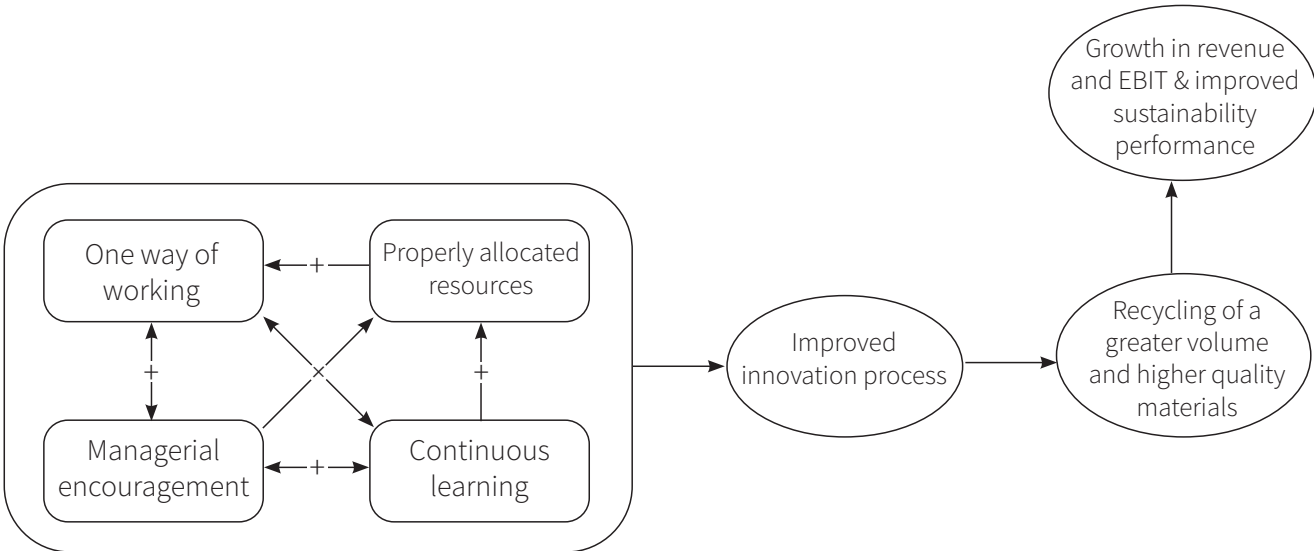


Figure [15], The grounded theory model.

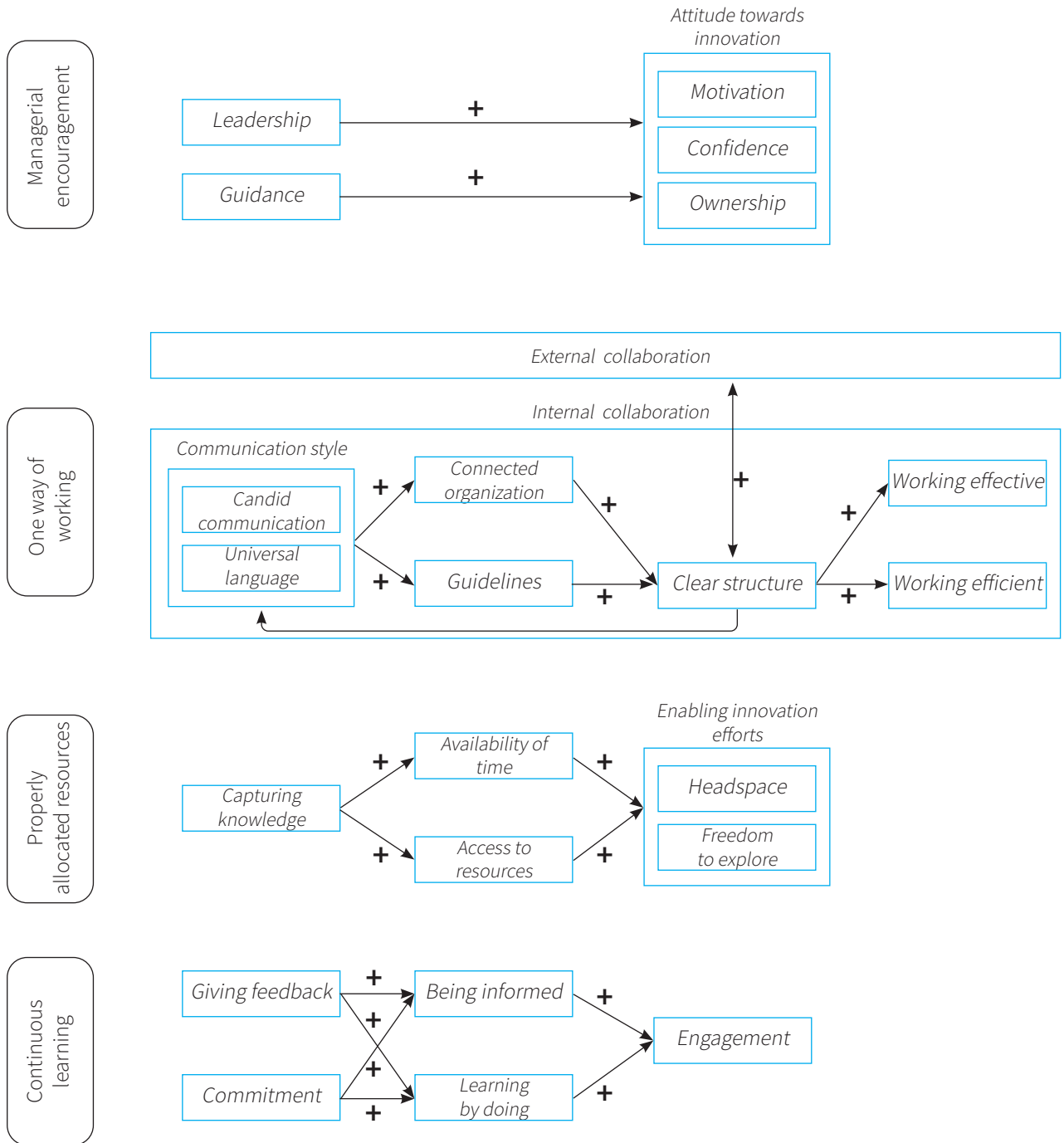


Figure [16], Concepts and the relationships between their corresponding categories.

## 4.2 DISCUSSING THE FOUR CONCEPTS

The following section discusses each of the categories thoroughly with the use of insides obtained from the data.

### 4.2.1 MANAGERIAL ENCOURAGEMENT

This section discusses the four subthemes of ‘Managerial encouragement’, as shown in figure 17. It shows how guidance and leadership shape the attitude towards innovation. Attitude towards innovation breaks down into motivation, confidence, and ownership. Both leadership and giving guidance have a positive effect on the attitude towards innovation. This is visualized with an arrow. First, leadership and guidance within the innovation process of Renewi are discussed. Afterwards, the attitude towards innovation is discussed, which contains motivation, confidence, and ownership.

#### Leadership

To create an optimal innovation process, dedicated leadership is needed from people in management functions throughout Renewi. An open and encouraging attitude toward all employees is essential for their engagement in innovation activities. Site manager 1 talks about being sincerely interested in his team members and their ideas. [1] *“There should be an open atmosphere, never punish someone for having an idea. The worst you can do is laugh about it. Even those ideas should also be considered because someone thinks it’s important at that moment. So, it’s a whole culture that should be created to establish an open atmosphere where people want to share their ideas, come up with ideas and feel that is important to do so.”* Additionally, innovation manager 3 talks about

the importance to have senior leadership included in the importance of innovation to show this to the rest of the company. Further, the director of Public Affairs talks about the importance of embedding innovation in the culture of Renewi at the highest level in the company. [2] *“Look, if our CEO doesn’t bring innovation back in the conversations every time, internally as well. Then other people will not prioritize it unless they are intrinsically motivated”*, he says. Underlining innovation from higher should be combined with giving incentives to the people who work on innovation activities. Incentives can for instance be given by providing sufficient resources, giving people enough time, and talking about the importance of innovation. These topics are later discussed. Besides top management, it’s important managers in all layers of the company embed innovation in their mindset. For people in the operational level, it’s more encouraging their managers to talk about innovation than hearing top management talking about innovation. [3] *“My manager and the head planner should proclaim innovation.”*, thus driver 1.

In addition, site manager 1 says the organization itself would want to do more innovation activities, however, the problem lies in the middle management. They must be keen on executing innovation activities. He talks about locations where things don’t work if middle management doesn’t like it. In his eyes, this layer is important to make others enthusiastic. This illustrates the need for dedicated leadership on innovation throughout the whole company. In the example of site manager 1, middle management doesn’t feel the importance of innovation that should be proclaimed higher up.

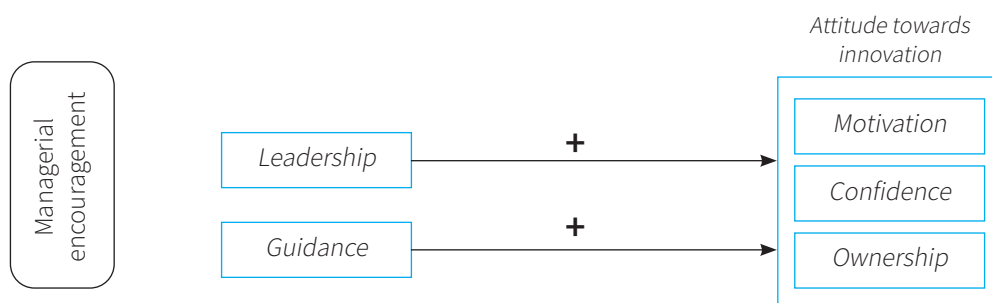


Figure [17], Managerial encouragement, relationships between the categories.



## Guidance

Next to leadership, people need guidance in their innovation activities and decision-making processes. Innovation manager 1, who started full-time in this role recently, talks about wanting [4] *“... one to ten people as heavy engines on innovation.”* within his division. In an ideal situation, these people would be widely distributed through his division and have different roles within different parts of the division. [5] *“Discussing the strategic story for everything with those people. And discussing the landscape where we want to go, also with our managing board”*, he says. Including these people in the strategic story of Renewi will empower them to carry out the vision of Renewi towards their teams. Identifying with the strategic story of Renewi makes it easier to guide teams on the topic of innovation. He talks about co-creating the strategic directions with the managing board after which everyone is dedicated to working on these directions. [6] *“We must see that progress is being made on all those topics that we are currently covering. So that we can see if we achieve what we have set up for this and if we don't succeed, we should also be informed about it.”* Likewise, innovation managers should take their role as a guide and leaders of innovation. Within a changing innovation system, new dynamics will occur where innovation managers should take a leading role as [7] *“Appointment makers instead of following the business.”*, thus an external consultant.

Moreover, the change manager talks about the need for guidance during changes and the lack of guidance during implementation in the past. [8] *“However, most often people have an even bigger need for guidance. If you're already working in this new way, it's nice to know it's written down somewhere. But someone who takes a look at it with you, whom you can turn to for all your questions. Yes, that's quite easily forgotten. Not only within Renewi, that's also in many places. But certainly, within Renewi I noticed this.”*, she says. This emphasises the importance of actively supporting middle management on this topic. In the end, middle management should guide their

teams towards an innovative attitude. The right guidance will create motivation for innovation activities. People will see the importance and feel confidence to experiment. This counts for both management and team members.

## Motivation

The data shows motivation to be one of the factors needed for improving the innovation process. Together with confidence and ownership, motivation is one of the three important factors in a positive attitude towards innovation. Site manager 1 says something interesting about this: [9] *“If you are motivated, you show it. If you are not motivated, you also do.”* By this he means it is easy to see who of his team members is motivated and who is not. In his view, enthusiasm comes and goes. However, once you stop giving attention, motivation quickly fades away. He talks about a ‘What’s in it for me?’ mentality. He feels it is important to show employees what they gain when doing something. This will motivate them to do so. If employees do not see the added value, they don’t do it. He notices the positive effect of working with compliments and appreciation on the personal value of employees and their motivation to do something. He talks about seeing the importance of innovation and his motivation to add to it due to a lot of positive extras in his work. [10] *“Only once something is seen as important enough, people will make time for it.”*, he says. This shows the importance of the motivation from people to the success of innovation at Renewi. However, not all interviewees are positive about the motivation for innovation at this company. This is clearly shown in the following quote. [11] *“The ‘i’ in Renewi stands for innovation, however for a reason all the way at the end. Not much motivation can be found.”*, thus site manager 3. Internal motivation is dependent on the reason why employees are working at Renewi. A part of the people at Renewi works because they want to add to a better world. [12] *“I just think it is very important to contribute to a better world. Renewi, as a central player in the circular economy, positions itself*

*perfectly to do so.*”, thus advisor Public Affairs. The Boost program is a perfect activity to enable these motivated people to contribute to innovation at Renewi. The Managing Director of CWNL talks about people getting more enthusiastic after implementing the Boost program. However, a big part of people working at Renewi works at the company only to earn money and is not interested in extra work when adding to a better world. A recycling manager says these people are not interested in improving the current way of working. The Group Sustainability Lead adds to this: [13] *“Some employees at Renewi value stability and not being stressed when they come home and that is why they spend lifetimes at the company.”*

### Confidence

Besides motivation, people should feel the confidence to share their ideas and work on them. By giving thought to the ideas of all people, confidence is created. [14] *“It is important, no matter how small the projects are, to give them attention. So that they can celebrate and share it with colleagues. That creates an oil slick because if something is nice, other people want it too.”*, thus Site manager 1.

Besides giving people the confidence to tell their ideas, the organization itself should be more confident to make strong decisions. An External Consultant says: [15] *“You see there is a lot of uncertainty about roles and processes. Who decides what? And then also people of a bluer nature that keep track of structures or processes. That is sometimes a bit lacking.”* Further information about structures and processes will be discussed later. Innovation manager 3 talks about the lack of making strong decisions leading to making decisions too late, making no decisions or creating vagueness. This can all have a negative influence on the performance of Renewi.

### Ownership

Lastly, people should feel ownership over the projects they are working on. Ownership will shape dedication toward innovation activities. Ownership can be differentiated in different levels. Activities on some levels seem further away from innovation than on others. Driver 1, for instance, says: [16] *“I collect waste that we can recycle. That is where it stops, that is my job.”* By doing this he contributes to the mission of Renewi: recycling more and of a higher quality. Yet, driver 1 doesn't feel the necessity of him doing this and doesn't take ownership over contributing to this higher goal. After talking about innovation and what it means for Renewi he said that it is none of his business. He questioned what he could change to contribute to innovation and says innovation is something for [17] *“... the people from Eindhoven”*. In addition to this driver 2 says: [18] *“I would feel important and would tell if something is going on, if I were more involved with the company and if I would actually be listened to.”* Both quotes illustrate a lack of ownership towards innovation at the operational level. Showing the importance of the job driver 1 and 2 and like-minded employees fulfil could create a positive attitude towards innovation from this group.

Further, managing Director CWNL talks about the involvement and ownership the business should take on specific topics. He says: [19] *“I really think that the substantive involvement should come from my head of engineering in my division. My head of product development must be very involved. My hard plastics man must be very involved. They must feel ‘I am responsible for hard plastics. I am responsible for expired products. I am personally responsible for thinking about a strategy for that product flow.’”* He would want people in his divisions to feel greater ownership over the subjects they work on.

Linking to this, ownership over the vision and strategic plans of Renewi is needed by management to clearly communicate these goals to their teams. If people don't feel control over

what should be told, it will never be executed clearly. Another moment where ownership is important is when changes are implemented. [20] *"I think that the people you ask to change things should be able to explain it to others. These people, management, should be able to explain with confidence why it's good to change. If not explained with confidence, people will not follow [...] In that case, management must understand clearly why certain changes are made and others are not."*, thus innovation manager 1. As he says, it is very important that management understands the matter they pass through to their team. Besides, he brings up another interesting point. He says misunderstanding is a consequence of missing information. He says it is a sign to further investigate in the topic.

Lastly, another level of ownership is found within the Boost program. An external consultant expresses his thoughts about the innovation teams taking responsibility for the innovation projects. He suggests they should take total ownership of the project. [21] *"It is your innovation, it is your investment, so you should be able to manage them."*, he says about the innovation teams. This shows the level of ownership an innovation team should feel working on the innovation.

**In conclusion**, strong leadership is needed from people in management functions to create an optimal innovation process. To encourage and permit people to work on innovation activities and to show the essence of innovation for the future of Renewi. Further, people need guidance in their innovation activities and decision-making process on the topic of innovation. Including more managers in the creation of the strategic story of Renewi will empower them to carry Renewi's vision out towards their teams. In addition to this, guidance is needed during changes. There is a need to actively support middle management on the topic of innovation. Since this group should guide their teams in having an innovation attitude.

For an innovation attitude three factors are important: motivation, confidence, and ownership. To motivate people, it is needed to show them the importance of what they are doing. This has a strong connection to leadership, people in leading positions should convey the importance of innovation for Renewi. Further, it is essential to keep giving people incentives to be motivated, because motivation quickly fades away in this group. Motivation to work on innovation activities is connected to the reason why people are working at Renewi. On the one hand there is a group that is intrinsically motivated to add to a better world and therefore enthusiastic about innovation at Renewi. On the other hand, there is a group who is less interested in improving the current way of working because of various reasons. For improving Renewi's innovation process, it is important to keep these two groups in mind. The second factor in an innovation attitude is confidence. In an improved innovation process people should feel the confidence to share their ideas and work on them. Not only individuals should be confident to act on innovation, but also Renewi as an organization should be more confident in its decisions for the goals to be a leading waste-to-product company. The last factor is ownership. People should feel ownership on the projects they are working on. This will shape dedication towards innovation activities. For the innovation process to be improved, ownership should be felt on all levels, from truckdriver to senior management.

Figure 18 provides a summary of the various categories from the concept of managerial encouragement. Included in the figure is a concise definition accompanied by an illustrative quotation and its corresponding translation.



Concept	Category	Definition	Illustrative quote	Translation	Interviewee
<b>Managerial encouragement</b>	Leadership	Showing leadership to show the importance of innovation for Renewi and stimulate innovation activities	<p>"We hebben vanuit CWNL ook gezegd 'We willen duidelijker strak beleid neerzetten, kaders formuleren.' En die moeten dan ook top down geïmplementeerd worden."</p> <p>"In CWNL is het proces goed gaande en wordt met name ook gedreven door de managing director die daar zit en vind dat het essentieel is voor de toekomst van zijn divisie. Hij zorgt dat daar voldoende tijd voor is. Maar dat is in andere divisies wat minder het geval."</p>	<p>[We as CWNL said "We want to establish a clearer, tight policy, formulate frameworks. Whereafter they are implemented top-down.]</p> <p>[In CWNL the process goes well which is overall driven by its managing director who finds it essential for the future of his division. He makes sure there's enough time. Which is less the case in other divisions.]</p>	<p>Managing Director CWNL</p> <p>Director Strategy Business and Development</p>
	Guidance	Guiding people in management functions to guide their teams towards a positive innovation attitude and innovation activities.	<p>"Wil je wel dat mensen met goede ideeën komen? Want als je het alleen maar doet omdat iemand zegt dat het goed is, is het niet zo dat het gaat werken. Vanuit intrinsieke motivatie moet je het gaan doen. En als je het doet omdat het opgedragen wordt, gaat het niet uit enthousiasme."</p> <p>"Ik denk dat we nu in een traject zitten waar dingen actief en sterk moeten aanpakken."</p>	<p>[Do you want people to come up with good ideas? If they only do something because people say you must do it, it's not going to work. They must do it because they're intrinsically motivated. If something is done because it's assigned, it's not out of enthusiasm.]</p> <p>[I think we're now in a procedure where we need to handle things more actively and strongly.]</p>	<p>Site manager 1</p> <p>Innovation manager 1</p>
	Motivation	The motivation to work on innovation activities and feel the importance of innovation for Renewi.	<p>"En ik vind persoonlijk ook dat je de verantwoordelijkheid moet leggen waar hij ligt, dus bij de startup, de innovatie. [...] Het is jullie innovatie, het is jullie investeerder, dus zorg maar dat jullie m goed kunnen managen."</p>	<p>[Personally, I think the responsibility should be where it belongs, with the start-ups, the innovations. [...] It's your innovation, it's your investor, so make sure you can manage them well.]</p>	<p>External consultant</p>
	Confidence	The confidence to share ideas and work on innovation activities. Besides, the confidence of management to make strong decisions.	<p>Feeling ownership over the innovation activities/ projects people are working on. In addition, feeling ownership of the vision and strategic plans of Renewi.</p>		
	Ownership				

Figure [18], Categories explained with its definition in the context and an illustrative quote, Managerial encouragement

## 4.2.2 ONE WAY OF WORKING

This section discusses the subthemes of ‘One way of working’. Figure 19 provides an overview of the relations between the subthemes of ‘One way of working’. This figure shows two groups: internal collaboration (bottom) and external collaboration (top). Within the internal collaboration, a preferred communication style of Renewi should include candid communication and a universal language. A clear communication style has a positive effect on the creation of guidelines which has a positive effect on establishing a clear structure throughout the company. Being a connected organization is positively affected by a candid communication style. A connected organization has a positive effect on establishing a clear structure throughout the company. A clear structure will establish more effectivity and more efficiency of innovation activities. Lastly, external collaboration is positively affected by the establishment of a clear structure and vice versa.

### Communication style

Renewi, for instance, is characterized by multiple communication methods, which is not uncommon. This can be attributed, in part, to the presence of diverse cultures and locations across different countries within the company. Additionally, the merging of two companies, each with their own distinct style of communication, contributes to this situation. However, the existence of diverse communication styles only poses a challenge when there is a lack of mutual understanding. For an optimal innovation process, it is important to align this communication style throughout the company to the extent of understanding each other clearly. Two essential factors that emerged from interviews for accomplishing this are candid communication and the use of a universal language.

### Internal collaboration

Collaboration within Renewi can be categorized on different levels. This section shows issues in collaboration within and between innovation teams, with investors of the innovation projects, within divisions, in the operations, and over the whole organisation.

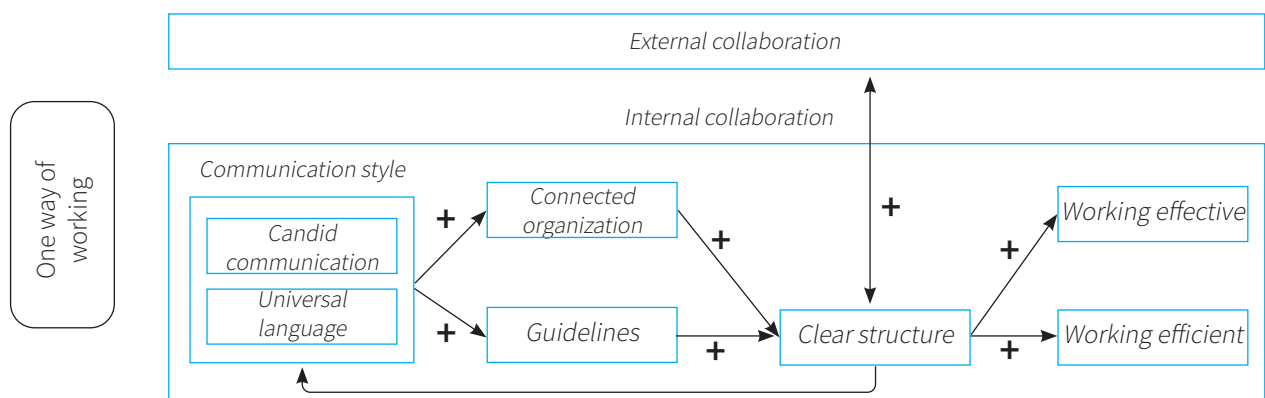


Figure [19], One way of working, relationships between the categories.

## Candid communication

[N6] Candid communication in this context means clear, straightforward, and truthful communication. The word candid is chosen because it represents a combination of the before-named meanings. This combination of words represents the type of communication that is needed to improve the innovation process.

Candid communication is a necessary factor to create uniformity within the company. Multiple interviewees address candid communication as being relevant for a clear understanding of innovation activities and the importance of it. The Director of Strategy Business Development talks about clearly shaping and articulating the vision of Renewi. According to him, this is needed [22] *“To make people enthusiastic and to create an image of where Renewi precisely wants to go, what that will look like, and what it means for the organization.”* The Advisor of Public Affairs talks about transparent and open communication. She expresses she sometimes misses the reasoning behind why innovation activities are or aren't working. The Change manager acknowledges noticing this in her own research at the company and says [23] *“Keep it short and compact. Showing what really happens and not only describing it in vague terms but what actually changes in the practice.”* She adds: [24] *“So you must go to the people and sit next to them. And you must explain it to them through different channels. And repeat, repeat, repeat.”* This is especially applicable to operational employees.

Besides, candid communication within the whole organization, communication between an innovation team and investors and between innovation teams in the Boost program is mentioned. [25] *“This contact is mostly informal”*, thus the Project manager of Business and Development. She talks about it being different from real start-ups where the investor is an external party to whom you don't speak unless you want a certain funding. [26] *“You should make use of that I think.”*, she says. In such situations candid communication is key.

As said before, the innovation teams are responsible for collecting the money for their innovation projects. Candid communication with investors will have a positive effect on receiving that budget. In addition, communication between innovation teams could be improved, thus the Project manager of Business Development. [27] *“Now it's mostly within your own project team.”*, she says. It could have positive results to extend this communication towards other teams and learn from each other.

Additionally, more communication between departments and sites is a topic a recycling manager speaks of. [28] *“Next to time and money, another big problem is the space and materials we have. This is an operational and logistic matter. There should be more communication about who has which spare materials to use for testing.”*, he says. He implies candid communication about space and materials could improve the innovation process. Another matter is clear communication about fulfilled tasks. Innovation manager 1 talks about employees knowing quite clearly what tasks to fulfil. However, effective communication about what is done and connecting these tasks to others is missing.

As said before, for an optimal innovation process, it is important to align this communication style throughout the company to the extent of understanding each other clearly. Keep in mind not all departments have to use the exact same communication style, as long as they understand each other and are able to update each other on important matters. They should know and speak the same company language. Getting all employees of Renewi on the same page regarding communication style would cost significant time and effort. [29] Group Sustainable Reporting Lead stresses the difficulty of getting all people on one line because of their attitude towards change. *“Many people are hired lately. Some of the old employees think it was all better before and they cannot hold on to what is going on now. They are having different attitudes towards change. [...]*



So, I would say for the innovation context. Implementing any of these will require a very careful recognition of the audience. You will probably handle many reactions, both positive and negative. And it's quite difficult to anticipate which ones will be easy and which ones will be impossible.", thus Group Sustainable Reporting Lead. Tackling this is something the Change manager elaborates on. She talks about listening to signals people give when resistance arises in conversations. [30] *"However, I notice an urge to move around those signals. Even though there is enough to be said for it to listen to them. They (the signals) have a function. I'm certainly not in favour of avoiding resistance and that is what happens a lot."* Listening to these signals could improve communication because people are by definition scared of change. As said before, a strong vision with clearly defined roles of its stakeholders gives people grip on the situation. Especially when there are changes happening. Candid communication helps to understand the situation better and take resistance away.

### Universal language

Using a universal language isn't applicable to every single person in the company. Interviews made it clear keeping different structures throughout the company layers is a reasonable option. The External consultant for instance says, [31] *"Different structures ask for different communication."* However, it is important for key stakeholders in the innovation process to talk the same language on innovation. The 'language' in projects, teams, departments, or divisions could vary. Key figures should function as a translator between the innovation group and surrounding groups. Adding to this, on the question to how innovation manager 1 would like to communicate, he answers [32] *"I would like to have more discussions about it."* This is typically a way of working for key stakeholders in the innovation process. Discussing topics could evoke curiosity in people and stimulate the understanding of others. A universal understanding of language could add to the quality of these discussions.

### Connected organization

From both interviews and informal conversations, it emerged that an island culture is applicable at Renewi. This means Renewi is scattered in the sense that different parts of the company are mainly focused on their own goals and the overall goals aren't the priority of those parts. A consequence of this is a lack of internal collaboration between different divisions and business units. An external consultant gives an example of Renewi being less developed in working together like that. [33] *"Really simple, agile working, transparent working. How do you work together in a team? There I notice it's often a beginner's level."* A reason for this, he says, could be the scatteredness of Renewi. Many different locations throughout cause people to work in their own bubbles, [34] *"They must get used to working together."* On the other hand, he sees innovation teams growing these skills because of the Boost program. Good collaboration is a crucial factor in innovation teams, thus the external consultant. [35] *"This is really important; we see that projects actually only become successful - innovation projects - if successful teams are working on them."*

As said before, [36] *"Renewi consists out of islands"* is often heard. Besides, Group Sustainable Reporting Lead says: [37] *"There are already different Renewi's within Renewi."* This could be caused by past mergers, widespread sites, and different working or communication styles. The latter is negatively influenced by this island culture. This could have to do with a remark the Project manager of Business Development makes: [38] *"In the past, divisions could get in trouble due to sharing information, when not reaching their PNLs. Even though these things don't happen anymore it still plays a role in people's heads, and it is still used as an excuse."* She talks about this in combination with the visibility of projects: [39] *"Yes, I think we really exist out of islands. And on the other side, even though there is a SharePoint page where projects can be seen, not much happens with it."* This SharePoint page could be a connecting tool and remedy for the

problem. However, many interviewees are not enthusiastic about this tool and/or don't know what can be found on it. Site manager 2 says [40] *"To make Renewi a whole again, something must be organised."* He advised creating a more central structure on a group level, one where divisions do not have their own R&D. This way it is easier to unroll new improvements or techniques to other divisions.

### Clear structure

Renewi needs a clear structure to connect its islands. The Group Sustainability Lead expresses that there is a lot of homework to be done on the foundation before innovation activities can arise, but that people are willing to do so. [41] *"There is a big appetite for new and for bigger, bolder, and better, but sometimes it feels like Renewi does not have enough foundations for this to stand tall."*, she says. *"It is like if you go fast without a solid foundation, the whole enterprise will be a bit shaky right?"*

Structure, or the lack of structure, is seen on different levels in the company. [42] *"...through the whole company structure is missing."*, the Change manager agrees. Interviewees mention missing structure in storing information, communication, or processes. Structure in storing information is later discussed. At the beginning of this section, Renewi's communication style is discussed. The Change manager talks about a lack of structure: [43] *"I think what we as an organization would benefit from, is to start with structure in ways of working. And especially in consultation, in conversations that are held with each other. I haven't really discovered that structure yet. I don't think it's really there either."*

Further, there is a concern about the structure of the processes that are used. Many people that work on a site are not necessarily going to other sites which makes it hard to see how others pursue the same processes. That is why Renewi needs clear governance to create a structure for these processes. This will also make it possible for people to find the applicable people and information they need.

[44] *"Structure, process, and a clear governance could help with this"*, thus the Director of Strategy Business Development. Site manager 3 agrees to this saying [45] *"We need structure, focus and attention."*, talking about processes concerning the innovation process. This is confirmed by an external consultant from Tekkoo who expresses his concern about clarifying processes and structures to guide people in the right direction. Nevertheless, we can't forget big steps are made looking at structuring the innovation process. Managing Director CWNL states: [46] *"So, I am very pleased that we have made quite some progress in the last year. On the one hand, ensuring that we work more uniformly and, on the other hand, simply implementing the substantive projects that were already there and giving them the right shape."* He is rightfully enthusiastic about the achieved results, notwithstanding a lot of steps to be done. The Change manager is critical of this uniformity. She says: [47] *"But that structure where everyone is rated the same isn't there yet. I think that for that matter it's important that everyone works in the same way. And I think consistency there is pleasant. Especially if you have the ambition to manage at least large parts of your company centrally. Because then it doesn't help if everyone does it in their own way or doesn't do it or does it a lot."* She adds that besides this she doesn't believe in an organization where one way of working is working through the whole organization. Especially because this organization consists of many smaller and bigger companies. As also talked about before, she says that creating one way of working will cost too much time and effort.

Further, innovation manager 1 is worried about the system that should be used to evaluate the number of ideas that are generated. He talks about the Boost program taking too much time to evaluate plus-minus 150 ideas. [48] *"So, I don't know how we will get this fixed timewise."*, he says. A clear structure on how to quickly evaluate ideas could speed up the process. Nonetheless, the funnel created from the Boost approach is partly covering this problem.

Quickly touched upon before, a point is made about knowing where to be for what information. Employees being in the business for quite some time know where and how to find the right people if they need information site manager 1 told me. He says, [49] *“Within Renewi we do a lot via personal contacts.”* This implies the challenge it can be to find information if a person doesn't have the right contacts. Further, he says, *“You notice that there is gradually more discussion across the divisions, but it can be done a lot better. Something that goes well with one person, that other people can say ‘hey, we can pick it up.’ Then you notice that not everyone is really interested in it. That is a pity sometimes.”* A better structure for sharing information can result in quicker and more effective searching. The lack of internal collaboration has to do with multiple things site manager 1 says. First, due to busy agendas, people have enough on their plates and are not open to adding more. Second, some employees are at a point in their careers where they are thinking about their end goal which doesn't include more work (on innovation). Lastly, some people are not keen on innovation. This is closely linked with the section about motivation towards innovation activities.

## **Guidelines**

Having a clear structure in place demands guidelines. Starting with clearer guidelines for the roles people have within the organization. Some people don't make optimal use of the resources they have. The external consultant says this has to do with the alteration of roles within Renewi during the last few years. People are still searching for what they can or should do within their function. An example of this is making better use of the extent of authority that is given, the external consultant suggests. Further, people in certain roles should get guidelines on how to act in particular situations or decision-making processes. The Change manager talks about middle management not always knowing how to handle certain situations.

Many people in these functions are promoted from operational functions to management functions because they were good at what they do. However, even though doing the best they can, some have little knowledge about managing. Providing management trainings could solve this problem.

In addition to this, the guidelines around Renewi's strategic focus should be clear, the external consultant says: [50] *“And there you see a strategic search for Renewi itself. Hey, where do we want to play? In what field do we want to play? There is, of course, a certain direction, but at the same time, you also see that in practice it is not yet completely clear.”* A clear focus could provide a guideline for these questions. Innovation manager 2 talks about Mission75 as a kind of guideline for the strategy: [51] *“We have a strategy and how do we execute it? Mission75 is such an element that helps with it. In a way, you can see if you're going to reach your goals or not. [...] If we do nothing, Mission 75 will go down.”* Besides, he talks about Boost providing comfort and control. [52] *“I think we don't have 100% control over what we do and don't do. That's why Boost gives me such comfort. Because we explicitly choose and make it clear which projects we're going to Boost and whom we're going to ask to do so.”* Mission75 is an example of a guideline for the strategic focus of Renewi. However, communicating the broader strategic focus could give people support for making choices. Decisions can't be dependent on one or two people, thus innovation manager 1. [53] *“Choosing the direction of the organization is an important thing and I think that should be supported by multiple people.”* Creating these guidelines will assure an easier and quicker decision-making process. This is needed to quickly evaluate the large number of ideas that are lying on the shelf, he says. The external consultant agrees with this by mentioning Renewi is looking immature at the decision-making process. For instance, the lack of clear roles and processes in the relatively new Product Management Innovation (PMI) department.



Besides evaluating, for instance, large numbers of ideas, unifying decision-making processes can be valuable for many other areas. The Recycling manager suggests [54] *“More lean working would be better, in that way continuous improvement is done easier.”*

### Working effective

[N7] Working effective is producing the result that is wanted or intended, producing a successful result. – Oxford dictionary

Matters pointed out in the last section, such as making choices, are closely linked to working effectively. Innovation manager 3 shares that Renewi is not always working effectively. He points out there is a close link between working effectively and working efficiently. However, before a company can work efficiently, it should work effectively and get things done.

### Working efficient

[N8] Working efficiency is doing something in a good, careful, and complete way with no waste of time, money, or energy. - Oxford dictionary.

Handling the above-named subtheme appropriately will make way for efficient working. If you ask site manager 2, things can be arranged much more tightly, to make space for innovation. Besides a clear structure, guidelines, and candid communication, efficiency in working can be improved by using ‘the memory of the company’. This memory contains all that happened in the past concerning a specific topic. [56] *“It is valuable if the information is recorded and saved for future employees who cope with precisely the same problems. I see a lot of repetition happening, which is just not efficient. There is no memory of who was part of the project before or who did compare projects.”*, thus Site manager 2. Preventing such memory to get lost can add to the efficiency of projects are ran. Section [4.2.3] will elaborate further on this topic.

Further, the Project manager of Business and Development talks about an efficient way of working within the innovation teams. [57] *“... you must make sure there is worked on the right thing. Make sure there is balance and working on matters that are needed work that moment instead of working on things people like.”*. Here efficiency is seen as working on the right things at the right moment.

On the other hand, there are good illustrations of working efficiently too. An example is a spontaneously formed informal group interested in p-fas. A topic which is widely considered to be a problem in this sector. This group contains people that have to do with technology and are interested in the topic. The people in this group gather once a month and exchange new information. Besides, they made a SharePoint page where all information is shared and can be found. A side note, in this example the functions of SharePoint are properly used and attractive to its users. They are in contact with knowledge institutes and follow publications. Site manager 1 who enthusiastically talks about this group mentions the amount of time they save by collaborating on gaining information on this topic. [58] *“Not everyone in the organization should be concerned with the topic, that would be a loss of time. However, it is good to keep track of the latest developments.”*, he adds. Another example is another informal group is created in a different layer of the company. A group of drivers created a straddle truck group chat in which people can send pictures of things being wrong with the load of a waste bin and what is wrong with it. By doing this they can help each other in solving the problem and prevent being sent to the same containers again. This initiative saves time and works as a space where drivers can help each other which creates positive relationships.

## External collaboration

The external consultant shares that innovation is often about collaboration with external partners in this business. This means knowledge and skills are needed from outside of the company to make ideas successful. Creating a connection with external parties can be challenging for some people. Even though he stresses Renewi making an afford to talk to clients and get the conversation going, this is not enough yet. [59] *“But still, there we see a challenge at Renewi. They are used to dealing with a customer in a very transactional way. A customer pays and they deliver something in return. They don’t feel like asking all those difficult questions to the customer, you know. [...] While innovation often requires a co-creating mindset.”*, he says. Some interviewees talk about having close connections to universities and regularly visiting networking events to keep up to date with the latest changes in the market. These kinds of connections are crucial for forming new ideas.

**In conclusion**, both internal and external collaboration are discussed in this section. Internal collaboration starts with a clear communication style. Due to the widespread geographical location of Renewi and an origin in different companies, parts of the company communicate in different ways. However, the existence of multiple ways of communicating is only a hurdle if there is a gap in understanding each other. Two things are needed for this: candid communication and a universal language. Candid communication is a necessary factor to create uniformity within the company. Not only providing a clear understanding of innovation activities and their importance but also giving reasoning for decision-making. Further stakeholders in the innovation process should talk the same language on innovation. Which means others can keep using different structures. A universal understanding of language could add to decisions-making and the quality of discussions. Discussing topics could fuel curiosity in people and stimulate the

understanding of others. A clear communication style has a positive influence on the connectivity of the organization. Currently, Renewi has a scattered nature. In a sense that different parts of the company are mainly focused on their own goals and the overall goals aren’t the priority of those parts. This island culture has a negative influence on communication throughout Renewi. However, the Boost program has a positive influence on creating a common way of communication. It focuses on a main goal and teaches people to work together throughout different divisions and business units. Good collaboration is a crucial factor in innovation teams and for the success of innovation projects.

To connect the islands of Renewi a clear structure is needed. Structure, or the lack of structure, is seen on different levels in the company. Interviewees mention missing structure in storing information, communication, on processes. Having a clear structure in place demands guidelines. Guidelines should be created for the roles people have and how to act in particular situations or help with decision-making processes. Further, middle management should have access to guidelines and training on how to manage their teams. In addition to this, the guidelines around Renewi’s strategic focus should be clear. Creating these guidelines will assure an easier and quicker decision-making process. A clear structure will positively effect efficient working. However, before a company can work efficiently, it should work effectively and get things done. Lastly, innovation is often about collaboration with external partners in this business. This means knowledge and skills are needed from outside of the company to make innovation projects successful.

Figure 20 and 21 provide a summary of the various categories from the concept of one way of working. Included in the figure is a concise definition accompanied by an illustrative quotation and its corresponding translation.

Concept	Category	Definition	Illustrative quote	Translation	Interviewee
<b>One way of working</b>	Candid communication	Clear, forthright, and open communication in all teams and within all levels of Renewi.	"Bij ons gaat het veel meer over bij wie je kunt zijn en weet ik dat dat mag en dat er behoefte aan is? En dat heel veel mensen in alle drukte dat allemaal maar niet zo goed weten, dat moet ook heel helder zijn denk ik in de communicatie. Wat willen we dan dat er verwacht wordt van jou?"	[With us it's much more about whom you should ask for something and knowing that that's okay and knowing that there's a need for that. That a lot of people in all the hustle and bustle don't know this, that should be very clear in the communication, I think. What do we want to be expected of you?]	Managing Director CWNL
	Universal language	One way of talking about relevant topics to be able to easily understand all people within Renewi.	"Nou ja taal is een heel belangrijk aspect daarin. Je merkt toch nog steeds. Ja weet je dat dat is ook niet alleen voor Renewi maar zeker ook hier dat gebruik van Engels en Nederlands door elkaar. Ook al spreken mensen Nederlands met elkaar de ene na de andere Engelse term vliegt daar doorheen. Als je een populatie hebt waarvan duizenden chauffeurs die dat eigenlijk niet gewend zijn te gebruiken. Aa dan is dat al heel snel bla bla. [...] En zeggen waar het op staat zonder 25 bijzinnen in één alinea."	[Well language is an important aspect in that. You notice, which is not only at Renewi but definitely also at Renewi, that English and Dutch is mixed together. Even though people speaking Dutch, many English terms are used. With a population including thousands of drivers who are not used to that it quickly becomes bla bla. [...] And saying it like it is without 25 clauses in one paragraph.]	Change manager
	Connected organization	Connecting the whole organization to create a less scattered company. (Scattered: spread far apart over a wide area)	"Er is weinig samenwerking tussen de divisies, we zouden veel van elkaar kunnen leren."	[There is little collaboration between the divisions, we could learn a lot from each other.]	Recycling manager
	Guidelines	A set of rules or instructions that are created by management telling people what to do in certain situations. Especially, to make decisions easier in difficult situations.	"Dus ik geloof niet dat dat dat je alles precies op dezelfde manier moet doen Maar ik denk wel dat je kaders kunt geven Je kunt zeggen heel Dit is wat wij belangrijk vinden en binnen dat kader heb je de bewegingsruimte om dat zelf verder in te vullen."		Change manager

Figure [20], Categories explained with its definition in the context and an illustrative quote, One way of working



Concept	Category	Definition	Illustrative quote	Translation	Interviewee
<b>One way of working</b>	Clear structure	A way in which the parts of Renewi are arranged and organized in a certain way for communication, storing information, and executing processes to create a solid foundation for Renewi.	"Nou ik vind ook dat we die structuren en processen nog duidelijker kunnen neerzetten. Dus hoe visualiseer je dat? Hoe vertaal je dat naar simpele communicatiematerialen? En dan vervolgens is het hoe hanteer je? Dus hoe stuur je op die processen en structuur? En in beide zie ik, er zijn wel veel Excel lijsten veel dingen. Maar het is soms een beetje een rommeltje. Het is niet altijd heel strak."	[Well, I think we could create clearer processes and structures. So, how do you visualize that? How do you translate that to simple communication materials? After which you should think about how to handle that. So how do you direct those processes and structures? In both I see a lot of Excel lists and things, but it's a bit of a mess. It's all not very clear.]	External consultant
	Working effective	Working in a way the result that is wanted or intended is produced.	"Het gaat erom of je de juiste dingen doet"	[It's all about doing the right things.]	Innovation manager 3
	Working efficient	Working in a good, careful, and completed way something is produced with no waste of time, money, or energy.	"Dat ik een manier vind om die grote hoop aan ideeën op een efficiënte manier en relatief korte tijdsplan toch geëvalueerd zien. [...] En praktisch he, niet puur theoretisch."	[I would want to find a way to be able to efficiently and with a short timespan evaluate that big pile of ideas. [Practical though, not purely theoretical.]	Innovation manager 2
	External collaboration	Working together with external parties to create or produce something.	"Dus ze werken veel in ketens. Dat betekent dat je ook heel vaak de kennis en kunde van andere bedrijven nodig hebt. Technologie is nodig hebt van andere bedrijven. Dan gaat het ook weer om IP, dan gaat het over wie heeft het IP? Waar wordt het ontwikkeld? Dus dan gaat het om moeilijke samenwerking. Uitdagende samenwerkingen."	[So, they work a lot with chains. That means a lot of knowledge and skills are needed from other companies. Technology is needed from other companies. Then it's about IP rights, who has those rights? Where will it be developed? So that's all about difficult collaborations. Challenging collaborations.]	External consultant

Figure [21], Categories explained with its definition in the context and an illustrative quote, One way of working

### 4.2.3 PROPERLY ALLOCATED RESOURCES

This section discusses the subthemes of ‘Properly allocated resources’. Figure 22 provides an overview of the relations between the subthemes. The figure shows the positive relationship between capturing knowledge on the availability of time and on getting access to resources. Further, a positive effect of the availability of time on enabling innovation efforts is shown. Access to resources also has a positive effect on enabling innovation efforts. Enabling innovation efforts consists of two subthemes: headspace and freedom to explore.

#### Capturing knowledge

This category is already touched upon in the before-mentioned categories. Capturing knowledge is often talked about in interviews, which shows in the following quotes. When talking to the project manager Business and Development noticing her saying that [60] “Renewi is reinventing the wheel regularly”. Site manager 2 mentions much information about tests and pilots is not being written down and only exists in employees’ heads. [61] “That’s just in someone’s head. [...] Yes, that is of course very bad. That’s just essential information that’s not captured anywhere and not been made available anywhere for anyone who is involved with such a subject.”.

This results in a loss of information when the applicable person would leave the company or forgets the information. However, this is changing for different parts of the company. The project manager of Business and Development talks about all innovation teams doing their own administration of results from tests and findings. She adds that it’s not the case that everyone from all divisions can see this information. This knowledge is saved in a Microsoft Teams surrounding were at the time only the innovation teams themselves have access to. [62] “It’s such a specific topic that the ones who are experts in the field of the divisions are involved and able to see this information. So, I think it’s also a bit of business sensitivity. Maybe a little unjustified fear, maybe not.”, she says. Saving this information is the first step, making it visible to all that need it is not the case yet. Therefore, it is important to increase the capturing of knowledge throughout the company and create a place where people can reach out to it.

On this same topic, innovation manager 1 expresses not knowing everything that is going on, which in his eyes is not a problem. Not everyone is agreeing with this. Site manager 2 makes a remark about the lack of knowledge Renewi corporate has on what projects are running.

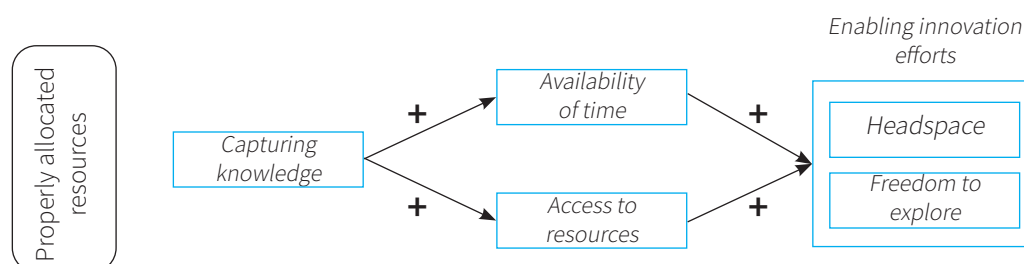


Figure [22], Properly allocated resources, relationships between the categories.

[63] *“I’m sure Renewi corporate has no clue about what development work is done here, and what is stored. People think there is a lot of knowledge, however, what precisely is not known.”* Further, he talks about the value of knowledge: [64] *“There are whole businesses within Renewi that were staffed differently in the past, so it’s not weird that people now have no knowledge of what was done in the past. However, a piece of memory is quite an asset in a company I would say.”* Another reason for the loss of knowledge is that the operational site plays a big role in these tests, and they are not always asked to document the outcomes. This has partly to do with the lack of structure that is in place to do so. Without structured ways to collect and store knowledge obtained from these tests, it’s not available for later use.

### **Availability of time**

Capturing knowledge will also result in saving time by not unnecessarily repeating projects, pilots, or tests. Time is noticeably a precious thing at Renewi. During the interviews, many people talked about the lack of time. For example, the project manager of Business and Development says she must make decisions about what to do and what not because she is the only one in this role and has too many tasks. Therefore, some things can’t be handled in time or handled at all. Her choices are based on the added value and urgency of the project. Innovation manager 2 talks about the availability of time to evaluate innovation ideas. He is concerned it takes up too much time which either gives room for competitors to take over or it could result in missing things if they work too rushed. [65] *“We’re just in a time rush.”*, he says. The Director of Public Affairs talks about innovation, in this case through the Boost program, not being a priority for most people. He says: [66] *“What is hard about innovation is that the innovation manager works full-time on this topic, whereas for other people it’s added to their current position. There is always a priority that is more important than participating in the Boost Program.”*

Some people struggle with seeing the importance of innovation because it’s something that stands further in time and has more insecurities than other tasks they have. However, the project manager of Business and Development says [67] *“Quite often it’s wrongly said; I don’t have time to innovate. While if you ask again and explain and tell why it’s important. Then still quite a bit of time can be made. And the resources too. So, I also think a bit that people don’t really see it as an excuse but a barrier that doesn’t really exist. But call it an obstacle.”* What she means by this is that people do not always take the effort to think of ways in which time or other resources can be made free.

Interestingly innovation manager 2 talks about another phenomenon at Renewi connected to time. [68] *“... what you see in such an important project is that everyone wants to be able to talk about it. There you see the project group being smaller than the advisory group.”* This indicated the effort people do to make the time for a topic that interests them. This leaves one thinking it there is really a lack of time, or a lack of priority. Time can also be a point of frustration if things take much longer than expected. Renewi should be careful of creating frustration among employees. Site manager 2 talks about being frustrated with the time some processes take before being able to test a pilot. For approving this, purchasing department, and legal department is needed which probably makes the process longer.

### **Access to resources**

For this section different types of resources are differentiated. The differentiation exists between human resources, financial resources, and knowledge resources. The availability of the right resources is a crucial element for an improved innovation process. [69] *“Innovation only works if the right people are in the right place with time and money”*, thus the Circular Economy Specialist. However, it’s not always easy to assign the right resources to the right people if there is scarcity, which is the case at Renewi.



[70] *“Granting resources differs strongly, I think. This is mostly due to the estimation of managers or division managers or how you would want to call them. Continuously considering the daily operation that must go on.”*, thus project manager of Business Development. Further, she thinks freeing resources and time for innovation is not something that should only be imposed from above. People must see the importance of it themselves. [71] *“If you try to do so, people will most likely say that they do it while not really doing it.”*, she says. Here she mostly talks about people who are in a position to grant resources. Innovation manager 1 agrees with this while at the same time he wants to be careful with dispensing resources. He says [72] *“People innovate all over the place. And it’s fun to do. We have some smart people on operational functions. Who also see things and start working on them. That’s positive. However, we should be careful we put the right capacity, the right investments in the right people.”*. On the same note innovation manager 2 talks about the capacity of resources at Renewi. He says [73] *“I think we should make it more explicit. I think it’s hard to decide which capacity goes where and what is already where.”*. By making the capacity more explicit, resources could be granted more adequately to the projects that need them.

The Boost program is a perfect tool to free up time and ensure people work on innovation. The external consultant talks about Boost being a vehicle to free up time. However, Renewi should be aware of the resources they have. [74] *“Most people do it (the Boost program) next to their initial job. I’m very dedicated to making time free for people, but we see it’s a challenge. How much we want to go to the next Boost waves with more project teams, we should stay critical of the availability of people. Can we coach them well? If not, it’s better to not do it yet.”*, thus managing director of CWNL. Likewise, the Circular Economy Specialist touches on the lack of people at Renewi empathises with the fact that innovation stands or falls with a few people.

These people are having a tough time because Renewi wants to accelerate innovation. He says that Renewi has twice as many projects in the pipeline, while still having the same amount of people on innovation. Site manager 2 also notices a problem in the occupation rate of Renewi. Innovation projects tend to keep going for a while, sometimes at a higher and sometimes at a lower intensity. People in the operations are hard to depend on for working on innovation projects because they are too dependent on the day-to-day business. As long as people are needed for the operations it’s hard to organize making people in the operations free for innovation in a structured way. This causes difficulty in the human resources for innovation projects. Besides this, he talks about tight staffing being at the expense of free roles from people with specific knowledge. These people could do research but are now being replaced by external human resources.

### **Enabling innovation efforts: Headspace**

During the interviews, it is often said Renewi is understaffed. [75] *“Our sustainability leaders effectively have two jobs at once”*, thus the Group Sustainability Lead. She thinks if people are really pushed like this, they do not have space in their heads to stop and take a step back. This causes people to choose the quick win, something that can get the work done now short-term game, instead of exploring what can also be. Especially innovation activities suffer from this she says. [76] *“In order to create conditions for people to have an innovative mindset”*, thus Group Sustainability Lead, *“you need employees who are eager for change, eager to not just settle for the status quo but go further. First, they need some space. If you have a lot on your plate, you don’t take extra risks. You just scale down, do what’s simple, do what’s less stressful”*, she says. *“And of course, you cannot expect that from everyone, because there are many people who just value that calm, that peace of mind.”*. This suggests by giving people the headspace, (more) ideas will arise on how to improve processes.

Additionally, the Change manager empathises giving people space to act on innovation activities. She says: [77] *“You know, if that (innovation) is something you believe in as a company, you should make time for it. Giving people the space to act on it.”*

### **Enabling innovation efforts: Freedom to explore**

Freedom to explore is felt on various levels. On the operational level, driver 1 said: [78] *“I like to have the freedom to plan the rides I do myself. I do have to follow the receipts, however, if there is no specific time written on them, I can sort them myself.”* In this way, he has the freedom to explore new and quicker routes. Exploring in this case isn't about big new innovations, however, it's about testing and giving people confidence to do so. On a different level, site manager 2 cares about creating the freedom to explore. However, he talks about the tight time schedule having negative influences on the freedom to explore ideas besides your job. On this same topic, innovation manager 1 empathises with the fact that it's positive that employees like to explore and show innovative behaviour throughout the company. However, he says that there should be awareness of allocating the right capacity, budget, and people at the right time. Resulting in scarce resources not going to waste.

**In conclusion**, capturing knowledge is needed to prevent Renewi to reinvent the wheel regularly. People mention knowledge being a valuable asset for the company. In addition to this, capturing knowledge properly will minimize the loss of knowledge when an employee leaves the company. However, when knowledge is saved, this information should be accessible to all who need it. Therefore, it is important to increase the capturing of knowledge throughout the company and create a place where people can reach out to it. This will increase the awareness of for instance innovation managers on what is happening within the company. Another reason for the loss

of knowledge is that the operational level plays a big role in these tests. They are not always given the time to document the outcomes of tests and pilots. This has partly to do with the lack of structure of consequently reporting and documenting. By capturing knowledge, activities in innovation projects will not be unnecessarily repeated, which saves time. This time can be used to act on other innovation activities. There is talk about noting the importance of innovation for Renewi on the time that is made free or works on innovation activities. Interestingly people that are happy to free up time to be part of an advisory group for an innovation project if the topics seem interesting and relevant. Besides time, the availability of the right resources is a crucial element for an improved innovation process. Three different resources are differentiated: human resources, financial resources, and knowledge resources. By making the capacity more explicit, resources could be granted more adequately to the right projects. The Boost program is a useful tool for this; however, this is only applicable to a small number of people in the company. Lastly, innovation efforts should be enabled. Two categories within innovation efforts are giving people the headspace to create room for new ideas and giving people the freedom to explore these ideas. Giving people headspace will result in employees thinking of ideas on how to improve processes. Giving people more freedom to explore innovation activities encourages innovative behavior.

Figure 23 provides a summary of the various categories from the concept of properly allocated resources. Included in the figure is a concise definition accompanied by an illustrative quotation and its corresponding translation.

Concept	Category	Definition	Illustrative quote	Translation	Interviewee
<b>Properly allocated resources</b>	Capturing knowledge	Taking control of storing and keeping all knowledge of Renewi.	<i>"We hebben ook de neiging om kennis ja toch al heel erg bij elkaar te houden. Dus dat verandert wel met de tijd, maar zeker in de historie ja was dat wel echt een ding. [...] Alle bedrijven hadden een eigen identiteit. Kennis is macht misschien ook wel."</i>	[We have the urge to keep knowledge for your own division. This is partly due to the history of the company, which is slowly changing. The companies that merged had their own identity. Maybe because knowledge is power.]	Site manager 2
	Availability of time	The possible time that can be spent on innovation.	<i>"En als je operationeel verantwoordelijk bent dan moet je zorgen dat je dagdagelijkse dingen gewoon goed lopen. Daar ben je verantwoordelijk voor, dan lijkt het mij wel lastig om ook de aandacht te hebben voor innovatie. Hoe leuk je dat ook vindt."</i>	[If you're operationally responsible, you must make sure that your day-to-day business runs smoothly. You're responsible for that, so it seems difficult to me to also pay attention to innovation. However much you like that.]	Director Public Affairs
	Access to resources	The opportunity or right to use human, financial or knowledge resources when needed.	<i>"Je tijd en je resources kun je maar 1 keer uitgeven, je kan je budget maar 1 keer inzetten, dus je moet keuzes maken."</i>	[You can only spend your time and resources once; you can only spend your budget once. So, you must make a choice.]	Director Strategy and Business Development
	Headspace	The figurative space that is free in one's head to keep busy with other things than the tasks to be completed.	<i>"Je kan alleen maar experimenteren als je een fris hoofd hebt of als je een prikkel hebt om iets op een andere manier te doen. Het gaat over prioriteren waar mensen hun gedachte heengaan. Je moet ze een reden geven om dat te doen."</i>	[You only experiment when you are having a fresh head, or you have incentives to do things differently. It is about prioritizing where people's thoughts are going, and you must give them a reason to do that.]	Group Sustainability Lead
	Freedom to explore	The ability to investigate, experiment, or discover new ideas, concepts, or territories without being restricted by external constraints or limits.	<i>"Individen willen wel, maar als die niet de back-up van hun leidinggevende hebben, bv geen geld krijgen, dan wordt het niks. [...] Dat is nadrukkelijk iets dat ik wil stimuleren."</i>	[Individuals want to, but if they don't have the backup of their managers, for examples they don't get money, then it won't work. [...] That is definitely something I want to encourage.]	Managing Director CWNL

Figure [23]. Categories explained with its definition in the context and an illustrative quote, properly allocated resources



## 4.2.4 CONTINUOUS LEARNING

The last section is about ‘Continuous learning’. Figure 24 shows the relationship between the categories in this concept. This figure shows that giving feedback has a positive effect on the extent to which people are informed. Besides, it has a positive effect on a culture where people learn by doing. Next to giving feedback, showing commitment has an positive effect on being informed and having a culture of learning by doing. Actively committing to innovation has a positive effect on both subthemes. Lastly, being informed and learning by doing both have a positive effect on people’s engagement to innovation.

### Giving feedback

The interviews show that giving feedback to one other is not always part of the way people communicate at Renewi. Creating a culture in which giving feedback is a standard activity could improve the innovation process. By implementing such a culture throughout Renewi, activities can be optimized quicker. Giving feedback can be seen in two different ways. First, giving feedback to people about the decision-making process. Second, giving feedback on activities and the way of working. Starting with giving feedback about the decision-making process, people should be informed about both the positive and negative outcomes of innovation activities.

[79] “I think you always learn if something doesn’t work, which is good. I also think through sharing these results people can be included in why something will happen or not. How many attempts are done to try something.”, thus the advisor Public Affairs. She adds that she hasn’t seen examples of why projects didn’t go through yet and would also like to know that side of the story. For example, in the innovation updates during the Mission75 live events, at the moment only success stories are shown. She thinks these moments can be used to show what doesn’t work. [80] “...however, you can immediately ask people for help.”. Site manager 1 adds to this: [81] “If things don’t work out, you must be open and honest with each other. You have expressed expectations to each other and if that doesn’t work out, yes okay, good for this test, but unfortunately. And move on to the next expectations, you must also speak up.”. Lack of feedback is also a problem on an operational level. Next an example from another part of the company, driver 2 mentions he never hears back from the ideas he tells his management. He expresses he would like to get feedback on the information he gives to them. Giving such feedback not only adds to informing other, but also to the level of engagement people show towards sharing ideas which is important for the innovation process.

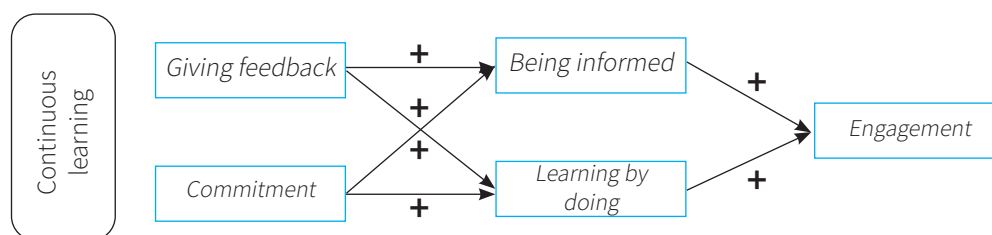


Figure [24], Continuous learning, relationships between the categories.

As said before, giving feedback to others and giving feedback on the way of working is just as important. When asked if it's stimulated to share best practices between divisions, the project manager of Business and Development replies: [82] *"More and more, what can I say about it? It's just not how we work. It's not because of reluctance; it's just not embedded in people's systems yet."* When looking at maintenance and planning, these best practices do get shared, however, not yet for innovation, she says.

### Commitment

[83] *"Innovation is a 'hugging concept' in the way no one would disagree with it. However, the moment you look at how it's done, and how much time, budget, and energy it needs, it becomes real."*, thus the director of Strategy Business Development. He implies commitment towards innovation is needed in order for people to act on it. Everyone can be enthusiastic about innovation, but only enthusiasm isn't enough. That's why it's important that top management commits to providing resources on a structural base and others in the company commit to using these resources smartly and practising innovation activities. Additionally, the external consultant says: [84] *"So, that's very typical for Renewi I think. We run into a number of things. It's a very operational organization, so they keep busy with the profit of today and tomorrow and optimizing that. However, they are less concerned with the profit and chances of the day after and the one in ten years."* He says innovation involves a commitment in the longer run. Yet, he sees a challenge in designing tight structures and processes and maintaining that simple structure for this innovation process.

### Being informed

Being informed can be interpreted in multiple ways. First, informing people about innovation activities happening within the company. The director of Public Affairs talks about having an insufficient image of what is going on with innovation.

He would like to see everyone being informed about which innovation projects are currently going on, or at least the bigger ones. At the same time, innovation manager 2 talks about the difficulty of knowing who is involved, what it's about, and what the status is of projects that have to do with innovation. He questions if people want to end up on a list. He could see people getting annoyed when he would want to know everything about their activities. However, it is relevant to know what is going on in the company in this area to be able to help people and avoid double work. Besides, being informed on innovation projects, a nice example of informing people is showed in the operations. The Activa is a weekly newsletter on a paper that is spread out in canteens and trucks throughout CWNL about the latest updates, interesting stories, and safety issues.

Second, people should inform each other on which tasks are being done, thus innovation manager 1. [85] *"I think we as an organization have clear tasks. However, everyone does their own job and after it's done they indicated that the job is done. But the rest of the organization often doesn't know, and I'm guilty too. You could say that report is done, read the report. But that's not the only thing I think."*, he says. What he means is connecting 'jobs' could improve quality. He says people should think broader than merely about their own jobs.

Third, inform people about the strategic goals of Renewi and how they are formed. Innovation manager 1 talks about not being informed about the way ideas or strategies are formed. [86] *"I have to say strategies interest me, but we don't invest enough time in them. It's not always clear to me exactly how the ideas or strategy come about."* He talks about discussion being an interesting way to get people informed on the current strategy. Besides, he talks about who should attend those discussions.

[87] *“I think for us innovation people, we need to coordinate the strategic discussion and why certain choices are made and why we leave things. I think there we need more energy from the layer below our management and the layers below that to make it important.”* If people feel more connected to the strategy because they were involved in its creation, they are more likely to propagate them to their teams. However, not only innovation managers, but others should also be interested in the strategy. This will create engagement with the higher goal of Renewi. Innovation manager 1 says this is not the case currently. [88] *“If you would ask employees from operations about the strategy, they no clue.”*

Finally, some people talk about Renewi needing to be informed by developments in the outside world. Renewi should have foresight in changes in the market, law and legislation, and activities from competitors. [89] *“Renewi is constantly moving to prepare for the future.”*, thus advisor Public Affairs. By being informed about what happens, Renewi can anticipate the future. Site manager 3 is not convinced Renewi is yet working like this. He states: [90] *“We start at the moment it goes wrong, but at that moment you’re already too late.”*

### **Learning by doing**

The project manager of Business and Development talks about the Boost program being a good example of teaching people about innovation by practising innovation activities. She mentions showing people how to do something and letting them experiment, works better than when higher management tells them to do something. [91] *“Yes, so to train people who can simply perform better that way. Preferably with people within the division itself, because that often works out better than when the head office comes to tell it.”*, she says. A recycling manager adds to this [92] *“Facilitating is important. You can’t just command something and expect it to be done.”* The project manager Business and

Development talks about people wanting to invent their own ways of working because in that case, it’s better remembered and better accepted. The External consultant says about Renewi: [93] *“Despite the fact that they are busy, and they don’t always have much time, they really are a studious organization. They are open to learning.”* Which is a positive observation for improving the innovation process. Further, innovation manager 1 talks about innovation as [94] *“... important to work on together. It’s also trial and error. Discussing what is going to happen. Setting a goal of the pilot, setting a baseline and just trying it.”*

### **Engagement**

As said before, being informed and learning by doing have a positive influence on the engagement of people of Renewi with innovation. Currently, some initiatives exist to build a community. For instance, the Boost celebration events function as a place to gather with all people included in the Boost program and other prominent innovation activities. SharePoint pages are another tool trying to keep people engaged and informed about certain topics. However, not all people are enthusiastic about using the latter. Further, the external consultant emphasises the importance of engagement from senior stakeholders to innovation to embed innovation in the organization. In addition, he talks about natural ways people stay engaged. First, he says: [95] *“When making steps you always notice that people see more things to work on. So that’s also a good sign. If things go right, they want to see more.”* Second, he talks about creating resistance: [96] *“If there is no resistance, there is no engagement I always say.”* Resistance can be seen as a positive thing in the changes made by improving the innovation process.

Continuing about the Boost program, engagement of the innovation team in the start-up and in the topic is crucial. Further, you need a CEO of the innovation team who is very excited about the topic, thus the project



manager of Business and Development. The Change manager talks about creating a trigger to engage people. [97] *“They should feel a trigger to contribute something. They need to feel a trigger to look at whatever it is and to talk with each other about it.”*

**In conclusion,** creating a culture in which giving feedback is a standard activity could improve the innovation process. It can be interpreted in two ways. First, giving feedback about the decision-making process to the people. Second, giving feedback on activities and the way of working. Further, people should be committed towards innovation. This means acting on innovation activities and strategic goals instead of merely saying they're enthusiastic about it. Yet, there is a challenge in designing tight structures and processes and maintaining that simple structure for this innovation process that people can commit to. More, there is talked about informing people about innovation activities and projects in different ways. First, inform people about innovation activities happening within the company. Second, people should inform each other about which tasks are being done. Third, inform people about the strategic goals of Renewi and how they are formed. Fourth, share innovation projects that are successful and not successful, be sure to share all lessons learned.

Additionally, Renewi must be informed by developments in the outside world. In addition, learning about innovation by practising innovation activities is discussed. Showing people how to do something and letting them experiment works better than when higher management tells them to do something. On the other side, people would want to invent their own ways of working because in that case, it's better remembered and better accepted. Finally, being informed and learning by doing have a positive influence on the engagement of people of Renewi with innovation. Engagement from senior stakeholders to innovation to embed innovation in the

organization is important. Triggers are needed to engage others in the company creating.

Figure 25 provides a summary of the various categories from the concept of continuous learning. Included in the figure is a concise definition accompanied by an illustrative quotation and its corresponding translation.

Concept	Category	Definition	Illustrative quote	Translation	Interviewee
Continuous learning	Giving feedback	Offering a helpful response to someone's work or idea to improve innovation activities. Besides, coming back to the ideas people shared.	"Dat is heel belangrijk, we zien gewoon dat projecten eigenlijk alleen maar succesvol worden, innovatieprojecten, als er gewoon succesvolle teams aan werken. [...] Dus gewoon onderling feedback aan elkaar geven. Wat nog niet makkelijk is of standaard is in deze organisatie."	[That is very important, we see that projects are only successful, innovation projects if successful teams work on them. [...] So, just giving each other feedback. Which is not easy or standard in this organization.]	External consultant
	Being informed	Being informed is about having all the information or knowledge that you need on (innovation) activities and strategic goals of Renewi and relevant from the outside world to Renewi.	"Je moet wel zorgen dat je een beeld houdt van wat er gebeurt weet je wel."	[You must make sure you are informed on what happens you know.]	Site manager 1
	Learning by doing	Learning by doing is a phenomenon about teaching something by practical activities...	"Nou ja het is ook bedoelt om mensen te inspireren en mee te nemen en motiveren enzo. [...] En dingen kan je ook leren he. En de hele aanpak ook wel een methode om daarbij te helpen van hoe zorg je nou dat je zoiets niet per se gestructureerd maar ook wel gewoon op de juiste manier in ieder geval dat je aan de juiste zaken, dat is wel het belangrijkste."	[Well, it's (The Boost program) meant to inspire people and motivate them. And you can also learn things. The whole method is to help people to be able to work on the right things in the right way, not to create too many structures.]	Project manager Business and Development
	Engagement	To urge/ necessity people feel to contribute to innovation at Renewi.	"Ik weet genoeg collega's die zeggen ik heb het al druk zat, waarom zou ik dit gaan doen. Waarom zal ik werk wat al heel druk is, drukker maken? Dan zie je dat de verbintenis met PMI er in sommige gevallen gewoon niet is. Ik voel de verbintenis wel omdat ik ervoor open sta. Dan is het ook heel makkelijk om voor PMI om mij te benaderen omdat ik er heel open in sta."	[I know enough colleagues who would say they are busy enough, why would I do this? Why should I make my already busy work, even busier? In these cases, you see no engagement with PMI. I do feel open for it. Then it's easier for PMI to reach me because I'm open for it.]	Site manager 1
	Commitment	The promise to do something or behave in a positive way towards innovation at Renewi.	"Maar het is een keuze die je maakt. En waar dit bedrijf niet zo heel goed in is vind ik tot nu toe. Is duidelijk zijn in de keuze die je maakt en daar ook naar leven."	[It's a choice you make. And I think this company is not really good in doing so. Being clear in the choices you make and living by that.]	Change manager

Figure [25], Categories explained with its definition in the context and an illustrative quote, Continuous learning

## 4.3 RESEARCH DISCUSSION

For this project, the emphasis lies in the research phase. This aims to accurately frame the problem at Renewi prior to developing solutions. Accordingly, the grounded theory method is employed to analyse the data in detail.

### Research set-up

The research can highlight several points of discussion when looking back at the research set-up described in section 3.1.1. First, the variety of interviewees made it difficult to interpret all information on the same level when building the model. Some stakeholders are connected to the innovation process on levels that are far apart. To enable a more detailed analysis in the future, stakeholders should be analyzed more thoroughly for each separate category. Due to the time constraints of this project, such in-depth research including all stakeholders is not realistic. Therefore this research give a more holistic overview of all stakeholders included.

### Analysing the data

At times comparing the codes is perceived difficult due to different angles people see to the innovation process. However, these same quotes made up for data rich and valuable. Therefore, in addition to utilizing the GTM, an alternative method is employed to analyze the data. As detailed in Appendix [O], a visualization is presented that aims to explain the various levels of codes generated from the data. Specifically, the visualization explores the constructs across different stakeholders involved in the innovation in their relationship to the innovation process. This is done for each category within the four concepts. The constructs are classified into four groups: [1] problems identified by the interviewer, [2] needs expressed by the interviewees, [3] observations with a favourable or neutral impact on the innovation process, and [4] observations with an unfavourable impact on the innovation process. Nonetheless, the analysis concludes that no significant patterns can be derived. Therefore, the GTM is used as it is in this chapter.



## 4.3 RESEARCH VALIDATION

After using the GTM one should take a critical look at the model built. This section first connects the model to the literature described in section 2.1.2. Afterwards, it takes a critical look at the data derived from the interviews.

### Connecting the GTM to the literature

As said in section 2.1 the final GTM model shows significant overlap with models presented by Adams et al. (2006) in 'Innovation management measurement: A review' and Crossan and Apaydin (2010) in 'A multi-dimensional framework of organizational innovation: A systematic review of the literature'. This section describes the overlap of the built model in this thesis with the presented models by Adams et al. (2006) and Crossan and Apaydin (2010).

While the focus of the models proposed by Adams et al. (2006) and Crossan and Apaydin (2010) is on factors that act as drivers and inhibitors of the general innovation processes, the GTM model concentrates on an individual's perspective of the innovation process within a specific organization, Renewi. The GTM model highlights several key categories, including capturing knowledge, the connectedness of the organization, availability of time, guidelines, and candid communication. With the exception of open communication, these categories are also identified in Crossan and Apaydin's model, while all categories are included in the Adams et al. model. Interestingly, the GTM model does not address the use of tools or the commercialization of innovations, both of which are covered in the models proposed by Adams et al. and Crossan and Apaydin.

Additionally, Portfolio management, which is a critical component of any innovation process, is not addressed in the GTM model. To address this gap, specific questions will be posed regarding portfolio management during the second round of interviews.

### A critical look at the interviews

Approaching interview responses with a critical perspective involves questioning the validity of statements made by interviewees.

For example, when individuals claim they have a shortage of time, it is important to consider whether this is truly due to a lack of available time or if it reflects a lower priority given to innovation activities. Another illustration is when an interviewee expresses fear of annoying others by seeking to learn about their innovative work. In such a case, one might ponder whether the benefits of sharing innovation activities outweigh the possibility of bothering others. If people become annoyed, they may need to modify their behavior rather than requiring the system to change.

These aspects are taken into account during steps in the design approach.

## CHAPTER 4

### *Key takeaways*

The model emerged from the grounded theory method for an improved innovation process exists of four concepts:

- One way of working
- Properly allocated resources
- Managerial encouragement
- Continuous learning

Playing these concepts right has a positive influence on the innovation process. An improved innovation process leads to more recycling and higher quality recycles. Which in turn leads to growth in revenue and EBIT and improved sustainability performance. All categories consist of multiple categories which between themselves have their own relationship.

**Managerial encouragement** is about creating dedicated leaders of innovation within Renewi on both senior leadership level and with middle management towards their teams. Through dedicated leadership, people are guided in their innovation activities and directed in preferred behaviour towards innovation. This guidance will give people the motivation and confidence to work on innovation activities. It encourages to feel ownership over projects and responsibility for their outcome.

**One way of working** can be divided into internal collaboration and external collaboration. With internal collaboration, the communication style for the people collaborating should be candid and through using a universal language. Further, a clear structure for innovation is needed with guidelines for actions and preferred behaviour. In addition to this, a connected organization will have a positive influence on internal collaboration. All elements together will cause more effective and efficient working throughout the company on the innovation process.

The third concept is about **properly allocating resources**. For innovations to succeed, there should be sufficient access to resources such as financial resources, human resources, and knowledge resources. In addition to this, time should be made available to work on innovation activities and to enable innovation efforts. Allowing people time will result in the headspace to think of innovative ideas and the freedom to explore these thoughts.

The fourth concept covers **continuous learning**. A continuous learning culture fosters learning by doing. Acting on innovation activities and giving feedback to each other on how to improve working together or exchanging best practices. Besides, giving feedback to each other, having feedback on the system is an insightful way of improving the structure of working. On top of this, all people should be informed about the for them relevant information to stay up to date on innovation activities. Combining these elements provides a situation in which people are engaged in what they do and committed to their goals.

Finally, a discussion and validation take a critical look at the research process. The research discussion talks about how the research is set up and how the data is analyzed. Further, the research validation connects the GTM to the literature and takes a critical look at the interviews.





*Renewi's site: Hoek van Holland*





# DEVELOP

The developing phase is about creating a future scenario. Through multiple iteration steps and validation from different stakeholders, three design concepts resulted in one future scenario. Stakeholders gave their input on different phases


in the design process through co-creation sessions. This input helps the creation of the final design scenario, which is used as a basis of the final design. In this phase making iterations is notably important to get to the optimal solutions.



# 05

## FROM CONCEPT TO FUTURE SCENARIO





Chapter 5 presents the design process from concepts to a future scenario. Starting with a description of the design approach linking to chapter 3 about the research approach. The design approach starts with the discussion of three design concepts based on the GTM. Hereafter, it provides a visual and textual presentation of the design scenarios. The three design scenarios are [1] creating an ecosystem, [2] guiding communities, and [3] Renewi's football team. Through discussion with the innovation managers, a combination of the design scenarios merges into one design direction. Followed by a validation of the design scenarios by stakeholders of the innovation process. Closing this chapter with a presentation of the future scenario in which Renewi acts as a leader in circular innovation.



## 5.1 DESIGN PROCESS

The design approach is a follow-up to the research approach, described in chapter 3. The last section of chapter 3 presents a visualisation of the GTM. The visual in figure 26 illustrates how the process is continuous. To create a suitable future vision, in the last stage, it is necessary to include stakeholders in the process. The visual shows a total of 25 interviews completed to gain insights for the final design. These interviewees are stakeholders with different roles and from levels throughout the company. The inclusion of stakeholders is crucial for the implementation and viability of the design.

The first blue triangle and black outlined square are the last steps of the GTM. From here three design concepts are constructed. The concepts are presented to the innovation managers which leads to a merge of concepts becoming a design direction. The design concepts are shown to the innovation managers to test the feasibility of the design scenarios. They are relevant stakeholders to estimate the chance of success due to their central roles in the process. Next, the design direction is presented to six key stakeholders of the innovation process. To justify the desirability of the design direction co-creation is used with these stakeholders. Using the inputs of these stakeholders to create a future scenario. Lastly, the future vision is a simplified version of the future scenario.

## 5.2 THREE DESIGN SCENARIOS

Three design scenarios are used to stimulate the imagination of what could be an improved innovation process for Renewi. Each scenario is roughly based on a concept discussed in chapter 4. However, one of the concepts seemed not to be applicable to just one design scenario. Therefore, the concept of properly allocated resources is spread over all three scenarios. In the next sections each design scenario shows which concepts it uses as a basis. Appendix [J] shows an overview of how the concepts and categories are used in the different scenarios. However, scenarios are not purely restricted to the overview shown. All design scenarios are created using the insights subtracted from the interviews and conversations with employees of Renewi.

The reader should keep in mind that these scenarios are distant outlines of the future and not realistic to reach in the close future. Although there is believed that a strong and slightly farfetched vision is proven to stimulate behaviour stimulation the reach of the goal (Duncan and Wack, 1994). They talk about scenarios as an alternative interpretation of the world of today linked to alternative expectations for the world of tomorrow.

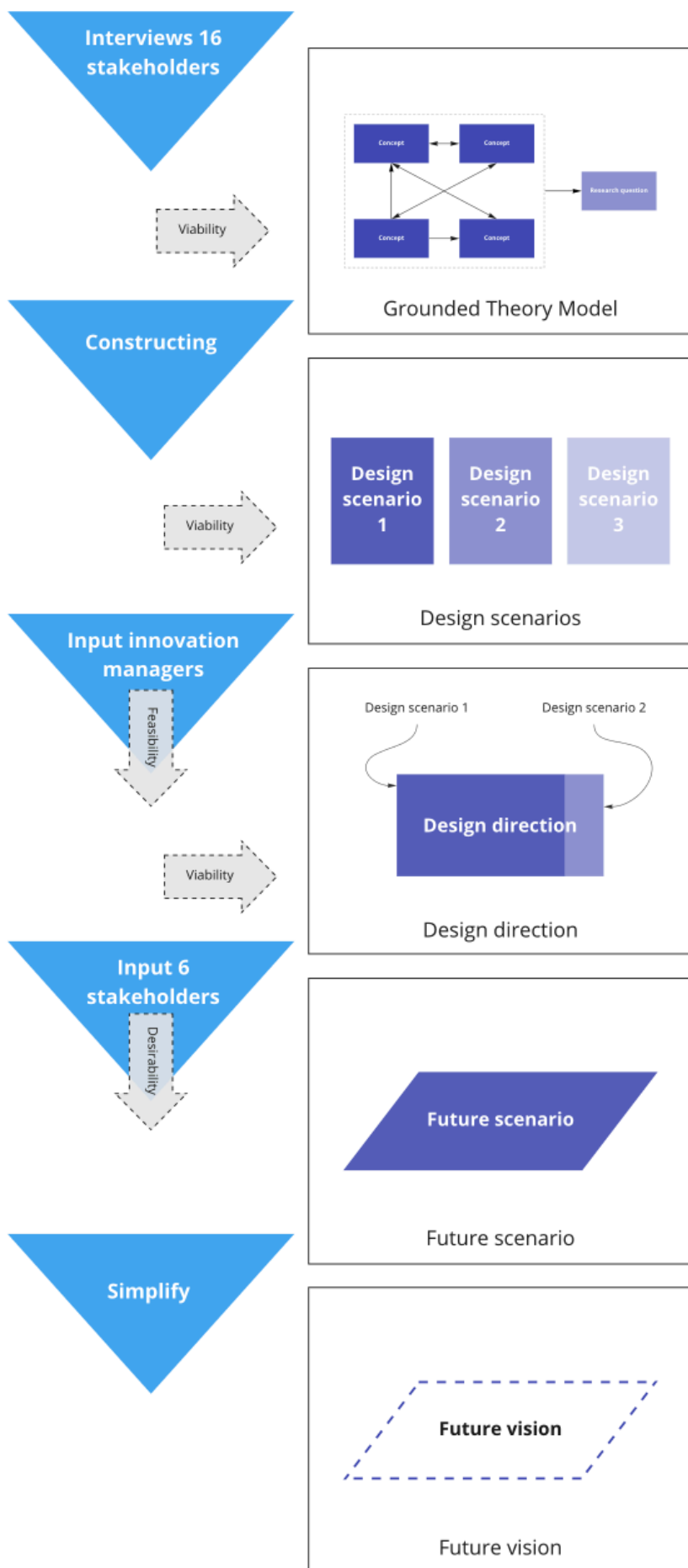


Figure [26], Five steps of the design process including the GTM.

## 5.1.1 CREATING AN ECOSYSTEM

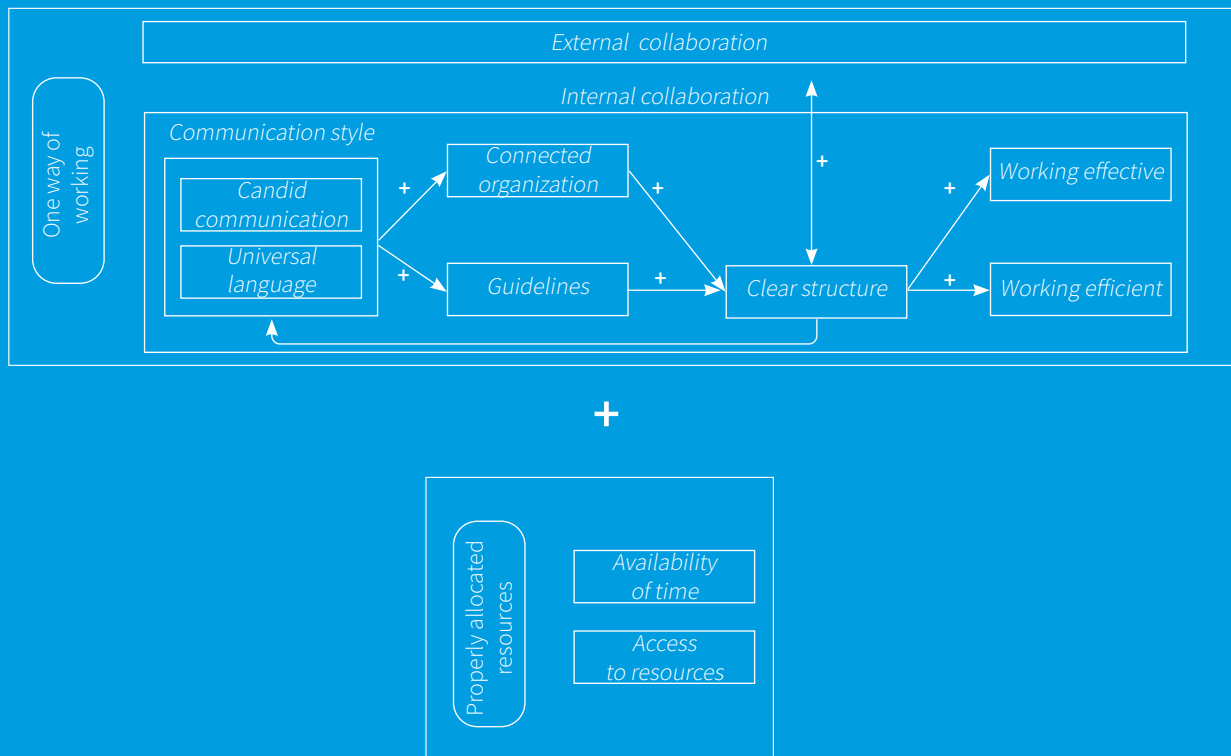


Figure [27], One way of working + capturing knowledge

This scenario is linked to the concept of ‘One way of working’ and the category of ‘Capturing knowledge’ from the concept ‘Properly allocated resources’, see figure 27. Figure 28 shows a visualisation of the future scenario.

In this design scenario, the attention is on two things; creating one way of working and properly capturing knowledge, see figure 27. Currently, Renewi suffers from an island culture. This is caused by teams and divisions being most concerned with their individual goals. Besides, it has caused a lack of communication between teams and divisions. In this design scenario bridges will be built between the island to reduce the communication problems and to enable reaching common goals instead of individual goals. Further, one way of working will be formed throughout Renewi by having a clear structure for common innovation activities. For instance, a common way for monitoring and determining the future of innovation projects. An important aspect is the communication of these activities. Communication is done by making use of the bridges.

This keeps the organization informed on important innovation activities and developments. Creating one way of working will contribute to a stronger connection between different layers of the organization and throughout different business units. In addition, spreading the strategic focus of Renewi throughout the whole company will give meaning to the cohesive way of working. Clear guidelines guard this way of working is for each group of employees. Besides, all employees communicate candid with each other. This will cause employees to work more efficiently towards reaching Renewi’s goals. The second important aspect is diligently capturing knowledge throughout the company. Memory on a wide range of topics will be stored in a structured way and is reachable to all. This will be done to avoid ‘reinventing the wheel’, or working on the same innovation projects in multiple places at the same. Through combining these factors, a connected ecosystem is created.

Appendix [K] shows a visual representation of the steps of the design scenario for creating an ecosystem.



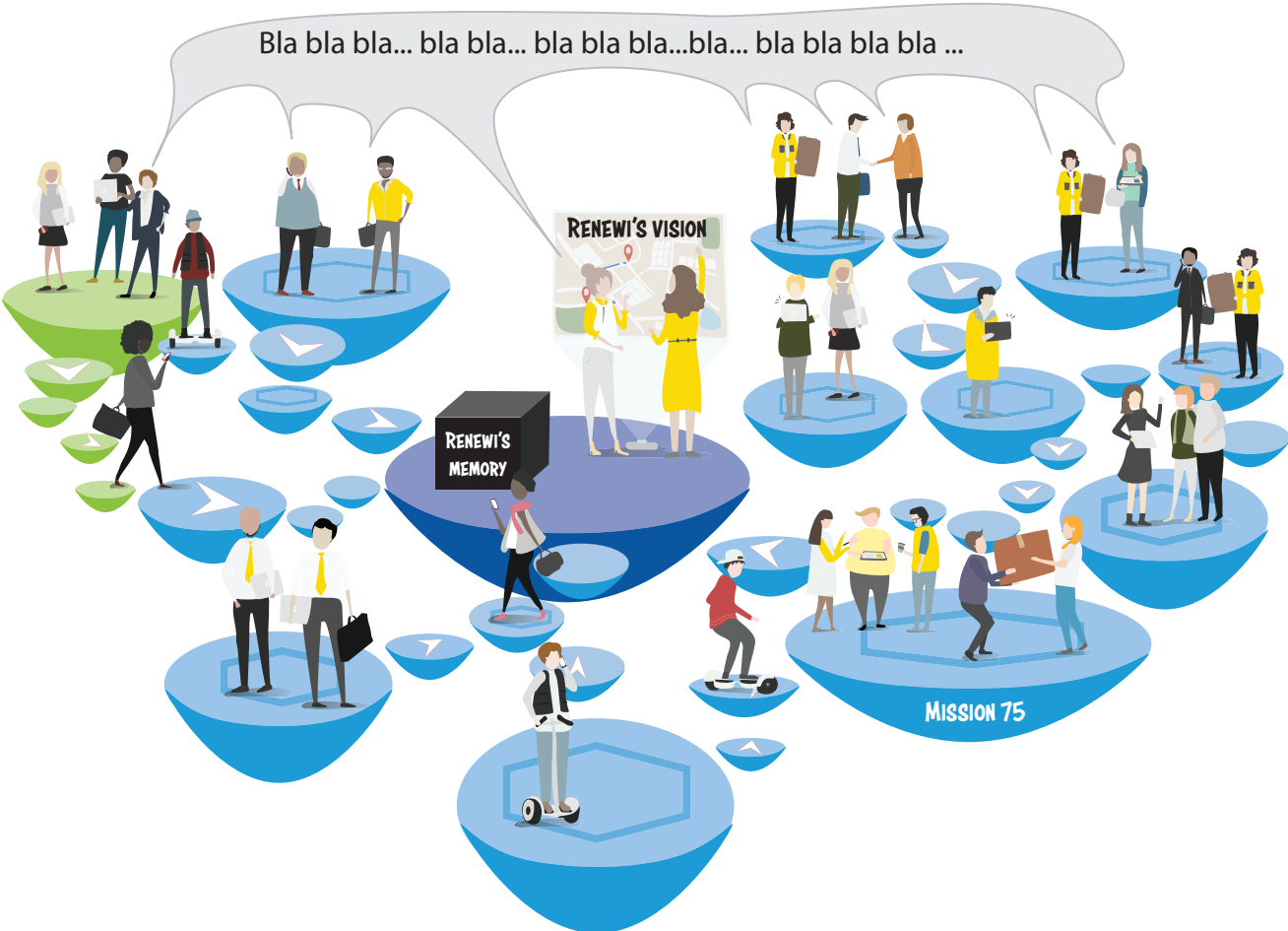


Figure [28], Design scenario 1: Creating an ecosystem.

## 5.1.2 GUIDING COMMUNITIES

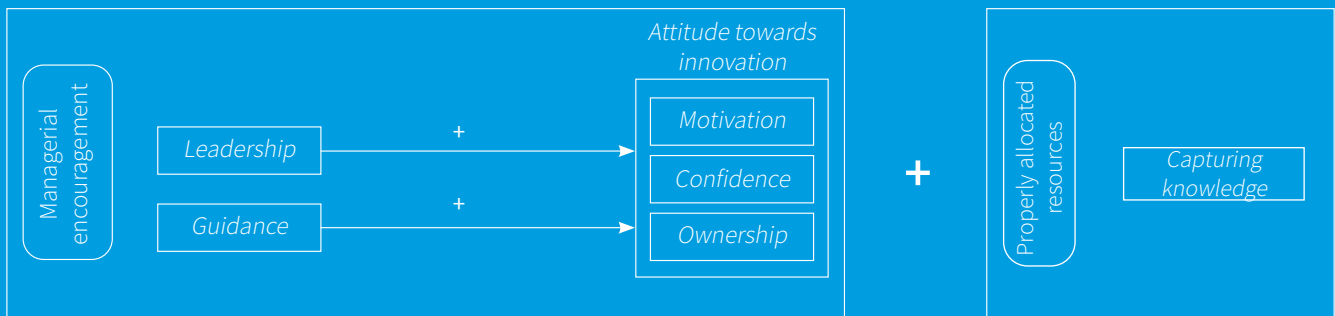


Figure [29], Managerial encouragement + availability of time and access to resources

This design scenario is linked to the concept of ‘Managerial encouragement’ and the categories of ‘Availability of time’ and ‘Access to resources’ from the concept ‘Properly allocated resources, see figure 29.

Figure 30 shows a visualisation of the design scenario. The purpose of this future scenario is to create a network of closely connected communities. A community is a group of people having a particular characteristic in common. In this case that characteristic is interest in a certain topic or problem in which Renewi could innovate. For this scenario, multiple small communities are created who all have their own leader. By keeping the communities small it is easier to guide and create the right attitude among the people within the community. This leader is derived from the central group: the spreaders of innovation. This group had a central position. Once this group, the spreaders of innovation, is existing of people enthusiastic for innovation. People from this group can start their own communities. Each spreader of innovation can initially be derived from a different business unit or level of the company. For this reason, communities are spread out over the whole company. The spreaders of innovation will create their own communities through express their interest towards innovation to the rest of the company. Therefore, the communities exist strictly of people who have interest in the topic and are enthusiastic to work on it. Forming communities is solely without any obligations.

While creating a communities, a spreader of innovation remains part of the initial group, which connects all communities together. They regularly meet during an innovation garage where they can share ideas. Clear guidance by the dedicated leaders on innovation will strengthen a positive attitude towards innovation. Within this attitude three things are important. First, people feel motivated. Motivation will drive people to work on innovation. Second, they are confident to experiment. Third, they should feel ownership over the projects they are working on which in turn motivates them to work of innovation activities. Besides, ownership is felt because the people within the communities are strongly connected. Leaders will be guided by the guards of the innovation toolbox, the innovation managers. They provides tools and knowledge to smoothly go through the process and to give guidance in guiding the communities. For instance, how to identify a promising idea in the early stages. Another aspect of this design scenario is properly allocating time and giving people who work on innovation activities access to resources. Innovation managers can for instance help middle management to make better estimations on assigning resources to divide over the communities. Innovation managers themselves should establish an easy way to monitor all running projects.

Appendix [L] shows a visual representation of the steps of the design scenario for creating an ecosystem.

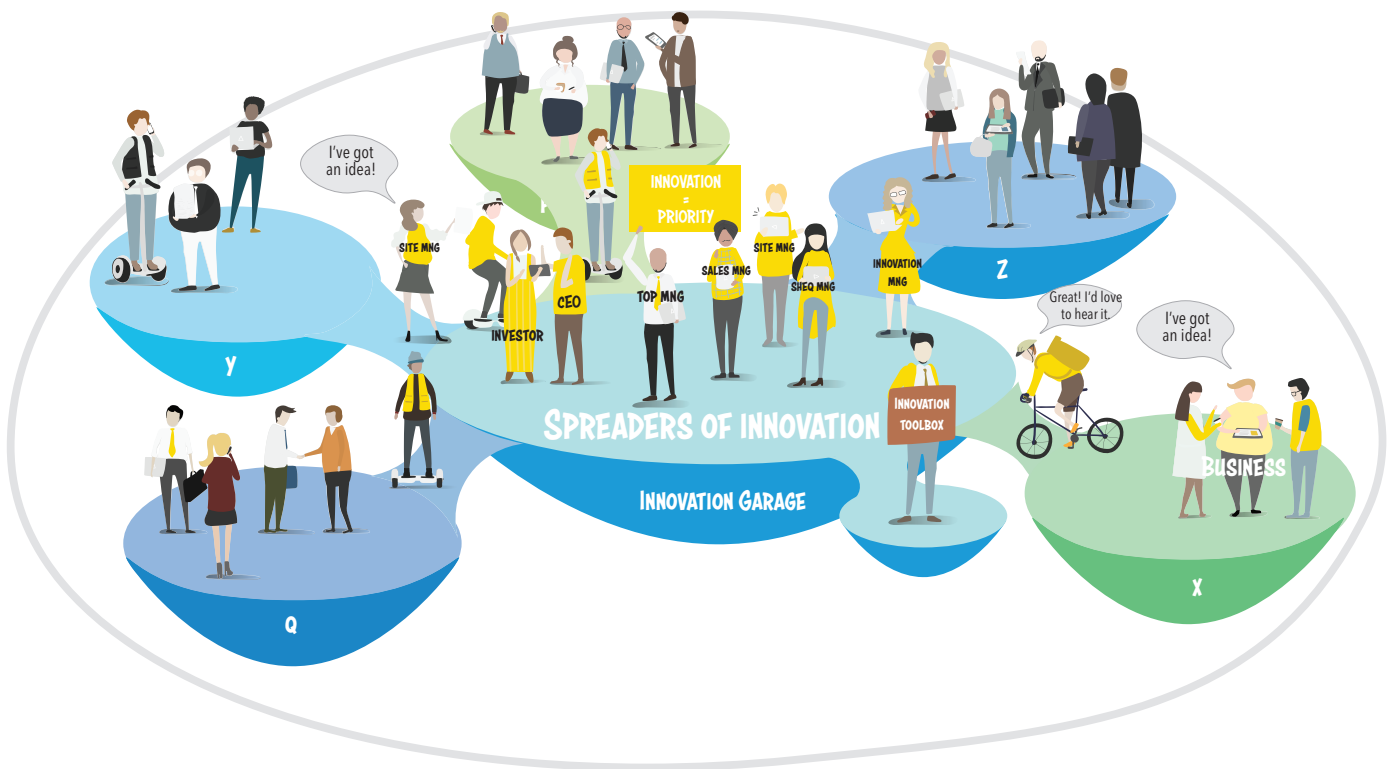


Figure [30], Design scenario 2: Guiding communities.



### 5.1.3 RENEWI'S FOOTBALL TEAM

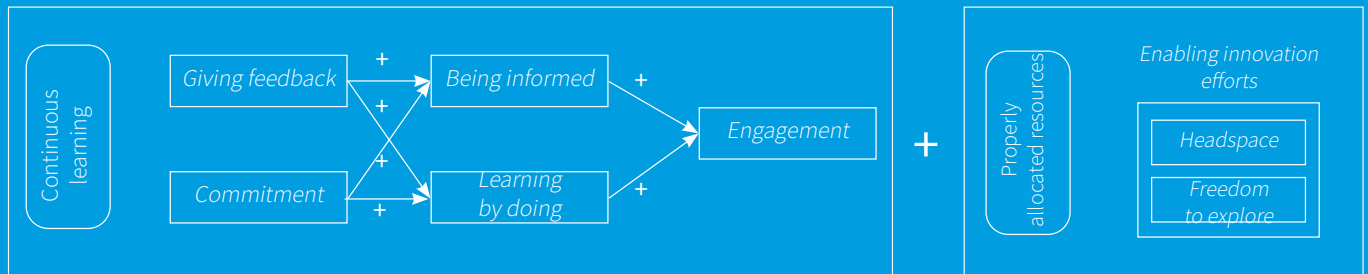


Figure [31], Continuous learning + enabling innovation efforts

This scenario is linked to the concept of 'Continuous learning' and the categories of 'Enabling innovation efforts' from the concept 'Properly allocated resources, see figure 31.

Figure 32 shows a visualisation of the future scenario. For this design scenario the metaphor of a football team will be used. In a football team it is important that the whole team is engaged to be able to win. All players are informed on the strategy and for instance who the opponents are for the upcoming games. Trainings are used to teach every one the newest techniques and let people practice. Besides, these training are an excellent opportunity to explore the game for each player first individually before becoming a part of the team. Further, having one goal during the competition creates engagement to all players, the coach and the trainer. Feedback plays an important role in improving overall skills.

It's all about engaging people to reach a particular goal together. In both a football game and throughout Renewi's innovation process. Engagement will growth through informing people throughout the company via different channels. People should be informed about what happens at Renewi without being overwhelmed by the amount of information. Therefore, care is given to whom gets what information. Continuous learning will be encouraged by giving people headspace and the freedom to explore for their ideas.

Giving feedback will become a standard activity throughout the whole company just like the football team. By sharing valuable lessons learned, failure costs are turned into valuable failure knowledge. Informing employees on the newest insides. This includes sharing best practices. In this scenario, people will feel the urge to figure out how ideas can be implemented by themselves while experiencing more responsibility in the process. This gives them total ownership over their own ideas and stimulates motivation to get to successful implementation. However, they are still part of the team which will give them a feeling of responsibility. It also means initiators will be held accountable for actively leading the process. Failure is not negative, however, unnecessarily neglecting tasks is not tolerated. Lastly, leaders have a facilitating role towards continuously learning.

Appendix [M] shows a visual representation of the steps of the design scenario for creating an ecosystem.

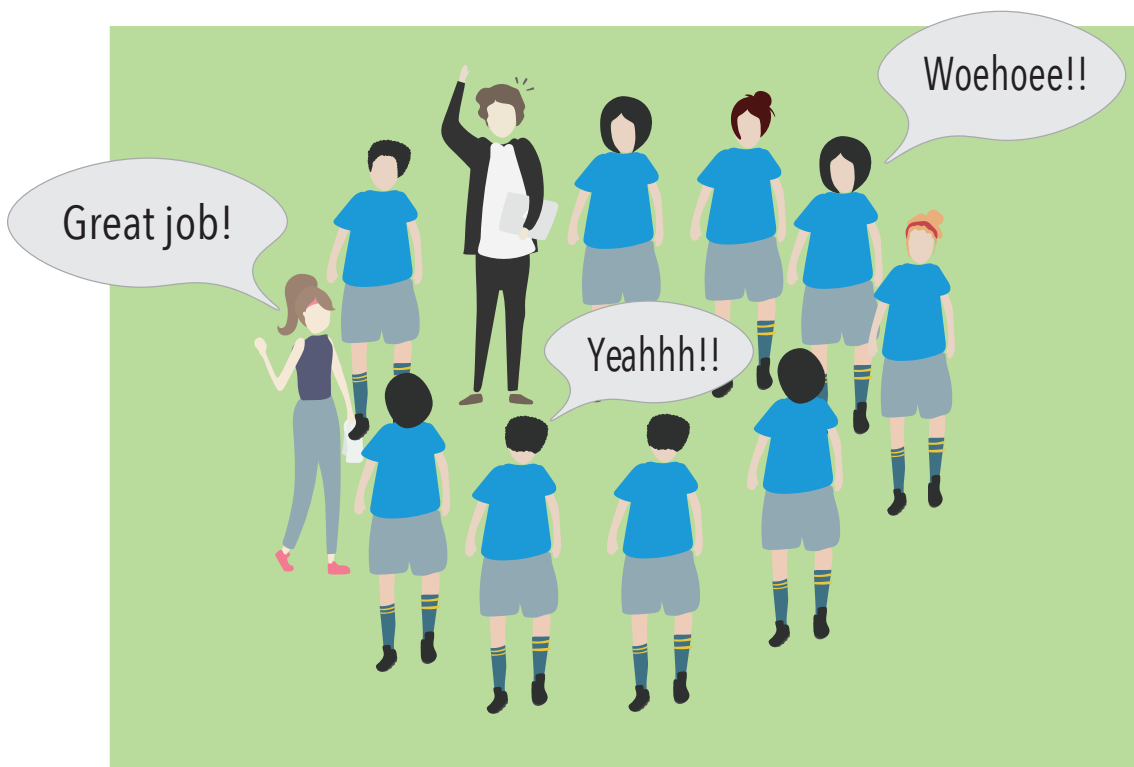


Figure [32], Design scenario 3: Renewi's football team.

### 5.3 CHOOSING THE DESIGN DIRECTION

Taking all matters into account there is decided to take design direction two, guiding communities, as a basis for the final design direction. To which some elements of design direction 1, building an ecosystem, are added. Figure [33] shows a visualization of design direction combined out of the two chosen future scenarios.

The choice for this design direction is made by means of a discussion with the three innovation manager of Renewi. These people play a crucial role in implementing the final design and motivating others due to their central role in the innovation process. By engaging the innovation managers in the process of choosing the design direction ownership over the design is created. This makes the implementation process of the design easier. The decisions for the design direction are based on a few remarks that came forward in the discussion. First, the amount of time spent on changes and during the implementation of the design can't be too high. Especially in the beginning where resources are scarce. There is a high possibility working on innovation activities will differ throughout the company. Therefore, it would be easier to create smaller communities in which people don't have to change much, than enforcing the exact same way of working for all. However, it stays interesting to use the same basics for innovation activities throughout the whole company. Second, the extent to which the future scenario is fitting to the current Renewi culture shouldn't deviate too much. The innovation managers are afraid implementation will be difficult when Renewi's current culture differs much from the culture sketched in the design scenario. Third, the extent to which people are still able to act entrepreneurial and act on their drive to experiment shouldn't be influenced. Lastly, the innovation managers acknowledged there is a considerable need for a central place that holds knowledge. Interviewees also reported limited excess to information and important information being stuck in the heads of employees. The creation of a central depository that manages existing knowledge in a central

place, enables sharing of lessons learned, informs employees on changes, and inspires is therefore included in the design direction. Including the remarks made by the innovation managers the basis design direction of guiding communities is supplemented with the categories of universal language, candid communication, and capturing knowledge.

[N9] The visualisation takes the term island culture literally. Even though, an island culture is not favourable for spreading innovation through the company, here the islands are used in a positive way. Smaller islands, the communities, are located around a central island in a way bridges can easily form. The islands represent the independent nature of each island. Different kinds of people are present on each island. This represents the possibility of forming a community with people from all over the company. The yellow colour of several people indicates that they are working on innovation activities or function as an important player in making innovation happen.





Figure [33], The design direction.

## 5.4 VALIDATION FROM STAKEHOLDERS

Validating interviews provide insides for the finalization of the design direction. This final future scenario contributes to the final step in the design process. It envisions how to improve the innovation process at Renewi. During the interviews, participants' input is asked on the design direction described and visualised in section 6.2. Appendix [E] provides an overview of the participants and their roles in the second round of interviews. Insides are used to make adjustments where needed and create a design that is preferable to all. Next to a validation of the design direction, the interviews are used to gather ideas and inspiration for the final design, the roadmap. Additionally, the interviews are used to engage the stakeholders with the design process and give them a chance to feel ownership over the final design. The interview guide for the co-creation sessions is presented in appendix [G]. Some valuable insides drawn from the interviews are clustered in 11 separate factors, see appendix [Q]. A short description of the outcome per factor is given below.

### Shaping Spreaders of Innovation (SOI)

The first observation that should be shared is about remarks on the current composition of the innovation team. [1] “You often see the same people who sign up for this kind of project or say they are working on incremental innovation. They try to see the bigger picture instead only working on that one task. [...] People that want and get energy from change and improvement. That really feels as a group of people to push change.”, thus participant 3. This illustrates which employees take a role in shaping the Spreaders of Innovation. Participant 2 adds to this, [2] “The most ideal is to have people from all layers and kinds of roles for a Spreaders of Innovation group. But they should be intrinsically motivated and want it themselves. They are the catalyzers of innovation. [...] Besides, it has to do with the profile of people. In innovation, you mostly see technical profiles, sales profiles, or management profiles.”. In addition to this, a few other characteristics of the SOI are pointed out.

First, the group shouldn't become too big. This is to keep an overview of people's functions and fields of work. Second, the group should include both energetic young or new people and experienced people. Third, the group should include some people who are responsible for strategy and knows the company's long-term goals. Fourth, the group should include some people that are closely connected to the working floor, have inside in specific disciplines, and believe in disruptive change. Further, some people with an academic background and skills in research should be included, people who dare to think outside of the box. Next, some people from sales and IT should be included, they know what is happening in the business. Lastly, innovation managers should be points of contact and organizers rather than boosters of innovation.

Further, few participants are sceptical about the management denotation within the SOI. Some firmly say the CEO - in this case not a CEO of an innovation team but the CEO of Renewi - doesn't have any say in the innovation process. Eventhough, there is a misunderstanding about which CEO is visualized, it is interesting to hear participants opinion of the role of Renewi's CEO. They say this because they experience Renewi's CEO doesn't have expertise in specific topics worked on in the innovation process. The CEO should get options between choices, but he can't decide on the options that are worked on.

### Communication between the Spreaders of Innovation

The vast majority of participants indicate communicating via well-known connections when searching for information. One participant says he always refers new colleagues to ask him, who in turn can refer to the right person. Participant 2 says [3] “If I want to know something I never look at SharePoint. I think of who might be working on the matter or who knows who’s working on it. Then I’ll start calling people. Sometimes my team helps in the search for information.”

Further, it is important the SOI have candid communication and speak the same language. Participants had different remarks about their preferred way of communicating. Some expressed that face-to-face communication is the best way of communication. However, due to the geographical spreading of Renewi, this is not easy to establish. A participant suggests online events should be kept in mind. Perhaps an alternation of physical and online meetings could be an option when innovation meetings are held more regularly. Besides, participant 1 talks about expectation management. He says [4] “Communication is very important, both internal and external. And expectation management is even more important. What are you doing? Why are you doing it? Do you see things moving? In what direction does the market go?”. Another interesting detail derived from the sessions is about the bi-monthly innovation meetings Renewi used to have. These meetings are held with all people who had to do with innovation. However, these meetings don’t exist anymore. It might be interesting to revive these meetings with some adjustments to the points that didn’t work before.

### Informing people outside of Spreaders of Innovation

In order to create an innovation culture or mindset it is relevant to introduce a respectable group of the organization to the innovation activities at

Renewi. This can be done via for instance the mission75 live events, however, these events are not accessible to all due to the time of broadcasting. To solve this participant 2 has an idea to include a short informative lecture at times when many people gather. For instance, operations or sales occasionally gather. These moments are most likely for training or celebrations. Participant 2 talks about it as [5] “In an academic surrounding you can also spread knowledge on innovation or Mission75. The team leaders should do the planning of the events, we facilitate everything. There you can spread it and you can show where to find everything about innovation.”. Further, one participant talks about including Renewi Young in innovation activities during a pizza night at one of its locations of Renewi. During this night some people can tell stories about the innovation process at Renewi and cases on the topic can be done. This way both sides benefit from such initiatives. Further participant 4 talks about the role of business leaders who should function as a bridge between the SOI, external network, innovation communities and divisions. He says [6] “Business leaders should be the people on the bridges. The ones who stay behind me, who see my discipline, and my group. What we’re working on and in what direction we should move. That should be coordinated with the innovation centre. For instance, what we see in The Netherlands, does that also happen in Belgium?”.



## Creating communities

The currently existing innovation group consists of people all over the company. Most of them have participated or are participating in the Boost program as part of the innovation team, investor, or initiator of a project. It started with people from CWNL, and it now also spreads to people from CWBE. The creation of the communities around this central group is possible in two ways. From outside in (the leader of a community joins the SOI) or from inside out (a participant from the SOI creates a community around him or herself). The first way is favourable to participant 1 [7]: “I think you should start from the outside to the inside. You should make sure someone who’s working in innovation is represented in every department. The people in the middle are the connection factor. However, the drive should come from the outside and not from the inside. The drive should come from the teams.”

## External network

The external network is an element which is not included in the chosen design direction. However, a significant number of participants talked about the importance of it. Therefore, this element will be included after all. Participant 1 says [8] “We need way more people who are working on what is happening outside of Renewi. That I don’t see enough in other departments.” One participant talks about inviting external people to the SOI meetings to keep them up to date on different topics.

## Generating ideas

Numerous participants talk about creating a direction for the ideas that people can generate and deliver. Participant 6 says: [9] “To make innovation successful, you need to start with a frame to make the right decisions. All discussions around this are very interesting, but they get you nowhere.” This gives guidelines for ideators, middle management, and the SOI. Creating guidelines gives direction for both providing ideas and the decision-making process. Middle management is a crucial link in this process and functions as a receiver and messenger of this

information. Participant 2 says [10]: “People (from the operation) are quite motivated to generate ideas and tell them to their management, however, if middle management doesn’t pass it through towards the central group, then nothing is going to happen. And if the central group doesn’t give feedback to middle management, operations, in turn, doesn’t know what’s happening with their idea and they lose their motivation.” However, the level of motivation from the operation differs between different departments. This is illustrated by a quote from participant 4 [11] “People in the operations don’t want to innovate, operations and innovation are right-angled to each other. These people want to do everything following procedure with the tools they have. So that would be conflicting.” Therefore, differences between employees should be kept in mind during the final design.

### Top management

Participant 3 identifies a leading and showcasing role for top management. He says [12]: “Top management has a motivating role top-down and a showcasing role to external networks and outside of Renewi. I think that it works vice versa when top management recalls an innovation in an article, a video, or on the radio. That motivates people top down. And the managing director of CWNL does that very well. He isn’t afraid to say just try it. He gives the mandate to continue a project.” Moreover, top management should free resources in the form of budgets and mandates. Another interviewee talked about them having to secure structural innovation budgets. Lastly, they should facilitate, inspire, and motivate. Underlining the importance of innovation both internal and external.

### Managing knowledge

A substantial part of the interviews is spent on the topic of managing knowledge. About half of the participants mentioned something about a central figure who should manage knowledge about innovation. This knowledge manager should be aware of who is leading in which fields and on the projects that are running. Besides, he/she is responsible for collecting all innovation information and connecting this to possible new projects. It is important to start logging relevant information from the moment a project starts. Some remarks are made about including the IT department which might have valuable software for a sharing platform or making use of portfolio management tools which are already in use at one department. On the contrary, participant 2 says [13] “It’s more important to find each other than to try and put everything in an Excel or SharePoint page. That’s also good because it makes the information accessible, however, most of the time people will keep contacting each other.” Considering all options, a central person who manages knowledge and functions as a spider in the innovation web would be an appropriate option for the future.

### Culture

Although innovation is becoming part of the culture of Renewi little by little, still a lot of steps should be taken. This is seen due to a remark one of the participants makes. He says innovation is one of Renewi’s core values, however, it is not embedded in the goals of all sites or business units. Participant 6 adds to this: [15] “If you’re having a lot of ambition in innovation, you should create an organizational structure that facilitates these ambitions. [...] I think we’re very strong in expressing a vision. However, I think we’re not bold enough and sometimes we don’t dare to keep going.”

Further, someone talks about establishing a culture in which it is okay to object to the opinion of higher management. He says this is important to avoid self-fulfilling prophecies within the company. Lastly, participant 5 notes that [16] “Top management often reasons that things should work out if something is thought of. There is not much experience with failure due to playing risk-free. Every detail is thought of. We’re not at all used to work with real disruptive changes.” Therefore, an open culture should be established, where people can speak their minds.

## The Boost program

As is shown in section 2.2.1 the Boost program is currently exclusively for a small group of people. During the interviews, there are mentions this is mostly because the program is relatively new and therefore not many people had the chance yet to participate. However, the program enables education on innovation for a few people at the time. Spreading 'the Boost mindset' through the company could therefore use a faster pace. In addition to this, participant 4 debates if boost is an education tool or an innovation tool. He says: [14] "If someone has many good ideas that are important to work on for Renewi. Why can't such a person not participate twice in the Boost program? At the moment, it is really used as an educational tool. We should use it as a tool to teach a more entrepreneurial mindset. I think that's important and good, however, you can get more out of it." Besides, the Boost program could be used to attract people with an innovation mindset or to attract people who are interested in working with innovation through the recruitment process.

## Incentives

Participants argue that incentives are needed to keep people interested and involved in innovation activities. Participants talk about using incentives in different ways. Participant 3 talks about using incentives to keep people up to date [17]: "How can you trigger people regularly and inform them about all that is happened?". He adds incentivizing management layers by implementing innovatively their goals and KPIs. Another participant mentions gamification as an incentive for teaching an innovation mindset. Creating a challenge will keep people interested in his view. In addition to this, an incentive could be designated time for innovation.

[N10] The design strategy is modified based on input received from essential stakeholders. Initially, the terminology "Spreaders of Innovation" was replaced by "Innovation Ambassadors," and "Communities" was renamed "Knowledge Communities" to enhance clarity of purpose. The integration of these Knowledge Communities results in the formation of Renewi's intelligence network. In addition, the top management team is rebranded as "Senior Leadership," while the roles of the operational level, Business Leaders and Renewi Young Professionals are added. The next pages show a detailed explanation and visualization of the final future scenario.



## 5.5 RENEWI A LEADER IN CIRCULAR INNOVATION

In the final future scenario, the innovation process of Renewi exists of multiple elements, see figure 34. The group of intrinsically motivated people, now called the **innovation ambassadors**, have a central position. This group works with a 'vote yourself in' system, where people can join to act as an ambassador if they are motivated. The current group is shaped over time and now exists of people that all already showed interest in innovation in the past. These people are most likely currently involved in the Boost program. The strategy guide in the next chapter elaborates on the specifics of this group. Ambassadors are responsible to advocate the Boost way of innovating through the company and spread enthusiasm and knowledge about innovation. Additionally, they serve the purpose of identifying potential individuals who exhibit interest and aptitude for participating in innovation initiatives, such as the Boost program. Ambassadors use candid communication and a universal language to keep each other up to date about innovation activities.

Around the centrally positioned ambassador group, **knowledge communities** form. Collectively being responsible for constituting **Renewi's intelligence network**. Each community assumes responsibility for the examination of a designated topic. Furthermore, all communities maintain close contact with the ambassador group, which is a result of an ambassador being part of a particular knowledge community. These communities can be composed of individuals from various departments within the organization. The knowledge communities are located in a supportive environment where all should be able to share ideas and respond to others' ideas. It is necessary all people are up to date on the vision of Renewi and its innovation themes. The purpose of this is to guide individuals towards the appropriate innovation activities and maintain focus on the innovation strategy.

**The innovation managers** are responsible for creating and communicating the innovation strategy. Besides, they guide the ambassadors group and function as a central point for questions about innovation activities. They also incentivize people to capture knowledge in a structured way and provide guidance for doing this. Effective **knowledge management** should ensure that knowledge is easily accessible, retrievable, and connectable.

Several other stakeholders play a role in the final future scenario. Like **senior leadership**, who needs to help the organization understand the relevance of innovation for Renewi. Senior leadership has a leading role in the company and a showcasing role to the outside world and external partnerships. Continuous decisions must be taken regarding innovation goals in order to achieve consistency between innovation activities and overarching organizational strategy. Senior leadership structurally supports innovation activities with financial and human resources. Further, **middle management** facilitates the flow of information related to innovation. They act as a bridge between the operational level and innovation managers, transmitting ideas and providing feedback in both directions. They have a crucial role in fostering communication between multiple stakeholders in the innovation process. Next, **the operational level** plays a vital role in the innovation process. As the front line of the organization, they have a unique perspective and are often the first to identify areas for improvement. Further, they are responsible for implementing pilot programs and conducting tests, making their role crucial in the success of innovation initiatives.

Outside of Renewi's ecosystem, an external hub is created that is used for experimentation with out-of-the-box innovation. While Renewi owns the hub, several different organisations and companies are allied. In this way, the hub acts as an innovation incubator, where a semi-permeable layer allows interesting knowledge to be easily transferred to Renewi. **Business leaders** are well-informed about both external and internal happenings on a certain discipline like wood, hard plastics, etc. They serve as connectors among various stakeholders and have a vast range of knowledge about their specific discipline. They have connections to external hubs and assist innovation managers in identifying problems that require solution and their reasons for needing resolution. Business leaders also belong to the innovation ambassadors.

Lastly, it could be beneficial for Renewi to integrate younger employees, **Renewi Young Professional**, into innovation and innovation activities to push innovation within Renewi. Both create an innovation mentality, encourage employees to think outside-the-box, and bring new skills, and new profiles in decision-making.

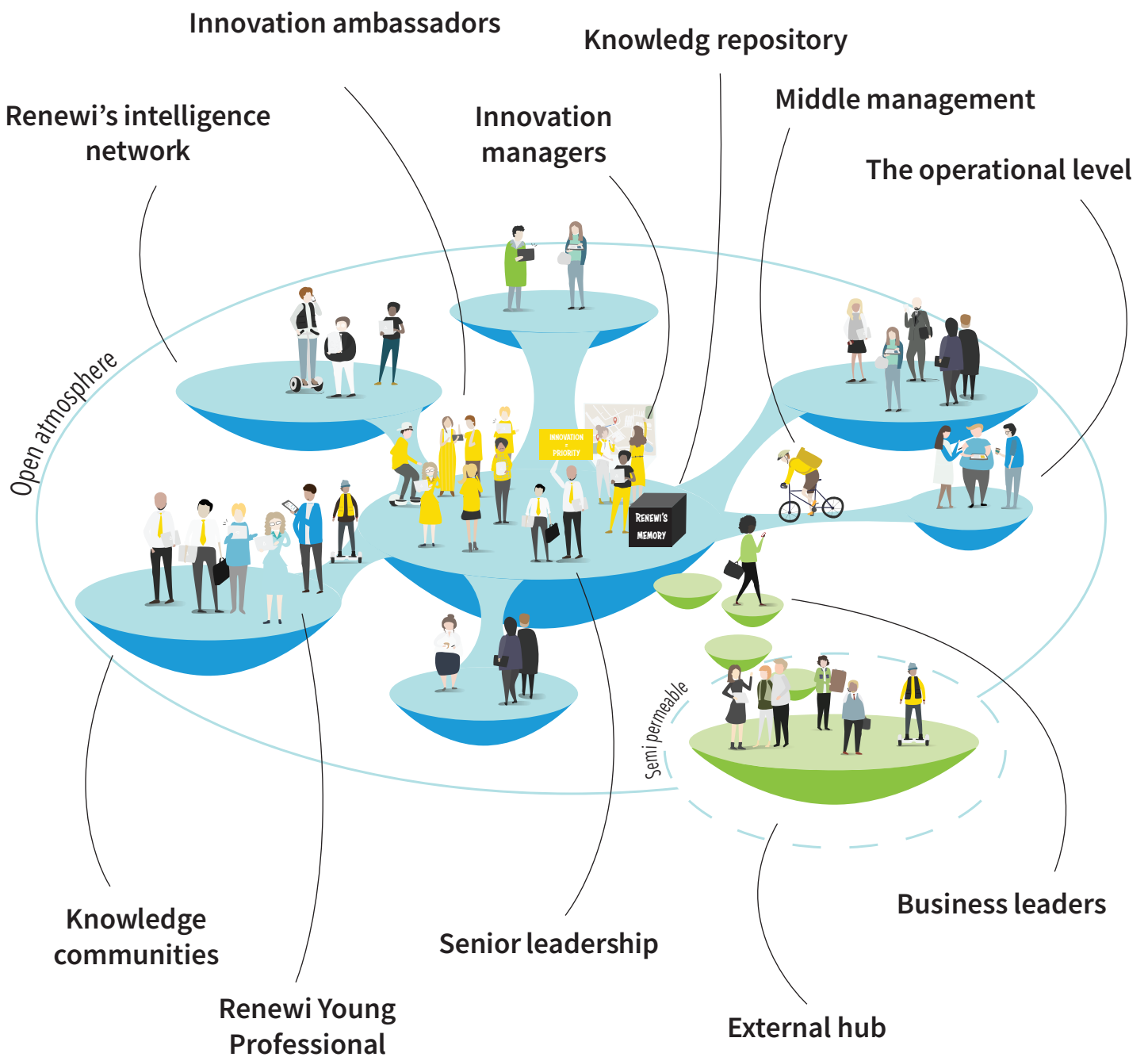


Figure [34]. The final future scenario.

## CHAPTER 5

### *Key takeaways*

The design approach is a follow-up to the research approach, described in chapter 3. It exists out of six stages. Starting with the last stage of the research approach: the grounded theory method model. It further includes the formation of three design concepts, merging two concepts into a future direction, using the future direction for a future scenario, and finally creating a future vision for the roadmap. The three design concepts are based on the combination of the concepts that emerged from the GTM.

The design scenarios are as follows:

1. Creating an ecosystem
2. Guiding communities
3. Renewi's football team

Key elements of **creating an ecosystem** are guiding people towards the right location. Creating a universal language throughout the company. Centrally capturing Renewi's memory for everyone to find. And creating a central innovation vision.

Key elements of **guiding communities** are connecting the islands Renewi metaphorically consists of the islands. Forming a central group of innovators who are up to date about the innovation strategy and innovation activities. Where the surrounding islands do not necessarily have to be up to date about all innovation activities. And creating a strong top-down incentive for innovation.

Key elements for **Renewi's football team** are working together as a team on innovation where giving feedback is entangled in the culture. All players are up to date about their position and the position of others. And a common goal creates engagement for everyone to perform best.

A combination of the first two design scenarios is further used. After validating interviews with key stakeholder, 11 topics came up of which a few are later integrated in the final future scenario.

Finally, the final future scenario describes how Renewi should function in the future acting on an improved innovation process, taking a leading role in the circular economy. The scenario illustrates how Renewi's organizational structure should change, how the innovation attitude is spread, and how knowledge is managed. Key stakeholders are innovation managers, innovation ambassadors, senior leadership, knowledge communities, middle management, the operational level, business leaders, and Renewi Young Professional. Figure 34 visualises the final future scenario.





*Renewi's site: Hoek van Holland*





# DELIVER

The last phase of the double diamond delivers the final design of this project. The final design consists of a strategic roadmap and strategy document which sketches a road toward the improved innovation process. For better

understanding, a strategy document provides detailed information about the process and implementation. Closing with validation and discussion about the design and its process.






# 06

## DELIVERING THE FINAL RESULTS





Chapter 6 delivers the final design. This starts with a future vision for an improved innovation process of Renewi. Moreover, it describes and visually presents a strategic roadmap. A strategy document describes the roadmap in detail. It includes a description of the key stakeholders and their main tasks, the innovation structure, some examples fitting the horizon, the first actions to implement, and guidelines for the stakeholders in that horizon. The actions presented in the strategy document together with the roadmap explain the implementation of the design.

## 6.1 FUTURE VISION

The future vision functions as a focused direction and strategic reference point that provides motivation for stakeholders of the design (Fiegenbaum et al., 1996). Simonse (2017) reports “A future vision is an expression of a desired future.”. The future vision for this design is created to give a clear direction for decision-making processes. Besides, it shapes the business and gives direction.

The future vision for innovation at Renewi is:

"Making Renewi a leader in circular innovation by capturing the full business potential of its ideas."

## 6.2 STRATEGIC ROADMAP

In this chapter a strategic roadmap is established to outline a pathway towards the defined future innovation vision. The ultimate aim of the roadmap is to improve the innovation process within the company. This roadmap encompasses three distinct horizons, each of which moves closer to realizing the future vision. Figure 36 shows a two page visualization of the strategic roadmap.

The horizons are created to smoothen the implementation of the final future scenario (found in section 5.5), by a step-by-step approach. The horizons are titled as follows: [1] [activate the ambassadors](#), [2] [exploit the intelligence network](#), and [3] [beyond Renewi's borders](#). To achieve the objectives within each horizon, three overarching themes are identified: [organizational architecture](#), [innovation attitude](#), and [knowledge management](#). The goals for these themes are further detailed through the specified actions. Each horizon presents a visualisation of that stage and the coordinated key stakeholders. Further in the chapter a corresponding timeline is outlined that connects the actions and parties involved. The strategy document presented after the strategic roadmap explains the details of the roadmap.

## 6.2 TACTICAL ROADMAP

The tactical roadmap, shown on the next page in figure 35, functions as a plan that outlines the steps and actions required to achieve an improved innovation process. It's a simplified version of the roadmap which can be used among employees to talk about the innovation strategy. It provides a visual representation of the strategy that is needed to reach the future vision. The tactical roadmap can be used for Renewi to align the key stakeholders of the innovation process, starting with the innovation managers, the innovation ambassadors, and senior leadership.

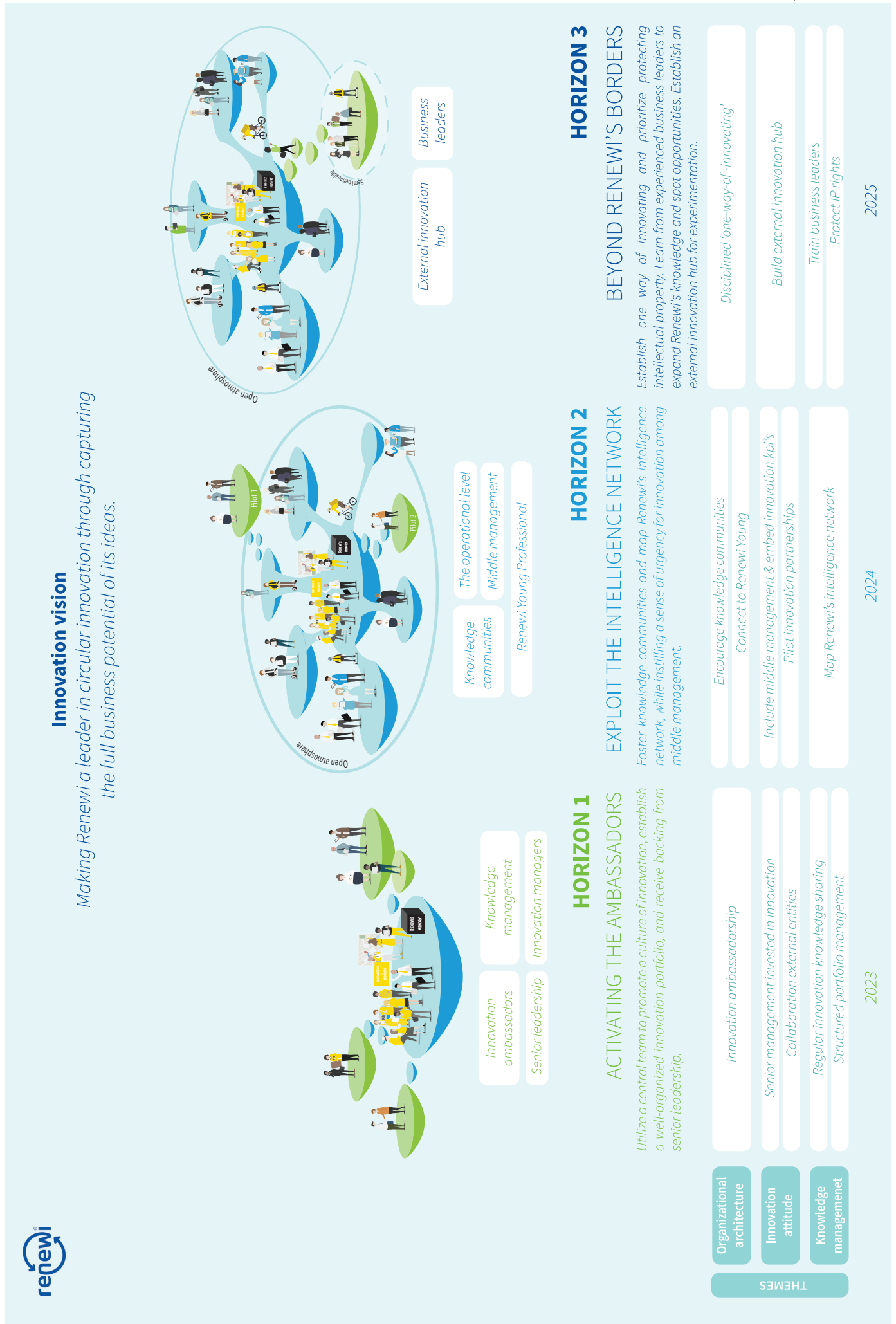


Figure [35] Tactical Roadmap towards an improved innovation process.



# ROADMAP TOWARDS AN IMPROVED INNOVATION PROCESS

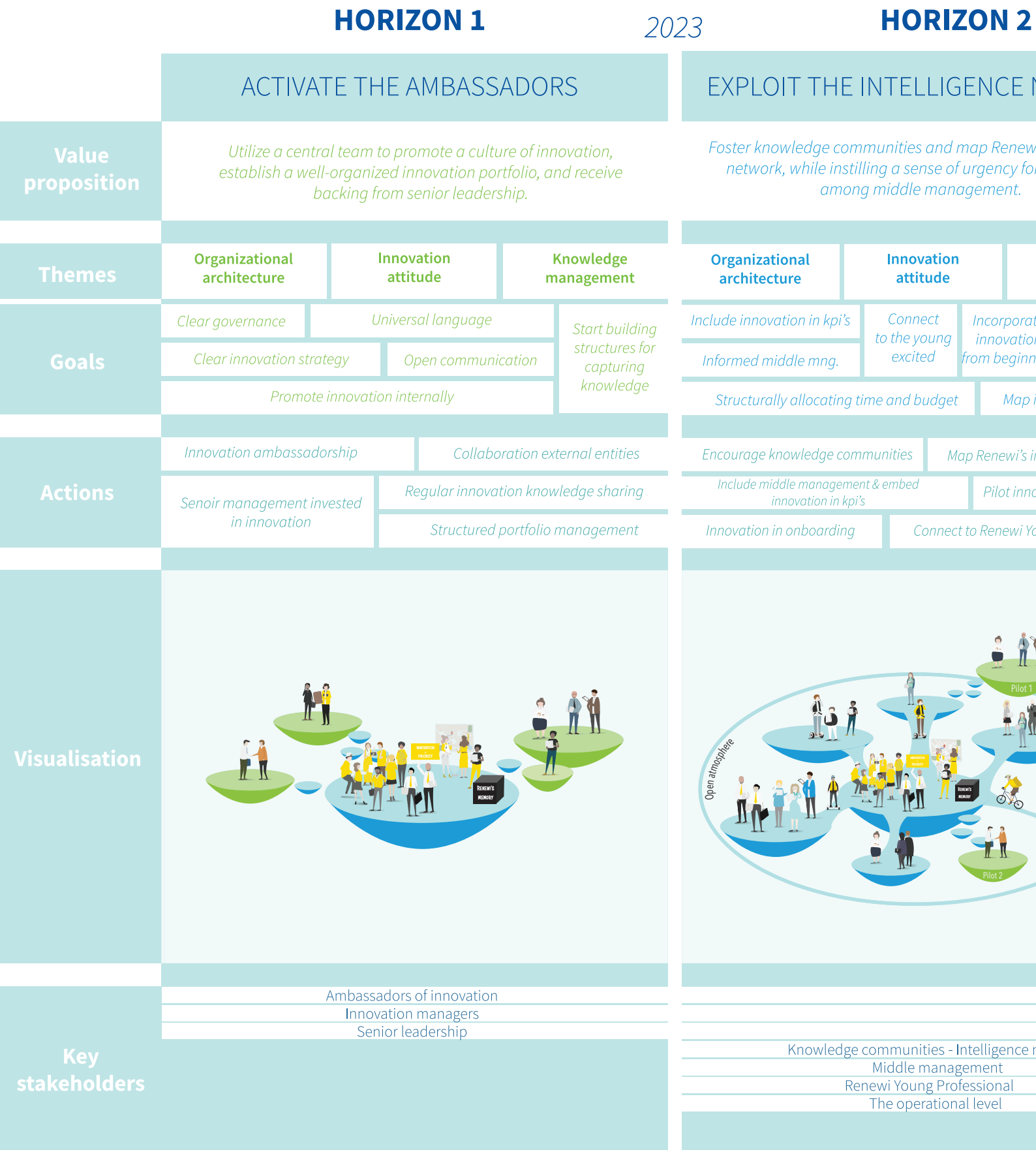


Figure [36]. Strategic Roadmap towards an improved innovation process.

# IMPROVED INNOVATION PROCESS

2024

## HORIZON 3

2025

### NETWORK

### BEYOND RENEWI'S BORDERS

Establish one way of innovating and prioritize protecting intellectual property. Learn from experienced business leaders to expand Renewi's knowledge and spot opportunities. Establish an external innovation hub for experimentation.

#### Knowledge management

Organizational architecture	Innovation attitude	Knowledge management
-----------------------------	---------------------	----------------------

Structured portfolio management

Grow intelligence network	Create external experimentation opportunity	
---------------------------	---	--

Intelligence network

Informed business leaders	Secure IP rights	
---------------------------	------------------	--

Intelligence network

Communicate innovation attitude to outside world

Innovation partnerships

Disciplined 'one-way-of-innovating'	Protect IP rights	
-------------------------------------	-------------------	--

Young Professional

Train business leaders	Build external innovation hub	
------------------------	-------------------------------	--



*“Making Renewi a leader in circular innovation by capturing the full business potential of its ideas.”*

network

External innovation hub  
Business leaders



# Strategy document

*ROADMAP TOWARDS AN IMPROVED INNOVATION PROCESS*



## STRATEGY DOCUMENT

The strategy document aligns with the previous presented roadmap. It outlines three horizons in detail, including the key stakeholders and their respective roles, responsibilities, and identities. The document also outlines guidelines for collaboration, communication, and provides examples of other companies as inspiration for implementation. Lastly, a list of actions is provided for each horizon.

### PURPOSE OF THE ROADMAP

The purpose of this roadmap is to reach the future vision through a steps-by-step approach. It first creates a strong core group, the ambassadors, before looking further. In horizon one the core group gets familiar with their role as innovation ambassador at Renewi. When this group is established and up to date about their role in the innovation process and the innovation mindset, this mindset can be spread to a broader group of people at the organization. This is done via forming knowledge communities throughout the company. All communities are attached to the central group through bridges and form the intelligence network. If this structure is established and all people know what is expected of them, Renewi can expand beyond their borders. This third horizon is focused on reaching out to institutes, start-ups, universities, and other organizations who could bring valuable knowledge and talent to Renewi. At the same time structures for managing knowledge are getting in to place and people get use to working with them.

[N11] Connecting to the boost program: The Boost program is mostly focussed on the precise innovation process of a few innovations, where this approach is focused on spreading 'one-way-of-innovating' through the company and establishing a continuous flow of innovation information through the company.

### READING THE DOCUMENT

The left top of each page displays the relevant horizon and corresponding section. Each horizon is given a different colour, corresponding the colours below. This colour is also used in the strategic and tactical roadmap to refer to each horizon.



Further, each horizon is described in detail through the following actors:

1. Key stakeholders
  - Role
  - Who
  - Tasks
2. Innovation structure
3. Examples
4. Actions
5. Guidelines

Starting with an overview of the three horizons on the next page.

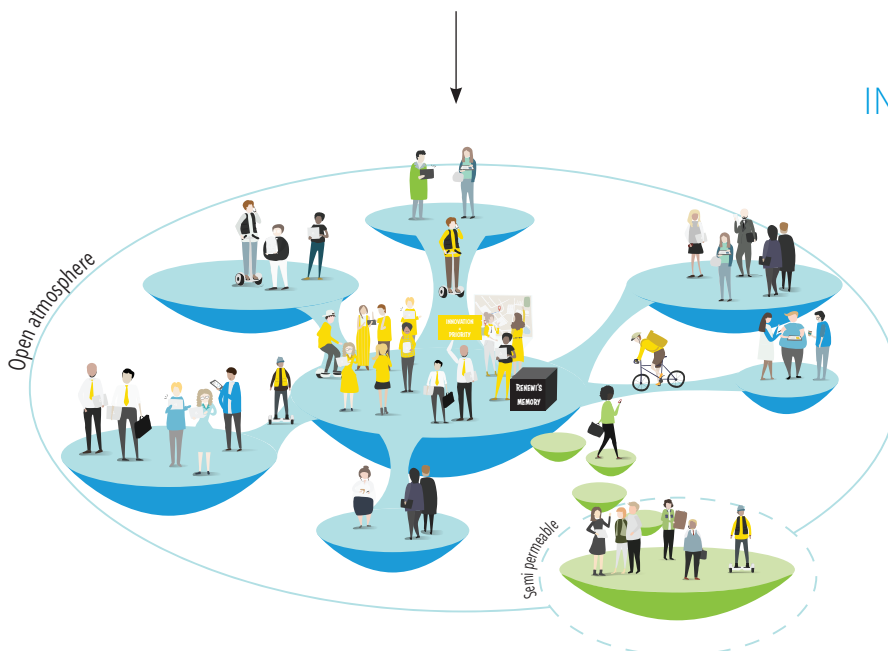
# THREE HORIZONS



2023  
**HORIZON 1:**  
ACTIVATE THE AMBASSADORS



2024  
**HORIZON 2:**  
EXPLOIT THE  
INTELLIGENCE NETWORK



2025  
**HORIZON 3:**  
BEYOND RENEWI'S BORDERS

## ROADMAP THEMES EXPLAINED

### ORGANIZATIONAL STRUCTURE

Renewi's organizational structure is **about the development of the innovation network and the way key stakeholders act** in the new innovation process.

This theme described the aspects that should be in place for the innovation process to work properly. It talks about the changes that should be made in Renewi's current organizational structure. The aspects of each horizon should be in place before moving to the next horizon.

### INNOVATION ATTITUDE

Innovation attitude is about **key stakeholders' attitudes towards innovation and how they interact**.

Employees' attitudes towards innovation will affect the overall innovation culture of the company. Building a culture of innovation should be about creating a climate and infrastructure which affects employees to express actions and thoughts needed for innovation. A supportive work environment that encourages exploration and risk-taking is essential for fostering a culture of innovation. Organizations should provide freedom to explore creative possibilities while at the same time having sufficient control to manage innovation in an efficient and effective manner.

It's about how key stakeholders think about innovation and spread an innovation mindset throughout the company. And about whom to connect as a stakeholder in order to do so.

### KNOWLEDGE MANAGEMENT

Knowledge management is about **capturing, structuring, and securing existing and new knowledge from within and outside of Renewi** to build a knowledge network (Renewi's intelligence network).

Clear guidelines on knowledge management are crucial for successful knowledge capturing. This includes both internal knowledge (such as ideas and results from tests, pilots, and implemented products/ processes) and external knowledge brought in by business leaders (see horizon 3). By taking a proactive approach to knowledge management, organizations can create a culture of innovation and continuously improve their competitiveness. Portfolio management [N12] should ensure that the knowledge is easily accessible, retrievable, and connectable.

#### The following questions should be answered

- How is knowledge captured?
- Where is knowledge captured?
- Who is responsible for capturing knowledge?
- How does Renewi use the captured knowledge?

#### Point of attention

- Capture knowledge on innovation topics from inside the company.
- Capture interesting knowledge from external places.
- Make knowledge understandable and accessible.
- Make knowledge retrievable.
- Connections knowledge.

[N12] Sufficient portfolio management helps organizations to prioritize and allocate resources effectively to the most promising projects. By using a systematic approach to evaluate and manage their innovation portfolio, organizations can ensure that their innovation efforts align with their overall business strategy and goals. Portfolio management can lead to improved decision-making to avoid over-investing in low-potential projects and under-investing in high-potential projects. Ultimately, good portfolio management helps organisations maximize the return on their innovation investments, while minimizing waste and risk, leading to improved outcomes and a more successful innovation process (Adams et al. (2006).





# HORIZON 1

## ACTIVATE THE AMBASSADORS

The first horizon aims to foster an innovation mindset through a core group of intrinsically motivated individuals who serve as innovation ambassadors. They are knowledgeable about current innovation initiatives, communicate openly, and are guided by innovation managers. The innovation managers are also responsible for creating and guarding the innovation vision and

strategy. Senior management plays a crucial role in promoting innovation internally and showcasing the company's innovative activities to the outside world. In addition, efforts are made to have structured portfolio management in place over innovation projects. Further, collaboration with external entities is explored.

## KEY STAKEHOLDERS



### INNOVATION AMBASSADORS

#### Role

The ambassadors have a central role in the future of Renewi's innovation process. They are the leaders of innovation and play an indispensable role in catalyzing and driving innovation. Ambassadors spread the innovation mindset throughout Renewi by word-of-mouth.

#### Who

Ambassadors are all active participants of the Boost program. It can be participant of current Boost cycles or past Boost cycles. The group can grow through a 'vote me in' system where intrinsic motivated people are permitted to the group.

#### Tasks

- Ambassadors are leaders in innovation.
- Ambassadors understand the ins and outs of the innovation strategy.
- Ambassadors spread knowledge on innovation throughout Renewi.
- Ambassadors advocate innovation.
- Ambassadors keep each other up to date about innovation activities during monthly meetings.
- Ambassadors guide knowledge communities.
- Ambassadors spot potential participants for innovation projects in the Boost program.

### INNOVATION MANAGERS

#### Role

Innovation managers are responsible for creating and guarding the innovation strategy. In the innovation strategy three aspects are important for the innovation managers: the governance, the innovation funnel, innovation themes, and securing structured portfolio management. Innovation managers are the link between the senior leadership, the ambassadors and middle management.

#### Who

Innovation managers in the innovation process are the current innovation managers from CWNL, CWBE and from the group. Innovation managers hired in the future will join this group.

#### Tasks

- Innovation managers create and guard the innovation strategy.
- Innovation managers are responsible to communicating and specifying the direction for innovation.
- Innovation managers are a central point for questions on innovation activities.
- Innovation managers incentivize people to capture knowledge in a structured way.

## KEY STAKEHOLDERS



### SENIOR LEADERSHIP

**Role** Senior leadership needs to help the organization understand that innovation is not optional. They must also help the organization to see innovation is a discipline by providing the right resources (like budget and time). Continuous decisions must be taken regarding innovation goals in order to achieve consistency between innovation activities and an overarching organizational strategy. However, senior leadership cannot be immersed in every detail of every project. But they can articulate the innovation focus and hold teams accountable for delivering results.

**Who** Senior leadership are the people in the Executive committee and heads of all divisions.

#### Tasks

- Senior leadership radiates the importance of innovation within the company.
- Senior leadership provides the necessary resources without constraints.
- Senior leadership has long-term commitment to innovation.
- Senior leadership showcases innovation projects to the outside world.
- Senior leadership has a strong vision for innovation.



## INNOVATION STRUCTURE

Figure 37 shows the innovation structure of horizon 1. People from all divisions and all levels can be innovation ambassadors. However, in the first horizon this group exists of people who are somehow included in the Boost program.

The figure shows how people spread over the company form a group with a collective interest in innovation. After this group is comfortable in their role as innovation ambassador, it can expand. Figure 38, in horizon 2, provides more inside on this.

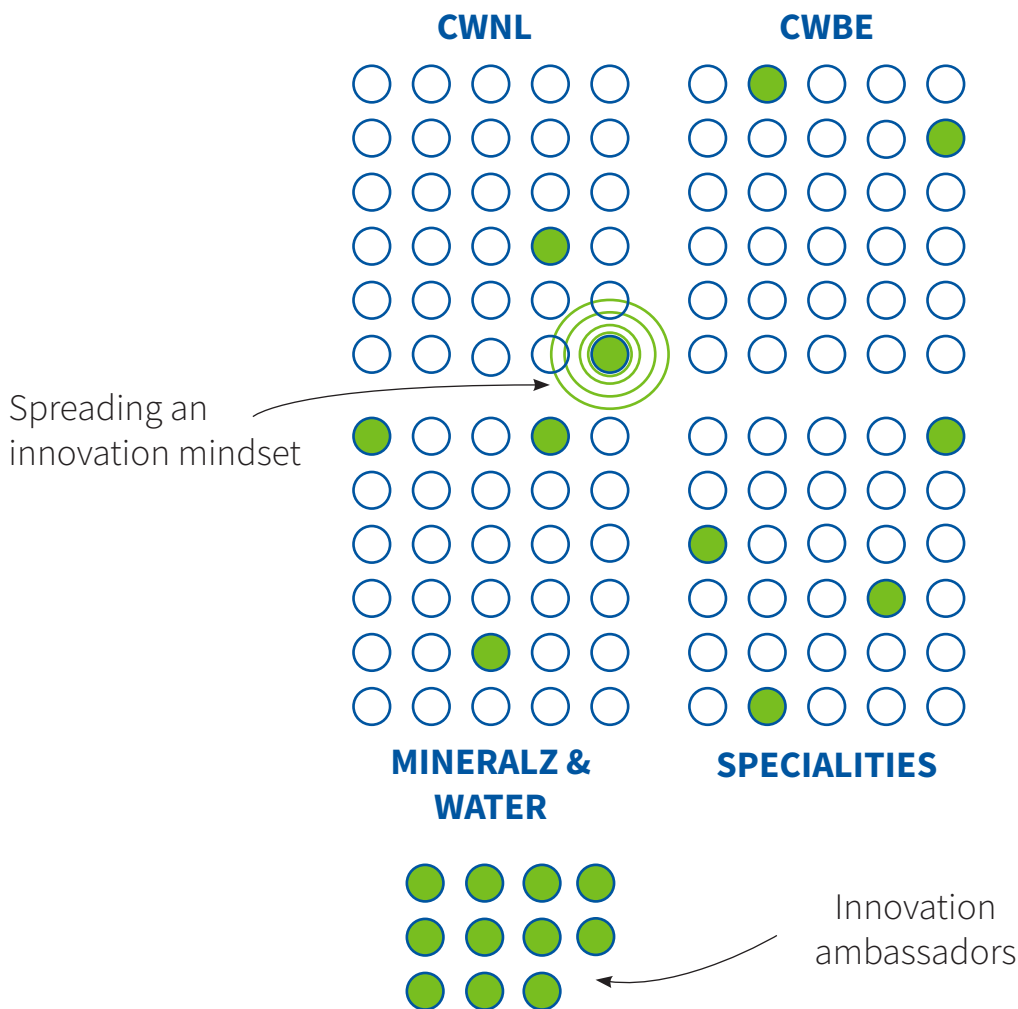


Figure [37], Innovation structure horizon 1.

## EXAMPLES

These examples, taken from various corporations, serve as a source of inspiration for Renewi to capture and transfer knowledge effectively.

### Knowledge transfer at Procter & Gamble

Procter & Gamble (P&G) places a strong emphasis on knowledge transfer as a way to improve cross-functional collaboration and drive innovation (Sakkab, 2002). The company believes that by sharing knowledge and experiences across departments and locations, employees can gain new perspectives and find more innovative solutions to problems. To support this, P&G regularly sends employees to work in different departments and locations, both within the company and in collaboration with external partners. This allows employees to gain new experiences, build relationships with colleagues in other areas of the business, and learn about different approaches to innovation.

In addition, P&G also encourages collaboration and knowledge sharing through regular meetings and cross-functional teams. These provide opportunities for employees to share their expertise and experiences, and to learn from others.

Renewi could copy the example by encouraging (knowledge) exchanges between divisions and business units. Besides, the company could learn from P&G's regular meeting and cross-functional teams.

### Best practice documentation at Toyota

Toyota uses a combination of best practices documentation and knowledge transfer to continuously improve its innovation processes (Liker and Convis, 2012). They are well known for their lean manufacturing approach. By documenting these best practices in detailed documents, including step-by-step instructions and diagrams, to ensure that they can be easily replicated. This documentation is used to train employees and to provide a reference for

future improvements. By sharing best practices, Toyota can quickly adopt new methods that have proven successful and avoid repeating past mistakes.

In addition, Toyota also regularly reviews and updates its best practices to ensure that they remain relevant and effective. This helps to ensure that the company continues to improve and adapt to changing market conditions.

The best practice documents of Toyota can serve as an inspiration for sharing lessons learned, particularly with respect to effectively collaborating between innovation teams, knowledge communities, and other stakeholders of the innovation process.

## ACTIONS

ACTIONS	DESCRIPTION	WORKLOAD	RESONSIBILITY
1 Ambassadorship program	Create an Ambassadors toolkit		
1a	The tool kit should include - An explanatory powerpoint presentation as basic tool to inform employees inside and (potential) clients from outside. - A booklet with a description of the goal of the ambassadors program, their role, and what is expected of them. - An innovation canvas to plot current innovation projects.	X	Innovation managers
	Next celebrations event (June 2023) the innovation ambassadorship is introduced to the applicable people.	2 days [X] ETFs	Innovation managers
1b	Inform on role as ambassador during first lunch lectures		
1c	Up to date on innovation strategy		
1d	Establish universal language	Attendance 1 lunch lectures	Innovation ambassadors
1e	Communicate clear governance		
2 Innovation lunch meetings	Every month an innovation meeting is organised by on of the innovation managers.		
2a	Keep the ambassadors invested through these meetings wwith an set agenda & time. Organizing innovation manager is conversation keeper.		
2b	Improve sessions through 10 min feedback calls.	Once every 3 months	Innovation managers
2c	During the meetings people are able to speak freely about ideas, strategy an other innovation topics.		
2*	These meeting can als be used to inform new ambassadors about their role		
3 Structured portfolio management	Innovation managers CWNL & new employee start with portfolio management of innovation projects in their division.		
3a	Hire fulltime employee on portfolio management CWNL	Monthly portfolio meeting	Innovation managers
3b	Create structured way in capture innovation projects in portfolio		CWNL & extra person
4 Senior leadership invested in innovation	During celebration events, 2/3 times a year, senior leadership is included and gets a platform to talk about the innovation strategy and vision.		
4a	Include senor leadership following the rule: Ask less invested time, while creating a bigger impact.	1 afternoon, 3 times/year	Senior leadership
4b	Every other month, one person of senior leadership joins a innovation lunch meeting to talk about current innovation activities.	1 person, every other month	
5 Collaboration external entities	During the first year collaboration with different external entities are established. This year functions as an exploration year.		Innovation managers



## GUIDELINES

### Innovation ambassadors

Ambassadors can be found in in all divisions and all business units. This creates a situation where people with knowledge in the innovation process and strategy can be found all over the company. These people can directly answer to questions about the matter without having to consult an innovation manager as middle person.

Further, the innovation ambassadors are a diverse group of around 70 people and include:

- People are intrinsically motivated
- Some people closely connected to operations
- Some people with academic background and research skills
- Some experienced people with know-how of best practice and learnings from the past
- Some investors from Boost

### Innovation managers

- Are responsible for creating the innovation strategy.
- Are responsible for implementing the Ambassadors program.
- Act as conversation keeper during the monthly innovation gatherings. They give all people equal opportunity to speak. [N13]
- Align innovation vision with all stakeholders.

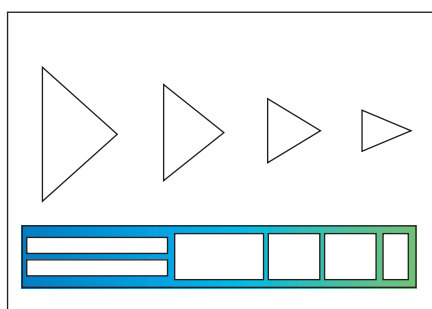
[N13] In of the interviewees from the second round of interviews pointed out that not all people are able to speak what's on their mind due to being overshadowed. Participant 6 says [18]: *“And that's something cultural, it's really important what you are saying now. Often the people who are strongest content wise are not the most extravert people. And you must create a culture and platform in which the introvert people get to speak. So that we not only serve the people to scream loudest. And especially in such an organization that's really important.”* He notices that these people often have valuable insides in the topic and should be able to tell. Therefore a point is made about giving people the opportunity to speak.

## EXAMPLES OF THE AMBASSADORS' TOOLKIT

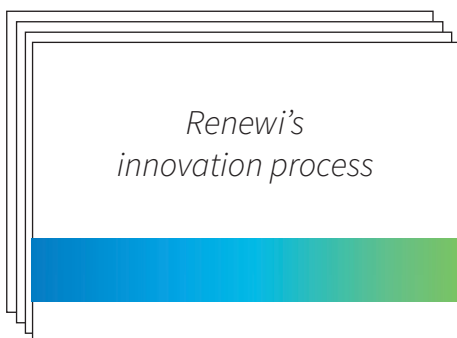


The ambassador booklet describes:

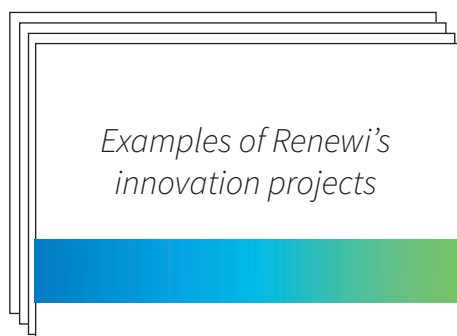
- The goal of the ambassador program.
- The roadmap towards an improved innovation process.
- Information about the ambassadors group.
- Ambassador's main tasks.
- Information about the way of communicating.
- Information about using a universal language.
- Guidelines for how to spot potential candidates for the Boost projects.



The physical innovation funnel canvas can be used to give people a better understanding of the innovation process of a particular innovation project. The canvas shows the four steps of the innovation funnel combined with the actions per step.



The powerpoint for internal use functions as a reminder for the innovation ambassadors about Renewi's innovation process, as well for showing interested employees about innovation projects and teach Renewi's way-of-innovating to others in their business unit or division.



The powerpoint for external use functions as promotion material towards new or existing clients to cooperate with Renewi on (innovation) projects.



# HORIZON 2

## EXPLOIT THE INTELLIGENCE NETWORK

In horizon 2, innovation ambassadors are confident in their roles and encourage people to adopt an innovative mindset. Enthusiastic people can 'vote themselves in' the ambassador's group. Knowledge communities are established around focused themes and are led by the ambassadors. A supportive environment with an open atmosphere encourages idea-sharing. Middle management is trained as idea receivers and messengers, to notice if they are within the boundaries of the innovation strategy. Innovation activities are included in their annual or quarterly goals. Knowledge is structurally captured and a portfolio for all innovation projects is managed. All knowledge communities are mapped and

together form Renewi's intelligence network. Senior management structurally frees up time and budget keeping up innovation activities. As part of the efforts to optimize collaboration with external networks, several pilot programs for collaborations with knowledge institutes, universities and others are initiated. Additionally, the onboarding process is infused with a part focusing on innovation within Renewi, allowing new employees to immediately gain basic knowledge about Renewi's innovation process. In addition to this, Renewi young is included to gain a deeper understanding of the innovation process and cultivate an innovative mindset.



## KEY STAKEHOLDERS



### KNOWLEDGE COMMUNITIES & RENEWI'S INTELLIGENCE NETWORK

**Role** These knowledge communities work on collecting and sharing knowledge on specific topic that fits in the overall innovation strategy. All communities have one or multiple leader(s) who functions as a link to the ambassador's group and him/herself is or becomes an ambassador. Communities can be created throughout the whole company, within divisions or over multiple divisions, see figure 38. All knowledge communities together form the intelligence network. People are free to leave whenever they want. Communities may be temporary, depending on the needs for creating a community.

**Who** A knowledge community can consist out of a group people from everywhere in the company. Only the leader of a community belongs to the innovation ambassadors.

#### Tasks

- Knowledge communities function as a group on one specific topic.
- Knowledge communities provide interesting ideas/ concepts to innovation managers.
- Knowledge communities function autonomous.



### MIDDLE MANAGEMENT

**Role** The primary function of middle management is to facilitate the flow of information related to innovation. They act as a bridge between the operational level and innovation managers, transmitting ideas and providing feedback in both directions. Thus, they have a crucial role in fostering communication and ensuring relevant ideas are identified and aligned with the company's innovation goals.

**Who** People in a management position who manage their own team. Be aware that this is a sufficient part of employees of Renewi.

#### Tasks

- Middle management communicates information on innovation to the ambassadors.
- Middle management communicates ideas from the operations to innovation managers or others important.
- Middle management ensures relevant ideas are identified and aligned with the company's innovation goals.

## KEY STAKEHOLDERS



### RENEWI YOUNG PROFESSIONAL

Renewi Young Professional aims to continue to offer a program that seems relevant to young employees of Renewi (e.g. topics for brainstorm) and to integrate them into their reelection. By clarifying these objectives and involving the right people these events are made more impactful.

It could be beneficial for Renewi to integrate younger employees into innovation and innovation activities to push innovation within Renewi. Both create an innovation mentality, encourage employees to think outside of the box, and bring new skills, and new profiles in decision-making.

**Who** Office-based employees who are under 35 years old.

### THE OPERATIONAL LEVEL

**Role** The operational level plays a vital role in the innovation process. As the front-line of the organization, they have a unique perspective and are often the first to identify areas for improvement. Further, they are responsible for implementing pilot programs and conducting tests, making their role crucial in the success of innovation initiatives. By actively involving them in innovation improvements, they could feel more rewarded and involved which could even lead to a more intrinsically motivated group of employees.

**Who** All people that work in the operations and are not management.

#### Tasks

- Operations implement pilot programs and conduct tests.
- Operations have the chance to bring their ideas forward.

## INNOVATION STRUCTURE

Figure 39 shows the innovation structure of horizon 2. Next to the ambassadors, now knowledge communities are formed. A community can be formed within a division or over two or multiple divisions. Every community contains at least one person who is also an ambassador.

This person is responsible for the communication between the community, the central group and to the innovation managers. Together the knowledge communities form an intelligence network. This network will provide the central group with in-depth knowledge on innovation topics.

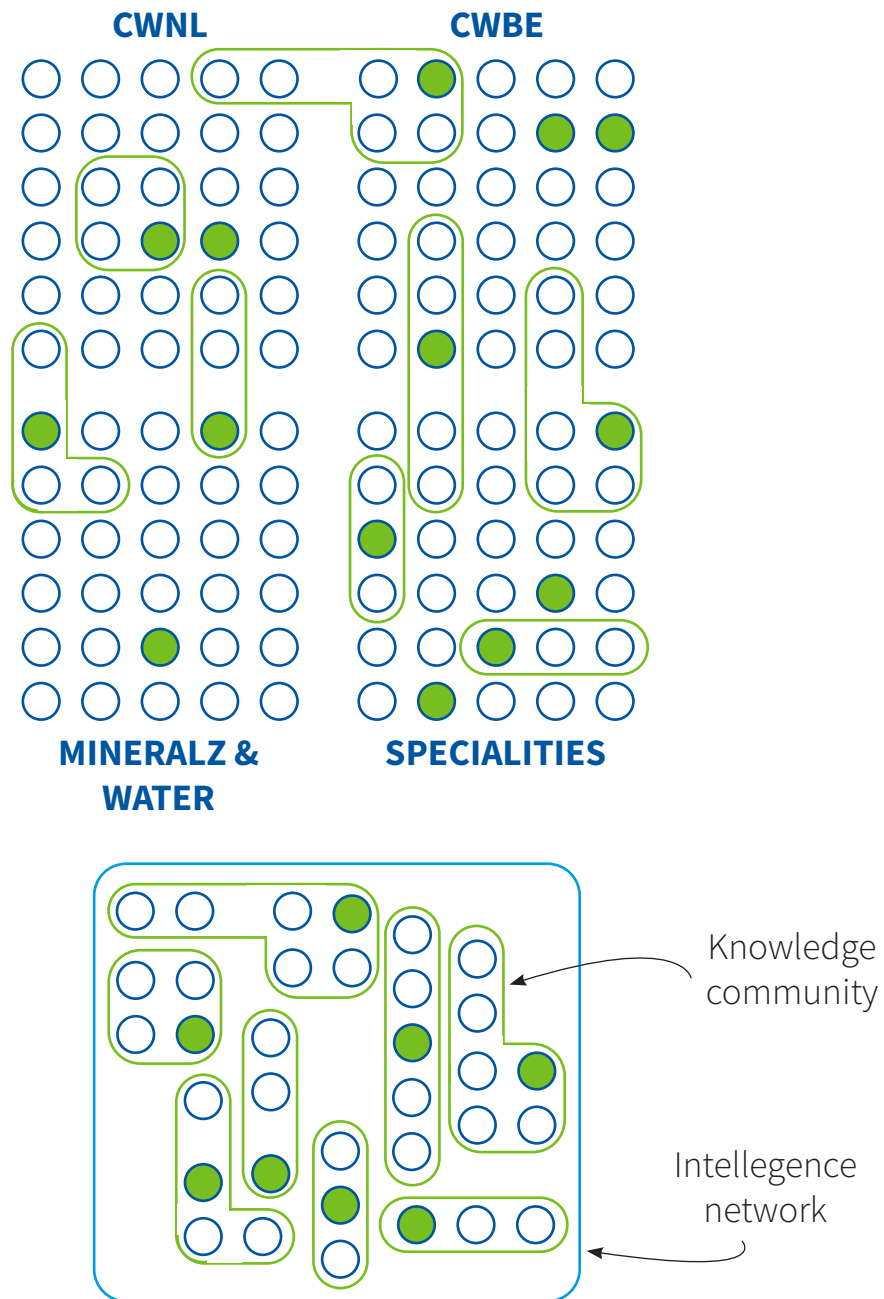


Figure [39], Innovation structure horizon 2.



## EXAMPLES

These examples, taken from various corporations, serve as a source of inspiration for Renewi to establish functional knowledge communities and encourage innovation and creativity.

### Squats at Spotify

Squats are autonomous functioning cross-functional teams of up to eight people who work on 1 function area. They have end-to-end responsibility for ideation, design, testing, deployment, and optimization. The main goal is to 'make mistakes faster than anyone else'. However, with high autonomy but without collaboration and a guidance process, it will lead to wasted time and unshared knowledge (Kniberg and Ivarsson, 2012). Spotify's squads and Renewi's knowledge communities are similar in a way where both are autonomously working on a topic of interest. However, Renewi's knowledge communities will not necessarily work on the whole innovation process from ideation to optimization.

### Imagination Breakthroughs program at General Electric

The imagination breakthroughs program is specifically designed to engage and commit managers and employees to innovation throughout the vast organization, and to harness, protect, and promote bright ideas. Every year, the heads of each business unit from within the corporation submit their biggest ideas for driving organic growth. A leadership team reviews all proposals and grants a few teams the 'imagination Breakthrough' imprimatur. Hereafter so-called 'IB projects' are designed, nurtured, and implemented within the individual business units. In addition, senior leadership takes time to review the current status of a selection of projects each month (Govindarajan and Trimble, 2005).

### Capturing knowledge at Intel

Intel has established communities of practice, where employees with similar areas of expertise can come together to exchange knowledge, collaborate on projects, and improve their skills. Further it uses knowledge management systems to capture and share knowledge, including databases, wikis, and collaboration platforms.

These systems make it easy for employees to find and share information, and help to ensure that knowledge is not lost when employees leave the company. The company has programs in place to support knowledge transfer between employees, including mentorship programs, cross-functional teams, and regular meetings. These provide opportunities for employees to share their expertise and learn from others. Lastly, Intel regularly documents best practices and shares them with employees to ensure that the most effective processes and methods are adopted company-wide (Davenport et al., 1998).

### Innovation themes at Deloitte

A core innovation team at Deloitte works to stay informed about market trends. When they discover an interesting trend, it becomes an innovation theme. Employees from any department can form a group and work on the theme alongside their client projects. Teams can also be formed without the involvement of the core innovation team, as long as the theme is relevant. The process of forming a team is made as simple as possible, with employees able to allocate time to work on the innovation theme. Depending on the importance of the theme, higher leadership is included in the team. The core innovation team keeps higher management up to date on a monthly basis to discuss themes being explored, how to develop the teams and what they see happening in the market. This information is derived from an interview with an innovation consultant at Deloitte, see appendix [D].

### 20% Time approach at Google

This approach encourages innovation and creativity amongst Google's employees. The program allows employees to dedicate 20% of their working time to project outside of their regular job responsibilities. This strategy could serve as a model for Renewi, where employees are allocated 20% of their time to participate in a knowledge community. This will provide an opportunity for them to gain expertise, delve into business challenges, research market trends and competition, and draw inspiration from colleagues across different departments (He, 2013).

## ACTIONS

ACTIONS	DESCRIPTION
1 Encourage knowledge communities	Word about knowledge communities should be spread throughout the company. People can create a community on a topic connected to the innovation strategy or suggest a different topic they think is important to keep up to date about.
2 Map Renewi's intelligence network	All existing knowledge communities (that are currently not called like this) should be mapped to create an overview of all 'knowledge groups' existing at Renewi.
3 Include middle management & embed innovation in kpi's	Knowledge communities can decide for themselves how they want to work, as long as the obtained knowledge is captured.
4 Include innovation in onboarding	Middle management should be incentivised to act on innovation activities and enable the flow of information throughout Renewi.
5 Pilot innovation partnerships	The onboarding should include a kind of 'Renewi's innovation process for starters'. Besides, Renewi innovative character can be used to attract new employees.
6 Connect to Renewi Young Professional	After experimenting last year, the year of 2024 will be used to test 3 or 4 different kinds of partnerships for a few months each. The choice about which partnerships is based on last year experimentation.
6 Connect to Renewi Young Professional	The energy and creativity of Renewi Young Professional can be used in innovation activities in the form of brainstorm sessions, Boost events, or information sessions.

## GUIDELINES

### Knowledge communities

- Knowledge communities are ultimately created to do research and collect knowledge on a certain topic.
- They can be formed outside of the innovation scope.
- They can in theory bring forward ideas to work on during the Boost program, however, this should fit the innovation scope.

### Middle management

- Trained in their role as receiver and messenger of innovation information and ideas during existing events.
- Guided to act in favour of the innovation strategy.
- They should be open for receiving ideas.



# HORIZON 3

## BEYOND RENEWI'S BORDERS

In the last horizon, Renewi adopts a disciplined approach to innovation with the creation of a knowledge and collaboration ecosystem. This includes Renewi's intelligence network, ambassadors, and all other employees involved in innovation. Renewi makes use of an external innovation hub that is used for experimentation with out-of-the-box innovation. While Renewi owns the hub, several different

organisations and companies are allied. In this way, the hub acts as an innovation incubator, where a semi-permeable layer allows interesting knowledge to be easily transferred to Renewi. Further, business leaders are well-informed about external and internal happenings in their discipline and bring in relevant knowledge. The company will also prioritise securing IP rights.



## KEY STAKEHOLDERS



### BUSINESS LEADER

#### Role

Business leaders are well-informed about both internal and external happenings on a certain discipline like wood, hard plastics, biobased materials, etc. They serve as connectors among various stakeholders and have a vast range of knowledge about their specific discipline. They have connections to external hubs and assist innovation managers in identifying problems that require solution and their reasons for needing resolution. Business leaders also belong to the innovation ambassadors.

#### Who

Business leaders are directors of divisions and managers of business units like Coolrec, Maltha, and ATM. Site managers of sites with a specific focus on a waste stream can also be business leaders. However, in time business leaders from big divisions should appoint more business leaders to stay up to date.

#### Tasks

- Business leaders motivate operations on innovation activities
- Business leaders motivate sales to receive information from clients on innovations
- Business leaders make connections to external hubs
- Business leaders assist innovation managers in identifying problems

### EXTERNAL HUBS

In Horizon 1, Renewi will initiate an exploration of collaborations with external entities, with a critical evaluation of such partnerships during this phase. In Horizon 2, collaborations with external entities will be optimized through the implementation of several pilot programs. This will involve connecting with entities such as knowledge institutes, universities, and others to determine what works best. Finally, in Horizon 3, an external innovation hub will be established outside of Renewi, with a semi-permeable layer around it. This hub will serve as a place for Renewi to seek inspiration and experiment with out-of-the-box innovation. While Renewi will own the hub, several different organizations and companies will be allied with it. In this way, the hub will act as an innovation incubator, and the semi-permeable layer will facilitate easy transfer of interesting knowledge to Renewi. Collaboration is inspired by the outcomes of the pilots done in horizon 2. In addition to this external function, the hub will also serve as a reality check, as noted by participant 1 [19]: “If you are too internally focused, you will believe in your own stories too much and you will overestimate things.”

## INNOVATION STRUCTURE

Figure 40 shows the innovation structure of horizon 3. Next to ambassadors and the intelligence network, business leaders play a role. Business leaders are people at Renewi with a specialization in a certain topic who operate inside en outside of Renewi. In each division a few business leaders are active.

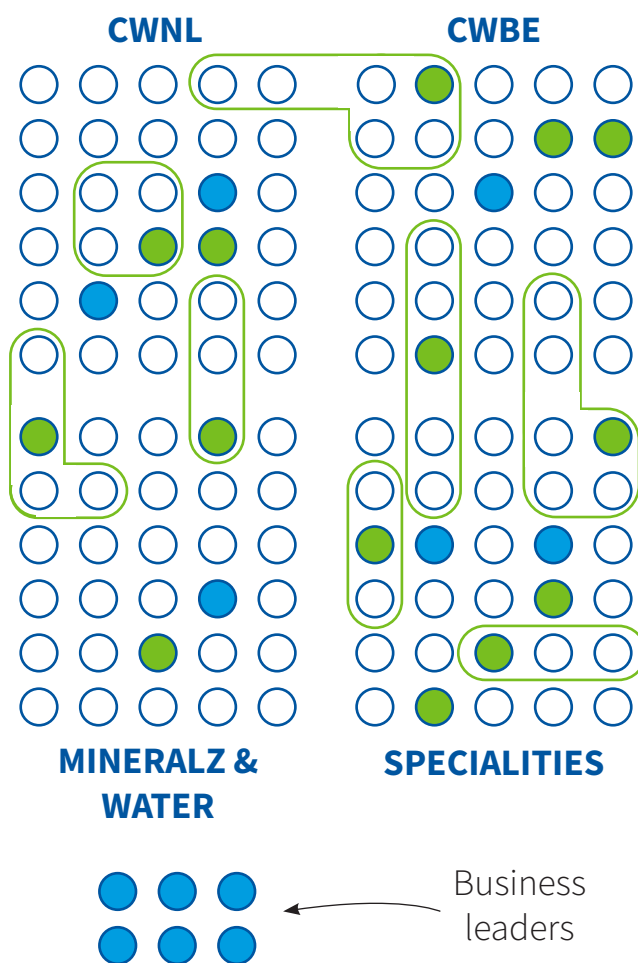


Figure [40], Innovation structure horizon 3.

## EXAMPLES

These examples, taken from various corporations, serve as a source of inspiration for Renewi to institute informed and involved business leaders. Additionally it provides an example of managing intellectual property.

### Apple business leaders

Apple is known for having business leaders who are highly involved in the development of its products and innovation strategies. These leaders play an important role in the company's success by exploring the field, gathering information, and making decisions that drive the company forward. Some have a hands-on approach, visiting manufacturing facilities and working directly with engineers and designers to develop new products. Others focus on product design and marketing (Kahney, 2008).

### Googles business leaders

Google is known for sending its business leaders into the field to gather information and to better understand customer needs. This approach has helped the company to develop innovative products that meet the needs of its customers and to stay ahead of its competitors. Google has a number of other business leaders who are involved in the company's product development and innovation efforts. These leaders work closely with engineers and designers to develop new products and to bring them to market. By being highly involved in the development of its products and innovation strategies, Google's business leaders have helped the company to stay ahead of its competitors and to continue to develop innovative and highly successful products (Adams, 2018).

In the last horizon, Renewi could experiment with business leaders who have similar roles to ones at Apple and Google in exploring the field and gathering information.

### IP management at IBM

Intellectual property (IP) management is a key part of IBM's innovation strategy, and the company places a strong emphasis on protecting its innovations through patents and other forms of IP protection (IBM, 2012).

IBM has a large and highly active IP department that is responsible for filing patents, managing IP portfolios, and advising on IP strategy. The company regularly files patents for its innovations, including new technologies, products, and services, to ensure that it has the right to commercially exploit these innovations and to prevent others from doing so.

In addition to filing patents, IBM also has a strong focus on licensing its IP to others, both to generate revenue and to promote the adoption of its innovations. The company has a large network of licensing partners and works closely with them to ensure that its IP is used effectively and that it is able to maximize the value of its innovations.

Over time, Renewi may consider emulating IBM's approach of prioritizing and actively managing intellectual property (IP). By licensing its future innovations, Renewi could establish a strong market position.



## ACTIONS

ACTIONS	DESCRIPTION
1 Train business leaders	Business leaders should be trained motivating operations on innovation activities and motivate sales to receive information from clients on innovations. Further, they should spot business opportunities and assist innovation managers in identifying problems in the field. Lasty, they should get the opportunity and time to make connections to external hubs.
2 Build an external innovation hub	The external innovation hub functions as an experimentation center that stands outside of Renewi, yet is closely connected to the company. Here opportunities that are too far off from the innovation strategy can be tested.
3 Protect IP rights	Protecting IP rights is linked to the external innovation hub. Renewi should be careful not to lose the IP rights on promising innovations.
4 Disciplined 'one-way-of-innovating'	In the last horizon, Renewi works with a disciplined 'one-way-of-innovating'. By creating this internal discipline, Renewi is an attractive partner in innovation projects.

## GUIDELINES

### Business leaders

- Have interest in a specific discipline.
- Have interest in researching customer needs.
- Have experience in that specific field.
- Search for valuable talent and knowledge outside of Renewi. [N14]
- Have research skills.
- Makes social connections easily.
- Are good at keeping overview.

### Knowledge hubs

Knowledge hubs fuction as external hubs of information and talent that can improve innovation activity at Renewi.

[N14] As Joy's law says "No matter who you are, most of the smartest people work for someone else." Bill Joy is the co-founder of Sun Microsystems, an American technology company that sold computers, software, and information technology services, and created the Java programming language. There is a common tendency among successful companies to prioritize their top customers and continuously improve their existing offerings, at the expense of exploring new opportunities and innovations. By solely focusing on what has already proven successful, they risk missing out on growth and potential new market trends. Renewi can leverage this insight to their advantage.

# STRATEGY DOCUMENT

Key takeaways

*HORIZON 1 | ACTIVATE THE AMBASSADORS*  
(Q2 - Q4 / 2023)

## VALUE PROPOSITION

Utilize a central team to promote a culture of innovation, establish a well-organized innovation portfolio, and receive backing from senior leadership.

## KEY STAKEHOLDERS

Innovation ambassadors  
Innovation managers  
Senior leadership

*HORIZON 2 | EXPLOIT THE INTELLIGENCE NETWORK*  
(2024)

## VALUE PROPOSITION

Foster knowledge communities and map Renewi’s intelligence network, while instilling a sense of urgency for innovation among middle management.

## KEY STAKEHOLDERS

Knowledge communities  
Middle management  
Renewi Young Professional  
The operational level

*HORIZON 3 | BEYOND RENEWI’S BORDERS*  
(2025)

## VALUE PROPOSITION

Establish one way of innovating and prioritize protecting intellectual property. Learn from experienced business leaders to expand Renewi’s knowledge and spot opportunities. Establish an external innovation hub for experimentation.


## KEY STAKEHOLDERS

Business leaders  
External innovation hub









# CONCLUSION & DISCUSSION

The chapter provides a comprehensive overview of the entire project, building upon the design fully explicated in the previous chapter. It offers an evaluation of the final design and addresses the research questions given in the initial chapter by establishing links between the GTM model, the design methodology, and the ultimate design outcome. To present a

well-rounded reflection, the chapter includes a design validation, an analysis of various limitations encountered during the design process, and a discussion of future recommendations. Finally, Chapter 8 offers a personal reflection on the design process and the project as a whole.




The background of the page is a close-up photograph of a perforated metal surface, likely a screen or filter. The surface is covered in a regular grid of oval-shaped holes. The lighting creates a strong gradient from a deep blue at the top to a bright green at the bottom. The text is overlaid on the left side of the image.

**07**

**DESIGN  
DISCUSSION**





With the completion of the design in the previous chapter, this chapter delves into its content and offers an evaluation of the project process. Starting with a validation of the roadmap and the strategy document. Followed by the limitation in the project that had an influence on the design. The chapter closes by giving future recommendations.



## 7.2 CONNECTING RESEARCH WITH DESIGN

The discussion for the research approach is located in section 4.3. This section establishes a connection between the GTM model, the design process and the final design.

The project's overarching research question is: "How can the innovation process of Renewi be improved to enable the company to recycle more and at a higher quality?". The following section evaluates the extent to which the strategic roadmap and strategy document incorporates the crucial aspects of the GTM research to improve Renewi's innovation process. This section examines the basics of the design and the three themes outlined in the roadmap. The themes include organizational structure, innovation attitude, and knowledge management. These themes align with the concepts found in the GTM, which include one way of working, properly allocated resources, managerial encouragement, and continuous learning.

### BASICS OF THE DESIGN

One fundamental aspect of the design is the management of expectations. Expectation management is apparent in the guidance and directive guidelines to all those who require them. The final design ensures that individuals are aware of their roles and responsibilities, as well as those of their colleagues, enabling easy interaction. Effective management of the expectations of key stakeholders in the innovation process reduces resistance during the implementation phase and enhances motivation to perform their tasks adequately. Further, the design is built on first establishing a strong core before committing to external partnerships. This does not preclude experimentation with external collaborations, which is already seen in early stages of the design.

### ORGANIZATIONAL STRUCTURE

Another key consideration that emerged from the GTM is the importance of establishing a clear structure. The strategic roadmap provides a clear framework through its three horizons and corresponding stakeholders. The role of each stakeholder is explicitly defined in the strategy

document. For example, the innovation managers are no longer fulfilling the role of advocating and promoting innovation at Renewi. Instead, they now play a central role in boosting innovation by functioning as easily accessible points of information for individuals with questions or ideas regarding innovation activities and creators of the design strategy and vision. This new approach enables innovation managers to serve as facilitators rather than promoters of innovation.

In addition to the innovation managers, the role of innovation ambassadors is also clarified in the design. The "vote yourself in" system used to select ambassadors ensures that the group is composed solely of individuals who are intrinsically motivated to participate. This approach is favoured by participants of the interviews who don't want to spend time on persuading others to join this group, but rather attract like-minded individuals who are genuinely interested in innovation. By doing this, key stakeholders in the innovation process are committed and engaged in innovation activities and the innovation strategy.

The open atmosphere in which the innovation process finds itself is essential for fostering a culture of innovation. West and Richter (2009) discuss innovativeness as being more likely to occur in a work environment where coming up with creative and novel outcomes is encouraged. Building a culture of innovation should be about creating a climate and infrastructure which affects employees to express actions and thoughts needed for innovation (Dobni, 2008). He says organizations should provide freedom to explore creative possibilities while at the same time having sufficient control to manage innovation in an effective and efficient manner. These aspects are also found as a need arises from the GTM, for which they are integrated into the final design as the open atmosphere around the innovation process.

## INNOVATION ATTITUDE

Innovation attitude is about key stakeholders' attitudes and how they interact. This aligns with parts from the GTM such as attitude towards innovation, communication style, and giving feedback. The roadmap addresses the need for feedback input and ideas on innovation activities by appointing middle management accountable for the flow of information. This encourages feedback throughout the company. Additionally, it emphasises the communication approach. The design of the ambassadors' network is modelled after the communication style of the majority of interview participants, which is via established connections. Renewi's intelligence network operates the same way. Besides knowledge communities are formed through the characteristics Ernst (2002) talks about: including a dedicated project leader, possible multidisciplinary, inter-functional cooperation and communication, responsibility for the process, and team autonomy. It is generally discussed that group and individual autonomy have a positive influence on the innovation process (Amabile, 1998). Next, an innovation mindset is easier spread through warm contacts than via cold one of the interviewees said. She says implementing new ways will require a very careful recognition of the audience. Therefore, already motivated employees are used to spreading the innovation mindset onto their own warm contacts and are used to spread this new way within divisors and business units.

The innovation mindset is fueled by a clear vision of innovation from senior management. Adams et al. (2006) talk about the importance of senior management to communicate and developing this vision for innovation. Therefore, senior leadership has an important position in the final design doing this. Additionally, West (1990) talks about a clear shared vision of innovation increases the effectiveness of a company's innovation activities. The GTM model shows a need for more efficiency. In the final design, this is touched upon by creating importance for a clear shared vision of innovation throughout Renewi.

## KNOWLEDGE MANAGEMENT

The absence of not knowing what other units in an organization are doing results in missed business opportunities. To prevent the loss of knowledge, organizations need to develop processes and systems that ensure that knowledge is accessible, transferable, and protected, thus Figueroa and Conceição (2000). This shows an innovation process wouldn't function appropriately without structured knowledge management. The GTM model shows the need for employees to capture knowledge more structurally. Therefore, knowledge management is depicted as one of the three themes throughout the final design. Well-executed knowledge management can in time also assist the proper allocation of resources.

Additionally, all people necessary are informed about the information they need or know how to find it. The flow of knowledge within an organization is critical to its success, as existing knowledge can be built on for future innovation. In the final design middle management plays a significant role to fulfil this task in order to increase successful innovation. As Clegg et al. (1999) say, many organizations have trouble transferring information and knowledge from one organizational unit to another. The system of knowledge communities and Renewi's intelligence network is designed to overcome these difficulties.

In time knowledge from outside Renewi can be attracted. This aspect is established after participants communicate the need for more people who are working on what is happening outside of Renewi. External hubs and business leaders enable this information to flow into the firm. Business leaders act on making connections with various stakeholders and have a vast range of knowledge about their specific discipline.

## 7.2 DESIGN VALIDATION

As stated in section 1.4, the double diamond approach used for structuring the design process gives three design principles to keep in mind during the approach. First, putting people at the centre of the problem to really understand their needs, strengths, and aspirations. Through a sufficient number of interviews and multiple co-creation sessions, a good understanding of the problem is created. Second, helping people gain a shared understanding of the problem and ideas by communicating inclusively and visually. By continuously talking to people, communicating with the company supervisor, and using visualized co-creation sessions, people from Renewi also got a good understanding of the problem. Lastly, getting inspired by what others are doing during co-creation and collaboration. The final design succeeds to answer the research question by combining solutions derived from literature, interviews, and co-creation sessions. Much inspiration for the final design is taken from communication with key stakeholders.

### Design for Renewi

The design of the roadmap and supplementary strategy document has been custom-tailored for Renewi, incorporating several key attributes. Firstly, the design leverages current knowledge and programs already in use at Renewi. It represents an extension of the existing innovation process, therefore it is relatively easy to implement. The Boost program participants have been seen as the starting group for the innovation ambassadors, and the hype surrounding Mission75 is utilized to generate greater interest and investment in innovation activities. Furthermore, the design accounts for the geographically widespread nature of the company in a way that does not impede the propagation of an innovation mindset. Additionally, the implementation of an improved innovation process in three steps helps to lower the perceived barriers faced by the organization. Using these steps will enhance the implementation of the future vision. Lastly, by utilizing innovation

ambassadors to spread the message about innovation in their respective divisions and business units, the internal communications department need not expend significant effort on executing and disseminating the plan.

### Validation on the basis of the innovation managers

During discussions with innovation managers, several relevant aspects emerged that need to be considered while formulating the roadmap. Firstly, it is crucial to limit the time and resources required for changes to the innovation process and design implementation, especially in the initial stages when resources are scarce. This objective can be achieved by leveraging existing knowledge obtained in the Boost program from people that are excited about innovation.

Secondly, the roadmap's future scenario should align with Renewi's existing culture to a considerable extent. Although the first paragraph of this section outlined the future scenario based on Renewi's current culture, small incremental steps need to be taken in various horizons to cultivate a more innovative culture. However, instead of directly implementing a new way of working, this step-by-step approach enhances the success of the implementation process.

Thirdly, the new innovation process should not hinder individuals' entrepreneurial spirit or their drive to experiment. On the contrary, the innovation process design should encourage entrepreneurial behaviour by involving individuals in roles such as innovation ambassadors, knowledge community members, or business leaders.

Lastly, innovation managers emphasized the importance of a central repository for holding knowledge. The design addresses this need by incorporating knowledge management as one of its three themes and acting on increasing the captured knowledge throughout the horizons.



## 7.3 DESIGN LIMITATIONS

### Variety of participants

The research and design process include a substantial amount of people interviewed for the project. However, the wide variety of the participants complicated the design process. A more detailed outcome could have been derived if a larger number of people had been interviewed in each interview category.

### Complexity

The design may be limited by the complexity of the organization and the diversity of the stakeholders involved. Starting during the interviews, interviewees from different part of the company had a wide variety of thoughts and feelings on the innovation process and innovation as a term at Renewi. This made it at times difficult to achieve a design favourable to all. However, the final design aims at including all stakeholders, a narrower scope of the project could have ended in a more detailed design for some of the stakeholders.

### Time limitations

Time restrictions may have affected the complexity of the design. In the current design, an overall description of each stakeholder is in place. However, with more time this overview and other elements in the strategy document could have been more detailed. Additionally, the extent of testing could have been higher giving the project more time. The last version of the design has not been evaluated by all stakeholders playing a role in the improved innovation process. For this reason it is important that they keep the strategy document a living document and adjust where needed.

## 7.4 FUTURE RECOMMENDATIONS

This section addresses the implementation and development of the roadmap and strategy document created in chapter 6. It delves into how the document can remain relevant for the future of Renewi, and examines the various aspects that must be considered for effective implementation. Furthermore, it explores how these implementation elements may require further exploration for optimal execution.

### Walk before run

The strategy document shows the first actions for the implementation of the roadmap. It is important to keep in mind all steps in a horizon should be executed before going to the next horizon. For instance, first ensure the innovation mindset at the innovation ambassadors before introducing this group to building the intelligence network. The same can be said for the external innovation hub. Take the time to experiment with different external partners in the first year, whereafter promising partners can be part of one of the few pilots in the second year. After knowing which partnerships work for Renewi an external innovation hub should be built. Keep in mind, walk before run.

### The innovation ambassadors' program

For implementing the innovation ambassadors' program three things need to be done. [1] Start with the design of a physical toolkit and a structure for the workshops. The toolkit consists of a booklet with information on who the ambassadors are, what they do, when they do it, and how they do it. Besides, it includes the innovation funnel canvas and two presentation slides. One for internal use and one for external use. [2] Next, planning and executing the workshops. The workshops should explain the ambassadors' role in the innovation process and evoke a conversation amongst the participants. Giving the workshops during lunch (including serving lunch) could increase attendance and enhance the atmosphere of the workshop. Lunch workshops will be given in multiple locations to increase attendance. For instance, Eindhoven, Amersfoort, Amsterdam, and Belgium. [3] Lastly, creating a standard format for the monthly

innovation gatherings. This format can be improved with short feedback talks with participants after the first few gatherings.

### Enhance the usability

The roadmap is currently presented in English. Materials for the innovation ambassadors' program will most likely be made in English or Dutch. To make the information accessible for the less acquainted with English or Dutch, it is recommended to offer all material in the three main languages spoken at Renewi. Starting with English and Dutch, whereas a French version is only necessary later in the implementation process. In addition to this, more research needs to be done to ensure the ambassadors' toolkit is easy to use.

### Onboarding

Based on the interviews, advice is given to implement innovation in the onboarding of new employees. A short and clear explanation of how Renewi innovates and what its goals are for the future can activate a widely spread innovation mindset. Including new employees directly will save time later and might steer up discussions with current employees about innovation.

### Sizable group

For the future of the innovation ambassadors, innovation managers should consider the size of the group of ambassadors. There will be a fine line between growing the group to spread an innovation mindset throughout Renewi and keeping it small to enable a connected group. The precise number of participants should be considered over time. When the group is growing too big, there can be thought of active and passive members of the group.

### Connect to the youngsters

Including Renewi Young Professional should be investigated more. The motivation and energy to add to innovation activities at Renewi should not be left to waste. However, there should be explored what role this group can precisely play in the innovation process.





Renewi site: Vlaardingen



# 08

## PERSONAL REFLECTION

Chapter 8 provides a personal discussion and reflection on the project. First, a personal reflection on the design process is given by highlighting several noteworthy aspects. Thereafter it gives a personal reflection on the progress of the project and the internship at Renewi.

## 8.1 PERSONAL REFLECTION ON THE DESIGN PROCESS

In this section, the focus is on my personal reflection regarding the design process for this project. The discussion encompasses an evaluation of the project as well as its associated environment. Moreover, it highlights specific areas that necessitated additional effort.

### The assignment

During the search for my graduation project, I was looking for a project where I could make an impact. In addition to this, I wanted to learn something about behavioural change within a big company. My interest in sustainability, the circular economy, innovation, and working culture made me decide to work together with the Business and Development department of Renewi. The mission of Renewi, ‘waste no more’, in combination with ‘improving its innovation process to recycle more and of a higher quality’ fits perfectly with my desire to make an impact with my graduation project while learning about the topics names above.

Before this project, I had some prior knowledge about innovation processes and recycling processes. This knowledge grew satisfactory throughout the project. I learned about specific innovation processes and making use of them in a corporate environment. Besides, I learned about the obstacles one can encounter when implementing a new way of working and the many different types of recycling processes.

### Keeping overview

I got the opportunity to take a step back and a deep dive into Renewi’s business and its innovation activities. Even though the project turned out differently than expected, I am sure I delivered a design which Renewi can use to increase its positive impact on the world. Instead of focusing on a particular group of people within the innovation process, the final design focuses on all players in the innovation process.

Therefore, it was at times hard to keep an overview of the project and focus on its essence. This is mostly due to the size of the project and the large variety of people I interviewed.

At times I felt like designing solutions for all problems I encountered. Unfortunately, this wouldn’t fit within the time restrictions of the project. Nevertheless, it took me a while to get the focus I needed to continue making a design that would fit the restricted timespan.

### Changing environment

Looking back at the project I did struggle a bit with the changing environment I felt myself in. I tried to understand the whole company in a short time, while noticing I got a new pieces of information and new things to learn about the company during each interview. Accordingly, the environment I was working in changed for me as an individual, as it did for Renewi. I started my project at a time Renewi is in the middle of implementing the Boost program. Consequentially, in the first few interviews, I obtained knowledge about how things go at Renewi, which were changing in the meantime and are now already different from the start. An example of this is coping with failure. In the first months, one of the interview participants told me about Renewi’s lack of experience with failure and taking risks. In the last month of my project, another interviewee told me [20] *“We got better at failure. First, we didn’t really stop to look at it. I think we have become much more aware now. We stop activities much faster now, which makes us consciously think about it.”*. It’s great to see that Renewi is making big steps in this. However, changes in the environment can be difficult for executing the project.

### Distinguishing the essentials from side issues

Several times I encountered difficulty in separating crucial information from side issues. This may have arisen from the open-ended nature of the interviews and the diverse responses from participants. Besides, the changing environment of the project impacted this. Additionally, utilizing the Grounded Theory Method for the first time also contributed to this challenge.

## 8.2 PERSONAL REFLECTION ON THE PROJECT

This section discusses my personal perceptions of the project. It entails an analysis of the environment in which the project is executed, reflections on the insights gained from this experience, and the cultivation of a professional attitude.

### Obtaining knowledge

It's fair to say I learned a lot during this project. First of all, the knowledge I obtained about innovation in the broadest sense of the word. During the past months, I immersed myself in the topic. I read articles and books, talked to experts during interviews, listened to experts talking in podcasts and videos, and not forgotten I did interviews with a sufficient amount of people at Renewi. I attempted to synthesize all the information I acquired and make sense of it. I recognize that I cannot capture all the knowledge in writing or specifically apply it to this project, but it will benefit me in my future professional career.

### Professional attitude

Working at a new company is always challenging. My goal, in the beginning, was to obtain as much knowledge about Renewi and the innovation process as I could. Therefore, I needed to get in contact with many people and ask them about their jobs, work ethic, culture etc. I didn't always ask easy questions. However, I noticed the way of presenting the question, the topic, and myself is of the essence to get the information participants gave. I experienced that various circumstances and individuals require different approaches to communication, self-presentation, and attitude. During this project I had the opportunity to put this into practice, resulting in a positive outcome.

### Working style

Graduation was an opportunity to figure out what working style suits me best. I noticed that I do prefer a combination of working at home and at the office. However, I must admit the travelling distance was quite challenging at times. As somebody who likes working in a group context with lots of interaction, this project was quite the opposite at times.

Nonetheless, I did talk to many people from Renewi to get as many insides as possible and see as much of the company as I could. However, I can indefinitely adjust my design and I had to stop talking to people to get more input. In addition to this, I always looked forward to site visits and guided tours I received after some of the interviews. Connecting to people this way gave a lots of energy. Though this not only added to my knowledge of innovation, but I have also learned much about recycling processes.





Collecting waste in the port of Rotterdam



# 09

## Glossary

### **A site**

One of Renewi's locations to collect, separate, and or recycle waste.

### **ATM**

ATM handles contaminated soil, wastewater, and oily sludge and in removing hazardous waste substances including packaged chemical waste.

### **CFS**

CFS is a specialist company that processes contaminated water and sludge using a physico-chemical separation process to produce clean water and sludge which can be used as fuel for power stations.

### **CWBE**

Commercial Waste Belgium

### **CWNL**

Commercial Waste the Netherlands

### **Benelux**

The economic union of Belgium, the Netherlands, and Luxembourg.

### **GHG**

Green House Gas

### **Grounded Theory Method (GTM)**

A theory that aims to analytically research qualitative data.

### **Human Resources**

The number of people committed to an innovation task (Adams, et al. 2006)

### **Innovation activities**

Innovation activity is seen as the extent to which an organization is nominally innovative or in what way innovation is embedded throughout the organization. (Adams et al., 2006)

### **Innovation mindset**

A set of attitudes or fixed ideas that somebody has about innovation.

### **Innovation efforts**

An attempt to do something that has a positive reaction on innovation activities.

### **KPI**

Key performance indicator

### **Mission 75**

The goal of Renewi is to be able to recycle 75% of its collected waste in 2025.

### **Mineralz**

Mineralz cleans contaminated soil and recycles mineral residues and turns them into secondary raw materials.

### **PMI**

Product management and innovation

### **Research and development (R&D)**

The set of innovative activities undertaken by corporations or governments in developing new services or products and improving existing ones. (Staff, Investopedia (2003-11-25). "Research And Development – R&D". Investopedia. Retrieved 2017-12-12.)

### **SHEQ**

Safety, Health, Environment, and Quality

### **UK**

United Kingdom

# 10

## References

### A

Adams, S. (2018). Google's innovation strategy: A reflection on the ten keys to success. *Journal of Innovation Management*, 6(4), 22-32.

Adams, R., Bessant, J., & Phelps, R. (2006). Innovation management measurement: A review. *International Journal of Management Reviews*, 8(1), 21-47.

Abbey, A., & Dickson, J. (1983). R&D work climate and innovation in semi-conductors. *Academy of Management Journal*, 26, 362-368.

Amabile, T., Conti, R., Coon, H. & Herron, M. (1996) Assessing the work environment for creativity. *Academy of Management Journal*, 1154-1184,39

Amabile, T. (1998). How to kill creativity. *Harvard Business Review*, 77-78

### B

Bard, J., Balachandra, R., & Kaufmann, P. (1988) An interactive approach to R&D project selection and termination. *IEEE Transactions on Engineering Management*, 139-146, 35

Bessant, J & Francis, D. (1997). Implementing the new product development process. *Technovation*, 1889-222, 17(4)

Burns, T., & Stalker, G. M. (1961). *The management of innovation*. Oxford University Press

Brown, J., & Duguid, P. (1991). Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning, and Innovation. *Organization Science*, 2(1), 40-57.

### C

Calantone, R. J., Benedetto, C. A., & Schmidt, J. B. (1999). Using the Analytic Hierarchy Process in New Product Screening. *Journal of Product Innovation Management*, 16(1), 65-76.

Chakravorti, B. (2004). The new rules for bringing innovations to market. *Harvard Business Review*, 82, 58-67.

Circle Economy. (2023). *The Circularity Cap Report 2023*.

Clegg, S., Hardy, C., & Nord, W. (Eds.). (1999). *Managing Organizations: Current Issues*. SAGE Publications Ltd.

Cooper, R. (1984). The Strategy-Performance Link in Product Innovation. *R&D Management*, 247-259, 14(4)

Cooper, R., Edgett, S. & Kleinschmidt, E. (1999). New product portfolio management: practices and performance, 333-351, 16

Cooper, R., & Kleinschmidt, E. (1990). New product success factors: A comparison of 'kills' versus successes and failures. *R&D Management*, 20, 47-64.

Cooper, R. G., Edgett, S. J., & Kleinschmidt, E. J. (1999). New product portfolio management: practices and performance. *Journal of Product Innovation Management*, 16, 333-351.

Cordero, R. (1990). The measurement of innovation performance in the firm: An overview. *Research Policy*, 19(2), 185-192.

Corbin, J. & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 3-21, 13

Cormican, K. & O'Sullivan, D. (2004). Auditing best practice for effective product innovation management, 819-829, 24(10)

Cosh, A., Fu, X., & Hughes, A. (2012). Organisation structure and innovation performance in different environments. *Small Business Economics*, 39(2), 301-317.



Crossan, M. & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic re-view of the literature, 1154-1191, 47(6)

## D

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.

Davenport, T., De Long, D., & Beers, M. (1998). Successful knowledge management projects. *Sloan Management Review*, 39(2), 43-57.

Das, P., Verburg, R., Verbraeck, A. & Bonebakker, L. (2018). Barriers to innovation within large financial services firms: An in-depth study into disruptive and radical innovation projects at a bank. 96-112, 21(1)

Davis, M. (1998). Knowledge management. *Information Strategy: The Executive's Journal*, 11-22, 15

Dess, G., & Picken, J. (2000). Changing roles: Leadership in the 21st century. *Organizational Dynamics*, 28(3), 18-34.

Duncan, N., & Wack, P. (1994). Scenarios designed to improve decision making. *Planning Review*, 22(4), 18-46.

Dobni, C. B. (2008). Measuring innovation culture in organizations: the development of a generalized innovation culture construct using exploratory factor analysis. *European Journal of Innovation Management*, 11(4), 539-559.

Dorenbosch, L., Van Engen, M. L., & Verhagen, M. (2005). On-the-job innovation: The impact of job design and human resource management through production ownership. *Creativity and Innovation Management*, 14(2), 129-141.

## E

Eisenhardt, K. M., & Graebner, M. E. (2007). Success factors of new product development: Theory Building from Cases: Opportunities and Challenges. *Journal of Product Innovation Management*, 24(1), 25-32.

Ekvall, G. (1996). Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology*, 5(1), 105-123.

Ernst, H. (2002). Success factors of new product development: A review of the empirical literature. *International Journal of Management Reviews*, 4, 1-40.

## F

Figueroa, E., & Conceição, P. (2000). Rethinking the innovation process in large organizations: a case study of 3M. *Journal of Engineering and Technology Management*, 17, 93-109.

Fiegenbaum, A., Hard, S., & Schendel, D. (1996). Strategic reference point theory. *Strategic Management Journal*, 17(3), 219-235.

## G

Getz, I., & Robinson, A. (2003). Innovate or die: Is that a fact? *Creativity and Innovation Management*, 12(3), 130-136.

Globe, S., Levy, G., & Schwartz, C. (1973). Key factors and events in the innovation process. *Research Management*, 16, 8-15. Govindarajan, V., & Trimble, C. (2005). Ten rules for strategic innovators: From idea to execution. Harvard Business Press.

Govindarajan, V. & Trimble C. (2005). Ten rules for strategic innovators: From idea to execution.

Groenveld, P. (1997). Roadmapping integrates business and technology. *Research Technology Management*, 40(5), 48-55.

Gundling, E. R. (2001). The 3M way to innovation: Balancing people and profit. *Research-Technology Management*, 41(3), 94-95. Hechanova, R. M., & Villaluz, C. D. (2019). Ownership and leadership in building an innovation culture. *Leadership & Organization Development Journal*, 40(2), 138-150.

## H

Hamel, G. (1994). Competing for the Future, *Business Harvard Review*

Hamel, G. (2006). The Why, What, and How of Management Innovation. *Harvard Business Review*.

Hailey, V. (2001). Breaking the mould? Innovation as a strategy for corporate renewal. *The International Journal of Human Resource Management*, 1126-1140, 12(7)

Hall, D. (1990). An interactive approach for selecting IR&D projects. *IEEE Transactions on Engineering Management*, 126-133, 37

Hauser, J. & Zeettelmeyer, F. (1997). *Research Technology Management*, 32-38, 40

IEA. (2022). Defying expectations, CO2 emissions from global fossil fuel combustion are set to grow in 2022 by only a fraction of last year's big increase.

He, L. (2013) *Google's Secrets Of Innovation: Empowering Its Employees*.

Hechanova, R. & Villaluz (2019). Ownership and leadership in building an innovation culture. *Leadership & Organization Development Journal*, 138-150, 40(2)

Hidalgo, A., & Albors, J. (2008). Innovation management techniques and tools: A review from theory and practice. *R&D Management*, 38(2), 113-127.

Hipp, C. & Grupp, H. (2005). Innovation in the service sector: The demand for service-specific innovation measurement concepts and typologies. *Research Policy*, 517, 535, 34(4)

## I

IBM. (2012). IBM innovation and intellectual property management solutions. IBM Corporation.

**J**

Jassawalla, A. & Sashittal, H. (1999). Building collaborative cross-functional new product teams. *Academy of Management Executive*, 50-63, 13

Jenkins, S., Forbes, S., & Banerjee, S. (1997). Managing the product development process. Part I: An assessment. *International Journal of Technology Management*, 13(4), 359.

**K**

Kanhey, L. (n.d.). Inside Apple's design process during the golden ages of Steve Jobs.

Kester, L., Griffin, A., Lauche, K., et al. (2011). Exploring Portfolio Decision-Making Processes. *Journal of Product Innovation Management*, (No. 6), 777-793.

KleinKnecht, A. (1987). Measuring R & D in Small Firms: How Much are we Missing?, 253, 36(2)

Kniberg, H., & Ivarsson, A. (2012). Scaling agile @ Spotify. Spotify Labs.

**L**

Li, H. & Atuahene-Gima, K. (2001). Product innovation strategy and the performance of new technology ventures in China. *Academy of Management Journal*, 1123-1134, 44(6)

Liedtka, J. (2014). Innovative ways companies are using design thinking. *Strategy and Leadership*, 42(2), 40-45.

Liker, J., & Convis, G. (2012). The Toyota way to continuous improvement: Linking strategy and operational excellence to achieve superior performance.

Lorenz, E., & Valeyre, A. (2005). Organisational innovation, human resource management and labour market structure: A comparison of the EU-15. *Journal of Industrial Relations*, 47(4), 424-442.

**N**

Nonka, I. (n.d.). The knowledge-creating company, 96-104, 69

**M**

Maduenyi, S., Oke, A., & Jagbe, M. (2012). Impact of Organisational Structure on Organisational Performance. In *Social and Economic Models for Development Track* (pp. 354-358).

Maxwell, J. A. (2012). *Qualitative Research Design: An Interactive Approach*. Sage Publications.

Ministerie van Infrastructuur en Waterstaat. (n.d.). Need for a circular economy. <https://www.government.nl/ministries/ministry-of-infrastructure-and-water-management>

**P**

Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publication, Inc.

Pinto, J. K., & Prescott, J. E. (1988). Variations in critical success factors over the stages in the project life cycle. *Journal of Management*, 14(1), 5-18.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903.

Polanyi, M. (1966). *The tacit dimension*. New York, Anchor Day Books.

**R**

Renewi. (n.d.). Proposed merger with van Gansewinkel. <https://www.renewi.com/en/about-renewi/merger-with-van-gansewinkel>

Renewi. (2022). *Renewing Earth*. Renewi plc Sustainability Review. Eindhoven.

Renewi (2022.) *Historic Merger Information*

**S**

Sakkab, Y. (2002). Connect & develop complements research & develop at P&G. *Research Technology Management*, 45, 38-45.

Saleh, S. & Wang, C. (1993). The management of innovation – strategy, structure, and organizational climate. *IEEE Transactions on Engineering Management*, 14-21, 40

Sarros, J., Cooper, B. & Santora, J. (2008). Building a Climate for Innovation Through Transformational Leadership and Organizational Culture. *Journal of Leadership & Organizational Studies*, 145-158, 15(2)

Schmidt, R., & Freeland, J. (1992). Recent progress in modeling R&D project-selection processes. *IEEE Transactions on Engineering Management*, 39, 189-201.

Single, A., & Spurgeon, W. (1996). Creating and commercializing innovation inside a skunk works. *Research-Technology Management*, 39, 38-41.

Sundabo, J. (1997). Management of innovation in services. *Service Industries Journal*, 432-455, 17

**T**

Tidd, J. (2001). Innovation management in context: Environment, organization and performance. *International Journal of Management Reviews*, 3(3), 169-183.

Tushman, M., & O'Reilly, C. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8-29.

United Nations. (n.d.). The Climate Crisis – A Race We Can Win. <https://www.un.org/en/climatechange/>

**U**

United Nations. (2022). *World Population Prospects 2022*.

United Nations Department of Economic and Social Affairs.

## **V**

Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. *Research in Organizational Behavior*, 1, 209-264.

Van de Ven, A. (1986). Central Problems in the Management of Innovation, *Management Science*, 32(5), 590-607.

Villaluz, V., & Hechanova, M. (2019). Ownership and leadership in building an innovation culture. *Leadership & Organization Development Journal*, 40(2), 138-150.

## **W**

West, M. A., & Richter, A. W. (2009). Climates and cultures for innovation and creativity at work. In M. A. West (Ed.), *The Psychology of Innovation in Organizations* (pp. 211-236). New York, NY: Psychology Press.

White, A. (2002). Enabling factors in the front end of the innovation process, 879-887

Wyld, D. C., & Maurin, R. J. (2009). Keys to innovation: The right measures and the right culture? *The Academy of Management Perspectives*, 23(2), 96-98.

## **Z**

Zien, K. A., & Buckler, S. A. (1997). From experience: dreams to market: Crafting a culture of innovation. *Journal of Product Innovation Management*, 14, 274-284.



# 11

## Appendix

- |     |  |     |   |
|-----|--|-----|---|
| [A] | The designbrief  | [K] | Visual presentation of design scenario 1 in the form of a comic strip             |
| [B] | GTM connected to the framework presented in 'Innovation management measurement: A review' by Adam et al. (2006).   | [L] | Visual presentation of design scenario 2 in the form of a comic strip             |
| [C] | GTM connected to the model presented in 'A multi-dimensional framework of organizational innovation: A systematic review of the literature' by Crossan and Apaydin (2010). | [M] | Visual presentation of design scenario 3 in the form of a comic strip             |
| [D] | Insides from experts in the innovation process of four companies: ABN AMRO, Rabo bank, Deloitte, and NS.   | [N] | Visual presentation of the final future scenario in the form of a comic strip     |
| [E] | Overview of interviewees in two rounds (purple coloured post-its are transcribed).   | [O] | An aim at explaining the different levels of codes derived from the data in Miro. |
| [F] | Interviewguide 1   | [P] | Relationships between the categories created in the GTM                           |
| [G] | Interviewguide 2   | [Q] | Clustered insides from the co-creation sessions                                   |
| [H] | Transcripts with an example  | [R] | Quotes and translations   |
| [I] | Grounded Theory Method in Miro   |     |   |
| [J] | The three future scenarios based on the concepts and categories from GTM.  |     |   |

**Personal Project Brief - IDE Master Graduation**
**Designing a roadmap to help Renewi innovate quicker and better** project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 19 - 09 - 2022 20 - 02 - 2023 end date

**INTRODUCTION \*\***

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Renewi strives to be the leading waste-to-product company in the world's most advanced circular economies, for which they focus exclusively on gaining value from waste. They see that the climate emergency is leading to unprecedented changes in their market. [1] To stay the leading waste-to-product company, Renewi needs to act. They do so by striving to recycle 75% of their collected waste in 2025 compared to 65% in 2020; this goal is called Mission75. Renewi has been innovating for years, however, this process should get better and quicker to reach Mission75. The current innovation process goes as follows. Each innovation project is defined as a start-up with an innovation team of 3 to 4 employees of Renewi that are interested in the topic. The idea for an innovation could come from different corners of the company: e.g., a client, an employee at an operational side, or a division manager. After an idea is created a team is formed and appointed to develop an idea through the stages of an innovation acceleration program called: The Boost program, see figure [2]. These stages are as follows: ideation, concepting, detailing & pilot, and demo. The innovators will be given 1 or 2 days a week to work on the start-up and are responsible for developing it. Each half year a few innovation teams start The Boost program with their start-up. In one Boost program 'cycle', one of the stages is run through. Between every stage, there is a so-called 'gate' where internal investors come in to invest in the project, see figure [1].

Currently innovating does not go quick enough and should be done better to reach Mission75. Three groups of people can be distinguished that each has a crucial role in Renewi's innovation process: the operational side, the innovation teams, and the investors. The overall challenge of Renewi is to stimulate an innovative mindset throughout the company. Next to this missing mindset, there is a culture of champions within the innovation process, which makes it hard to get certain ideas through. The champion culture also motivates the same group of people to work on innovation within their own work and doesn't yet stretch beyond this group. Further, Renewi strives for operational excellence and customer intimacy rather than product leadership. Looking at the 3 value strategies from Treacy and Wierstra Operational excellence strategy stands for focusses on efficiency, supply chain management, and volume. Customer intimacy strategy stands for excellent customer service, customized products, and delivering above expectations. Lastly, product leadership strategy focusses on innovation, design, and time-to-market. [2]

Below a few opportunities and limitations to the project are pointed out.

Opportunities:

- Innovation is one of Renewi's core values and innovation teams are being invested in
- Innovation causes Renewi business – shares get worth more if Renewi keeps its leading position
- Results of current innovations are good (robust financial performance, a step change in its safety record, and the further development of its long-term strategy for accelerated growth)
- An internal acceleration program is being set up and iterated on (The Boost Program)

Limitations:

- Lack of basic knowledge and appreciation of how to innovate
- Lack of time for the innovators and innovators
- Mismatched promises
- Lack of trust because the innovation process goes too fast or too slow, which results in demotivation
- Culture of Champions
- No product leadership strategy

[space available for images / figures on next page](#)

Personal Project Brief - IDE Master Graduation

introduction (continued): space for images

## Governance matches the investment need

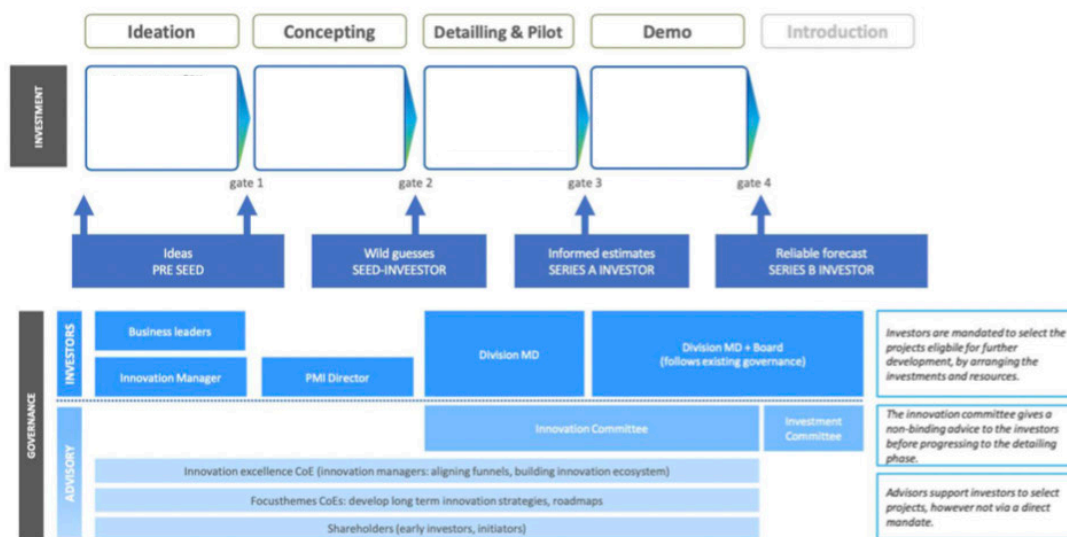


image / figure 1: Moments of investments that match the product fases and type of investors

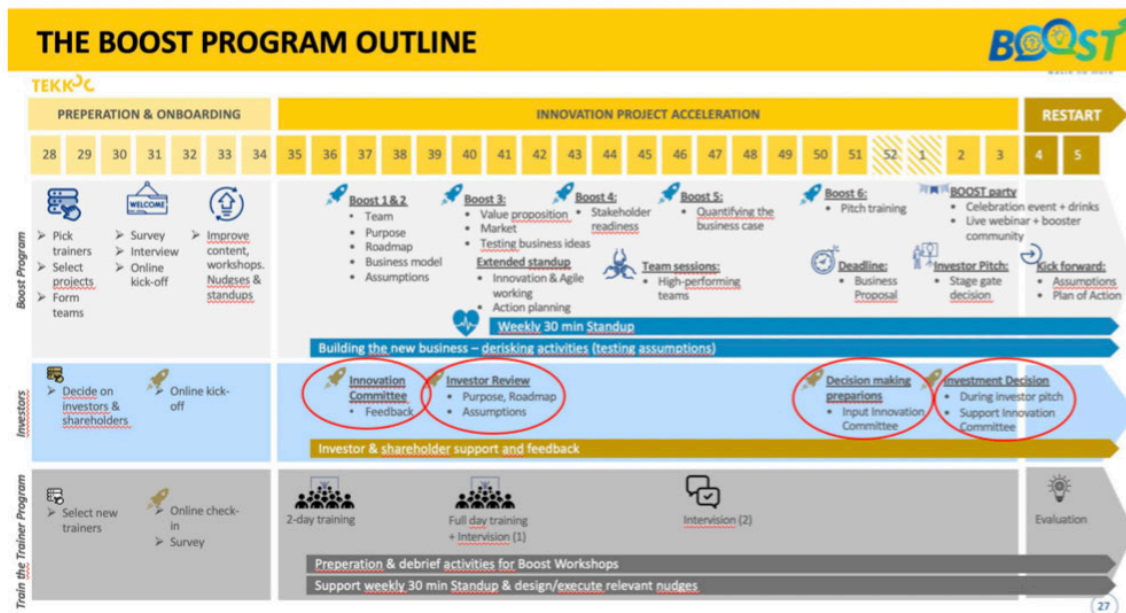


image / figure 2: The Boost program outline of 1 cycle, moments the investor meets with the team assigned in red.



**PROBLEM DEFINITION \*\***

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

Renewi needs to innovate better and quicker to reach mission75, recycle 75% of their collected waste by 2025, to remain the leading waste-to-product company. Renewi sees that three groups of people can be distinguished that each has a crucial role in Renewi's innovation process: the operational side, the innovation teams, and the investors. For both the operational side as the innovation teams, programs are already created and implemented to stimulate this mindset and contribute their knowledge about innovation, whereas the investor group is left out. Therefore, their preference lies on a focus on investors for this project.

"We don't need more; we need to do it better."- Ernst Jan Mul, Innovation Manager Renewi

**ASSIGNMENT \*\***

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... . In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

For this project, I will research what should happen within the innovation process of Renewi to achieve a quicker and higher success ratio of innovation. The outcome of this project will be a detailed roadmap with a clear starting point and action to implement a new way of working to help Renewi reach Mission75 and beyond.

To get to this I will focus on the following main questions:

- What does the innovation process throughout Renewi look like and where are bottlenecks spotted?
- Who are the key players in the innovation process and what are their roles?
- What are the social dynamics of Renewi between 'players' that have a crucial role in the innovation process?
- What bottlenecks should be addressed (first) and how should to improve the innovation rate at Renewi?

Personal Project Brief - IDE Master Graduation

PLANNING AND APPROACH \*\*

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 19 - 9 - 2022 20 - 2 - 2023 end date



In my planning I want to put the focus mostly on the discover and define fase to take a good look at the problem. In the first fase I will diverge and seek for as much knowledge and input as I can get about the problem from stakeholders in different positions and levels of the organization. This I will do through in-depth interviews and a SWOT analysis. During these interviews I will use the first fase of the Design Thinking method, where I will empathize with the interviewees and really try to understand their needs. I will keep the problem of the 'user', the interviewee in this case, always in mind. As Liedtka said "Spending time at the front end of the process exploring the question and its context paid big dividends in producing more effective solutions in the organizations we studied." [1] Next to this I will do literature review in which I search for similar problems in the literature that is already described.

In the define fase I will make a detailed overview of the innovation process, it's 'players' and the current way of working. Besides I will create user journey's for all groups that have a crucial role in the innovation process. From these outcomes I can extract where the bottlenecks in the innovation process accure and define the most prominent ones. This will be written in a problem definition.

Further, in the next fase I will develop multiple concepts through co-creation and individual concept developing. I will use parts from the lean start-up method to transform ideas into prototypes.

In the last fase I use the laste part of the lean start-up to test ideas that are transformed into prototypes and will use an iterative validation of my concepts. [2] This will be written down and visualized in a roadmap to which an implementation plan is added.

### MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... . Stick to no more than five ambitions.

Throughout my studies, I focused mostly on sustainability. I have broadened my interest by choosing electives (within The Netherlands and abroad) and my minor in the field of sustainability and entrepreneurship. Besides my concern to make a positive impact through the work I do by learning about this topic I also developed a deep interest in behavioral change within companies. These topics often go hand in hand and are not easy to handle. For my master thesis, I was searching for an assignment that could challenge me in both working with behavioral change within a company and having to do with making a positive impact on the world. I am positive about this project at Renewi giving me the chance to do both.

Learning objective of the Graduation Project:

- In-depth knowledge of behavioral change
- In-depth knowledge of innovation processes
- Broadening my competencies in the field of Design Thinking
- Gaining experience with tackling a project like this on my own

Personal learning ambitions:

- Gaining experience in a professional working field
- Focus on fewer things at the same time
- Developing my "rethinking" skills
- Saying "I'm sorry" less often
- Getting better at formulating what I want to say

It excites me to run a Strategic Design Project on my own for the first time. I hope to develop myself further in both my learning objectives, my personal learning ambitions, and get better inside my strengths and weaknesses as a strategic designer during this project.

References:

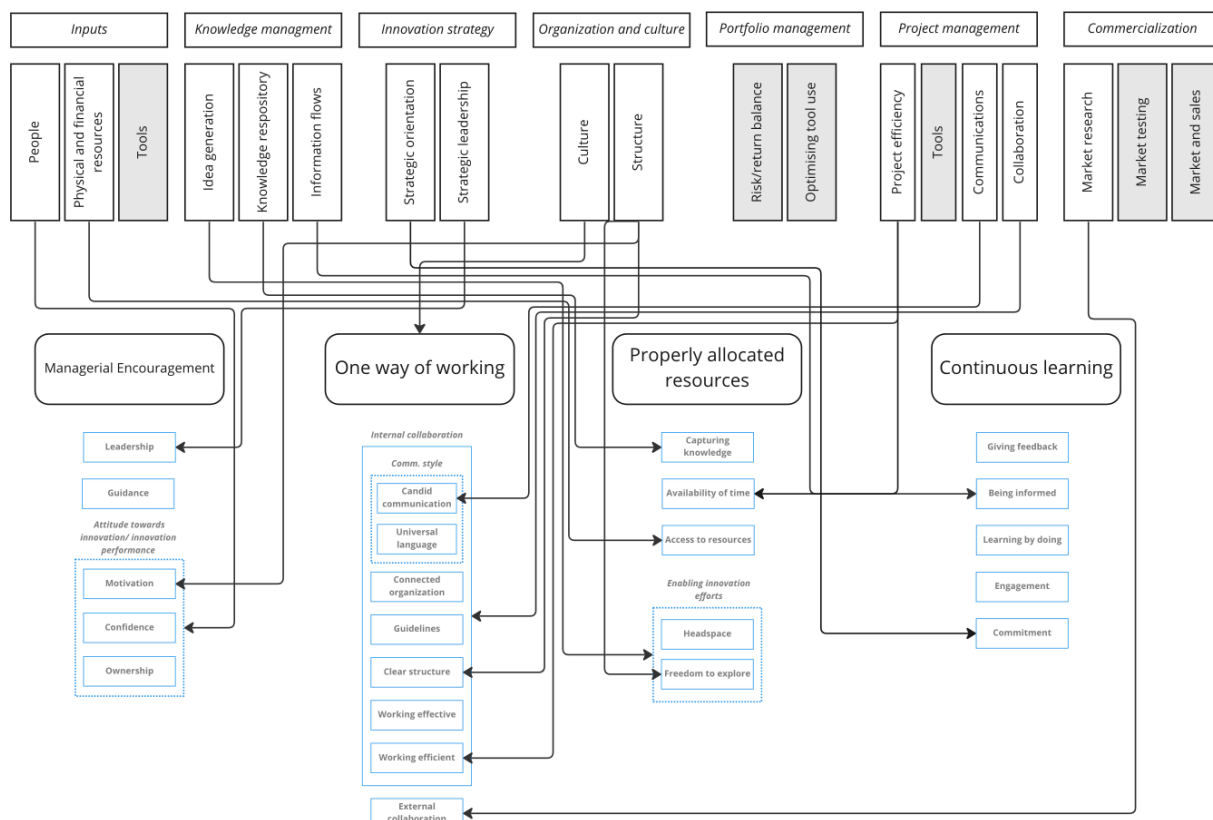
- [1] Renewing Earth, Renewi plc Sustainability Review 2022 \ Renewi (2022, July 5).
- [2] Treacy, M. & Wiersema, F. (1993). Customer Intimacy and Other Value Disciplines. Harvard Business Review, 71(1), 84-93.
- [3] Innovative ways companies are using design thinking | Emerald Insight. (2014, March 11). Retrieved September 21, 2022, from <https://www.emerald.com/insight/content/doi/10.1108/SL-01-2014-0004/full/html?skipTracking=true>
- [4] Lean Startup: a comprehensive historical review | Emerald Insight. (2018, August 10). Retrieved September 21, 2022, from <https://www.emerald.com/insight/content/doi/10.1108/MD-07-2017-0663/full/html?skipTracking=true>

### FINAL COMMENTS

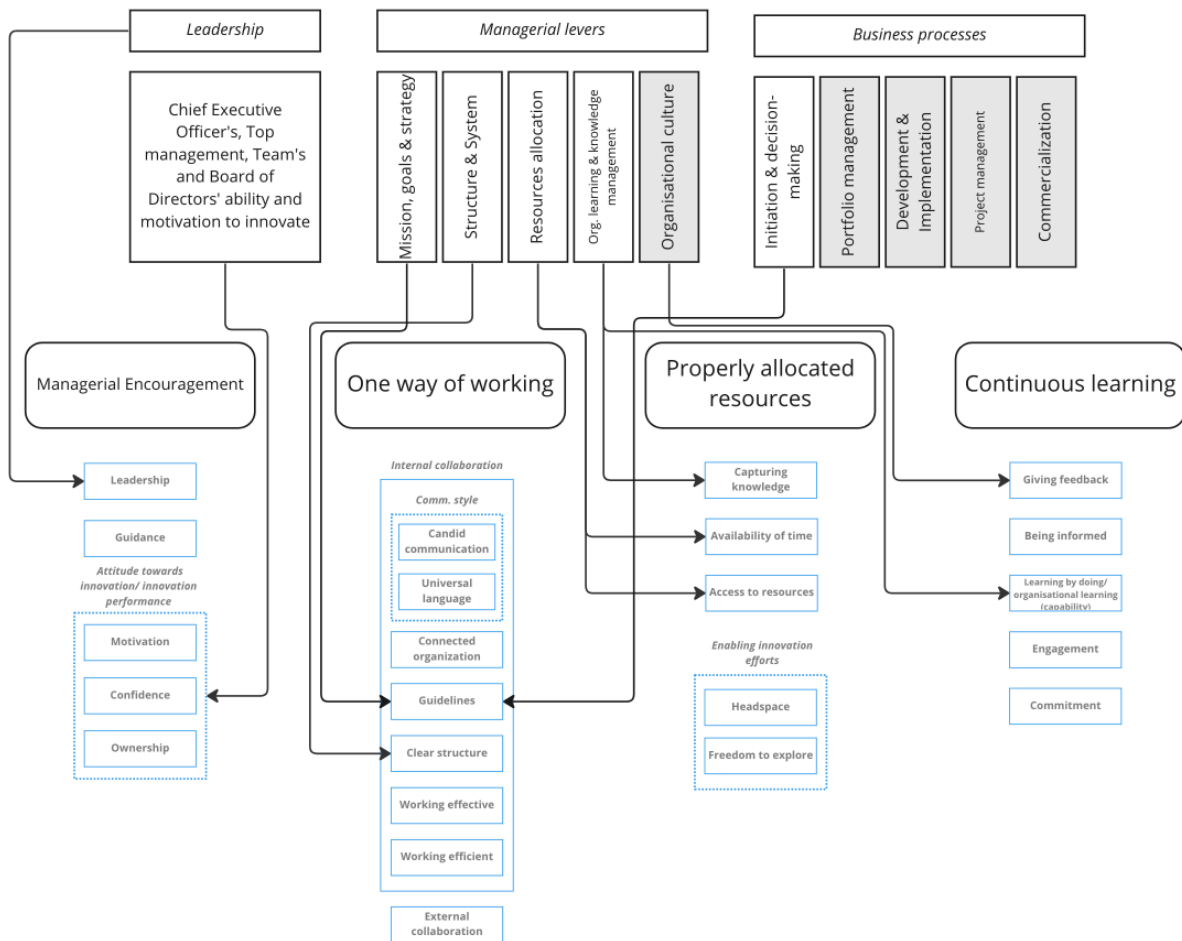
In case your project brief needs final comments, please add any information you think is relevant.



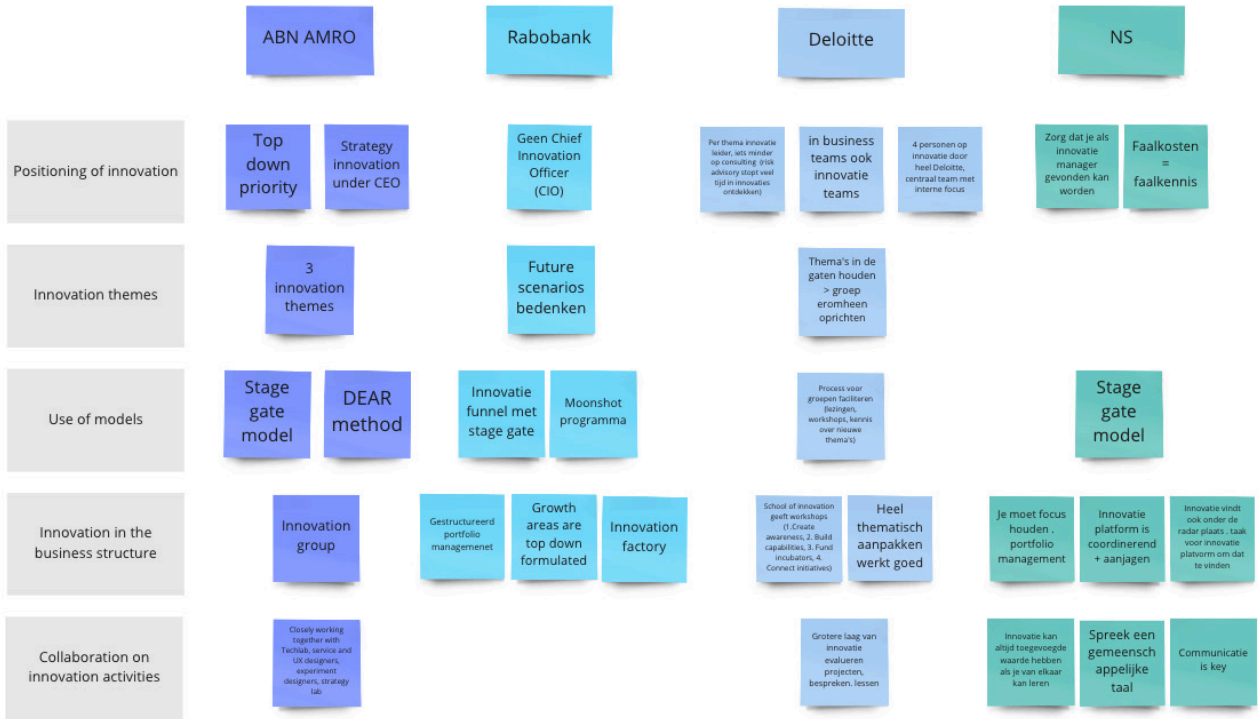
[B] GTM connected to the framework presented in 'Innovation management measurement: A review' by Adam et al. (2006).



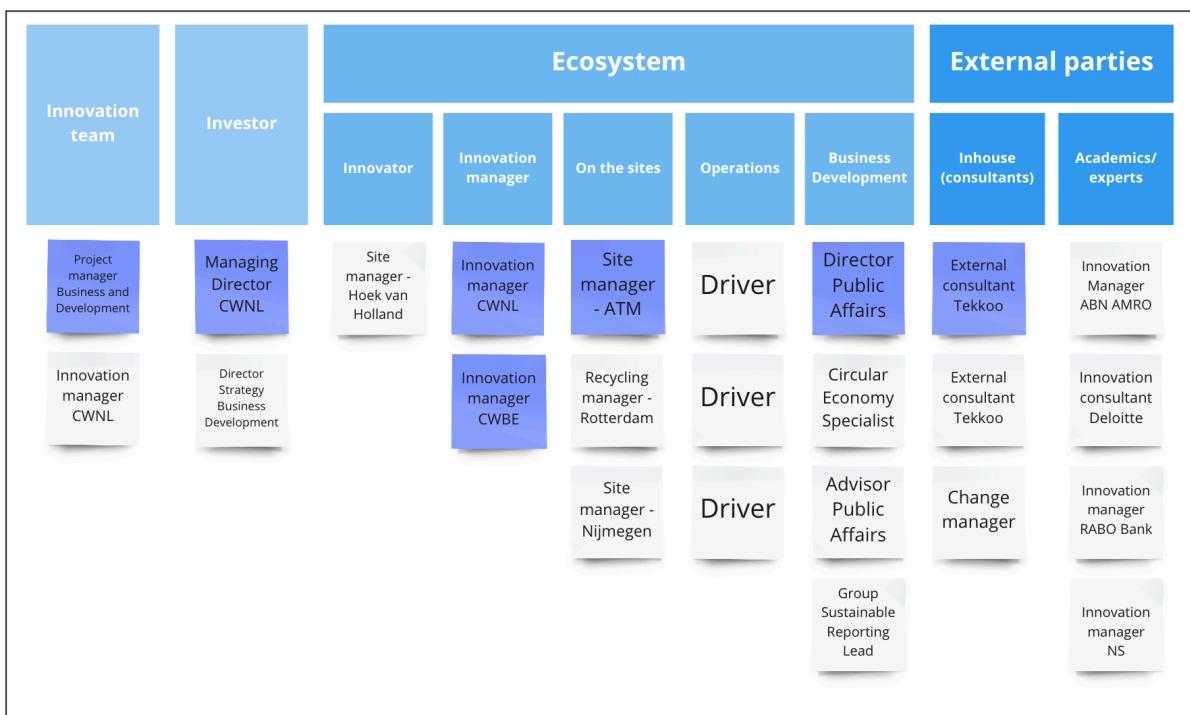
[C] GTM connected to the model presented in 'A multi-dimensional framework of organizational innovation: A systematic review of the literature' by Crossan and Apaydin (2010).



[D] Insides from experts in the innovation process of four companies: ABN AMRO, Rabobank, Deloitte, and NS.



[E] Overview of interviewees in two rounds (purple coloured post-its are transcribed).





### Interview guide 1

- Introduction of myself and the project
- Introduction of the interviewee

Goal of this meeting: Gaining knowledge on the question "What does the innovation process throughout Renewi look like?". Focus on the role of the interviewee and their hurdles/ what's going good.

- Questions about different topics

"What are the roles of the key players in the innovation process?"

- Kan je mij kort jouw rol bij Renewi beschrijven?
- Wat vind jij het belangrijkste waar je je mee bezig houdt?
- Wat zie jij als succes voor Renewi?
- Hoe gebruik je jouw kennis die je buiten Renewi hiervoor hebt opgedaan?

"Who are the key players in the innovation process?"

- Hoe zou je innovatie omschrijven?
- Welke rol heeft innovatie binnen jouw werk?
- Wat is het je waard om te innoveren?
- Wat voor cultuur zou er moeten zijn om dit te behalen? En hoe kan die worden gevormd?

"What are the (hierarchical) relationships between key players that have a crucial role in the innovation process?"

- Hoe sta jij in je rol als investeerder?
- Wat vind jij een fijne manier van samenwerking?
- Mis jij iets in die samenwerking/ wat gaat goed?
- Hoe zie jij de samenwerking tussen de divisies? Wat werkt er goed en wat werkt er minder goed.

"What is the motivation of a key player (not) to innovate?"

- Hoe denk je dat Renewi zijn doelen betreft innovatie kan bereiken?
- Is het besef er binnen Renewi bij iedereen om te innoveren?
- Hoe zie jij de toekomst van Renewi op het gebied van innovatie?
- Waar denk je dat de bal moet liggen als het gaat om het verkondigen van het belang van innovatie?

## [G] Interviewguide 1

## Interview guide 2

- Introduction of myself and the project
- Introduction of the interviewee
- Explain goal of this meeting

Goal of this meeting: Collecting insides in the interviewees view on the proposed future scenario for the innovation process.

- Questions about different topics

## General

- Can you shortly describe your role at Renewi?
- What is your own role in innovation?

## Spreaders of Innovation (SOI)

- Who should be part of the SOI?
- Would you consider yourself part of this group?
- How much responsibility should the SOI take?
- How can this group grow? / should this group grow?

## Communication

- How do you communicate with your team?
- What is your preferred way/ tool to communicate?
- Feedback

## Community

- How could communities be created?
- Are you currently part of something you could describe as a community?
- Which topics would be relevant for such communities?

## Capturing knowledge

- How do you capture knowledge?
- What is your opinion on how knowledge is saved at Renewi?
- (How could this be improved?)
- Where/ how do you find information you need?

## Management

- Which role should top management take?
- How should top management communicate the innovation culture?
- Which incentives should they give?
- What is the role of middle management?

[H] Transcripts with an example

R: Ik denk dat, wij willen graag nog stage gate trajecten. Ja het is hier best ingebakken. En dat is ook eigenlijk van de laatste jaren zal ik het maar zeggen. Dus als wij nu een traject ingaan dan lopen we dat netjes door, dan wordt het ook wel goed vastgelegd. Maar ik kom zo vaak tegen het lees met een ontwikkeling van [TECHNOLOGIE] op ons water en dan ja gaan we technologieën vergelijken. En dan is er een bepaalde technologie, die is dan afgetest hier. En dan zeg ik laat rapport maar eens zien. En dan is er niks. Dat zit dan bij iemand in het hoofd gewoon. Ja dat functioneerde niet voor de kwaliteit water die wij hebben. Ja dat is natuurlijk gewoon bijzonder slecht he. Dat is toch essentiële informatie, dat niet ergens vast ligt en ergens beschikbaar gesteld is voor iedereen die met zo'n onderwerp bezig is. En wellicht misschien het testen is gewoon heel veel werk steeds om dat te doen. Als die persoon straks weg is, dan is het gewoon weg. Dat is ATM in het verleden en dat doen we wel een stuk minder. Maar ik weet wel zeker dat Renewi corporate, weet echt niet wat wij aan ontwikkelwerk hebben gedaan wat er opgeslagen is. Men denkt dat er heel veel kennis is, maar wat die precies is weten we ook niet. Dat is niet ontsloten voor iedereen.

I: En is dat wel interessant om dat vooral ook op een hoger niveau te delen of dat het meer centrale plek te delen?

R: Ja dat weet ik niet, maar ik weet wel dat het... Heb je toevallig [PROJECT] onderzoek gehoord, wat [NAAM] doet. Al het onderzoek en al de testen die zij doet heb ik zelf nog in het verleden ook allemaal gedaan. Dat project bevorderlijk was te doen, dat is wel aardig, dat is allemaal al lang gebeurd. Daar zie je gewoon, dat is zo waardevol als je dat soort dingen vastlegt en ontsluit voor toekomstige mensen die met precies dezelfde problemen. En hoe weet ik niet, maar ik merk wel dat je ziet herhaling optreden in wat er gebeurt. Dat is gewoon niet efficiënt.

I: Oké en specifiek het project van [PROJECT], zijn daar wel rapporten van?

R: Nee, naja er is wel wat van. Maar wat je dus ziet dan ontstaat er behoefte om zo'n project in te richten en dat er geen herinnering meer is van wie daar in het verleden allemaal bij betrokken is of wie daar vergelijkbare projecten in heeft gedaan. Men weet het niet eens van elkaar.

I: Ja dan denk je wel, wat zonde van je tijd als dat allemaal opnieuw wordt gedaan. Of ben jij nu dan ook bijvoorbeeld aangehaakt?

R: Nee, ik heb wel wat dingen gedeeld en denk dat dat prima is zoals dat nu gaat. Maar zo iets zie ik gewoon vaker gebeuren. Ook omdat mensen natuurlijk gewoon nieuw worden. Er zijn hele bedrijven binnen Renewi die heel anders bemenst zijn dan in het verleden was. Dus het is ook niet gek dat men niet meer weet wat er in het verleden allemaal gespeeld heeft. Maar een stukje herinnering binnen je onderneming lijkt mij wel waardevol. Dat is ook gewoon een asset zou ik maar zeggen.

🗨

🗨

🗨

🗨

🗨

🗨

🗨

🗨

**EB** Elisa Bloem ⋮

Knowledge not captured

Reply ▾

**EB** Elisa Bloem ⋮

Make essential information (results from tests) available for everyone

Reply ▾

**EB** Elisa Bloem ⋮

Knowledge held decentralized

Reply ▾

**EB** Elisa Bloem ⋮

Need for efficiency

Reply ▾

**EB** Elisa Bloem ⋮

People are not informed

Reply ▾

**EB** Elisa Bloem ⋮

Renewi is scattered

Reply ▾

**EB** Elisa Bloem ⋮

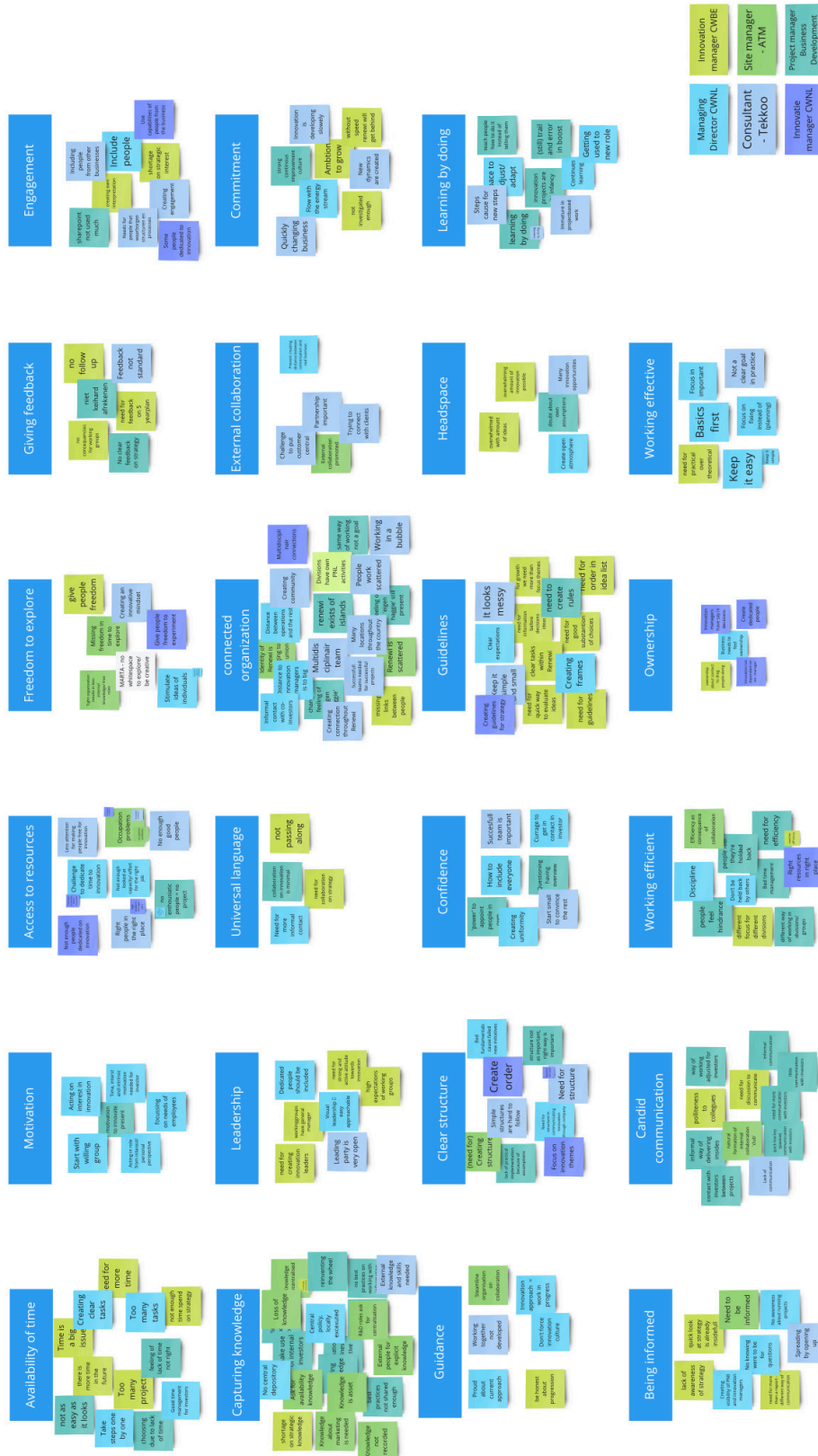
Knowledge is asset

Reply ▾

Transcript number	Role interviewee	Department	# Words
1	Advisor Public Affairs	Strategy and Business Development	2904
2	Innovation manager	Commercial Waste Belgium	4598
3	Project Manager Business Development	Strategy and Business Development	5383
4	External Consultant Tekkoo	-	5863
5	Managing Director CWNL	Commercial Waste Nederland	11930
6	Program manager ATM	Mineralz & Water	7327
7	Director Public Affairs	Strategy & Business Development	4656
8	Innovation manager	Commercial Waste Nederland	9639

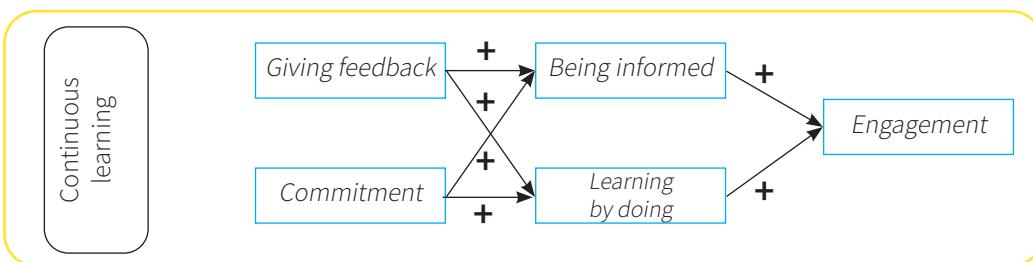
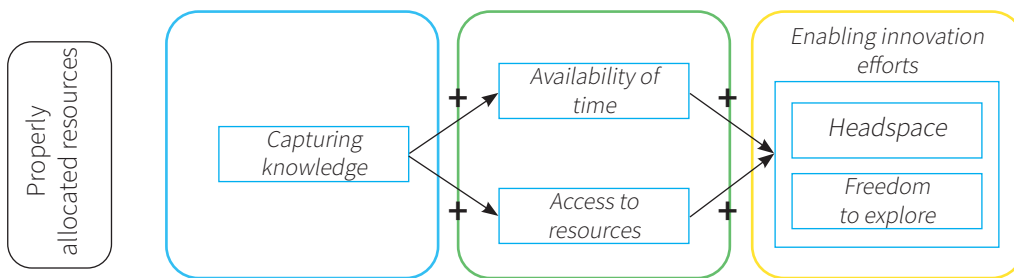
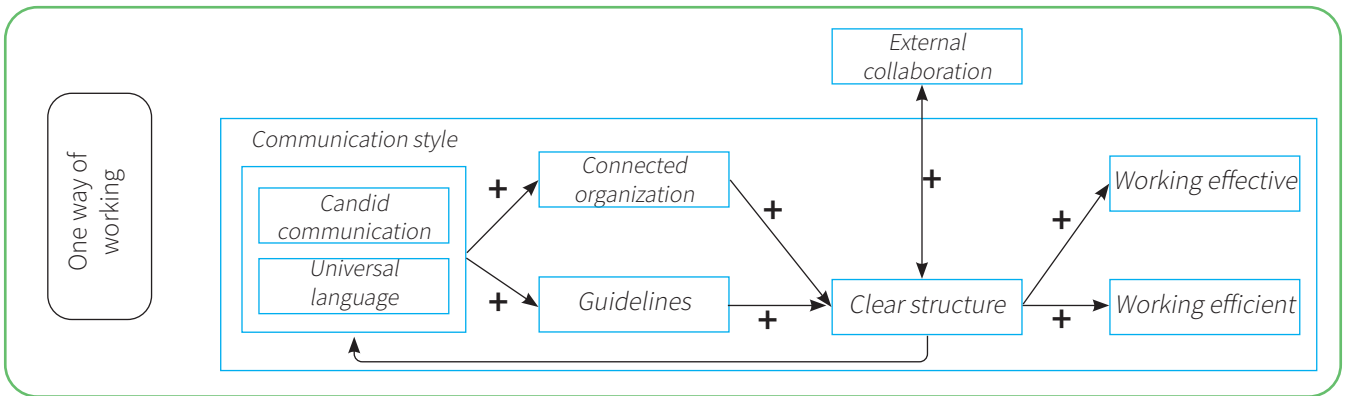
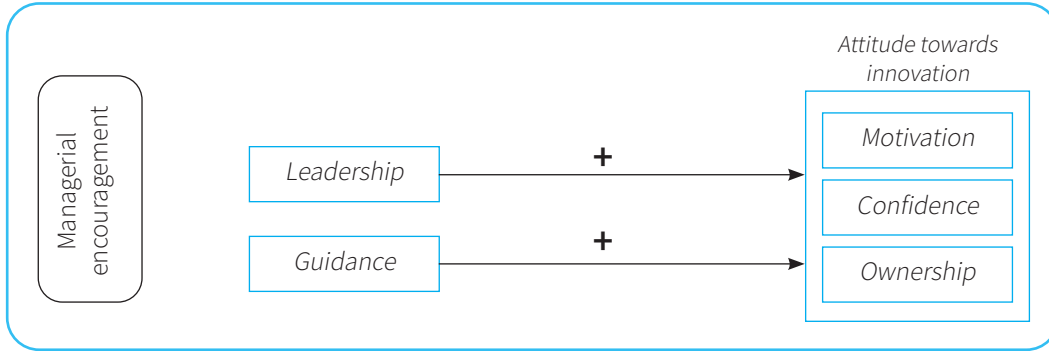


[1] Grounded Theory Method in Miro



[J] The three future scenarios based on the concepts and categories from GTM.

Blue = future scenario 2 (guided communities), green = future scenario 1 (One way of working), and yellow = future scenario 3 (Renewi's football team).

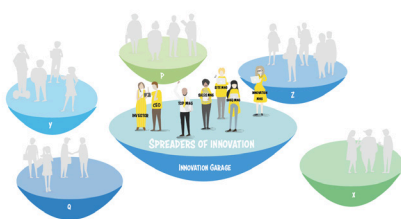


[K] Visual presentation of design scenario 1 in the form of a comic strip

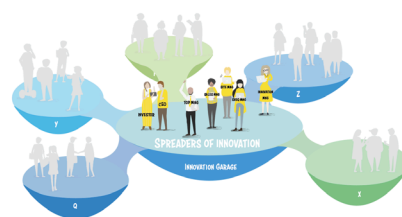
The comic strip below shows a visual representation of seven steps of the future scenario for creating an ecosystem. At the bottom of each step a short explanation is written. 'C' indicates the criteria for that step and 'R' indicates the reaction it [moet oproepen].



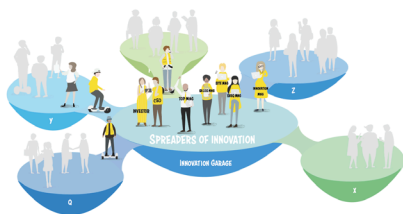
1 It starts with a central group with intrinsic motivation called the Spreaders of Innovation (SOI). These people are enthusiastic about innovation.



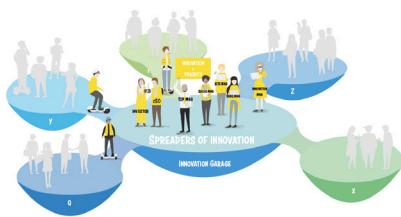
2 Multiple smaller communities are created. These groups all have their own way of working.



3 The communities are closely connected to the SOI. This makes it easier to keep overview of the activities in the communities.



4 The communities are guided by the spreaders of innovation. The SOI should create motivation, confidence, and ownership in the communities.



5 Top management takes the lead and gives sufficient access to resources. This shows motivation top down.



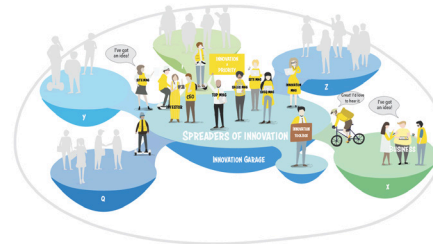
6 There is an open atmosphere for everyone to share ideas. This keeps the innovation funnel filled.



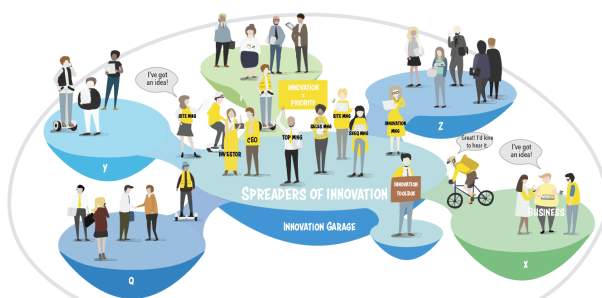
7 Middle management connects ideas to SOI. Less ideas go to waste.



8 People are given the headspace to explore. More ideas are generated and the innovation funnel stays filled.



9 SOI community expands bit by bit, which makes the innovation mindset spread quicker.



10 Guided and connected communities



[L] Visual presentation of design scenario 2 in the form of a comic strip

The comic strip below shows a visual representation of seven steps of the future scenario for creating an ecosystem. At the bottom of each step a short explanation is written. 'C' indicates the criteria for that step and 'R' indicates the reaction it [moet oopropen].

1 Current state: Renewi is scattered.

2 One way of working is created which results in efficient and effective working

3 The islands are connected, this makes it possible for all to reach information and closes the gap between operations and 'the rest'.

4 People are informed where to be for what information which in again results in working efficient and effective. People are aware of running projects.

5 Knowledge centrally captured. Memory stays in company and time is saved by not 're-inventing the wheel'.

6 The vision and strategic focus of Renewi is spread throughout the company. This clarifies the decision-making process.

7 A clear structure is created for all the islands. This gives a strong basis for all initiatives and creates a basis for quickly way to evaluating ideas.

8 People stick to the created guidelines. There is discipline to work on one thing and people are given headspace to explore.

9 This makes it attractive to extend external collaborations. Co-creation with external parties is done more and more.

10 People communicate clearly and speak a universal language, which causes for sufficient communication between (innovation) teams

11 Renewi as a working ecosystem.

[M] Visual presentation of design scenario 3 in the form of a comic strip

The comic strip below shows a visual representation of seven steps of the future scenario for creating an ecosystem. At the bottom of each step a short explanation is written. 'C' indicates the criteria for that step and 'R' indicates the reaction it [moet oopropen].

1 People are informed about what happens within Renewi, the whole team is engaged to win

2 People know the strategy and their position in the field to be able to work better together

3 The decision making process is clear to all

4 Giving feedback to each other is a standard activity

5 New ideas are shared & people get feedback on them. This way people feel heard

6 Best practices are shared to improve the activities

7 Winning team is born!

[N] Visual presentation of final future scenario form of a comic strip

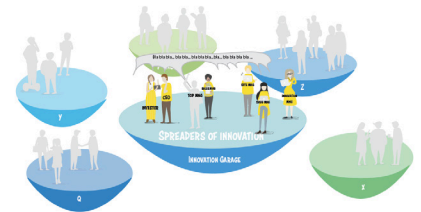
The comic strip below shows a visual representation of seven steps of the future scenario for creating an ecosystem. At the bottom of each step a short explanation is written. 'C' indicates the criteria for that step and 'R' indicates the reaction it [moet oopropen].



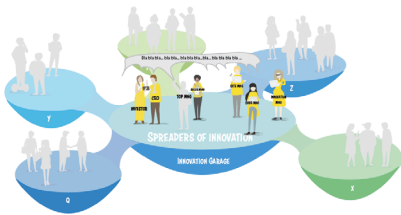
1 Centrale group with intrinsic motivated people = 'The spreaders of innovation' (SOI)



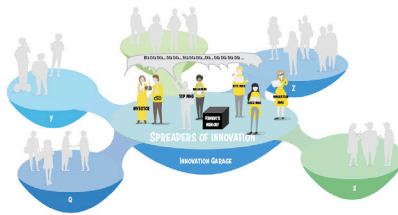
2 Talk the same language (about innovation) & communicate about (innovation) activities



3 Small communities are created, each with their own way of working



4 Communities are connected to central group, this creates overview over innovation activities



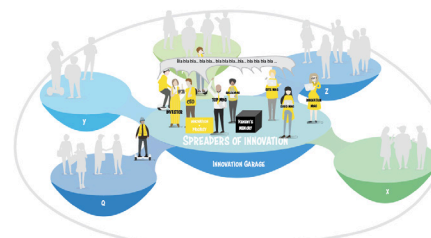
5 Knowledge is captured and kept in a central place which is in reach for everyone



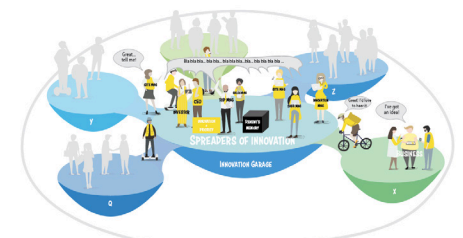
6 SOI are the leaders of the communities & create motivation, confidence, and ownership within communities for innovation activities



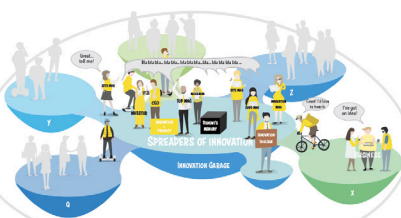
7 Top management shares importance of innovation & there are enough resource



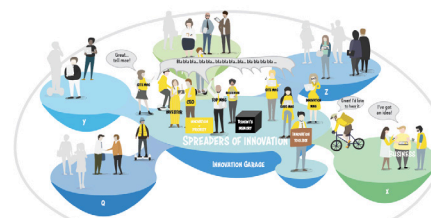
8 An open atmosphere is created where people can share their ideas



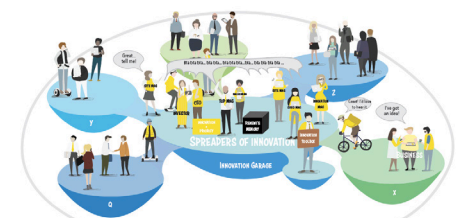
9 Middel management functions as messenger to SOI



10 Innovatie managers manager 'innovatie toolbox', organise get together, and are contact point for questions



11 Slowly SOI expands, innovation mindset spreads throughout Renewi



12 Connected and guided communities



[O] An aim at explaining the different levels of codes derived from the data in Miro.





[Q] Clustered insides from the co-creation sessions





## [R] Quotes and translations

Note: all quotes used in this report are translated from Dutch to English. They are translated by me, a MSc student of the TU Delft. I did all the interviews after which I translated the quotes. The quotes are freely translated within the context it was said to understand the scope of what is meant. The Dutch translations of all quotes are shown below.

### INTERVIEW ROUND 1

[1] “Er moet openheid zijn, niet iemand afstraffen en vooral niet iemand uitlachen. Ook dat idee moet je oppakken, want iemand vindt dat belangrijk op een bepaald moment. Dus het is de hele cultuur die je moet hebben om uiteindelijk een open cultuur te hebben waar mensen het willen delen, met ideeën komen en ook voelen dat het belangrijk is.”

[2] “Kijk als onze CEO niet elke keer in zijn gesprekken, intern ook, innovatie laat terugkeren. Dan gaan andere mensen, tenzij ze intrinsiek gemotiveerd zijn, het ook geen prioriteit geven.”

[3] “Mijn manager en hoofdplanner moeten innovatie verkondigen.”

[4] “Een tot tien mensen als zware motoren voor innovatie.”

[5] “En dan met die mensen dat strategische verhaal voor alles eens met die mensen bespreken. En dat dat landschap van waar dat we eigenlijk allemaal naartoe moeten gaan bespreken en dat dan ook met onze directie bespreken.”

[6] “Je moet zien dat op al die topics die we nu halen dat vooruitgang geboekt wordt. Dat we dus bereiken wat we daarvoor hebben opgesteld en als dat niet lukt het ons ook wordt laten weten.”

[7] “Agenda zettters in plaats van zegmaar het volgen van de business”

[8] “Maar heel vaak hebben mensen misschien nog wel meer behoefte aan stukje begeleiding. Als er eenmaal bij aan de slag zijn dan is het fijn dat het ergens opgeschreven staat. Maar iemand die even meekijkt bij wie ze nog kunnen aankloppen om een vraag te stellen of iets waar ze zich nog zorgen om maken, dat ze dan bij iemand terecht kunnen ja dat wordt vrij makkelijk vergeten. Niet alleen binnen Renewi, dat is op veel plekken maar zeker binnen Renewi dat heb ik al wel in de gaten.”

[9] “Als je gemotiveerd bent om iets te doen straal je het uit, als je iets moet doen zie je dat ook.”

[10] “Zodra iets belangrijk wordt, maakt met er pas tijd voor.”

### INTERVIEW ROUND 1

[1] “There should be an open atmosphere, never punish someone for having an idea. The worst you can do is laugh about it. Even those ideas should also be looked at because someone thinks it's important at that moment. So, it's a whole culture that should be created to create an open atmosphere where people want to share their ideas, come up with ideas and feel that is important to do so.”

[2] “Look, if our CEO doesn't bring innovation back in his conversations every time, internally as well. Then other people will not prioritize it either unless they are intrinsically motivated.”

[3] “My manager and the head planner should proclaim innovation.”

[4] “One to ten people as heavy engines on innovation.”

[5] “Discussing the strategic story for everything with those people. And discussing the landscape where we want to go, also with our managing board”

[6] “We must see that progress is being made on all those topics that we are currently covering. So that we can see if we achieve what we have set up for this and if we don't succeed, we should also be informed about it.”

[7] “Appointment makers instead of following the business.”, thus an external consultant.

[8] “However, most often people have an even bigger need for guidance. If you already working in this new way it's nice to know it's written down somewhere. But someone who takes a lot at it with you, whom you can turn to for all your questions. Yes, that's quite easily forgotten. Not only within Renewi, that's also in many places. But certainly, within Renewi I noticed.”

[9] “If you are motivated, you show it. If you are not motivated, you also do.”

[10] “Only once something is seen as important enough, people will make time for it.”

[11] “De ‘i’ in Renewi staat voor innovatie, maar met een reden helemaal aan het eind. Motivatie is ver te zoeken.”

[12] “Ik vind het gewoon heel belangrijk om bij te dragen aan een betere wereld. En Renewi als centrale speler in de circulaire economie positioneert zichzelf natuurlijk heel goed.”

[13] “Some employees at Renewi value stability and not being stressed when they come home and that is why they spend lifetimes at the company.”

[14] “En dan is het belangrijk hoe klein de projecten ook zijn. Ze wel de aandacht te geven, dat ze het kunnen vieren en delen met collega’s. En daardoor krijg je een olievlek, want als er iets leuk is dan willen andere mensen het ook.”

[15] “Dus je ziet daar nog heel veel onduidelijkheid over rollen en processen, wie bepaald wat. En vervolgens ook mensen van een wat meer blauwe aard die structuren en processen vervolgens hanteren en bijhouden. Daar ontbreekt het soms een beetje aan.”

[16] “Ik haal afval op zodat we kunnen recyclen. En daar houdt het op, dat is mijn taak.”

[17] “De mensen uit Eindhoven.”

[18] “Als ik meer betrokken zou zijn binnen het bedrijf, daadwerkelijk naar mij geluisterd zou worden? Zou ik mijn belangrijk voelen en wel vertellen als er iets aan de hand is.”

[19] “Ik denk toch echt dat de inhoudelijke betrokkenheid moet komen van mijn hoofd engineering in mijn divisie. Mijn hoofd productontwikkeling moet heel erg betrokken zijn. Mijn harde kunststoffen man moet heel erg betrokken zijn. Die moeten voelen ik ben verantwoordelijk voor harde kunststoffen. Ik ben verantwoordelijk voor over datum producten. Ik ben zelf verantwoordelijk voor zelf nadenken over een strategie op die productstroom.”

[20] “Ik denk dat de mensen waaraan je vraagt zaken te veranderen, die moeten natuurlijk andere mensen in vertrouwen kunnen uitleggen waarom het goed is om zaken te veranderen. Anders krijg je die mensen niet mee. [...] Dan moet je dat zelf ook wel heel goed begrijpen waarom dat we bepaalde keuzes maken en andere dingen niet kiezen.”

[21] “Het is jullie innovatie, het zijn jullie investeerders, dus zorg maar dat jullie ze goed kunnen managen.”

[22] “Ook om mensen te enthousiasmeren en een beeld te geven waar we precies naartoe willen. Hoe dat eruitziet en wat dat betekent voor de organisatie.”

[23] “Kort en compact houden ja en aangeven wat er daadwerkelijk gebeurt dus niet alleen maar dus schrijven wat je wilt in abstracte termen. Maar wat verandert er nou daadwerkelijk in de praktijk.”

[11] “The ‘i’ in Renewi stands for innovation, however for a reason all the way at the end. Not much motivation can be found.”

[12] “I just think it is very important to contribute to a better world. Renewi, as a central player in the circular economy, positions itself perfectly to do so.”

[INITIALLY ENGLISH QUOTE]

[14] “Then it is important, no matter how small the projects are, to give them attention. So that they can celebrate and share it with colleagues. That creates an oil slick, because if something is nice, other people want it too.”

[15] “You see there is a lot of uncertainty about roles and processes. Who decides what? And then also people of a bluer nature that keep track of structures or processes. That is sometimes a bit lacking.”

[16] “I collect waste that we can recycle. That is where it stops, that is my job.”

[17] “The people from Eindhoven.”

[18] “I would feel important and would tell if something is going on, If I were more involved with the company and if I would actually be listened to.”

[19] “I really think that the substantive involvement should come from my head of engineering in my division. My head of product development must be very involved. My hard plastic man must be very involved. They must feel ‘I am responsible for hard plastics. I am responsible for expired products. I am personally responsible for thinking about a strategy for that product flow.’”

[20] “I think that the people you ask to change things should be able to explain it to others. These people, management, should be able to explain with confidence why it’s good to change. If not explained with confidence, people will not follow [...] In that case, management has to understand clearly why certain changes are made and others are not.”

[21] “It is your innovation, it is your investment, so you should be able to manage them.”

[22] “To make people enthusiastic and to create an image of where Renewi precisely wants to go. What that will look like and what it means for the organization.”

[23] “Keep it short and compact. Showing what really happens and not only describing it in vague terms but what actually changes in the practice.”

[24] “Dus Je moet naar mensen toe en ja je moet ernaast gaan zitten. En je moet het toelichten. En langs verschillende kanalen hè. Dus ja we gaan er heen en het toelichten en herhalen, herhalen, herhalen.”

[25] “Dit contact is meestal informeel.”

[26] “Daar moet je daar ook wel gebruik van maken denk ik.”

[27] “Het is nu nog heel erg binnen je eigen projectteam.”

[28] “Naast tijd en geld zijn de andere grote problemen wat we hebben ruimte en materiaal. Het is een operationele en logistieke kwestie. Er zou meer communicatie kunnen zijn over wie welke bakken over heeft en die dan gebruiken voor testen.”

[29] “Many people are hired lately. Some of the old employees think it was all better before and they cannot hold on to what is going on now. They are having different attitudes towards change.”

[30] “Maar ik merk een neiging om daar omheen te bewegen terwijl er ook genoeg voor te zeggen is om te zeggen joh die weerstand die heeft een functie. Maar ik ben zeker geen voorstander van het altijd maar uit weggaan van weerstand en dat is wel wat veel gebeurt.”

[31] “Andere structuren vragen om andere manieren van communicatie.”

[32] “Ik zou er meer over willen discussieren.”

[33] “Echt simpel, agile werken, transparant werken. Hoe werk je in een team samen? Daar valt mij op dat het vaak nog van een beginnend niveau is.”

[34] “Ze moeten aan elkaar gewend raken om samen te werken.”

[35] “Dit is erg belangrijk, we zien dat projecten eigenlijk alleen succesvol worden, innovatieprojecten, als er een succesvol team aan werkt.”

[36] “Renewi bestaat uit eilanden.”

[37] “There are already different Renewi’s within Renewi”

[38] “In het verleden konden divisies in de problemen komen door informatie met elkaar te delen als het hun PNLs tegenzat. Ondanks dat die dingen niet meer gebeuren speelt het nog wel in mensen hun hoofd en wordt het nog steeds als excuus gebruikt.”

[39] “Ja ik denk dat er wel gewoon echt eilandjes zijn ja. En aan de andere kant heb je wel op de innovatie SharePoint projecten staan, maar je ziet daar eigenlijk weinig mee gebeuren.”

[40] “Om Renewi weer een geheel te maken zou er iets op groepslevel moeten worden georganiseerd.”

[24] “So you must go to the people and sit next to them. And you must explain it to them through different channels. And repeat, repeat, repeat.”

[25] “This contact is mostly informal”,

[26] “You should make use of that I think.”

[27] “Not it’s mostly within your own project team.”

[28] “Next to time and money another big problem is the space and materials we have. This is an operational and logistic matter. There should be more communication about who has which spare materials to use for testing.”,

[INITIALLY ENGLISH QUOTE]

[30] “However, I notice an urge to move around those signals. Even though there is enough to be said for it to listen to them. They have a function. I’m certainly not in favour of avoiding resistance and that is what happens a lot.”

[31] “Different structures ask for different communication.”

[32] “I would like to have more discussions about it.”

[33] “Really simple, agile working, transparent working. How do you work together in a team? There I notice it’s often a beginner’s level.”

[34] “They must get used to working together.”

[35] “This is really important; we see that projects actually only become successful - innovation projects - if successful teams are working on them.”

[36] “Renewi consists out of islands.”

[INITIALLY ENGLISH QUOTE]

[38] “In the past, divisions could get in trouble due to sharing information, when not reaching their PNLs. Even though these things don’t happen anymore it still plays a role in people’s heads, and it is still used as an excuse.”

[39] “Yes I think we really exist out of islands. And on the other side, even though there is a SharePoint page where projects can be seen, not much happens with it.”

[40] “To make Renewi a whole again, something must be organised.”



[41] “There is a big appetite for new and for bigger, bolder, and better, but sometimes it feels like Renewi does not have enough foundations for this to stand tall.”, she says. “It is like if you go fast without a solid foundation, the whole enterprise will be a bit shaky right?”

[42] Door het hele bedrijf heen mist er echt structuur.”

[43] “Ik denk waar wij als organisatie bij gebaat zijn is om te beginnen structuur in manieren van werken. En dan met name in overleg vormen, in gesprekken die met elkaar gevoerd worden. Die structuur heb ik nog niet echt ontdekt. Volgens mij is hij er ook niet echt.”

[44] “Structuur, processen en een duidelijke governance kunnen ons daarmee helpen.”

[45] “We hebben meer structuur, focus en aandacht nodig.”

[46] “Dus ik ben erg blij dat we in toch het laatste jaar best wel wat slagen hebben gemaakt met enerzijds zorgen dat we meer uniform gaan werken en aan de andere kant gewoon ook daadwerkelijk de inhoudelijke projecten die er al waren en je wat meer in een goede vorm gieten.”

[47] “Maar die structuur waarbij iedereen hetzelfde beoordeelt die is er ook niet nee precies en denk je dat op dat punt belangrijk is dat iedereen op dezelfde manier werkt ja en nee ik denk dat iets van consistentie wel prettig is. Zeker als je de ambitie hebt in ieder geval grote delen van je bedrijf centraal aan te sturen. Want dit dat is er natuurlijk wel en dan helpt het niet als iedereen dat op zijn eigen manier doet of niet doet of heel veel doet.”

[48] “Dus ik weet het ook niet, we hebben zoveel dingen waar dat we op moeten gaan innoveren en ik weet ook nog niet van hoe krijgen we dat timewise gefixt.”

[49] “Binnen Renewi doen we veel met persoonlijke contacten. Je merkt dat er langzamerhand wat meer over de divisies heen met elkaar besproken wordt, maar het kan nog een heel stuk beter. Iets wat bij de een goed loopt, dat andere mensen dan kunnen zeggen ‘he, we kunnen het ophalen’. Dan merk je dat er toch niet echt bij iedereen interesse daarin in. Dat is soms jammer.”

[50] “En daar zie je nog een strategische zoektocht voor Renewi zelf. Hé, waar willen we spelen? In welk speelveld willen we spelen? Een bepaalde richting is er natuurlijk wel, maar tegelijkertijd zie je ook dat in de praktijk het nog niet helemaal helder is.”

[51] “We hebben een strategie en hoe geven we daar voldoende handen en voeten aan? Mission75 is zo’n element wat daar ook bij helpt. Want daarin kun je zien, gaan we het halen of niet? [...] Als je niks doet, dan gaat Mission75 omlaag.”

[INITIALLY ENGLISH QUOTE]

[42] “... through the whole company structure is missing.”

[43] “I think what we as an organization would benefit from is to start with structure in ways of working. And especially in consultation, in conversations that are held with each other. I haven’t really discovered that structure yet. I don’t think it’s really there either.”

[44] “Structure, process, and a clear governance could help with this]

[45] “We need structure, focus and attention.”

[46] “So, I am very pleased that we have made quite some progress in the last year. On the one hand, ensuring that we work more uniformly and, on the other hand, simply implementing the substantive projects that were already there and giving them the right shape.”

[47] “But that structure where everyone is rated the same isn’t there yet. I think that for that matter it’s important that everyone works in the same way. And I think consistency there is pleasant. Especially if you have the ambition to manage at least large parts of your company centrally. Because then it doesn’t help if everyone does it in their own way or doesn’t do it or does it a lot.”

[48] “So, I don’t know how we will get this fixed timewise.”

[49] “Within Renewi we do a lot via personal contacts.”. This implies the challenge it can be to find information is a person doesn’t have the right contacts. Further he says: “You notice that there is gradually more discussion across the divisions, but it can be done a lot better. Something that goes well with one person, that other people can say ‘hey, we can pick it up.’ Then you notice that not everyone is really interested in it. That is a pity sometimes.”

[50] “And there you see a strategic search for Renewi itself. Hey, where do we want to play? What playing field do we want to play? There is of course a certain direction, but at the same time you also see that in practice it is not yet completely clear.”

[51] “We have a strategy and how do we execute it? Mission75 is such an element that helps with it. In a way you can see if your going to reach your goals or not. [...] If we do nothing, Mission75 will go down.”

[52] “Ik denk dat wij nog niet 100% in control zijn over wat we wel en niet doen. En daarom geeft Boost mij ontzettend veel comfort. Omdat we die heel expliciet kiezen en heel duidelijk maken deze gaan we Boosten, deze mensen vragen we.”

[53] “De richting van de organisatie kiezen is toch wel een belangrijk ding en ik vind dat dat door meerdere mensen gedragen moet worden.”

[54] “Meer lean werken zou goed zijn, daarbij kunnen we makkelijker constant verbeteren.”

[55] “De vragen worden gesteld op een manier dat je je idee niet eens meer wilt delen.”

[56] “Daar zie je gewoon, dat is zo waardevol als je dat soort dingen vastlegt en ontsluit voor toekomstige mensen die met precies dezelfde problemen zitten. En hoe wee tik niet, maar ik merk wel dat je herhaling ziet optreden in wat er is gebeurd. Dat is gewoon niet efficiënt.”

[57] “... je moet ook zorgen dat er aan het juiste gewerkt wordt. Dat er een beetje balans is en dat je ook werkt aan zaken waar je nu aan moet werken in plaats van wat mensen leuk vinden.”

[58] “Je wil niet dat iedereen in de organisatie zich erin gaat verdiepen, dat is gewoon zonde van de tijd. Maar je moet wel zorgen dat je het wel beeld houdt.”

[59] “Maar nog steeds, ook daar zien we de uitdagingen bij Renewi. Dat ze gewend zijn om op een hele transactionele manier om te gaan met een klant. Een klant betaalt en daarvoor leveren ze iets. Ze hebben dan niet zoveel zin om allemaal moeilijke vragen stellen aan de klant, weet je wel. [...] Terwijl Innovatie vraagt vaak meet om een co-creatie achtige setting.”

[60] “Renewi vindt het wiel vaak opnieuw uit.”

[61] “Dat zit dan bij iemand in het hoofd gewoon. [...] Ja dat is natuurlijk gewoon bijzonder slecht he. Dat is toch essentiële informatie, dat dat nergens vast ligt en nergens beschikbaar gesteld is voor iedereen die met zo'n onderwerp bezig is.”

[62] “Ja dat is natuurlijk zo'n specifiek onderwerp dat degene die hier de experts van de divisies bij betrokken zijn, dus die kunnen erbij. [...] Dus ja het is denk ik ook nog wel een klein beetje bedrijfsgevoeligheid. Misschien ook wel een beetje onterechte angst of niet. Of terechte angst.”

[63] “Maar ik weet wel zeker dat Renewi corporate weet echt niet wat wij aan ontwikkelwerk hebben gedaan, wat er opgeslagen is. Men denkt dat er heel veel kennis is, maar wat precies weten ze ook niet.”

[52] “I think we don't have 100% control on what we do and don't. That's why Boost give me such comfort. Because we explicitly choose and make it clear which projects we're going to Boost and who we're going to ask to do so.”

[53] “Choosing the direction of the organization is an important thing and I think that should be supported by multiple people.

[54] “More lean working would be better, in that way continuous improvement is done easier.”

[55] “The questions are asked in a way you do not feel like sharing your idea anymore.”

[56] “It is valuable if the information is recorded and saved for future employees who cope with precisely the same problems. I see a lot of repetition happening, which is just not efficient. There is no memory of who was part of the project before or who did compare projects.]

[57] “... you must make sure there is worked on the right thing. Make sure there is balance and working on matters that are needed work that moment instead of working on things people like.”

[58] “Not everyone in the organization should be concerned with the topic, that would be a loss of time. However, it is good to keep track of the latest developments.”

[59] “But still, there we see a challenge at Renewi. They are used to dealing with a customer in a very transactional way. A customer pays and they deliver something in return. They don't feel like asking all those difficult questions to the customer, you know. [...] While innovation often requires a co-creating mindset.”

[60] “Renewi is reinventing the wheel regularly.”

[61] “That's just in someone's head. [...] Yes, that is of course very bad. That's just essential information that's not captured anywhere and not been made available anywhere for anyone who is involved with such a subject.”

[62] “It's such a specific topic that the ones who are experts in the field of the divisions are involved and able to see this information. So, I think it's also a bit of business sensitivity. Maybe a little unjustified fear, maybe not.”

[63] “I'm sure Renewi corporate has no clue about what development work is done here, and what is stored. People think there is a lot of knowledge, however, what precisely is not known.”

[64] “Er zijn hele bedrijven binnen Renewi die heel anders bemenst zijn dan in het verleden was. Dus het is ook niet gek dat men niet meer weet wat er in het verleden gespeeld heeft. Maar een stukje herinnering binnen je onderneming lijkt mij wel waardevol. Dat is ook gewoon een asset zou ik maar zeggen.”

[65] “We zitten gewoon in een tijdsgebrek.”

[66] “Het lastige is met innovatie is dat Ernst Jan is daar fulltime mee bezig maar andere mensen hebben ook hun andere dingen het komt er voor hen dan bij. En er is altijd een prioriteit op altijd iets dat belangrijker is dan deelnemen aan een innovatieboots.”

[67] “Misschien en best wel vaak wordt onterecht ook wel gezegd; ik heb geen tijd om te innoveren. Terwijl als je echt vraagt en uitlegt en verteld waarom het belangrijk is. Dan wordt er ook best wel tijd gemaakt nog hoor. En de middelen ook wel. Dus ik heb ook wel gewoon een beetje, niet dat het een excuses is, maar iets als dat mensen zien als een belemmering die ten onrechte niet echt bestaat. Maar dus wel als een belemmering noemen.”

[68] “... wat je ook ziet is dat als zo'n project belangrijk is dan wil iedereen meepraten dus dan zie je dat vaak de projectgroep kleiner is dan de stuurgroep.”

[69] Innovatie werkt alleen als je juiste mensen op de juiste plek zijn met tijd en geld.

[70] “Middelen toekennen is wisselend denk ik heel sterk. [...] Ik denk dat dat puur een beetje een inschatting door de betreffende leidinggevende of directeur of divisie manager of hoe je het wilt noemen. Ja zeker continu een afweging van de dagelijkse missie die ook door moet.”

[71] “Als je dat wel probeert, zullen mensen waarschijnlijk zeggen dat ze het doen terwijl ze het niet echt doen.”

[72] “Mensen innoveren overal en nergens. En het is ook leuk om te doen. We hebben wat best wel de slimme gasten op operationele functies. Die ook dingen zien die ook dingen ondernemen. Dat is positief. Moet er wel voor waken dat we de juiste capaciteiten, de juiste investeringen in de juiste mensen doen.”

[73] “Ik denk dat wel best wel meer expliciet mogen maken. Ik denk dat het lastig is te bepalen nog waar de capaciteit naartoe gaat en waar dat precies zit en uiteindelijk.”

[74] “De meeste mensen doen het erbij, en ik ben erg voor dedicated mensen vrijmaken. Maar we zien wel dat da teen uitdaging is. [...] Hoe graag we ook naar de volgende Boost waves willen met nog meer projectteams. Laten we een goed kritisch kijken naar zijn de mensen ook beschikbaar? Kunnen we die goed begeleiden? Want als we dat niet kunnen, denk ik dat we het beter niet kunnen doen.”

[64] “There are whole businesses within Renewi that were staffed differently in the past, so it's not weird that people now have no knowledge of what was done in the past. However, a piece of memory is quite an asset in a company I would say”

[65] “We're just in a time rush.”

[66] “What is hard about innovation is that Ernst-Jan works full-time on this topic, whereas for other people it's added to their current position. There is always a priority that is more important than participating in the Boost Program.”

[67] “Quite often it's wrongly said; I don't have time to innovate. While if you ask again and explain and tell why it's important. Then still quite a bit of time can be made. And the resources too. So I also think a bit that people don't really see it as an excuse but a barrier that doesn't really exist. But call it an obstacle.”

[68] “... what you see in such an important project is that everyone wants to be able to talk about it. There you see the projectgroup being smaller than the steer groep.”

[69] “Innovation only works if the right people are in the right place with time and money”

[70] “Granting resources differs strongly, I think. This is mostly due to the estimation of managers or division managers or how you would want to call them. Continuously considering the daily operation that must go on.”

[71] “If you try to do so, people will most likely say that they do it while not really doing it.”

[72] “People innovate all over the place. And it's fun to do. We have some smart people on operational functions. Who also see things and start working on them. That's positive. However, we should be careful we put the right capacity, the right investments in the right people.”

[73] “I think we should make it more explicit. I think it's hard to decide which capacity goes where and what is already where.”

[74] “Most people do it next to their initial job. I'm very dedicated for making time free for people, but we see it's a challenge. How much we want to go to the next Boost waves with more project teams, we should stay critical on the availability of people. Can we coach them well? If not, it's better to not do it yet.”



[75] “Our sustainability leaders effectively have two jobs at once

[INITIALLY ENGLISH QUOTE]

[76] “In order to create conditions for people to have an innovative mindset, you need employees who are eager for change, eager to not just settle for the status quo but go further. First, they need some space. If you have a lot on your plate, you don’t take extra risks. You just scale down, do what’s simple, do what’s less stressful. And of course, you cannot expect that from everyone, because there are many people who just value that calm, that peace of mind.”

[INITIALLY ENGLISH QUOTE]

[77] “Ja weet je, dat is iets als je daar als bedrijf in gelooft moet je daar tijd voor maken. En mensen dus ruimte gunnen om dat te doen.

[77] “You know, if that (innovation) is something you believe in as a company, you should make time for it. Giving people the space to act on it.”

[78] “Ik vind het fijn da tik de vrijheid heb om zelf in te plannen. Wel je bonnen volgen, maar als er geen tijd op staat kan ik m zelf indelen.”

[78] “I like to have the freedom to plan the rides I do myself. I do have to follow the receipts, however, if there is no specific time written on them, I can sort them myself.”

[79] “Ik denk dat je altijd leert als iets niet lukt, dus dat is in principe goed. Ik denk ook door dat te delen neem je mensen mee in waarom iets er niet komt of waarom iets er wel komt. Hoeveel pogingen er wel niet zijn gedaan om iets te proberen. Ik denk dat dat ook heel stimulerend werkt richting anderen.”

[79] “I think you always learn if something doesn’t work, so that’s good. I also think by sharing this people can be included in why something will happen or not. How many attempts are done to try something.”

[80] “...maar je kan ook best meteen hulp vragen, van heeft iemand hier nog een goed idee over?”

[80] “...however, you can immediately ask people for help.”

[81] “Als dingen niet lukken moet je daar open en eerlijk naar elkaar in zijn. Je hebt een verwachting naar elkaar uitgesproken en als dat niet lukt is het van ja oké goed voor de proef maar helaas. En gaan weer op naar de volgende. Als het niet voldoet aan de verwachting moet je het ook uitspreken.”

[81] “If things don’t work out, you must be open and honest with each other. You have expressed expectations to each other and if that doesn’t work out, yes okay, good for this test, but unfortunately. And move on to the next expectations, you must also speak up.”

[82] “Meer en meer. Ja wat kan ik daar over zeggen? Het is gewoon denk ik gewoon nog niet zo ja. Het is niet eens onwil. Het is gewoon dat het nog niet echt in het systeem is vaak hoor.”

[82] “More and more, what can I say about it? It’s just not how we work. It’s not because of reluctance; it’s just not embedded in people’s systems yet.”

[83] “Innovatie is een knuffelonderwerp in de zin dat niemand is het ermee oneens. Maar het begint op het moment dat jij kijkt okee hoe gaan we dit vormgeven en hoeveel tijd, budget, energie gaan we erin steken. Dan wordt het echt.”

[83] “So, that’s very typical for Renewi I think. We run into a number of things. It’s a very operational organization, so they keep busy with the profit of today and tomorrow and optimizing that. However, they are less concerned with the profit and chances of the day after and the one in ten years.”

[84] “Dus dat is heel typisch voor Renewi denk ik. Dat we tegen een aantal dingen aanlopen. Het is een hele operationele organisatie, dus heel erg bezig met de winst van vandaag en morgen en het optimaliseren van wat er is. Maar wat minder met de winst en de kansen voor overmorgen of voor tien jaar.’

[84] “I think we as an organization have clear tasks. However, everyone does their own job and after it’s done they indicated that the job is done. But the rest of the organization often doesn’t know, and I’m guilty too. You could say that report is done, read the report. But that’s not the only thing I think.”

[85] “Ik denk dat wij als organisatie, wij hebben een duidelijke taakverdeling, maar iedereen doet zijn taakje en effectief die communicatie van dat taakje wordt dan aangegeven van ik heb mijn taakje gedaan. Maar ja de rest van de organisatie weet er vaak niet, en ik ben er ook schuldig aan ik zeker ik ben er ook schuldig aan. [...] Je kunt wel zeggen, het rapport is gemaakt, lees het rapport. Maar dat kan niet het enige zijn volgens mij.”

[86] “Maar ik moet eigenlijk zeggen, die strategie interesseert mij wel, maar we steken er eigenlijk te weinig tijd in. Het is voor mijzelf niet duidelijk hoe de ideeën of de strategie precies altijd tot stand te komen.”

[87] “Ik denk dat voor ons innovatiemensen de strategische discussie goed af te stemmen en waarom dat we bepaalde keuzes maken en wat dat we dan links laten liggen. Ik denk dat er daar wat meer energie en van de laag onder onze directie en de lagen daaronder nodig is om daar belangrijk te zijn.”

[88] “Als je iemand uit de operatie vraag over de strategie hebben ze geen idee.”

[89] “Renewi is eigenlijk in constante beweging en maakt zich klaar voor de toekomst.”

[90] “Op het moment dat het fout gaat beginnen we eraan, maar dan ben je te laat.”

[91] “Ja dus mensen op te leiden die gewoon die manier beter kunnen uitvoeren. Het liefst met mensen binnen de divisie zelf omdat dat toch vaak ook wat ja het landt vaak beter dan wanneer het hoofdkantoor het weer eens komt vertellen zeg maar.”

[92] “Faciliteren is belangrijk, je moet niet zomaar iets opdragen en verwachten dat het gebeurt.”

[93] “Ondanks dat ze druk zijn, niet altijd veel tijd hebben, dus wel echt een leergierige organisatie zijn. Ze staan open om te leren

[94] “... belangrijk dat je dat samendoet. Maar het is soms ook trial and error. Bespreken wat we gaan doen. Het doel van de pilot bepalen, een baseline neerzetten en dan gewoon proberen.

[95] “Je merkt ook altijd als je stappen maakt dat er mensen gaan zeggen, dan moet dit ook. Dus dat is eigenlijk ook een goed teken. Als dingen goed gaan willen ze dus eigenlijk ook steeds meer meer.”

[96] “Als er geen weestand is, dan is er geen engagement zeg ik altijd maar.”

[97] “Ze moeten een trigger voelen om iets bij te dragen ze moeten een trigger voelen om daar wat het dan ook is naar te kijken om het er met elkaar over te hebben.”

[85] “I think we as an organization have clear tasks. However, everyone does their own job and after it's done they indicated that the job is done. But the rest of the organization often doesn't know, and I'm guilty too. You could say that report is done, read the report. But that's not the only thing I think.”

[86] “I have to say strategies interest me, but we don't invest enough time in them. It's not always clear to me exactly how the ideas or strategy come about.”

[87] “I think for us innovation people, we need to coordinate the strategic discussion and why certain choices are made and why we leave things. I think there we need more energy from the layer below our management and the layers below that to make it important.”

[88] “If you would ask an employee from operations about the strategy, he/she has no clue.”

[89] “Renewi is constantly moving to prepare for the future.”

[90] “We start at the moment it goes wrong, but at that moment you're already too late.”

[91] “Yes, so to train people who can simply perform better that way. Preferably with people within the division itself, because that often works out better than when the head office comes to tell it.”

[92] “Facilitating is important. You can't just command something and expect it to be done.”

[93] “Despite the fact that they are busy, and they don't always have much time, they really are a studious organization. They are open to learning.”

[94] “... important to work on together. It's also trial and error. Discussing what is going to happen. Setting a goal of the pilot, setting a baseline and just trying it.”

[95] “When making steps you always notice that people see more things to work on. So that's also a good sign. If things go right, they want to see more.”

[96] “If there is no resistance, there is no engagement I always say.”

[97] “They should feel a trigger to contribute something. They need to feel a trigger to look at whatever it is and to talk with each other about it.”

## INTERVIEW ROUND 2

[1] “Je ziet ook best wel vaak dezelfde mensen tegen die zich aanmelden voor dit soort projecten of aangeven bezig te zijn met kleine verbeteringen of die toch proberen het hele plaatje te snappen i.p.v. alleen het ene taakje waar ze mee bezig zijn. [...] van die mensen die willen en energie krijgen van verandering en verbetering. Dat voelt wel echt als een club die bijdraagt aan het pushen van verandering.”

[2] “Het meest ideale is vanuit allerlei lagen en allerlei rollen mensen in zo’n Spreaders of Innovation groep hebben. Maar het moeten met name intrinsiek gemotiveerde zijn die vanuit zichzelf willen, het zijn als het ware de aanjagers/katalysatoren. [...] Maar dat heeft ook te maken met het profiel van mensen. In innovation zie je technici profielen sales profielen die heel erg enthousiast zijn, of projectmanagement profielen.”

[3] “Als ik iets wil weten ga ik niet zoeken op Sharepoint, dan ga ik bedenken van welke mensen binnen het bedrijf zouden het mogelijk weten of er mee bezig zijn? En dan ga ik een rondje bellen. Soms helpt mijn team ook mee”

[4] “Communicatie is enorm belangrijk, intern en extern. En verwachtingsmanagement. Wat ben je aan het doen? Waarom ben je het aan het doen? Wat zie je bewegen? Waar gaat de markt naartoe?”

[5] “In een academie achtige omgeving kan je ook kennis verspreiden over innovatie/ Mission75. De teamleiders moeten de planning doen, wij faciliteren alles. Daar krijg je die spreiding nog en daar kan je ook verwijzen naar hier staat alles op het gebied van innovatie.”

[6] “Business leaders zouden de mensen moeten zijn die op die bruggetjes staan en die zeggen van joh he, achter mij zit mijn vakgebied, mijn clubje en wij zijn bezig met en wij zien dat dit anders zou moeten of dat we op termijn die kant op zouden moeten. En dat dan coördineren met een innovatiecentrum, wat we hier in Nederland tegenkomen, speelt dat ook in België?”

[7] “Ik denk dat je moet beginnen van buiten naar binnen. Je moet zorgen dat je in elke afdeling een sterke persoon/sterke groep hebt die met innovatie bezig is en dan gaan die mensen in het midden de verbindende factor zijn. Maar de drive moet vanuit buiten komen en niet van binnen. De drive moet vanuit die teams komen.”

[8] “We hebben veel meer mensen nodig die bezig zijn met wat er buiten gebeurt en dat zie ik binnen andere Renewi afdelingen nog niet of niet genoeg.”

[9] “Om innovatie succesvol te maken, heb je vanaf het begin het juiste kader met de juiste beslissingen nodig. En alle discussies eromheen zijn heel interessant, but they get you nowhere.”

## INTERVIEW ROUND 2

[1] “You often see the same people who sign up for this kind of projects or say they are working on incremental innovation. They try to see the bigger picture instead only work on that one task. [...] People that want and get energy from change and improvement. That really feels as a group of people to push change.”

[2] “The most ideal is to have people from all layers and kind of roles for a Spreaders of Innovation group. But they should be intrinsically motivated who want it themselves. They are the catalyzers of innovation. [...] Besides, it has to do with the profile of people. In innovation you see technical profiles, sales profiles, or management profiles.”

[3] “If I want to know something I never look at SharePoint. I think of who might be working on the matter or who know who’s working on it. Then I’ll start calling people. Sometimes my team helps in the search for information.”

[4] “Communication is very important, both intern and extern. And expectation management. What are you doing? Why are you doing it? Do you see things moving? In what direction does the market go?”

[5] “In an academic surrounding you can also spread knowledge on innovation or Mission75. The teamleaders should do the planning, we facilitate everything. There you can spread it and you can show where to find everything about innovation.”

[6] “Business leaders should be the people on the bridges. The ones who stay behind me, who see my discipline, and my group. What we’re working on and in what direction we should move. That should be coordinated with the innovation centre. For instance, what we see in The Netherlands, does that also happen in Belgium?”

[7] “I think you should start from the outside to the inside. You should make sure from every department there is a strong person or group who’s working on innovation. The people in the middle are the connection factor. However, the drive should come from the outside and not from the inside. The drive should come from the teams.”

[8] “We need way more people who are working on what is happening outside of Renewi. That I don’t see enough in other departments.”

[9] “To make innovation successful, you need to start with a frame to make the right decisions. All discussions around this are very interesting, but they get you nowhere.”



[10] “Mensen (vanuit de operatie) zijn best wel gemotiveerd om ideeën door te geven, maar als middel management niks doorgeeft de andere kant op dan gaat er niks gebeuren. En als zij wel wat doorgeven die kant op, maar er is geen terugkoppeling weer terug naar de operatie dan gaat de motivatie daar weg.”

[11] “De operatie wil helemaal niet innoveren, operatie en innovatie staat haaks op elkaar. Operatie wil alles volgens procedures doen met de installaties die ze hebben. Dus dat geeft conflicten.”

[12] “Topmanagement heeft een motiverende rol naar beneden en een showcasende rol naar externe en buiten. Dat is denk ik ook een wisselwerking als iemand uit topmanagement ergens in een artikel, een filmpje of radio specifiek benoemd waar mensen mee bezig zijn. Dan motiveert het ook meteen naar beneden, maar wat Marc ook heel erg goed doet. Die is niet bang om te zeggen, probeer het is gewoon. Hij geeft echt wel mandaat om door te pakken.”

[13] “Het is veel belangrijker dat we elkaar vinden, dan dat we proberen alles in een Excel of een Sharepoint te stoppen. Dat is ook goed want dan kunnen we altijd zoeken, maar meestal gaan mensen met elkaar contacten.”

[14] “Als iemand een heleboel goede ideeën heeft die belangrijk voor Renewi zijn om uit te werken. Waarom mag die niet nog een tweede keer een Boost project doen? Maar het wordt nu echt ingezet als opleidingstool. We moeten meer ondernemend denken en daar gebruiken we de tool voor. Ik denk dat dat belangrijk en goed is, maar dat je daar meer uit kan halen.”

[15] “Als je heel veel ambities hebt in innovatie, moet je ook een organisatiestructuur neerzetten die die ambities kan faciliteren. [...] Ik denk dat we heel sterk zijn in het uitdragen van een visie, maar ik vind wel dat we niet bold genoeg zijn en soms niet durven door te pakken.”

[16] “Topmanagement redeneert vaak dat er dingen voor elkaar moeten komen als er iets wordt bedacht. Er is nog niet zo veel ervaring met falen doordat er afgelopen tijd risicovrij gespeeld is. Alles wordt eerste heel goed uitgewerkt. Met echt disruptive changes zijn we totaal niet bekend.”

[17] “How can you trigger people regularly and inform them about all that is happened?”

[10] “People (from the operation) are quite motivated to generate ideas and tell them to their management, however, if middle management doesn't pass it through towards the central group then nothing is going to happen. And if the central group doesn't give feedback to middle management, operations in turn doesn't know what's happening with their idea and they lose their motivation.”

[11] “People in the operations don't want to innovate, operations and innovation are right-angled to each other. These people want to do everything following procedure with the tools they have. So that would be conflicting.”

[12] “Top management has a motivating role top down and a showcasing role to external networks and outside or Renewi. I think that's it works vice versa, when topmanagement recalls an innovation in an article, a video, or on the radio. That motivated people top down. And Marc does that very good. He isn't afraid to say just try it. He gives mandate to continue a project.”

[13] “It's more important to find each other, than to try and put everything in an Excel or SharePoint page. That's also good, because we can find things back there, however, most of the time people will keep contacting each other.”

[14] “If someone has many good ideas that are important to work on for Renewi. Why can't such a person not participate twice in the Boost program? At the moment it is really used as an education tool. We should use it as a tool to teach a more entrepreneurial mindset. I think that's important and good, however, you can get more out of it.”

[15] “If you're having a lot of ambition in innovation, you should create an organizational structure who facilitated these ambitions. [...] I think we're very strong in expressing a vision, however, I think we're not bold enough and sometimes we don't dare to keep going.”

[16] “Top management often reasons that things should work out if something is thought of. There is not much experience with failure due to playing risk free. Every detail is thought of. We're not at all used to work with real disruptive changes.”

[17] “Hoe kun je redelijk gestructureerd prikkelen en informeren over wat er allemaal is gebeurd?”

[18] “And that’s something cultural, it’s really important what you are saying now. Often the people who are strongest content wise are not the most extravert people. And you have to create a culture and platform in which the introvert people get to speak. So that we not only serve the people to scream loudest. And especially in such an organization that’s really important.”

[19] “If your too much internally focused, you will believe in your own stories too much and you will overestimate things.”

[20] “We got better at failure. First, we didn’t really stop to look at it. I think we have become much more aware now. We make an end to things much faster now, which makes us consciously think about it.”

[18] “En dat is een cultureel iets, dat is een hele belangrijke wat je zegt. Want vaak zijn de mensen die content wise heel erg sterk zijn in bepaalde dingen, zijn nu niet de meest extraverte mensen. En je moet ook een cultuur en platform creëren wat toelaat dat ook die mensen die hele introvert zijn aan het woord kunnen komen. Dat we niet enkel degene die het hardste kunnen roepen bedienen. En dat is zeker in zo’n organisatie heel erg belangrijk.”

[19] “Als je te veel intern gefocust bent ga je te veel geloven in je eigen verhaal en ga je dingen overschatten.”

[20] “We zijn goed aan het worden in falen. Eerst stonden we er niet zoveel stil bij. Bij stoppen we een project of niet. Ik denk dat we nu veel bewuster in zijn geworden. Dat we veel sneller dingen beëindigen en daar ook bewust even bij stil staan.”