

An aerial photograph of a dense forest with a prominent circular path or clearing in the center. The image is overlaid with a semi-transparent teal color.

MASTER'S THESIS ENVIRONMENT AND
SOCIETY STUDIES

THE TRANSITION TO A CIRCULAR ECONOMY

THE ROLE OF CIRCULAR
CHAMPIONS

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The transition to a circular economy

The role of circular champions

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Pre-face

The transition to a circular economic system is one of the biggest challenges of this time. In this research, I am looking into the role of individual frontrunners within the transition to a circular economy. During my bachelor's degree in International Development Studies at Wageningen University and my master's degree in Environment and Society Studies at the Radboud University, I became more and more interested in the transition to a circular economic system. Within the search for a relevant internship and research topic, I soon decided that I wanted to focus on the circular economy. In consultation with Over Morgen, where I was able to do my graduation internship, and most of all with Malu Hilverink, consultant at Over Morgen, I came to the topic 'circular champions'. Malu is a circular champion by herself and I was directly intrigued by the impact she had in the transition to a circular economy. I was wondering if there were more people like her, who triggered the transition to a circular economy. When it turned out that little scientific research had been done on frontrunners in the circular economy, I was motivated to start this research by myself.

This thesis is written for everyone who is interested in the role that circular champions can play within the transition to a circular economic system. A summary in English and Dutch is available for everyone who is interested, but who is not able to read the whole report.

I enjoyed writing this thesis and acquiring knowledge about the circular economy in general as well as about circular champions specifically. The interviews with circular champions were really inspiring. The circular champions I spoke to inspired me to stay committed to the circular economy. I will use my acquired knowledge and my curiosity to hopefully become a circular champion by myself one day.

I am really thankful for the help of Maria Kaufmann, my thesis supervisor from the Radboud University, who was always eager to help me and kept me sharp. Furthermore, I want to thank Malu Hilverink, she inspired me to write this research, connected me with many inspiring circular champions, and she helped me with all kinds of practical stuff. I also want to thank Thijs Aarden and the other Over Morgen colleagues who helped and inspired me on different topics during my research and internship. Furthermore, I want to thank all interviewees who voluntarily participated in this research. Last, I want to thank my boyfriend Thijs for the mental support and doing a last check.

I hope you will enjoy reading this thesis.

Marinda Bosman, June 2021.

Abstract

The world population is growing and natural resources are being depleted. To maintain a livable earth and to be able to pass it on to the next generation, the system must change. The Dutch government set the goal to achieve a circular economic system by 2050. Research showed that a lot needs to be done to achieve this goal. In earlier research, the focus is mostly on the role of industry, government, NGOs, financial institutions, and research institutions. This thesis concentrates on the role of circular champions in the transition to a circular economy.

In this qualitative research, the question of what role circular champions play in the transition to a circular economy within an organization or sector in the Netherlands is answered. Most circular champions were already into sustainability issues before they got involved in the transition to a circular economy. Circular champions agree about the fact that the necessity for the planet to change to a more sustainable, circular economy is big. Common characteristics between all circular champions are their intrinsic motivation to contribute to the transition to a circular economy and their courage. In response to the interviews, a distinction can be made between three kinds of circular champions: preachers, entrepreneurs, and reformers. These different types of circular champions have different personal characteristics, use different strategies, and have different roles in the transition to a circular economy.

All circular champions agree that cooperation and transparency are essential for being successful as a circular champion. Preachers furthermore need people around them who are or become enthusiastic, entrepreneurs need network and collaboration built on trust, for reformers space to try, develop and fail is crucial. Furthermore, it is looked into what strategies circular champions use to involve others in the transition to a circular economy. For preachers and entrepreneurs, the main strategy is to gain attention and support, reformers mostly focus on linking and relational management strategies. This research shows that circular champions have a role in the acceleration of the transition to a circular economy. Preachers contribute to the transition to a circular economy through exchanging knowledge. The contribution of entrepreneurs is in their entrepreneurship and in breaking through resistance. Reformers play an important role in the development and exchange of knowledge, and in breaking through resistance. Circular champions contribute to the acceleration of a circular economy, all in their own way.

Keywords: Circular economy – transition management – circular champions – system change



Preacher



Entrepreneur



Reformer

FIGURE 1: TYPES OF CIRCULAR CHAMPIONS

Nederlandse samenvatting

De wereldbevolking groeit en natuurlijke hulpbronnen raken uitgeput. Om de aarde leefbaar te houden en door te kunnen geven aan de volgende generatie, moet het systeem veranderen. De Nederlandse overheid heeft zich ten doel gesteld om in 2050 een circulair economisch systeem te realiseren. Uit onderzoek blijkt dat er nog veel moet gebeuren om dit doel te bereiken. In eerder onderzoek ligt de focus vooral op de rol van industrie, overheid, ngo's, financiële instellingen en onderzoeksinstituten. In dit onderzoek wordt er gefocust op de rol van circulaire aanjagers in de transitie naar een circulaire economie.

In dit kwalitatieve onderzoek wordt de vraag beantwoord welke rol circulaire aanjagers spelen in de transitie naar een circulaire economie binnen een organisatie of sector in Nederland. De meeste circulaire aanjagers waren al bezig met duurzaamheidsvraagstukken voordat ze betrokken raakten bij de transitie naar een circulaire economie. Circulaire aanjagers zijn het erover eens dat de noodzaak voor de planeet om te veranderen naar een meer duurzame, circulaire economie groot is. Gemeenschappelijke kenmerken van alle circulaire aanjagers zijn hun intrinsieke motivatie om bij te dragen aan de transitie naar een circulaire economie en hun moed. Naar aanleiding van de interviews kan een onderscheid worden gemaakt tussen drie soorten circulaire aanjagers: predikers, ondernemers en hervormers. Deze verschillende soorten circulaire aanjagers hebben verschillende persoonlijke kenmerken, gebruiken verschillende strategieën en hebben verschillende rollen in de transitie naar een circulaire economie.

Alle circulaire aanjagers zijn het erover eens dat samenwerking en transparantie essentieel zijn om succesvol te zijn als circulaire aanjager. Predikers hebben verder mensen om zich heen nodig die enthousiast zijn of worden, ondernemers hebben behoefte aan netwerk en samenwerking op basis van vertrouwen, voor hervormers is ruimte om te proberen, te ontwikkelen en te falen cruciaal. Verder is er gekeken naar welke strategieën circulaire aanjagers gebruiken om anderen te betrekken bij de transitie naar een circulaire economie. Voor predikers en ondernemers is de belangrijkste strategie om aandacht en steun te krijgen voor de circulaire economie, hervormers richten zich vooral op verbindende en relationele strategieën. Dit onderzoek laat zien dat circulaire aanjagers een belangrijke rol hebben in het aanjagen van de transitie naar een circulaire economie. Predikers dragen door kennisuitwisseling bij aan de transitie naar een circulaire economie. De bijdrage van ondernemers zit in hun ondernemerschap en in het doorbreken van weerstand. Hervormers spelen een belangrijke rol bij de ontwikkeling en uitwisseling van kennis en bij het doorbreken van weerstand. Alle circulaire aanjagers dragen op hun eigen manier bij aan de versnelling van een circulaire economie.

Key words: Circulaire economie – transitiemanagement – circulaire aanjagers – systeemverandering



Prediker



Ondernemer



Hervormer

FIGURE 2: SOORTEN CIRCULAIRE AANJAGERS

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1. Introduction to the research

“The warning signs are flashing red and the alarm bells are ringing” (Simons & Nijhof, 2021, p.17). During the 20th century, the world population has grown and this growing population started to use much more materials, minerals, fossils, and biomass. As a result, the consumption of natural resources by humans is increasing rapidly. These developments cause big environmental problems and it is expected that the demand for natural resources keeps rising (Bastein et al., 2013). “The growing world population and the need for an increase in prosperity are a given” (Bastein et al., 2013, p.7). From this starting point, it is necessary to prevent us from crossing the borders of our possibilities. To make this happen, the way we are dealing with our natural resources needs to change (Bastein et al., 2013). The circular economy is seen as the “operationalization for businesses to implement the much-discussed concept of sustainable development” (Kirchherr et al., 2017). It is seen as “a promising strategy” (Velasco-Muñoz et al., 2021, p.1) which on the one hand reduces negative impact on the environment, and on the other hand, can improve the economic performance.

In European policymaking, the circular economy has gained a prominent place (Mcdowall et al., 2017). Already in 2015, the European Commission issued a press release with high circular ambitions (Kovacic et al., 2020). The circular economy is Europe’s answer to the structural problems of the linear ‘take, make, and dispose’ approach (Mcdowall et al., 2017). While the circular economy has a prominent place in the policymaking of Europe, a clear definition of the used concepts is not defined (Kovacic et al., 2020). The Dutch government is also aware of the big environmental problems of our time. In line with the European Union, the Dutch Government set in 2016 the ambitious goal to reach a fully circular economy by 2050. In the Government-wide Circular Economy program, the circular economy is defined as follows: “this means that in 2050 raw materials be used and reused efficiently, without harmful emissions to the environment. As far as new raw materials are needed, they are sourced sustainably and further damage to the social and physical living environment and health is prevented. Products and materials are designed in such a way that they can be reused with as little loss of value as possible and without harmful emissions to the environment” (Rijksoverheid, 2016). To reach this sustainable and future-proof economic system, the Dutch government works together with companies, civil society, knowledge institutions, and other governments (Hanemaaijer et al., 2021). At the beginning of 2021, the first ‘Integrale Circulaire Economie Rapportage’ (ICER) was written. In this report, the progress of the transition to a Dutch circular economy is described. The report concludes that resource use has barely declined since 2010. The Dutch government laid the foundation for the transition to a circular economy, but in the coming years, much has to be done to achieve a circular economy (Hanemaaijer et al., 2021).

The government has as an important task to set ‘the rules of the game’, they have they power to determine in which ‘playing field’ can be played. Within the right playing field, the transition to a circular economy can develop (Hanemaaijer et al., 2021). The determination of ‘the rules of the game’ is a big responsibility. In the ICER report, a big focus is on the responsibilities of the government within the standard and linear roles. However, in the report, it is mentioned that there is a role for everyone (Hanemaaijer et al., 2021). Kovacic et al. (2020, p.5) noticed during their research, that individual frontrunners play a major role: “in numerous conversations and discussion about the policies related to the circular economy we encountered highly committed and intelligent individuals who were sincerely devoted to developing a more sustainable future Europe”. Also Rotmans & Loorbach (2009, p.6) noticed the importance of frontrunners. They argue that: “the focus on frontrunners is a key aspect of transition management”.

This research focuses on the role of individual frontrunners in the transition to a circular economy: ‘circular champions’. In this research, a circular champion is defined as *a person with knowledge about*

and experience in the circular economy. This person is involved in affecting the transition to a circular economy. A circular champion is willing and able to involve and lead others in the transition to a circular economy. It is not about a formal role, but about the power to influence others (Andersson & Bateman, 2000; Howell et al., 2005; Taylor et al., 2012; Flynn et al., 2020; Byström, 2018).

In the following, the research problem, research aim, the research questions, and the relevance of this research are discussed. In the second chapter, a literature review is conducted, and definitions of the most important concepts are defined. The third chapter describes the methodology which is used to find an answer to the research questions. After the methodology, the results are presented. From the results, a conclusion is drawn which is discussed in the discussion. This research ends with recommendations for further research.

1.1 Research problem statement

As discussed above, the need for a transition to a (more) circular economic system is clear. A lot of research on the transition to a more sustainable and circular system has been done (Simons & Nijhof, 2021; Hanemaaijer et al., 2021; Bastein et al., 2013; Ellen MacArthur Foundation, n.d.). Nowadays, most research into a transition to a circular economic system is focused on the broader picture, for example, the whole system, companies, or governments (Simons & Nijhof, 2021; Bastein et al., 2013; Upadhayay & Alqassimi, 2018). It is however shown that individuals can be helpful in acting on environmental issues (Andersson & Bateman, 2000; Starik & Rands, 1995; Holm et al., 2015) and that frontrunners are essential in a transition (Rotmans & Loorbach, 2009). Andersson & Bateman (2000) argued that more research needs to be done on the process in which individuals play a role in “transforming environmental issues into organizational actions” (Andersson & Bateman, 2000, p. 548; Visser & Crane, 2010), which means that it is necessary to look into how individuals can contribute to the operationalization of solutions for environmental issues. Elia et al. (2017) state that research on the circular economy on the micro-level is lacking. So, on the one hand, research is done on the role of individuals within environmental transitions whereas their necessity, and on the other hand the transition to a circular economy has been extensively researched. Agreement exists that the transition to a circular economy is necessary (Bastein et al., 2013, Hanemaaijer et al., 2021, Simons & Nijhof, 2021). Circular champions can fulfill a key role in this transition. However, clarity about what role circular champions play exactly, does not exist. Therefore, this research focuses on circular champions and their role and contribution in the transition to a circular economy. The research gap is found in the missing research to the intersection between individual frontrunners and the transition to a circular economy.

1.2 Research aim and research questions

1.2.1 Research aim

As described before, a lot of research is conducted into the transition to a circular economic system (Simons & Nijhof, 2021; Hanemaaijer et al., 2021; Bastein et al., 2013; Ellen MacArthur Foundation, n.d.). However, the role of circular champions in this transition is underexposed. This research aims to explore (van Thiel, 2007) on the one hand why circular champions became circular champions in the first place, and on the other hand what role they play in the transition to a circular economy. The purpose of this research is to investigate, structure, and indicate the role of circular champions for governments, companies, NGO's and others who are interested.

1.2.2 Research questions

The main question that will be answered in this research is:

What is the role of circular champions in the transition to a circular economy within an organization or sector in the Netherlands?

To answer the main question, the following sub-questions are formulated:

1. What is the motivation of people to become circular champions?
2. Which conditions are necessary to fulfill the role of a circular champion?
3. What strategies do circular champions use to accelerate the transition to a circular economy?

1.3 Scientific and societal relevance of the research

1.3.1 Scientific relevance

Sustainable development and circularity have been extensively researched. The most common definition for sustainable development is the definition which was established during the World Commission on Environment and Development of 1987: “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Potter et al., 2008). In this research, the focus is on the circular economy. It is argued that sustainability and circularity are not the same: “circularity contributes to a more sustainable world, but not all sustainability initiatives contribute to circularity” (Het Groene Brein, n.d.). Circular economy practices can be considered as “important elements for the transformation to systems of sustainable consumption and production” (Schroeder et al., 2018, p.79).

In the last couple of years, a lot of research on the circular economy in the Netherlands has been conducted (Bastein et al., 2013; Sociaal-Economische Raad, 2015; Jonker et al., 2018). In the book ‘changing the game’ (Simons & Nijhof, 2021) the authors focus on the role of industry, government, NGOs, financial institutions, and research institutions in ‘the sustainable market transformation’. In the ICER 2021 report (Hanemaaijer et al., 2021), the focus is on the Dutch transition to a circular economy as a whole. Others also concluded that the focus of circular economy research is on the big scale, a circular economy as a whole, or to whole countries or continents (Simons & Nijhof, 2021; Bastein et al., 2013; Upadhayay & Alqassimi, 2018). Herein, common topics are the definition (Jonker et al., 2018), the chances and barriers (Bastein et al., 2013), and the economic and technical aspects of circularity (Geisendorf & Pietrulla, 2018). However, research on the role of individual frontrunners, or circular champions, is missing. In contrast to current literature (Simons & Nijhof, 2021; Bastein et al., 2013; Upadhayay & Alqassimi, 2018), in this research, the focus is on individual circular frontrunners. Research has already shown that champions can fulfill an important task in a transition: “for example, the valuable role that networks of champions play in the transition to water sensitive cities has been recognized by academics, industry and politicians” (Taylor et al., 2012, p. 85). However, it is not yet scientifically substantiated what role champions can play in the transition to a circular economy. The combination of transition literature, literature about (environmental) champions, and knowledge about the circular economy can give new insights into the role of circular champions in the transition to a circular economy. The goal of this research is to provide this scientific base for the role of individuals as circular champions in the transition to a circular economy within a sector or organization.

First of all, literature and theories about the circular economy and (environmental) champions are combined in this research. Furthermore, the concept of a circular champion is validated based on empirical research. Empirical research on circular champions is a new focus in the research of the circular economy. The outcomes of this empirical research contribute to the knowledge about the role of circular champions in the transition to a circular economy.

1.3.2 Societal relevance

By now it is made clear that the ambitious goal to achieve a circular economy in 2050 is challenging (Hanemaaijer et al., 2021; van Loon & Van Wassenhove, 2020 ; Stahel, 2019). This research contributes to the process of reaching this goal. More knowledge about the role of circular champions in the transition towards a circular economy is gained, as well as, knowledge about the motivation of circular champions and what strategies circular champions use to involve more people in the transition to a circular economy. This knowledge can be used by policymakers, NGO's and others to stimulate the transition to a circular economy. Within consultancy firm Over Morgen, they noticed that companies and municipalities often want to do 'something' to make their contribution to the transition to a circular economy. It is however often unclear where to start and what to do. Based on the conclusions of this research, these people can make a better-founded decision on how to support and stimulate circular champions that are already present in the companies. This research shows the role of circular champions in the acceleration of the transition to a circular economy, which can be used to stimulate and activate circular champions.

Thereby, this research contributes to the acceleration of the transition to a circular economy. This acceleration is required to achieve the goal of a circular economy by 2050 (Hanemaaijer et al., 2021). Within this research the role of circular champions is investigated, structured and indicated, to make clear what the impact of circular champions is and why and how policymakers should or should not support them in their work of accelerating the transition to a circular economy.

2. Literature review and theoretical framework

In the following, the relevant literature about the circular economy, transition management and champions is discussed. In the theoretical framework, these three concepts and the used definitions in this research are elaborated.

2.1. Circular economy

The concept of the circular economy is gaining increased attention (Reike et al., 2018). This growing attention is for both practitioners and scientists (Kirchherr et al., 2017). Kirchherr et al. (2017) indicate that some writers about the circular economy however “seem to have no idea about what [CE] is about” (Kirchherr et al., 2017, p.229). To delve into circular champions further in this research, it is important to first have a good definition of the circular economy. So, first of all, an overview of the scientific and grey literature about the definition of the circular economy is given. Furthermore, attention is paid to the different perspectives on the transition to a circular economy, the Mission-oriented Innovation System, and challenges, critics, and weaknesses.

2.1.1 Definition circular economy

The concept of the circular economy is described as a promising strategy (Velasco-Muñoz et al., 2021) and the strategies for the circular economy are much discussed in grey and scientific literature (Moraga et al., 2019). Kovacic et al. (2020) indicate that there is not just one definition for a circular economy. The circular economy can best be understood as a combination of different ‘ideas and initiatives’ (Kovacic et al., 2020). Kirchherr et al. (2017) found 114 definitions for the circular economy in scientific literature. In the analysis of these 114 definitions, Kirchherr et al. (2017) did not find one definition or parts of a definition which are included in more than half of all definitions. This makes clear that a disagreement exists about what the circular economy exactly is. To give an overview, some different ideas, initiatives, and definitions are elaborated in this research. Within this overview, it is important to keep in mind that this overview is incomplete.

Stahel (2019) claims that the circular economy is the most sustainable post-production business model. This definition focusses on the business model, while the circular economy can be seen as something much broader than only a business model. The Ellen MacArthur Foundation is an NGO that tries to develop and promote the transition to a circular economic system worldwide (Ellen MacArthur Foundation, n.d.). It is their mission to ‘accelerate to a circular economy’. They define a circular economy as: “a circular economy is based on the principles of designing out waste and pollution, keeping products and materials in use, and regenerating natural systems”. In the book ‘The Circular Economy in Europe’ (Kovacic et al., 2020, p. 6) three ideas are central: “the circular economy is a policy in the making, it is an imaginary about the future, and it is far removed from what is known about the economic process in biophysical terms”. The circular economy is described as the opposite of the linear economy, in which “resources are extracted, used, and discarded” (Kovacic et al., 2020, p. 6). The comparison with the linear economy is often made, researchers agree about the fact that the circular economy is the opposite of the linear economy.

Thijs Aarden (consultant Over Morgen) uses in a column in RO-magazine the following definition of a circular economy: “A sustainable economic system that functions within the capacity of our planet and grows people's well-being, without waste and harmful emissions to the environment and in harmony with nature in which the value of raw materials, materials, and products is preserved through closed cycles” (Aarden, 2020). The efficient use of resources, and within that, the decrease of resource usage is an important topic in a circular economy. It is important to note that a circular economy is much more than recycling. Already in the designing process of products, a long-lasting and reuse must be taken into account (Hanemaaijer et al., 2021; van Loon & Van Wassenhove, 2020).

TNO uses the following definition:

The circular economy is an economic and industrial system that takes the reusability of products and raw materials and the regenerative capacity of natural resources as a starting point and that minimizes value destruction in the total system and strives for value creation in every link of the system. (Bastein et al., 2013, p. 7)

TNO, The Ellen MacArthur Foundation and more make clear in their definitions that the circular economy is about a total system, while others like Stahel (2019), have a more narrow focus on the business model of a circular economy (Bastein et al., 2013; Ellen MacArthur Foundation, n.d.;). Within all definitions, the focus is mainly on the technical and practical aspects of the circular economy.

After they analyzed 114 definitions of the circular economy, Kirchherr et al. (2017, p.224) drew a new definition of a circular economy. Within this definition, the most common parts of the 114 definitions are included. With this definition it is made clear that the circular economy is a really broad concept with focus on different levels and focuses:

A circular economy is an economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes. It operates at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations. It is enabled by novel business models and responsible consumers. (Kirchherr et al., 2017, p.224)

As stated before, there is a lot of grey and scientific literature about a circular economy. Agreement about the definition of a circular economy does not exist. The definition used in this research is the definition of Kirchherr et al. (2017) because of their extensive research on different existing definitions of a circular economy. To understand the differences between the linear and circular economy, also a definition of a linear economy is included. The linear economy is the opposite of the circular economy:

A linear economy is an economic system, which operates on the principle 'take-consume-throw away' and consumes resources inefficiently. As a result, the resource scarcity and environmental pollution problems are becoming more acute day by day. Linear business activities are characterized by the following factors: use of non-renewable resources; prioritize sales of new products; the failure to collaborate; and failing to innovate or adapt. (Pavliashvili & Gubeladze, 2020, p.1)

2.1.2 Perspectives

Looking into the transition to a circular economy can be done from different perspectives. Two (extreme) perspectives exist about how to approach the transition to a more sustainable, circular economy: a top-down approach and a bottom-up approach (Genovese et al., 2017). The implementation of a circular economy by using a top-down approach is about launching a new "scientific concept of development" (Naustdalslid, 2014, p. 305). This means: "once the policy goals are established and defined (harmonious society, CE etc.), scientific insight on society, social and economic mechanisms and natural processes, all based on empirical data and scientific methods, will guide the authorities in the practical implementation of policies" (Naustdalslid, 2014, p. 305). On the other hand, there is the bottom-up approach, which starts from the product level and stimulates the transition from below (Genovese et al., 2017). In this research, the focus is on the bottom-up approach in which circular champions play a role.

2.1.3 Mission-oriented Innovation System

Hekkert et al. (2020, p.77) claim that a Mission-oriented Innovation System (MIS) as a new framework is necessary for policymakers and analysts to understand and solve a societal mission. They define an MIS as: “the network of agents and set of institutions that contribute to the development and diffusion of innovative solutions with the aim to define, pursue and complete a societal mission” (Hekkert et al., 2020). On the basis of this theory of Hekkert et al. (2020), the ‘Planbureau voor de Leefomgeving’ (PBL) made a MIS for the successful transition to a circular economy. The PBL divides eight components that are necessary for a successful transition from a linear economy to a circular economic system in general. These eight components are called the ‘key processes’ which are essential for the transition to a circular economy. These eight components do not stand alone, they are all interrelated. The eight components are (Hanemaaijer et al., 2021):

1. **Entrepreneurship;**
For introducing and upscaling circular initiatives, entrepreneurs are important. They can bring new technologies, products, and business models to the market.
2. **Knowledge development;**
Knowledge is essential for innovation. More and new knowledge about the transition to a circular economic system can help entrepreneurs, policymakers, and others to continue the transition to a circular economy.
3. **Exchange of knowledge;**
In addition to the development of knowledge, the exchange of knowledge counts. The exchange of knowledge between entrepreneurs, governments, and knowledge institutions can help to accelerate the transition to a circular economy.
4. **Giving direction to the search process;**
At the beginning of a transition, a lot of uncertainty exists. For a successful circular economic transition, some people must give direction to this process. This can save a lot of time, money, and effort.
5. **Market formation;**
Stable market demand for circular materials, products, and services is essential for a transition to a circular economy. Substantial market demand can give trust to entrepreneurs and investors.
6. **Resource mobilization;**
Well-educated people and financial resources are necessary to accelerate the transition to a circular economy.
7. **Breaking through resistance;**
A transition is often in conflict with the established order. It is needed to overcome this resistance. On the one hand, new systems need to be built, but on the other hand, old systems need to be broken down. The common habits of people are often based on the linear economic system. This can cause resistance, which needs to be eliminated.
8. **Coordination.**
The transition to a circular economy is a complicated mix of change processes. The different change processes can supplement each other, but they can also compete with each other. Those separate change processes must be attuned to each other by one or more coordinators.

Those eight components, which together form the MIS, are essential for a successful transition from a linear to a circular economy. So, these eight components can cause reaching a circular economic system in the Netherlands. Hanemaaijer et al. (2021) assign component 4 (giving direction to the search process) and 8 (coordination) mostly to the government. All 8 components are included in this

research because people are necessary to fill in these components and it is expected that circular champions have a role in the fulfilling of this. The extent to which circular champions play a role in these eight key processes is under study. In this research, it is tried to give an overview in which of the eight components circular champions contribute or play an important role.

2.1.4 Challenges, weaknesses, and critics

In the transition to a circular economy, different challenges exist. Van Loon & Van Wassenhove (2020) concluded in their study on four companies that it is difficult to shift to a circular economic system within a company. It brings a lot of obstacles and challenges. They distinguish four main challenges (van Loon & Van Wassenhove, 2020, p. 3419):

1. Understand the market for recirculated products (consumer behavior);
2. Cost of operating circular business model compared to costs saving of remanufacturing (recoverable value);
3. Access to good quality returns;
4. Speed of technological processes (innovation).

These challenges are focused on the transition to a circular economic system within a company. Also a lot of logistic challenges need to be overcome (Akkerman et al., 2019).

Besides these challenges of the circular economy, Sariatli (2017) describes some weaknesses of the circular economy. One of the weaknesses mentioned is the lack of specific guidelines about the implementation of the circular economy (Sariatli, 2017). Furthermore, the public opinion of the circular economy is not yet sufficient (Sariatli, 2017). Circular Academy (n.d.) is also mentioning these weaknesses. They claim that studying the circular economy from practical and scientific perspectives is important in the process to implement circular principles effectively (Circular Academy, n.d.). Furthermore, it is difficult to measure the circular economy (Kovacic et al., 2020). This means that it is difficult to make an overall sum of to what extent we reached a circular economy and what it yields.

Researchers also have critics of the circular economy. First of all, criticism is about the infeasibility of the circular economy (Kovacic et al., 2020). Within the circular economy, the aim is to close loops, this is however seen as impossible. There is also criticism about if closing the loops of materials and products is really preventing primary production, this criticism is however directly refuted (Zink & Geyer, 2017). Whalen & Whalen (2020) criticize the different business models which are presented as inspiration for the circular economy. They conclude that many 'circular' business models do contribute just a little to 'ecological sustainability' (Whalen & Whalen, 2020). Korhonen et al. (2018) claim that many key questions about the circular economy are still open.

Many challenges and critics are based on the fact that a lot about the circular economy is unknown. More scientific research is necessary to answer all questions. Korhonen et al. (2018, p.45) who did research to and write about the limitations of the circular economy, however still argue that the circular economy "seems to be a promising concept". So, the challenges, weaknesses and critics are considered, but it is judged that they do not outweigh all the research in which the circular economy is seen as a possible solution for the existing climate problems.

2.2 Transition management

Different theories exist about change and transitions. In this section, first of all, different theories about change and social practices are briefly elaborated. Afterward, the theory about transition management is explored in depth.

2.2.1 Definition

First of all, Green (2016) indicates that change is not a linear process. Green (2016, p.9) uses a systematic approach: “a ‘system’ is an interconnected set of elements coherently organized in a way that achieves something. It is more than the sum of its parts”. The changes in complex systems, like the economic system in the Netherlands, never happens quickly. Within his theory, ‘activists’ play a role, but “shifts in technology, prices, demography, and sheer accident can be far more important than the actions of would-be change agents” (Green, 2016, p.257).

Shove et al. (2012) focus in their theory about social practices on how societies change. They assume that “the source of changed behavior lies in the development of practices” (Shove, et al., 2012, p.11). This social practice theory is based on the ‘theories of process’, in which that which is analyzed can change over time (Shove et al., 2012). The focus within this theory is on individual behavior.

Both theories give useful and important insights on how to analyze change. The transition to a circular economy is about a change in a whole system. Within this research, the focus is on the role of individual frontrunners. The theory of transition management is chosen because of the broad focus on systematic change as a whole on the one hand, but also space for individual contributions on the other hand.

“It requires a different way of thinking, a different way of looking at the problem and a different type of language (system language) that allows us to describe and understand what is going on and see how we can actually change it” (Simons & Nijhof, 2021, p.19). Einstein (in Simons & Nijhof, 2021, p.22) said the famous words: “you can’t solve a problem by using the same thinking that created it”. These statements by Simons and Nijhof, and Einstein show that another way of thinking and looking is necessary to change ‘the system’. To reach a circular economy, current institutions need to gain more awareness and a circular philosophy needs to be embedded in the whole design process (Upadhayay & Alqassimi, 2018). Geels (2011) describes the systematic changes as ‘socio-technical transitions’, because of the changes in different sectors and practices. “At the core of ‘transition management’ is the challenge of orienting long-term change in large socio-technical systems” (Meadowcroft, 2009, p.324). Meadowcroft (2009) elaborates on transition as a change in the rules of the game, change in social practices, and development in technologies. Meadowcroft (2009, p.324) defines management as “a conscious effort to guide such transitions along”. This broad focus on at one hand transitions and at the other hand management makes it very well applicable for this research on the role of circular champions in the transition to a circular economy.

Thrive (in Het Groene Brein, 2021, p.8) states that “transition management looks at the dynamics of the entire transition process and is concerned with both innovation (construction) and changes in existing social institutions (conversion and reduction)”. Geels (2011, p.24) defines transitions as “complex and long-term processes comprising multiple actors”. Furthermore, he gives three characteristics, which especially apply to sustainability transitions. The first characteristic is about the specific goal or purpose of the transition. He gives as the second characteristic that sustainability transitions in the first place do not offer obvious user benefits. The last characteristic is about the domains in which sustainability transitions are most needed. These domains are dominated by large firms which own ‘complementary assets’. Sustainability transitions are multi-dimensional and the interaction between different actors is important (Geels, 2011).

The different views on transitions and transition management are considered. A combination of different definitions, elaborated before, are used to form the definition of transition management used in this research:

Transition management is the management of a dynamic, long-term system-change process with a focus on both innovation and changing social institutions. (Meadowcroft, 2009; Het Groene Brein, 2021; Geels, 2011)

It is assumed that the phase of a transition affects the strategies a circular champion uses. Therefore, the phase of the transition is included in the research. The different phases used in this research are pre-development, start-up, speed-up, and stabilize based on the work of Hanemaaijer et al. (2021). The elaboration of these phases follows in the next section.

2.2.2 Phases

Based on a report of Bode et al. (2019) and the scientific article of Hekkert et al. (2020), Hanemaaijer et al. (2021) assumes that a transition goes through different phases. Hanemaaijer et al. (2021) distinguish four phases:

1. Pre-development;
2. Start-up;
3. Speed-up;
4. Stabilize.

Each phase has its own characteristics. In the pre-development phase, a lot of knowledge questions and many knowledge developments are alive. There is a start of innovation experiments, but the established system is still functioning. In the next phase, the start-up phase, entrepreneurs start with some commercial activities. Furthermore, initiators start to collaborate and the urgency becomes clearer. A fundamental discussion exists about the vision and direction of the future. In the speed-up phase, a substantial market demand originates. On the one hand, there is a lot of resistance, on the other hand, the 'rules of the game' start to change. Contradictions and uncertainties are under discussion. In the stabilization phase, the new 'rules of the game' have become the new normal and the resistance has decreased. However, it is still being optimized (Hanemaaijer et al., 2021).

2.3 Circular champions

Lastly, the term circular champion is elaborated. Loorbach et al., (2015, p.61) state: "key to transition management is the empowerment of frontrunners". In scientific literature, different terms are used for individual frontrunners, such as policy entrepreneurs or change agents (Taylor et al., 2012; Flynn et al., 2020). First of all, these different terms are elaborated. Afterward, the term circular champion is elaborated in-depth, and attention is paid to the strategies they use.

2.3.1 Definition

Verduijn (2015) indicates that policy entrepreneurs can be recognized by what they do, and not specifically by which role they have. Policy entrepreneurs are "highly talented and exceptional bureaucrats, who, just like their private counterparts, are constantly on the alert for new opportunities (for policy change) and have the capacity to 'sell' and 'market' new ideas" (Brouwer & Huitema, 2018, p.1259). The term change agents and policy entrepreneurs are often used alternately; a clear distinction between the two does not exist (Brouwer & Huitema, 2018).

Then we look into environmental leaders, which are highly motivated and they have some personality characteristics which are strongly developed. They are confident, enthusiastic, and persistent. Furthermore, environmental leaders have the power to influence others (Taylor et al., 2012). Environmental leaders are described as "emergent leaders who are centrally involved with effecting transformations within their own organizations or broader institutions such as their industry sector" (Taylor et al., 2012, p. 85).

In reports, the term circular champion is popping up more and more (Byström, 2018). However scientific research about circular champions is scarce. For this reason, in this part, the focus is on the one hand on the practical elaboration of circular champions, but also on the scientific elaboration of environmental champions. The term environmental champion is derived from the 'champions of innovation' literature (Taylor et al., 2012). Champions can play an essential role in driving change (Taylor et al., 2011) and they often lay at the basis of product development and innovation. To take care of realizing product innovations, champions are necessary (Taylor et al., 2012). Champions are seen as individuals who emerge informally in an organization. They make an important contribution to innovation through their active and enthusiastic promotion (Howell et al., 2005). The combination of their personal beliefs and the topic on the table is most important in their emergence as leaders, whereas the description of their formal roles matters less. Therefore, an environmental champion can appear at each level in an organization.

The European Investment Bank wrote in 2015 the Report: 'The 15 circular steps for cities' (Byström, 2018). One of these 15 steps is "contact and learn from circular pioneers and champions" (Byström, 2018, p.9). These circular champions are described as people with insight, energy, and passion who "can drive and inspire circular change" (Byström, 2018, p.9). Hans Kröder and Lex Eschauzier established the social enterprise 'circular champions'. They offer an implementation program with the goal to assist organizations with their transition to a circular economy (circular champions, n.d.). The attention for circular champions is growing; scientific literature is however limited.

The definitions of policy entrepreneurs, change agents, environmental leaders, and environmental champions are all focused on individual frontrunners in a certain transition. However, the terms also have some differences. So are policy entrepreneurs and change agents mostly focusing on change in policies. Environmental leaders and champions focus on broader environmental transitions. A widely accepted definition of champions does not exist (Taylor et al., 2011). It is chosen to formulate a new definition because of the specific focus on champions in the transition to a circular economy. This focus is different from champions in other environmental transitions because of the more concrete focus on circular principles. Furthermore, the focus of circular champions is not only on policy change but on the change of a whole system. In this research, the definitions of a circular economy and an environmental champion in combination with policy entrepreneur and change agent are used to come to the definition of a circular champion:

A circular champion is a person with knowledge about and experience in the circular economy. This person is involved in affecting the transition to a circular economy. A circular champion is willing and able to involve and lead others in the transition to a circular economy. It is not about a formal role, but about the power to influence others. (Andersson & Bateman, 2000; Howell et al., 2005; Taylor et al., 2012; Flynn et al., 2020, Byström, 2018)

2.3.2 Strategies

Champions use different strategies to fulfill their role. Andersson & Bateman (2000) distinguish three activities that emerge from a variety of definitions which can be considered as parts of the process of championing. First of all, a champion needs to get aware of the issue. Anderson & Bateman (2000) refer to this as 'the identification of an issue'. The method of scanning behaviors and scanning sources can be used to gain as much valuable knowledge as possible. The frequent internal and external scanning behavior of a champion increases the probability "of a successful environmental championing episode" (Andersson & Bateman, 2000, p.550). Secondly, the packaging of an issue is distinguished by Anderson & Bateman (2000). The framing and presentation of an issue can be powerful aids in championing issues. By framing an issue, champions choose which aspects to highlight and which not. They also discovered that financial opportunities, urgency, local impact, and ease are successful

framing dimensions to frame environmental issues. Furthermore, Anderson & Bateman (2000) discovered that within the presentation of an issue the use of drama and emotions does not have a positive effect. The use of metaphors however increased the likelihood of successful championing. The last activity Anderson & Bateman distinguish is the selling of an issue. A champion can use different methods to persuade someone to get involved in a specific topic. Using coalition building and an inspirational appeal within the selling of an issue increased the probability of a successful championing episode.

These three activities of Anderson & Bateman follow each other up and can be used in any kind of situation. These strategies are however quite narrow and they are not focusing on ‘connection’ or ‘linking’ different people. Therefore, the entrepreneurial policy change strategies of Brouwer & Huitema (2018) are also elaborated. Brouwer & Huitema (2018, p.1266) distinguish 10 entrepreneurial policy change strategies which can be divided into four categories. In figure 3, the four categories and the 10 policy change strategies can be found.

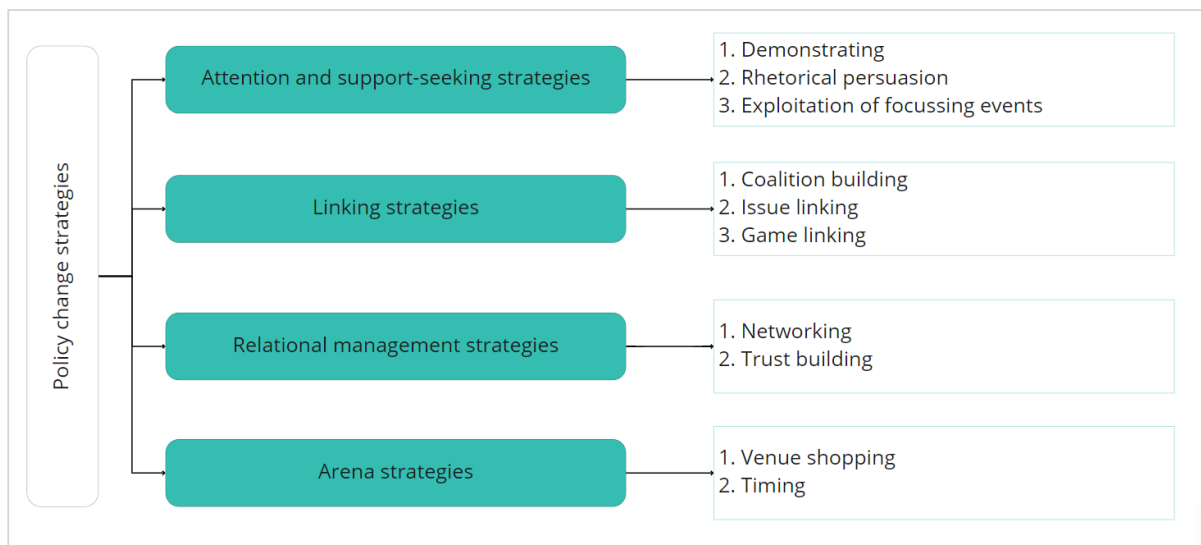


FIGURE 3: ENTREPRENEURIAL POLICY CHANGE STRATEGIES

Within the category of attention and support-seeking strategies, demonstrating is the first one. Demonstrating is about creating attention for certain problems and their value. Rhetorical persuasion is used to convince people of the necessity of a problem and to make sure that other people adopt the ideas of a change agent. Furthermore, focusing events are used to increase the attention for a certain problem (Brouwer & Huitema, 2018). Focusing events often change which issues are dominant in the policy domain (Birkland, 1998). “Focusing events are described as sudden, relatively uncommon events that are immediately harmful or expose the risk of potentially greater future harms” (Brouwer & Huitema, 2018, p.1265).

The linking strategies are divided into three. The first one is coalition building, this means that policy entrepreneurs seek to collaborate with others to realize their ideas. Various advantages exist about coalition building, like legitimacy, additional financial resources, and the idea that increasing the number of actors involved within a certain policy leads to better (informed) decisions (Brouwer & Huitema, 2018, p.1265). Besides collaboration and the linking of people to each other, issue linking is used. This implies that different problems can be linked and also different solutions can sometimes be linked. Within this strategy, it is tried to get acceptance for their own problem or solution, but it is also looked at if a link can be made with other problems. The last linking strategy is game linking. Within

game linking, change agents try to acquire support from other change agents by making concessions to help them (Brouwer & Huitema, 2018).

Networking and trust building are the two relational management strategies. Networking is about getting to know all different kinds of people who can be helpful. Networks differ from coalitions in their broadness (Brouwer & Huitema, 2018). Networks “refer to the whole of relations that an entrepreneur maintains” (Brouwer & Huitema, 2018, p.1267). Networks are essential, without the support of other actors, efforts can fail (De Bruijn & Ten Heuvelhof, 2008). Besides networking, trust building is an important strategy that is used in different phases of the process of change (Brouwer & Huitema, 2018).

The last category is arena strategy, within which a distinction is made between venue shopping and timing. First venue shopping is distinguished, which means that the most promising location or locus to come up with their ideas is searched. At last, timing is really important in the process of managing change (Brouwer & Huitema, 2018).

These 10 strategies are set up in the light of policy change. The transition to a circular economy is partly a change in policy but is actually broader. Nevertheless, it is assumed that these strategies are also fitting in the transition to a circular economy. Furthermore, Howell et al. (2005, p.644) claim that reports written about champions are “largely anecdotal, reflecting the researcher’s impressions, rather than reliable and valid measurement using well-accepted instruments”. Therefore, it is decided to use the 10 entrepreneurial policy change strategies within this research. In line with Anderson & Bateman (2000), and Brouwer & Huitema (2018), Van Eerd et al. (2018, p.426) concluded that the use of “a smart combination of framing, coalition-building, venue shopping and timing strategies” is important in the implementation experiences within water governance in the EU.

The strategies of circular champions are divided into four ‘championing strategies’ of Brouwer & Huitema (2018): 1) attention and support-seeking strategies, 2) linking strategies, 3) relational management strategies, and 4) arena strategies. In this research it is investigated which strategies circular champions use in the transition to a circular economy.

2.4 Theoretical and conceptual framework

Within this section, first of all, the conceptual framework is elaborated. Furthermore, the operationalization of the concepts found in the conceptual model is included.

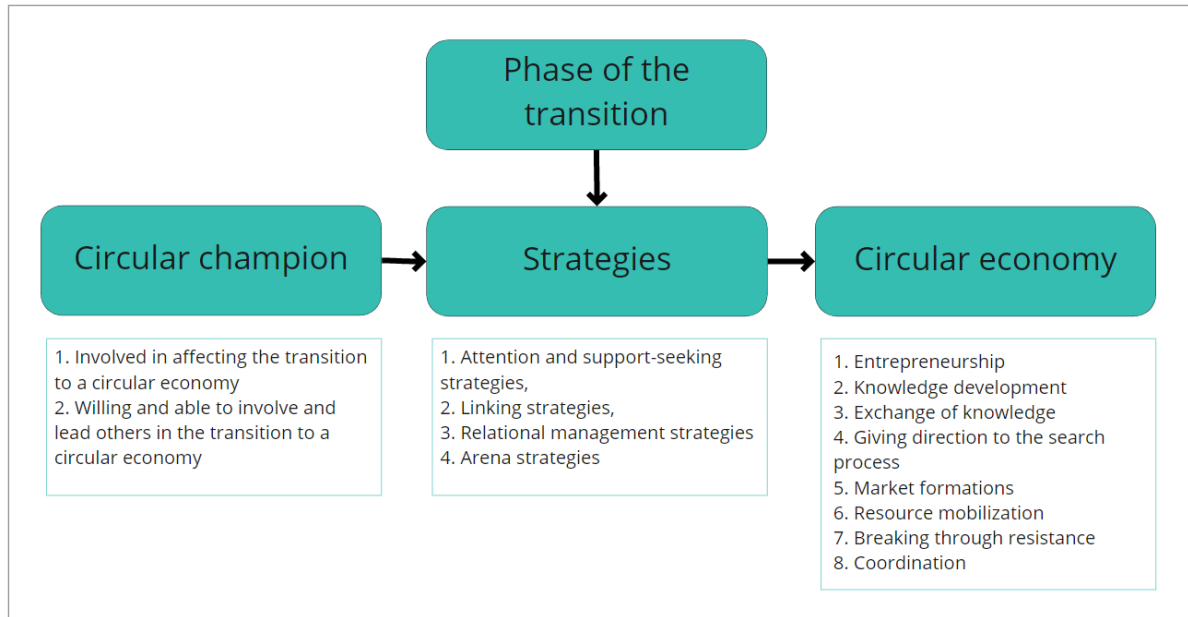


FIGURE 4: CONCEPTUAL FRAMEWORK

2.4.1 The conceptual framework

Within the conceptual framework (figure 4), the earlier elaborated concepts are linked to each other. In this research, the role and strategies of circular champions in the transition from a linear economy towards a circular economy are central.

As visible in the conceptual framework, the focus is on the role of circular champions and especially on the strategies they use to accelerate the transition to a circular economy. These strategies are divided into four categories of strategies: 1) attention and support-seeking strategies, 2) linking strategies, 3) relational management strategies, and 4) arena strategies (Brouwer & Huitema, 2018). The circular champion strategies affect the transition to a circular economy. The phase of the transition can influence the strategies of a circular champion. The transition phases that are assumed are pre-development, start-up, speed-up, and stabilize (Hanemaaijer et al. 2021). The eight factors of the PBL (Hanemaaijer et al., 2021) are used to operationalize the transition to a circular economy. All in all, the theory of transition management is used in combination with the theory of policy change strategies, the theory of environmental champions, and the circular economy to come to an answer to the research question.

2.4.2 Operationalization

In this chapter, the operationalization of the concept is elaborated. First of all, the focus is on the operationalization of circular champions. Thereafter, there will be looked at the different transition phases which are included in the research. Then the operationalized circular champions strategies are discussed. This chapter ends with the elaboration of the components of a successful circular economic transition.

Circular champions who participated in this research, are checked on the characteristics of circular champions which are detailed in table 1. The first check is done before the interview, with small online research on Google. The remaining characteristics are checked upon during the interview. Further elaboration of this check follows later in this research. The predefined characteristics of a circular

champion are elaborated after the interviews are held. After the interviews, it is looked into comparisons and differences between all circular champions.

Circular champion (Andersson & Bateman, 2000; Howell et al., 2005; Taylor et al., 2012; Flynn et al., 2020, Byström, 2018).	
Involved in affecting the transition to a circular economy	The interviewee is involved in the transition, which means that the interviewee plays an active role in the transition to a circular economy.
Willing and able to involve and lead others in the transition to a circular economy	The interviewee has the willingness and the ability to influence others to get involved in the transition to a circular economy.

TABLE 1: OPERATIONALIZATION CIRCULAR CHAMPION

The different phases of a transition are recognized by the characteristics of the phases, described in table 2. Based on these characteristics, the phase in which a circular champion operates or did operate can be determined. It is investigated in which phase circular champions mostly come into action. Furthermore, the impact of the phase at stake on the strategies that are deployed is looked into.

Transition Phases (Hanemaaijer et al., 2021)	
Pre-development	Knowledge questions, knowledge developments
	Start of innovation experiments
	Established system is still functioning
Start-up	Entrepreneurs start with commercial activities
	Initiators start to collaborate
	Urgency becomes clearer
Speed-up	Substantial market demand originates
	A lot of resistance, but 'the rules of the games' start to change
	Contradictions and uncertainties are under discussion
Stabilize	The new 'rules of the game' has become the new normal
	Resistance has decreased
	The system is still being optimized.

TABLE 2: OPERATIONALIZATION TRANSITION PHASES

Within the operationalization of the champion strategies, four categories can be distinguished. The four kinds of strategies from Brouwer & Huitema (2018) are used. In table 3, the different strategies are mentioned, with at the second column the sub-strategies. These sub-strategies make clearer what

Kind of circular champion strategies (Brouwer & Huitema, 2018)	
Attention and support-seeking strategies	Demonstrating
	Rhetorical persuasion
	The exploitation of focusing event
Linking strategies	Coalition building
	Issue linking
	Game linking.
Relational management strategies	Networking
	Trust building
Arena strategies	Venue shopping
	Timing

TABLE 3: OPERATIONALIZATION CIRCULAR CHAMPION STRATEGIES

kind of strategies fall under each group of strategies. In this research, it is looked into what strategies circular champions use to accelerate the transition to a circular economy.

It is looked into which components of a successful transition towards a circular economy, determined by the PBL (Hanemaaijer et al., 2021) circular champions contribute to. The focus on the Mission-oriented Innovation System (Hekkert et al., 2020) and these eight components (Hanemaaijer et al., 2021) is chosen because they focus on a circular economy in general. The eight components are visible in table 4. These eight components are essential for a successful transition to a circular economy. More specifically it is investigated in what way circular champions contribute to the eight factors for a successful transition to a circular economy.

Components of a successful circular economic transition (Hanemaaijer et al., 2021)	
Entrepreneurship	For introducing and upscaling circular initiatives, entrepreneurs are important. They can bring new technologies, products, and business models to the market.
Knowledge development	Knowledge is essential for innovation. More and new knowledge about the transition to a circular economic system can help entrepreneurs, policymakers, and others to continue the transition to a circular economy.
Exchange of knowledge	In addition to the development of knowledge, the exchange of knowledge counts. The exchange of knowledge between entrepreneurs, governments, and knowledge institutions can help to accelerate the transition to a circular economy.
Giving direction to the search process	At the beginning of a transition, a lot of uncertainty exists. For a successful circular economic transition, some people must give direction to this process. This can save a lot of time, money, and effort.
Market formation	Stable market demand for circular materials, products, and services is essential for a transition to a circular economy. Substantial market demand can give trust to entrepreneurs and investors.
Resource mobilization	Well-educated people and financial resources are necessary to accelerate the transition to a circular economy.
Breaking through resistance	A transition is often in conflict with the established order. It is needed to overcome this resistance. On the one hand, new systems need to be built, but on the other hand, old systems need to be broken down. The common habits of people are often based on the linear economic system. This can cause resistance, which needs to be eliminated.
Coordination	The transition to a circular economy is a complicated mix of change processes. The different change processes can supplement each other, but they can also compete with each other. Those separate change processes must be attuned to each other by one or more coordinators.

TABLE 4: COMPONENTS OF A SUCCESSFUL CIRCULAR ECONOMIC TRANSITION

3. Methodology

This chapter covers the methodology and conceptualization of the research. First, the research design and the research strategy are featured, then the data collection and data analysis are elaborated. This chapter ends with an elaboration of the research philosophy, validity, reliability, and ethics.

3.1 Research design

In the figure below, a schematic overview of the research phases is shown.

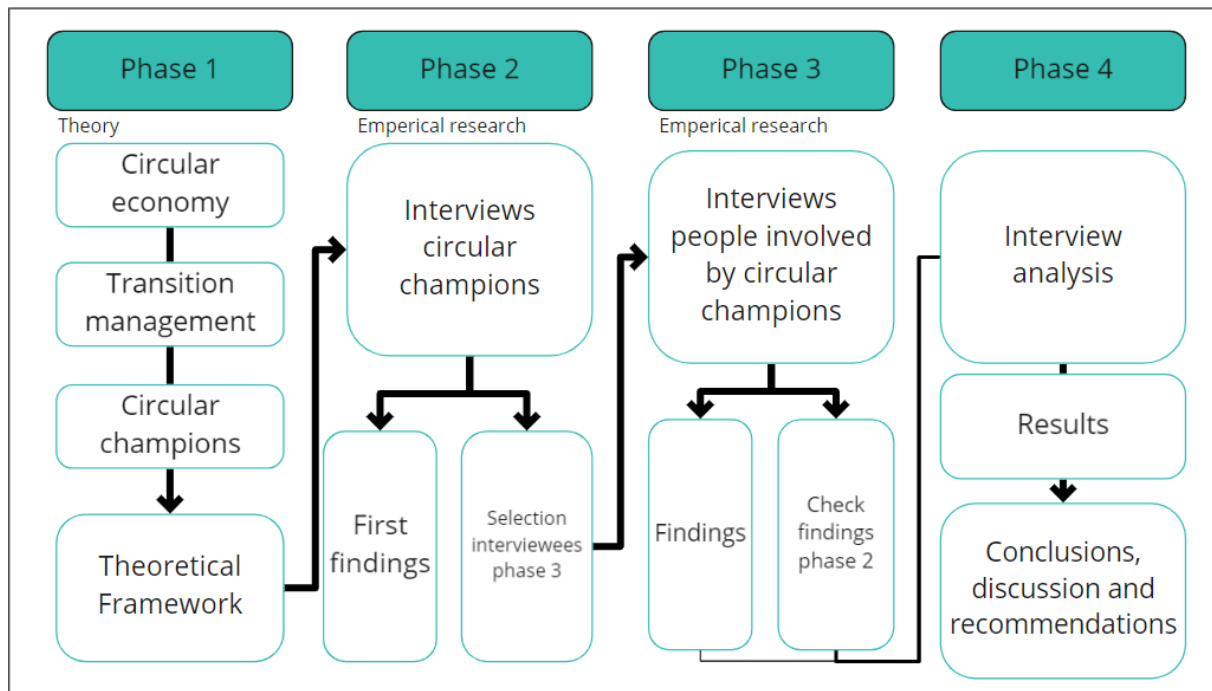


FIGURE 5: RESEARCH DESIGN

In the first phase, the focus was on theoretical research. The first phase ended in a theoretical framework which serves as a basis for the next phases. In the second phase, the first interviews with circular champions are conducted. In this first round of interviews, more clarity is found about the role circular champions play in the transition to a circular economy. The original purpose of the second round was to interview people who were involved in the transition to a circular economy by the interviewed circular champions. So, beforehand it was the idea to no longer interview circular champions in the second round but fully focus on people who are involved in the transition to a circular economy by circular champions. Unfortunately, it was difficult to come in contact with these people, so also in the second round, mostly circular champions were interviewed. Two employees of circular champions were willing to participate in this research. These two employees are interviewed on the one hand to find new insights, and on the other hand, they were able to reflect on the circular champions they know. In the fourth phase, all collected data is transcribed, analyzed, and compared. Phase four ends with a conclusion, discussion, and recommendations for further research.

3.2 Research strategy

3.2.1 Case

Within this research, the focus is on circular champions in the Netherlands. It is chosen to focus on the Netherlands, because of the Dutch network of the researcher and the internship coordinator. Within the case of the Netherlands, not one specific sector or organization is chosen because the research aims to discover similarities and differences between individuals who are involved and have involved others in the transition to a circular economy. The definition of a circular champion is about individual

persons, that is the reason that the focus in this research is on individual persons in different sectors and organizations. It is tried to find out how circular champions see and fulfill their role.

3.2.2 Qualitative research

To find an answer to the main question, qualitative research is carried out. Qualitative research is chosen because of the in-depth interest in individual research objects. An attempt is made to clarify underlying motivations and opinions of circular champions. Within qualitative research, the possibility to ask in-depth questions to the interviewees and learn more about what moves them is provided (van Thiel, 2007). The interpreting and analysis of qualitative data are mostly an iterative process. Due to the iterative nature of the research, a systematic approach is essential for valid and reliable research (van Thiel, 2007). To answer the sub-questions, the interviews are linked to the scientific basis in the theoretical framework. This theory is expanded, based on the interviews with circular champions.

3.3 Research methods, data collection, and data analysis

Qualitative research can be divided into three phases: “data collection, data ordering and the actual analysis” (van Thiel, 2007, p.138). The data collection phase consists of two parts. First of all, a secondary literature study is carried out to set a solid basis for the primary research part. Secondly, the primary research is conducted, in which interviews were organized.

3.3.1 Sampling strategy

The interviewees are partly selected based on non-probability sampling. Non-probability sampling means that the participants of the research are selected consciously and purposively (van Thiel, 2007). This applies to most of the circular champions included in the research. These circular champions are in the network of Malu Hilverink, my internship coordinator and a circular champion by herself, or in the network of Thijs Aarden, my other internship supervisor. These circular champions are personally asked to contribute to this research. An e-mail was sent to them, the e-mail can be found in Appendix 2. On the other hand, probability-sampling is used to find circular champions who wanted to participate in this research. These circular champions are reached by a post on LinkedIn (see Appendix 1) by Over Morgen. This post was shared by Malu Hilverink, and the researcher. The post of Malu was also shared by Jan Rotmans, professor in Sustainability Transitions at Drift, Erasmus University Rotterdam. This post caused a lot of reactions from circular champions, and from people who consider others as circular champions. All circular champions were looked into via Google and discussed with my supervisor. People who seemed to fit the definition of a circular champion were asked to participate in the research.

The snowball method was used to find people who are involved in the transition to a circular economy by circular champions. This means that from the first group of people, a sample is drawn (Goodman, 1961). This method of sampling is a way to reach a specific group of people (Naderifar et al., 2017). In this research, the snowball method is used to reach people who are involved in the transition to a circular economy by a circular champion. The circular champions who are interviewed, are asked for people who they did involve in the transition to a circular economy and were willing to participate in the research. During the interviews, it became clear that this is a very difficult question and often also a question people do not want to answer. “People who are now on the move always forget that they were not so enthusiastic” (interview 11), “you can never talk about that again” (interview 11) are reactions to this question. Therefore, it is decided to focus more on circular champions who wanted to participate in this research.

3.3.2 Bias

Within this research, a very specific group of people is involved. This specific focus group was reached via the networks of my internship supervisors. Within this specific focus group, a varied research group

is involved in this research, to avoid results that are based on other characteristics (like gender or age) than the specific characteristics (like experience) of a circular champion. The circular champions included in this research differ in function, gender, age, and company they are working for. In figures 6-8 the different characteristics and the distribution of the groups are displayed. The diverse group of interviewees only applies to the circular champions involved in this research; the employees of circular champions have been disregarded.

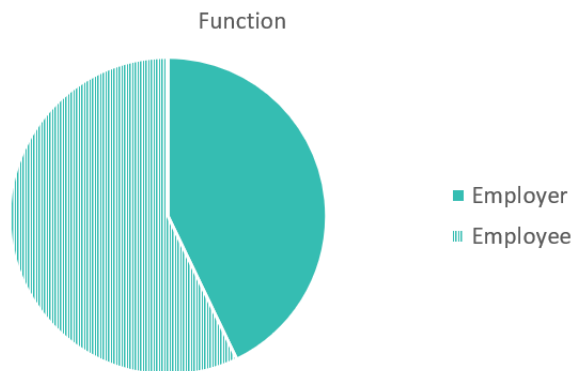


FIGURE 6: FUNCTION INTERVIEWEES

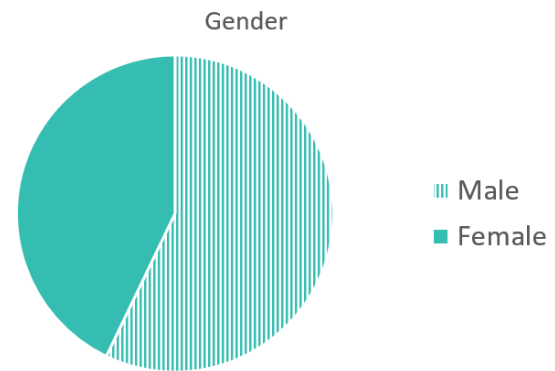


FIGURE 7: GENDER INTERVIEWEES

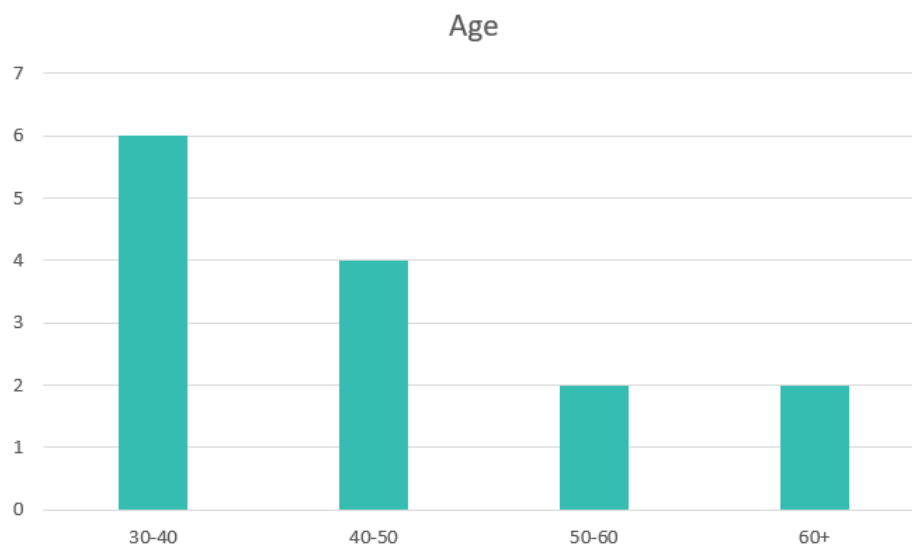


FIGURE 8: AGE INTERVIEWEES

By using different ways to reach participants and asking both my internship coordinators, with both other networks, an attempt is made to shrink the chance of selection bias.

3.3.3 Interviewees

The study population firstly consists of individuals who match the definition of a circular champion. Furthermore, people who were involved by these circular champions in the transition to a circular economy are included.

14 circular champions and 2 employees of circular champions are involved in this research. Due to the limited time available, it was not possible to include more respondents in this research. In the cases that it was possible, it is looked into the role of a circular champion from two perspectives; from the perspective of the circular champion himself/herself and the perspective of an employee of the circular champion.

In table 5, there is an overview (in alphabetical order) of the people who participated in this research, as well as the company they are working for, a short description of the company they are working for, and their function. Circular champions working in different sectors are included in this research. Although the goal is to gain more insight in the role of circular champions in general, differences in specific roles, strategies, or characteristics between sectors are also investigated.

Name	Company	Function
Arend van de Beek	Lagemaat	Program Manager Circular Economy
	Lagemaat is a medium-sized wrecker with a special focus for circularity.	
Tom Blankendaal	Royal BAM group	Project Manager Circular Economy
	BAM is a company in the field of construction, infrastructure, PPP investments and facility management.	
Guido Braam	Powered by Meaning	Co-owner
	Powered by Meaning is a holding company that includes 12 companies, all with the mission to contribute to a better world.	
Karin Dorrepaal	DOOR architecten	Partner
	DOOR architecten is an architectural firm specialized in circular construction.	
Douwe Jan Joustra	Independent	Self-employed
	Douwe Jan Joustra worked for different companies as expert in circular economy. Now he is retired, but still helping people as a coach or external expert by reflecting on all kinds of initiatives that call themselves circular	
Barbara Harskamp	Omgevingsdienst Noord-Holland-Noord	Ambassador Circular
	Omgevingsdienst Noord-Holland-Noord is a fusion between the environmental services Region Alkmaar, Kop van Noord-Holland, West-Friesland and the province of Noord-Holland.	
Malu Hilverink	Over Morgen	Ambassador Circular
	Over Morgen is a consultancy firm for the sustainable living environment.	
Sander Lubberhuizen	Circulogic	Self-employed
	As a transition broker, Circulogic is an intermediary to align relevant parties.	
Maarten Markus	AM	Project Manager Sustainability
	AM is the second largest project developer in the Netherlands.	
Sladjana Mijatovic	BPD	Sustainability & Circular Economy Manager
	BPD is the largest project developer in the Netherlands.	
Cécile van Oppen	Copper8	Co-founder
	Copper8 uses advice, research and entrepreneurship to realize the circular economy.	
Wouter Schik	Arcadis	Specialist Sustainable Design and Development
	Arcadis is an international company that provides design, engineering and consultancy services for a sustainable built and natural environment	
Willy Smit	WAM&VanDuren	Managing Director
	WAM&VanDuren Construction group is a construction company in the Achterhoek with a focus on integral development, design, construction and maintenance of real estate.	
Yvette Watson	PHI Factory	Co-owner

	PHI Factory is a consultancy firm, they help organizations accelerate towards a circular economy.	
Employee Company X	Company X	Employee
Employee Company Y	Company Y	Employee

TABLE 5: INTERVIEWEES

The circular champions involved in the research meet the criteria of circular champions elaborated in the previous chapter. These criteria are checked for each circular champion. Partly this check is based on an online search of the respondents. The criteria which are not able to be checked online, are checked during the interviews. In table 6, a check is done on the requirements for circular champions. In the column 'willing and able to involve and lead others in the transition to a circular economy', examples are given which show that the involved people are circular champions. Because of the agreement not to use quotes traceable to a person, no quotes from circular champions are visible in the table.

Name	Involved in affecting the transition to a circular economy	Willing and able to involve and lead others in the transition to a circular economy
Arend van de Beek	Program manager Circularity at Lagemaat.	Arend van de Beek was speaker on the 4PM in the Cleantech Center, to tell more about circularity in demolition (Lagemaat BV., n.d.).
Tom Blankendaal	Project Manager Circular Economy at BAM.	Confirmed in interview with an example.
Guido Braam	Circular Hero 2021, 'Guido knows how to reach and inspire many people' (<i>Erkenning Voor Circulaire Aanjagers – Week van de Circulaire Economie</i> , n.d.).	
Karin Dorrepaal	Co-founder DOOR, an architectural firm specialized in circular construction and pioneer in this field.	
Douwe Jan Joustra	Independent circular economy expert with a lot of experience in circularity.	Douwe Jan was keynote speaker at the launch of Dutch Circular Textile Valley (Admiraal, 2019).
Barbara Harskamp	Ambassador circularity at Omgevingsdienst Noord-Holland-Noord.	Confirmed in interview with an example.
Malu Hilverink	Ambassador circularity at Over Morgen.	One of the founding fathers of CIRCL (in which many people are involved).
Sander Lubberhuizen	Founder Circulogic, with the experience to help others to achieve a circular economy.	
Maarten Markus	Project manager sustainability at AM (with special focus on circularity).	Confirmed in interview with an example.
Sladjana Mijatovic	Sustainability & Circular Economy Manager BPD.	Confirmed in interview with an example.
Cécile van Oppen	Co-founder Copper8 who uses advice, research and entrepreneurship to realize the circular economy.	

Wouter Schik	Expert sustainable design and development at Arcadis (with special focus on circularity).	Confirmed in interview with an example.
Willy Smit	Managing Director of WAM&VanDuren with as one of the expertise: circularity.	Willy Smit is the driving force behind and spinner/connector of De Achterhoek Circle Region (Hagelstein, 2019).
Yvette Watson	Co-founder PHI factory, in which she helps organizations to accelerate towards a circular economy.	

TABLE 6: CHECKED CRITERIA CIRCULAR CHAMPIONS

3.3.4 Semi-structured interviews

The interviews are conducted semi-structured (van Thiel, 2007). This means a topic list with some questions is prepared in advance, but all questions are asked in different order in each interview. The list touches upon the following topics: involvement in the circular economy, definition of a circular economy, role in the transition to a circular economy, activities undertaken to involve more people, involvement of people in the transition to a circular economy, and other. Within these topics, different questions were asked. In the semi-structured interviews was a lot of space to ask the interviewees in-depth questions.

3.3.5 Content interviews

The goal of the interviews with the circular champions was to get insight in 1) what motivated them to become circular champions, 2) what is their role in the transition to a circular economy, and 3) what conditions are necessary to fulfill their role as circular champions. The focus laid on these themes, with special attention to the strategies circular champions used. The used interview guide can be found in Appendix 3. The method of interviewing is chosen because the research objects are individuals, and it was meant to collect in-depth data.

Via the circular champions, a few interviews were also conducted with the people they inspired. Thereby, the role of the circular champion is reviewed from their perspective.

3.3.6 Processing and analyzing

The interviews were recorded, and transcribed afterward. For transcribing the interviews, there is made use of Word Online. This program transcribed the audio of the interviews. All transcriptions are checked and corrected afterwards. Coding is used to organize the data. Three interviews were planned significantly later than the first 13 interviews. Therefore, it is decided to first code the 13 interviews and add the last three interviews later. The coding is done inductively to make it possible to respond to the answers of participants. Therefore, two cycles are distinguished. In the first cycle, open coding is done. After the open coding, more than 450 codes were assigned to the interviews. In the second cycle, the codes from the first cycle were compared, linked, and merged within the axial coding phase. Within this second cycle, the theories and concepts described in the theoretical framework are used to organize the data. For the three interviews that are coded later, list-coding is used. The codes which were set up in and after the first and second cycle of coding, are applied to these last interviews. *Atlas.it* is used to code all data (Miles et al., 2020). After the completion of coding, 8 categories of codes and 3 codes which do not fit into a code group remained. In appendix 4, the coding table can be found. The codes partly relate back to the theories elaborated in the theoretical framework. After the coding, the data is looked into to find similarities and differences.

3.4 Research philosophy, validity, reliability, and ethics

3.4.1 Research Philosophy

This research is based on an interpretative approach. First of all, this means that the ontology of a subjective reality is assumed (van Thiel, 2007). Also, within epistemology, it is assumed that knowledge cannot objectively be observed (van Thiel, 2007). In this approach, it is assumed that it is not possible to find one empirical world. Every person has his/her own perspective on reality (van Thiel, 2007). An attempt is made to create a level of understanding based on the participating circular champions and other interviewees that look at it from their own context. This means that first of all, the perception of the interviewee was researched (van Thiel, 2007). The scientific theory, which is formulated deductively, forms the basis of the research. The collection of data is carried out inductively.

3.4.2 Validity

Validity is an important criterion for scientific research. The validity can be divided into two parts: the accuracy (internal validity) and the consistency of a measurement (external validity) (van Thiel, 2007). The higher the accuracy and consistency, the higher the validity of the research. First of all, attention is paid to the accuracy of the research. Before the interviews take place, a check on accuracy is done. This means that the interview guide is discussed with fellow students and my internship coordinator before taking the first interview. Within the interviews, the circular champions are often asked to explain answers or dive deeper into the questions they gave. The circular champions are motivated to think really good about what they say and why they give certain answers.

Second, the consistency of the measurement is considered. Different interviewees, and within that, different cases are included in the research. An attempt is made to include circular champions who are involved in totally different projects. On the one hand, circular champions working in the construction industry are involved, but on the other hand, also circular champions active in the social sector participated in this research. After all interviews, the answers are compared. To make sure that all interviewees are asked the same questions, a semi-structured interview is used. The same questions were asked to all interviewees, with an exception of the deeper questions which followed on the answers to the pre-set questions.

A well-known definition of circular champions does not exist. To prevent being dependent on people who think they are circular champions by themselves, all circular champions are screened online. This means that all circular champions are looked into via Google. Articles they wrote or articles written about them are read, and their LinkedIn pages were viewed to check their involvement and experience in the transition to a circular economy. This method is used to triangulate the decision whether people are circular champions or not. Furthermore, employees of circular champions are involved in the research to reflect on and triangulate the answers given by circular champions.

Language has an influence on the expression of an interviewee (van Nes et al., 2010). The native language of the interviewees as well as the native language of the researcher is Dutch. Therefore, the interviews are conducted in Dutch. Interviewing in Dutch contributes to the richness of answers and the avoidance of limitations. This contributes to the quality of the data. However, taking the interviews in Dutch and writing the research report in English also brings difficulties (van Nes et al., 2010). The most important difficulty is not being able to literally translate quotes. Despite this risk, it is judged that the richness of answers and avoidance of limitations outweigh the disadvantages of interviewing in the native language.

3.4.3 Reliability

To make this research as reliable as possible, the interviewed people and the interviewer do not know each other and did not meet each other before the interview. The only exception is made for Malu Hilverink, my internship supervisor. Furthermore, the questions are set up beforehand and can be used again in further research (van Thiel, 2007). However, the increasing knowledge and experience of the researcher during the research can affect the outcomes of the research. Due to previously heard answers, the researcher can focus more on topics discussed in previous interviews. This effect is made as small as possible with a predetermined questionnaire and a random order of the interviews.

In addition, some of the results are looked at from two perspectives: the circular champions themselves and the people they got involved in the transition to a circular economy. Thereby, some answers are verified.

To conclude, all interviews were recorded and transcribed to avoid the dependency on human memory (van Thiel, 2007). Furthermore, a diary was kept in which can be found back which interview found place on which date.

3.4.4 Ethics

People participating in this research are informed about the goal of the research beforehand, to meet the rule of veracity (van Thiel, 2007). Before each interview, the interviewees are informed about some practical issues. First of all, all interviewees participated voluntarily in this research. They were, at any moment, allowed to stop their participation. This has been made clear at the beginning of all interviews. All interviewees are offered the possibility to participate anonymously to the research (van Thiel, 2007). All circular champions agreed to include their names in this thesis, but to make sure that quotes are not traceable to them. A list of all interviews in random order is made and stored on a secured laptop. In this list, every interviewee is assigned a number. In this research, all quotes are referred to these numbers. In addition, some examples which are used are generalized or anonymized. Anonymizing the transcripts of all interviews was quite difficult because there were many specific examples. Therefore, I decided, in consultation with my university supervisor, to only share the elaborated transcripts with her. Only two people participated who are involved in the transition to a circular economy by a circular champion in this research, because of this small amount, the transcription of their interviews are totally anonymous. Furthermore, permission is asked for the recording of the interview beforehand. The transcripts are stored on a secured laptop and also in *Atlas.ti* a password has been set, to guarantee safe storage. After the transcription of the interviews, the recordings of the interviews were deleted. Finally, the final version of the research is shared with the interviewees, so it is completely open where they participated in.

4. Results

Within this research, several interviews are held with circular champions and with people who got involved in the transition to a circular economy by a circular champion. In this chapter, the results of these interviews are discussed. First of all, a distinction is made between three kinds of circular champions; preachers, entrepreneurs, and reformers. Thereafter it is looked into the motivation of circular champions to become circular champions in the first place. Furthermore, attention is paid to the used definitions of a circular economy, personal characteristics of circular champions, and which conditions are necessary to become a circular champion. There is also focus on the strategies which circular champions use in the transition to a circular economy and the role and contribution of circular champions in the transition to a circular economy are considered afterward. At last, the kind of transition circular champions define the transition to a circular economy is elaborated.

4.1 Preachers, entrepreneurs, and reformers

A lot of different circular champions are involved in this research. During the interview with interviewee 5, a distinction in 3 groups of circular champions was discovered:

I think you need different types of champions. Those are the champions that make it socially visible ... You need the enterprising champions who start a new company in no time ... and you need the process facilitators, who support the process and try to implement the fundamental principles as best as they can. (interview 5)

The distinction of interviewee 5 was not just taken over, the distinction was further investigated. After the interview, the division was analyzed and compared with the other data. During the analysis of the data, it turned out that three groups apply to all involved circular champions. Without asking the interviewed circular champions to these specific roles, all interviewees can be classified into these specific types. Therefore, all involved circular champions are divided into three groups. A distinction is made in preachers, entrepreneurs and reformers, as visible in figure 9.

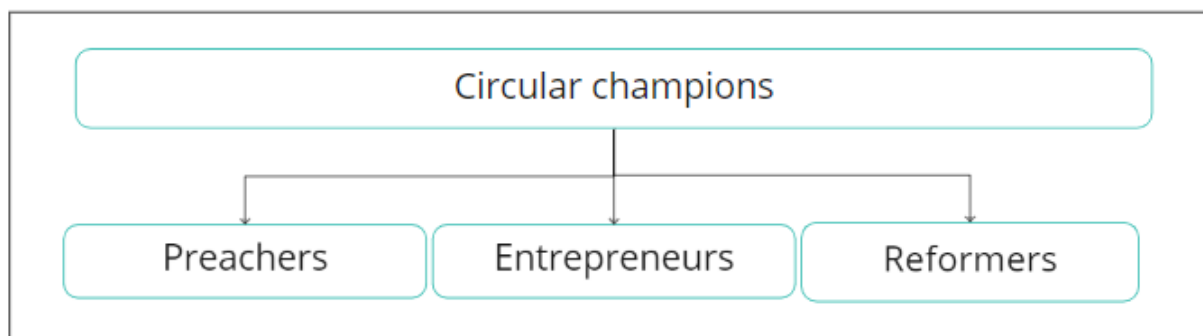


FIGURE 9: GROUPS OF CIRCULAR CHAMPIONS

First of all, there are the circular champions who make the circular economy and its principles visible to society. In this research, they are referred to as *preachers*. They share their circular ideas with the world: “so that just requires a lot of storytelling” (interview 12). Besides sharing their ideas, they also play a role in enthusing people: “I get energy when I can inspire people around me, and I can take them into the ideas, that is the impact for me” (interview 12).

Secondly, the entrepreneurial circular champions can be distinguished. These circular champions start new initiatives and companies, and, with that, make the circular economy practical:

My role is being an entrepreneur because *organization* was nothing, we had no budget, we only made promises to companies and we just started. And well, I set up that organization and

then my role is to ensure that you hire the right people and that you find the right partnerships and that you think about; what in that system is needed now? (interview 8)

This second group are the *entrepreneurs*. These entrepreneurs make the circular economy practical: “so don’t talk about it, but do it” (interview 9).

The third group consists of the process counselors or the supporting circular champions. The circular champions in this group are referred to as *reformers*. This last group tries to implement the basic principles of a circular economy the best they can and they try to convince people of this: “I have a role in the projects we do. Because I want to achieve the highest achievable within the economic frameworks that we have and at the same time we encounter those edges of our economic system in the projects” (interview 10) and “so the nice thing is that I can push against it” (interview 11). Reformers want to empower people to take steps towards a circular economy: “we really want to enable others” (interview 11). These reformers play a role that is more on the background than preachers and entrepreneurs.

All three types of circular champions are necessary and complement each other. The circular champions involved in this research are divided into those three groups. However, some circular champions cannot be placed in a single group, but are part of two different groups. It is often seen that entrepreneurs and reformers also partly fulfill the preacher role. Most circular champions involved in this research are reformers, however, there are also preachers and entrepreneurs interviewed.

In table 7, the division of preachers, entrepreneurs, and reformers in this research is shown.

Number interviewee	Preacher	Entrepreneur	Reformer
1			X
2			X
3	X		X
4			X
5			X
6			X
7	X		X
8	X	X	
9	X	X	
10			X
11			X
12	X		X
13			X
14	X		X

TABLE 7: DIVISION BETWEEN DIFFERENT TYPES OF CIRCULAR CHAMPIONS

4.2 Motivation

All circular champions involved in this research are asked how they got involved in the transition to a circular economy. In the first acquaintance with the circular economy there are no clear differences between preachers, entrepreneurs, and reformers. Most people who are now circular champions were already dedicated to other sustainability issues: “well, I think, we always called it sustainability, so I think in the years 2012 to 15-16 it was mainly sustainability and sustainability has become a kind of catchphrase” (interview 9). From being dedicated to sustainability, most circular champions got accidentally in contact with circularity or the circular economy: “I ended up there quite by accident at the time through my employer” (interview 12). The similarity between all circular champions is that they became enthusiastic about the circular economy right after they came in contact with it:

I think I came into contact with the circular economy in 2012, ... before Michael Braungart and William McDonough with Cradle to Cradle, then I already thought; this is cool, so that means we can keep living, we just have to organize it smarter. (interview 8)

The range in time when circular champions got in contact with the circular economy, is quite big. On the one hand, the circular champions were 'at the cradle' of the circular economy in the Netherlands. On the other hand, circular champions came into contact with the circular economy years later. All circular champions are at least 3 years working in the circular economy right now.

The most common reason for circular champions to become enthusiastic about the circular economy is the necessity for the planet: "if you are honest, we are so wrong, so it is getting really urgent. It has been for a long time, we really have to" (interview 3) and:

We are with far too many people on the planet and we also demand a lot of products, of food, but that also creates a lot of waste and I believe that we are now in a kind of unsustainable system and that a solution must be found. (interview 7)

So, the reason that circular champions want to contribute to the transition to a circular economy can be summarized as: "we all know that resources are running out" (interview 7), "you have to join now" (interview 7). However, some circular champions see the transition to a circular economy as an interesting or nice challenge for themselves too: "I find it very interesting and challenging myself" (interview 13) and "I especially like it a lot" (interview 2).

4.3 Definition circular economy

As already made clear in the theoretical framework, a lot of definitions for the circular economy exist. To check the knowledge about the circular economy of circular champions and to gain insight in their perspective of the definition, all circular champions are asked for their definition of a circular economy. The circular champions involved in this research found it often difficult to give a specific definition and it is often mentioned that a lot of definitions exist. The definitions they gave differ mostly in a focus on technical aspects or a focus on social aspects.

First of all, circular champions in the construction sector have a really clear, and often technical definition of the circular economy: "preventing wastage of raw materials" (interview 2) or "from possession to use, reuse of materials in the broadest sense of the word" (interview 9). In contrast to these definitions, circular champions who do not work in the construction sector, focus more on the attitude: "circular is more of an attitude to me than an abstract definition" (interview 4), "another way of thinking" (interview 12) and "that everyone who works in the circular economy also has an interest in high-quality reuse" (interview 10).

Half of the interviewees are working in the construction sector; the other interviewees are working in other sectors. The circular champions in the construction sector, quickly talk about the definition of circular construction instead of the circular economy as a whole. Timber construction and modular construction are two kinds of construction that come back very often when you talk about circular construction. They are focused on practical solutions and possibilities and improving those, more than circular champions in other fields. Furthermore, the circular champions working in the construction sector see ICT as an important necessity to develop a more circular construction sector: "in fact, we need an ICT tool everywhere to be able to implement it properly" (interview 9). All kinds of technology are essential to convince the construction sector of the possibilities of circular construction: "we solve this by saying, we look at the drawings and, if necessary, we do a scan on the spot with a drone or with laser technology" (interview 14). This is one example of the most practical solutions circular champions in the construction sector focus on, while circular champions in other sectors are focusing more on

social innovation and change. This difference in focus seems to show that within the construction sector, the second phase, the start-up phase, is reached, while in other sectors they are still in the pre-development phase.

Furthermore, the difference between people who focus on mainly the circular economy and people who focus on sustainability a bit broader, and see circularity as an important part of their discipline, is investigated. This can be seen as a distinction between circular champions and environmental champions with a focus on the circular economy. All circular champions involved in the research firstly were dedicated to sustainability. Some of them are still working on sustainability, with a special focus on circular economy. They see the circular economy as a part of sustainability: “circular is, therefore, one of those many puzzle pieces in it. So, I am not only concerned with circular, but circular in how you place that in the broader issue” (interview 4). However, other circular champions see the circular economy as something else than sustainability:

Sustainability means that you say: you should shower for shorter periods, with colder water; less energy, less water consumption. A circular economy is: let companies come up with something with solar boilers and ways to purify water themselves, in your closed loop, your local closed-loop. So, you can shower as long as you want, but it does not bother anyone, with hot water, because you get energy from the sun and you clean your water yourself, so it does not bother anyone. (interview 8)

Within this distinction of circular champions and environmental champions with a focus on circularity, a clear difference between preachers, entrepreneurs, and reformers is not found.

4.4 Personal characteristics

All circular champions were asked what personal characteristics they needed to become circular champions. A few personal characteristics are the same for preachers, entrepreneurs, and reformers, but also some differences have been discovered.

First of all, from the 14 interviewed circular champions, 6 gave their intrinsic motivation or enthusiasm as one of the reasons they became successful as circular champions. The others did not mention their drive as specific, but in all interviews, it became clear that the circular champions were intrinsically motivated to contribute to the transition to a circular economy. One of the interviewees said: “I believe it should start with your own intrinsic motivation anyway” (interview 7). Another interviewee said that “pure enthusiasm” (interview 12) is one of the big reasons that people join the transition because of him/her. In line with this, circular champions want to lead by example: “because I also want to set a good example myself, so I travel with public transport, you know, all that sort of things” (interview 10) and “I try to convey that in everything I do” (interview 10).

Another personal characteristic that applies to most circular champions is courage, “also dare, because it is just a matter of trial and error” (interview 12). This attitude of ‘just trying’ and not knowing all answers is coming back with many circular champions: “I think I am very experimental about it, so not indeed as an expert like ‘I know’ and this is what we are going to do, but much more like I am just curious and interested” (interview 11). This experimental approach fits well in the start-up phase. Having the courage to go, to take steps, without knowing all answers, is an important characteristic for circular champions, in all three different roles:

Yes, leadership, courage, it is all necessary for this, and that things will not go well. And we must all accept that because that will simply be the case. Anyone in this sector who knows those things exactly does not know everything for sure, that is the only certainty I know. (interview 4)

Intrinsic motivation and courage are important personal characteristics for all types of circular champions. In the following, an explanation of personal characteristics that are important for specific groups is given.

For preachers it is first of all essential to have good communicative skills: “communicative, social skills, that comes from the inside and I do believe that the moment someone touches something from the inside, it starts to roll” (interview 12). These communicative skills are necessary to make people enthusiastic about the circular economy, secondly, the ability to inspire people is essential: “and enthusing people, in the broadest sense, we do that through all kinds of things” (interview 9).

For entrepreneurs, an innovative look is necessary for being a circular champion: “in addition also really being able to look a little further, so that innovative attitude” (interview 12). An example in this is focusing on circular solutions, without only looking at the circular part:

I do not feel that we should explain the circular economy to the general public because then you are moving towards sustainability, you say; be careful. ... what I would like is for the general public to choose a better solution, without playing the moral card. (interview 8)

So, this means that the focus should be on the positive aspects of new, circular products and not only on why a circular economy is necessary. Another circular champion explained that “we often have the wrong argumentation. So that is the idealistic argument. What I think would be very much needed is a much better economic argumentation and substantiation” (interview 5). So, knowledge about how to ‘sell’ the circular economy and circular products is essential for entrepreneurs.

In addition to the innovative look and know-how to sell products, decisiveness is an essential characteristic for entrepreneurs, but also for reformers. Entrepreneurs and reformers both say that it is important to “just get started” (interview 6).

Just saying that you are going to do it and if you do, then immediately take a step. Okay, so what is the first step we are going to take, okay, and then when are we going to take it? Well tomorrow okay, then we will do that tomorrow, we will do it for real. Otherwise, it will not happen. (interview 6)

So not talking about what to do, but ‘just do it’. Within this decisiveness, perseverance is also essential: “you need perseverance, because it does not come automatically” (interview 8) and “we are pretty stubborn go-getters, so we kept going” (interview 5). Reformers furthermore mention being resilient as an important characteristic:

I always say resilience. Because, you just notice that everyone, including myself, you shoot back into your cave very quickly when things do not go as you expected, or when things are more difficult, when other people have a different opinion that makes you doubt, then you shoot back into your reflexes and that is just human. So, we are really busy developing new habits, learning them, that takes that resilience, to, let us say, accept that things are going differently as you hope or as expected and then bounce back again. (interview 3)

This attitude of trying, with bearing in mind that things could go wrong, is crucial for reformers in the transition to a circular economy. The last essential characteristic for reformers is modesty. “Dare to put others in the spotlight” (interview 10) and “do not care that much about ego” (interview 10) are important characteristics for reformers to become successful circular champions. “Because you care more because there is an interest that is greater than your self-interest” (interview 10).

In figure 10 the different personal characteristics are displayed in one overview.

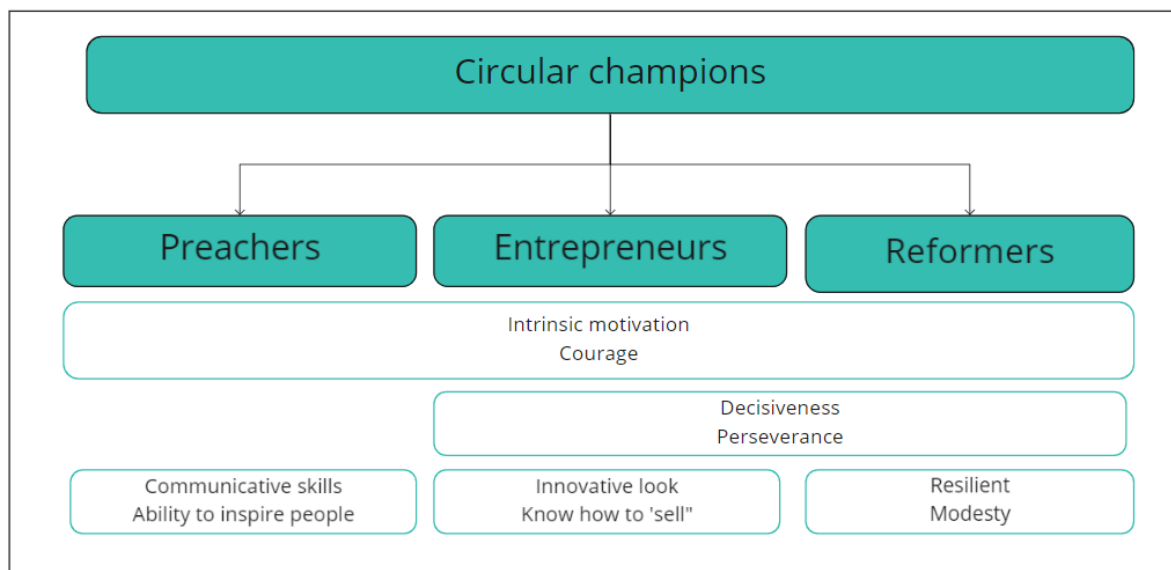


FIGURE 10: CHARACTERISTICS CIRCULAR CHAMPIONS

4.5 Conditions

It is asked to all circular champions what was necessary for them to become successful circular champions, so the focus is on conditions or circumstances which are necessary for circular champions to fulfill their role. In addition, all circular champions are asked if there are any barriers they face in 'accelerating' the transition to a circular economy. It was found that some conditions and barriers apply for all circular champions, these are discussed first. Afterward, the conditions and barriers that specifically apply to preachers, entrepreneurs and reformers are discussed.

First of all, cooperation is seen as an essential condition for all kinds of circular champions. An answer which often came to the question of what is necessary to fulfill the role of circular champions is that collaboration is key: "of course I did not do it alone, so it is always together with, so it never stands on its own" (interview 12). The circular champions involved in this research all agree that collaboration is very important in becoming successful in involving more people in the transition to a circular economy, "you have to switch that together, there is no other way" (interview 6). In line with the necessity of collaboration, the importance of a team is also named:

Because the moment you just don't feel comfortable in your own skin, or you come across such a resistance point, that you just have a team as a safety net to catch you and say yes, but we are working on something a lot bigger than this. (interview 10)

One aspect which is often mentioned in combination with collaboration, is transparency: "yes, those bulkheads have to go down. We should not want to invent everything ourselves" (interview 3), "transparency is a very important precondition for me" (interview 13). To accelerate the transition to a circular economy, transparency is a key factor: "we do not have time to draw it all out on our island" (interview 3). "Because, you know, we are going too slow when we keep it all to ourselves. So that is why everything we make, things we invent, everyone can use, as long as we get further" (interview 11). Circular champions see the necessity to transform our system to a more circular system as fast as possible, collaboration and transparency are of great importance in this.

Cooperation and transparency are seen as essential conditions, but circular champions also run into a lot of barriers. A lot of different barriers are specified by the circular champions: more than 30 different barriers were mentioned. All circular champions agreed that many barriers exist: "yes of course,

endlessly, that is why it is a transition” (interview 11). Far out the most mentioned barrier is that there is a lot unknown and there is much uncertainty. On the one hand the lack of knowledge about circularity by people: “that starts with people who still do not know what circular is at all” (interview 3) and on the other hand also the unfamiliarity with circular principles: “but that is a problem, I think at the moment, that we do not yet know exactly how it all works” (interview 13). The unfamiliarity and the unknowing also result in another issue, namely the question of who is a real expert and who can be trusted:

Yes, what I find scary is that there are too many companies that call themselves experts, but also bluff through that a bit. And that is very difficult because it is not my full expertise either, so you have to rely on each other and you also have to allow each other to learn. (interview 7)

The fact that not all details are totally clear already causes this trust issue. Another issue mentioned as a barrier is the fact that “in the Netherlands, the circular economy theme has been hijacked by the world of waste and recycling, so all initiatives that have something to do with waste and recycling are, even today, immediately called circular” (interview 5).

Specific for preachers, it is important to be surrounded by people who also become enthusiastic. They get energized when other people get enthusiastic about the circular economy too. The goal of preachers is to reach a ‘ripple effect’ in which more and more people are getting involved in the transition to a circular economy:

Then there is a ripple effect because I can want to do it all myself, but ... I am not an architect, so I cannot go and tell an architect, okay, you have to do this and this and this exactly in order to do it and that is not a lasting impact either. (interview 12)

The lasting impact is about enthusing people who are going to take circular steps in their own area. The barriers about uncertainty, elaborated in the previous paragraph, apply to the preachers.

Furthermore, for entrepreneurs the way of collaboration needs to be more based on trust:

And only when that trust is there, then you will notice that collaboration is being designed differently and that it is no longer about how much profit or margin I make on a product, but instead you start thinking together about how to make the total case feasible. That is a completely different way of cooperating. (interview 13)

Collaboration based on trust and equality is seen as a key point to reach a circular economy:

And if at the end, we think we are earning 50 ... we also say we are with 5 men, we each get 10 and not the main contractor 30 and the other 20 is divided by 4. Then you also have equal opportunities and I think that you will also get much more done, the commitment and therefore better-integrated cooperation, in fact, that chain cooperation. I think that is the basis for a circular economy. (interview 9)

This example shows that entrepreneurs can change the way they work together. Besides collaboration, an important aspect is knowing the right people or having a network:

Well, I am lucky that I have a fairly large network. So, you must have a network, we also have to tap into other networks via my network and they also have networks again, so it really is connecting the networks and making sure that you get the good things up there. (interview 9)

Creating and having a ‘circular network’ and being able to connect people in this network to each other, is seen as one of the important tasks of an entrepreneur.

Reformers indicate that to fulfill the role of circular champions successfully, it is necessary to have the space to try, to develop and to fail:

Space for myself to take steps in this, because it is not something like from day one okay, hoppa, then you have immediate results or something. So, for becoming successful, I have to feel the space to just find my way around and be able to do that. (interview 12)

This space is quite broad: “yes, you need the space, in time and capacity and possibilities, because people themselves are too busy with all their daily things” (interview 4). The space to discover and develop more about the circular economy is necessary to make this transition happen: “and that you, therefore, need that experimental space, and must use and utilize it to shape that transition” (interview 13). In line with the needed space, a lot of barriers are mentioned, which are time, laws, and regulations, and money. In the context of law and regulation, many different examples were mentioned. Circular champions, for example in the construction sector, see the tax system as a barrier:

Well, what you see now, of course, is that in terms of the tax system a lot of tax is levied on labor and the construction process is still quite labor-intensive and therefore that transition has a kind of extra barrier because reusing stuff generally leads to more labor in that process. (interview 13)

Regarding time, first of all a lack of time is a barrier. Time is needed for innovation, but there is often not enough time for this: “the time to renew and innovate, which is also necessary, that within companies that there is just a little” (interview 1). The second time barrier is about long-term projects. These projects make it difficult to draw lessons on the short term:

So, you can just as one project has had its design phase, you can perhaps learn lessons from that so that another project can copy that, but an entire project circular from start to finish, we do not have those examples yet. (interview 7)

Reformers and entrepreneurs partly run into the same barriers. First of all, this is about the existing laws and regulations, which are unintentionally barriers for circular projects:

Of course, you have barriers in legislation and regulations, so if we close a cycle and we are *example*. Well, that is very essential, ... then we will work together on how we can get an exemption for that because it is a very good idea. Then you just have to talk to each other again and talk to the municipality. And yes, then you will get there at a certain point, then that will work and those are sometimes longer processes and that can sometimes be annoying. (interview 11)

It is furthermore mentioned that the government is already doing a lot to stimulate circular projects, but this does not always work out well:

The government is of course already doing a lot with subsidies and circular programs. I do not think all of them are equally effective because in my opinion they actually have a too short lead time. So, if you want to apply for a subsidy for a project, then you have to show the results this same year, and for the construction industry that is just very complex and almost impossible to do. That when I start developing a project, that I realized it that same year. Well those time frames do not match with each other. (interview 1)

All in all, governments are taking steps to try to prevent law and regulations from working as barriers for circular development, but much more steps need to be taken to come to a point that law and regulations stimulate companies to use circular principles.

Furthermore, reformers and entrepreneurs run into barriers concerning money. They mention that actually the whole economic system is a problem. To reach a circular economy, the system needs to change:

So, you are in a system that is often focused on ordinary money and the point from circularity is that the definition of value must change. And as long as the definition of value is generally ordinary money, and that is the interpretation, the focus is quickly on efficiency, because efficiency is about money. (interview 12)

However, also the opposite is argued:

It is often also thought that costs are a problem. I have rarely seen costs as an issue. Costs can be an issue in total if you add everything together, but usually, it is a prioritization issue. Because if costs are a point then apparently the priority level is enough at some point, so then you get: what is the priority of interest? And if you can link interest and connect the priority of interest and things that are needed, money is almost never a problem” (interview 4).

In line with this, the lack of incentives is often mentioned: “so there are no such incentives” (interview 7). So, all in all, on the one hand money is seen as a barrier, while it is often argued that the prioritization of the circular economy is actually a bigger barrier.

In figure 11 a simplified overview of the necessary conditions for different types of circular champions is shown

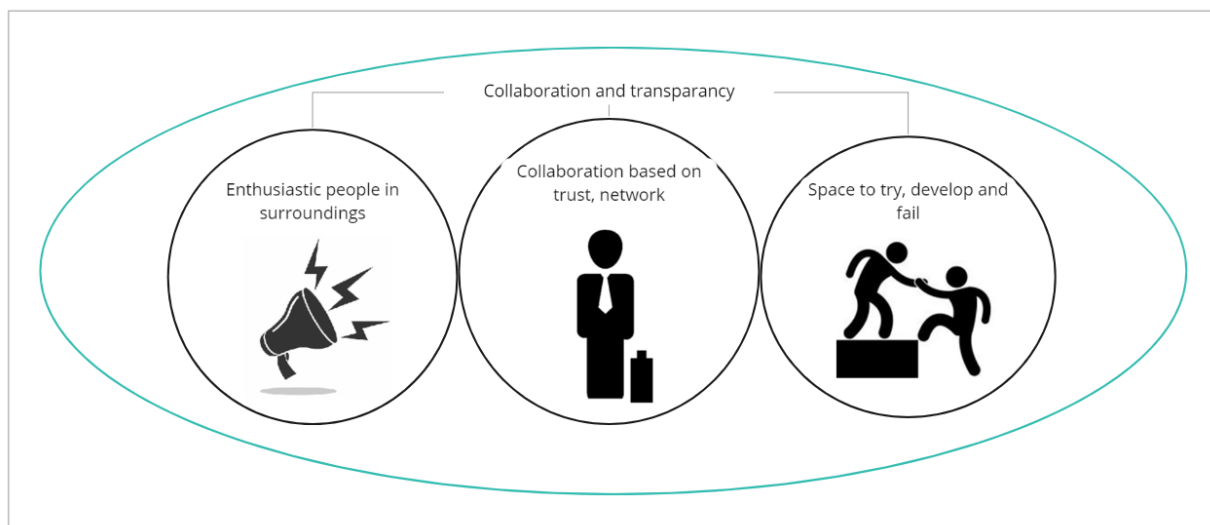


FIGURE 11: NECESSARY CONDITIONS CIRCULAR CHAMPIONS

4.6 Strategies

Circular champions undertake different strategies to accelerate the transition to a circular economy and to involve more people in this transition. Before the strategies come into play, it is important to be informed about new developments within the circular area: “I think that is our most difficult job, to constantly keep up, because it happens very quickly in the circular economy” (interview 9). One of the interviewed circular champions emphasized in line with this that contact with people who are skeptical about the circular economy is really important and helpful: “the realization that those people who are skeptical, they are skeptical for a reason and that is often very valuable input to accelerate a transition, so do not dismiss that, but investigate exactly where that skepticism comes from” (interview 11). So, being up-to-date about the possibilities and critics of the circular economy is important before strategies are discussed.

Preachers play a very important role in making people aware and enthusiastic about the circular economy. They start by making people familiar and enthusiastic about it: “and then it began to live. And then we also accelerated a lot, making it visual” (interview 8). Circular champions, and in particular preachers, pointed out that making people enthusiastic about the circular economy is an important role, and they have many different ways to do this: “and making the region enthusiastic, in the broadest sense we do that through all kinds of things, through the initiatives, which can be very broad” (interview 9). To make people enthusiastic, focus is on the necessity of a circular economy, but also on some practical issues: “but then we explained that the circular economy can be a new export product for the Netherlands, just like food and water, which is simply born out of necessity” (interview 8). The different strategies to try to enthuse people, are in line with the attention and support-seeking strategies of Brouwer & Huitema (2018). Preachers are the ones who introduce many people to the circular economy principles, which fit well in the pre-development and start-up phase of a transition.

Within this research, two employees of circular champions involved in this research are interviewed. It was concluded that they came into contact with a preacher. These employees reflect on the role of the preacher in their involvement in the transition to a circular economy. Both employees were not familiar with the circular economy:

I came there, so I also had a lot of introductory meetings in the beginning. And also, with *name of the circular champion*, then you are overloaded with circularity and in the beginning I even thought what is all of that? I had to Google all the terms. So, it was unknown territory for me and now it is completely alive and I also notice that I take that unconsciously in my own environment a lot, I am a bit infected with what I deal with. (interview 15)

So, the employees were not familiar with the circular economy. However, they already set their first steps in the field of sustainability: “then it starts years ago with separating your waste at home” (interview 16) and this developed in small steps. Both employees did not apply at the company they are working at right now due to their involvement in circularity. However, the employees interviewed in this research are now proud to work for a company which is involved in this transition:

Yes, I think that it is cool to see how creative they are and that we are looking for solutions instead of ‘nothing is possible’, I like that. And we just dare to take risks and see what the effect is. And, to be a bit of a frontrunner in that, I am very proud. (interview 15)

Besides being proud of the approach of the company, employees also share the knowledge and information they acquire with their friends and family:

Yes, well, I think that is cool to share that we do different things and that we are working on a better future, better world for all of us. That is the best message that we all have, but also just on the mindset that we have, just do it. (interview 15)

The contact with a preacher made the employees very enthusiastic about the circular economy and about how they can contribute to that. This enthusiasm confirms the role and influence of preachers.

Circular champions, and in particular preachers, agree on the fact that practical tips and examples are important in involving more people in the transition to a circular economy: “that by using practical examples, by making it small, you can get it to people and make them think; but I can also apply that idea in my project. And then you slowly get it going” (interview 13). So, it is important to show people what the circular possibilities are and that it is already possible:

If you only tell a nice story, but they cannot test whether what you say is correct, then I think that you also get little interest, but I think that people only become convinced if you can show that it is possible. (interview 9)

In convincing people, it is argued that different things are necessary: “you need the testing grounds, the circular examples, but I think you also need the acceleration projects, the upscaling projects, so that you see that it is not just the exception that can be circular” (interview 3). Demonstrating (Brouwer & Huitema, 2018) is an essential strategy used by preachers. This shows that making the circular economy tangible, which is often done by entrepreneurs and reformers, is of great importance for preachers, this shows that the different types of circular champions complement each other.

Entrepreneurs are the circular champions who make circularity practical and bring it to the market. Those are the ones who start companies and make circular products and services accessible to consumers: “if you show that, and that can start very small, ... then it will become tangible for everyone” (interview 9). Besides making circularity tangible, entrepreneurs also want to convince people that it can be nice to do something different than before: “that it can be done differently and that it is indeed quite fun if you do it differently” (interview 9). Being and giving practical examples is seen as key strategy: “and then you try to get people involved in that target group, not so much by telling them what the circular economy is, but by simply being an example yourself” (interview 8). Entrepreneurs use, just like the preachers, mostly the attention and support-seeking (Brouwer & Huitema, 2018).

The right timing, which refers back to the arena strategies of Brouwer & Huitema (2018), is another aspect which is mentioned as essential for entrepreneurs:

So, it's also just a bit of timing or having the wind in the back of that circular economy, sustainability was very moralistic and explaining to everyone that it had to do less and was not at all stimulating for entrepreneurs. And the circular economy again had the opportunity to have a new name and to radiate something of innovativeness and feeling again, so that is also being lucky in time. (interview 8)

Reformers see convincing clients or companies from circular principles or more circular options as an important part of their job: “we try to make our clients aware of what circularity entails. That is really a mission. And we will also look at what are the options?” (interview 14). Circular champions have the mission to ‘sell’ circular economy principles: “we just try to give it a place in all our projects and we do this solicited and unsolicited” (interview 3). It is a part of their business and they want to involve their clients in it too: “show what the chances are and then it got a lot of movement in one go” (interview 8).

In line with the strategies of Brouwer & Huitema (2018), reformers use linking and relational management strategies to accelerate the transition to a circular economy. Reformers refer to connecting people, projects, companies, and governments as one of their main jobs. This connection occurs on different levels. First of all, it is about connecting people with themselves: “actually it is much more about reconnecting people with just that pleasure again, and their inner drive” (interview 12). Furthermore, it is about the connection within an organization: “to tie all those lines together, and also ensure that your organization gets a boost and feel that they have to go down that path” (interview 6). Lastly, the focus is on connecting different parties: “ensure that the parties will find each other” (interview 6) and “between the 3 o's [government, entrepreneurs and education] we try to make the links between everything that has to do with circularity” (interview 9).

Supporting and enabling people to take steps towards a more circular economy is also seen as a responsibility for reformers: “so we want to enable others” (interview 11). So, giving people the opportunity to find out what a circular economy means and how they can contribute to that personally: “it is very much about empowering indeed and making yourself superfluous, so being an injection and then hopefully people will do it themselves” (interview 11). Furthermore, a part of the job of reformers is to thank and help people and companies who take circular steps where necessary: “so to thank those frontrunners, to give them a platform, to show them off, but also to help them where they run into things” (interview 7).

In figure 12, an overview is given of the different strategies that different types of circular champions use.

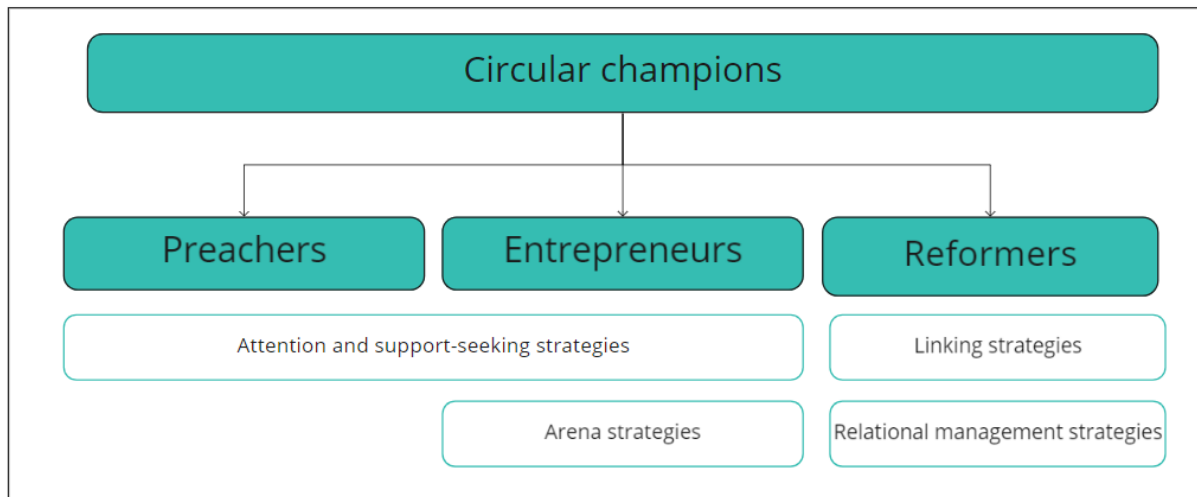


FIGURE 12: STRATEGIES CIRCULAR CHAMPIONS

4.7 Contribution circular champions

The transition to a circular economy consists of different aspects. Circular champions play a big role in this transition. The role they play is quite diverse. In this section it is looked at which components that are necessary for a successful transition to a circular economy (Hanemaaijer et al., 2021) preachers, entrepreneurs, and reformers contribute.

Enthusiating people is the main goal of preachers. They contribute to this through the exchange of knowledge about the circular economy:

I think you can only do that by actually introducing people to it as young as possible. There is, of course, a lot of my generation and just below that, there are a lot of people who are leaving, so that means that there are a lot of new entrants and we have to make sure that they know this, understand it and are going to take it further. (interview 9)

On the question what is the role of a circular champion in the transition to a circular economy, the most given answer by preachers is to make other people enthusiastic about the circular economy: “it is about generating enthusiasm, it is about seeing opportunities, looking at possibilities differently” (interview 3). It is even argued that making people enthusiastic can cause that regulation is less necessary:

But then we do not have to rely on that pillar of regulation, but if I make you enthusiastic and show you how you can change something and then give yourself that choice, how to organize it? I think you just go and that applies to everyone. (interview 11)

Entrepreneurs first of all, contribute to the component entrepreneurship: “yes, I am an entrepreneur, so I just have to put it into practice myself” (interview 8) and:

I set up that organization and then my role is to make sure that you hire the right people and that you find the right partnerships and that you think about; what in that system is needed now? What now creates a turnover, so that it gets attention in one go. (interview 8)

To contribute to the component of entrepreneurship, it is essential to change the normal way of working and dare to take some risks:

That is the difficulty of the circular economy, what you do today does not pay off tomorrow so you invest, it is future-proof entrepreneurship ... so you invest in the future and I think that is quite a difficult one. (interview 9)

Within this contribution to the component of entrepreneurship, entrepreneurs also contribute by breaking through resistance. Entrepreneurs contribute to this on the one hand by showing that it is possible: “then you show circularly and that much more is possible” (interview 9) and on the other hand also by showing that that circularity can be fun: “so it can also make it much more fun” (interview 9). For being successful as an entrepreneur, generating attention and involving people also matters: “and my role was then just to generate a lot of attention in that phase and to involve people” (interview 8).

Reformers see convincing people of the principles of a circular economy as the first step, but it is important to keep aiming for more:

So that is great, so I set that in motion, but the next step is to make sure that all agreements and frameworks around it also become a bit more circular and then we can go, it can start flying at some point. (interview 1)

Furthermore, reformers use ‘asking questions’ to make people think about how and why they are doing things:

Constant, okay, but if we do this guys, is there no other way? Should we not do this? And then not always come up with a solution, but just ask the question. So basically, you name the pink elephant in the room that is there, where a lot of people stick their heads in the sand, and then you name it and throw it on the table. (interview 12)

So, they do not always have the answer, but they ask questions to stimulate people to think about other ways: “but why then and why do we do it this way and why don't we do it differently? And how could it be?” (interview 11). The stimulating questions are used to make people aware of all chances and set little steps to more circularity: “just ask questions, say just what if we can do that? And yes, what if it works, you know? And yes, shall we just do it?” (interview 6).

In addition, reformers have a role in knowledge exchange about circularity. On the one hand, this is an extension of the collaboration, connection, and transparency that was elaborated before. The role of reformers is to connect people. So actually, it is their role to organize that knowledge can be exchanged. Furthermore, this is about making knowledge available:

This means that all *association* members actually have access to the ideas and that we can also achieve volume the other way around, if we have figured out how to deal with something specific, we can then switch on all *association* members to be able to use it. (interview 14)

Besides knowledge exchange, reformers also play a role in the development of knowledge: “we do a lot of getting and sharing info” (interview 14). As mentioned before, circular champions agree on the fact that a lot needs to be discovered in the field of the circular economy. They see that the lack of knowledge about the circular economy is one of the big reasons that municipalities and organizations do not know what to do about it: “we understand that we have to do something with that. I only know a single municipality, or a single organization that is having resistance there, most of them have more concerns, partly from the knowledge and not knowing” (interview 4). Reformers use their influence to develop new knowledge about the circular economy: “I want to put as many questions as possible that exist, to which there are no answers yet, for colleagues, or for municipalities, at universities or other parties to ensure that those questions, that answers will come to that” (interview 6). Answers on these questions are necessary “so that we can continue to build the puzzle” (interview 6).

Reformers also see it as their task to ask critical questions and to prevent ‘greenwashing’: “... and ask critical questions, because I am also a huge nag on that point because there are an incredible number of claims that are nonsense, or superficial” (interview 4). Some circular champions see it as their role to take care of protecting the term circular, so that it does not lose its value and become a ‘catch-all concept’ like sustainability:

I think it is especially important ... that we now ensure that circular does not become a new catch-all concept, just like sustainability, under which just anything is grouped and that we must ensure, above all, that the right things are done. (interview 6)

Other circular champions however see circularity already as a catch-all concept: “circularity is, of course, a catch-all concept, so you have to oversee the entire spectrum” (interview 14).

Dealing with and breaking through resistance is something else reformers work on. First of all, people have to adjust that times are changing and with that, the world is:

I just think the most difficult generation is the generation between about 30 and 40-45 because they can last a very long time. They will simply have to do completely different things in their working life. In the past, everyone always thought, if I know or can do something, then I can do it for 30 years. I think everything you think now, that may well be gone in 5 years, then it is already something else. (interview 9)

Flexibility is essential in this: “so that is also a challenge. If you teach that to young people, to be flexible across the board, you also have a good future I think, the more secure you are, the more difficult it will be” (interview 9). Reformers use different ways to break through resistance. On the one hand, it is about circular champions who try to break resistance by bringing circularity in everything they do: “we do not do one project in a circular manner because the client asks for it, but we just try to give it a place in all our projects and we do this solicited and unsolicited” (interview 3). On the other hand, reformers try to let clients understand what circularity is in their mission to break through resistance: “then we try to make our clients aware of what circularity entails” (interview 14). One of the reformers assumed that diversification and the possibility to choose how to change is important to break through resistance and involve people in the transition to a circular economy:

If you make it diverse, you also see that you get people along in the whole movement where we have to go. But not everyone is focused on the same thing, which is great, because then you also offer the space to choose ... you know people want to change, but they do not want to be changed. They do not want to be imposed on something, but they want to make their own choices and have room in this and see for themselves what suits them. (interview 11)

Reformers often focus on breaking through resistance, while a minority of reformers believe that “we are really over the fact that there is resistance” (interview 4). These last group circular champions assume that no more resistance exists against the circular economy in general. The majority of the involved circular champions however see a lot of resistance to break through. A clear cause for these different perspectives is not found.

In figure 13 is visible to which components preachers, entrepreneurs, and reformers contribute to the components that are necessary for a successful transition to a circular economy (Hanemaaijer et al., 2021).

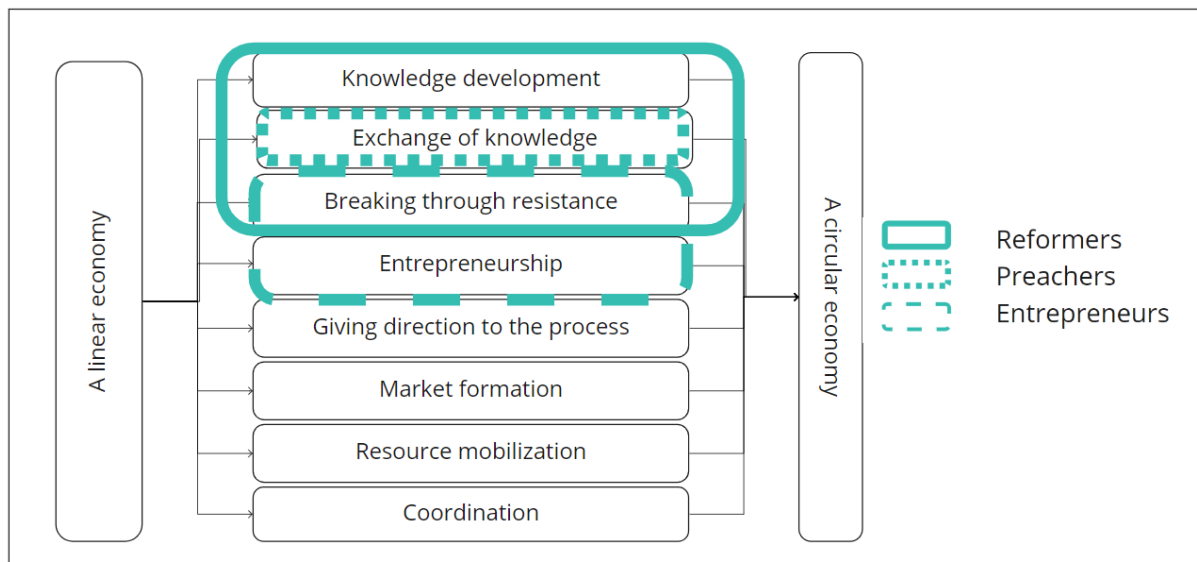


FIGURE 13: CONTRIBUTION CIRCULAR CHAMPIONS (COMPONENTS OF HANEMAAIJER ET AL. (2021))

4.8 Transition

Opinions of circular champions are divided based on the fact what kind of transition the transition to a circular economy is. On the one hand, there are circular champions who think that the transition to a circular economy is not an economic or a technical issue, but most of all is a social transition:

Is it a technical problem we face, the circular economy? I say no, technically I think anything is possible and at the same time there are many solutions. So, is it an economic problem? It is going to hurt the wallet, that is right. In the short term, it hurts. It is an investment issue. It is not a cost issue, it is an investment issue because it does pay for itself. But the question is, can we afford the alternative? And I think that is a very hard no. What is it then? Well, I think it takes enormous social innovation to understand together that all the choices we make every day contribute to a more sustainable world of tomorrow, so whatever we decide today, we can do something with that. We have to rethink everything, and that is what we want to bring to the table, so we are mainly on the social innovation side. (interview 11)

Another circular champion agrees and said:

Well, those are all kinds of technical challenges that come your way when you start building in a different way or with different materials. So, there should certainly be more research and in particular more integrated research, because I think we have all the separate pieces of the puzzle that we are perfectly capable of solving. But the point is, how do you put it together? That is for sure, but yes, to get that change going or to make it bigger, it is indeed a kind of social transition. (interview 13)

Not all circular champions agree on the fact that the transition to a circular economy is mainly a social transition, some circular champions claim that the type of transition differs per chain:

In one chain it is more technical, in another chain it is more social and it is always a financial one, because if responsibilities change or roles change, yes then roles change, and responsibility also changes and therefore a price tag changes I think. (interview 6)

Furthermore, is it also assumed that the transition to a circular economy is a social, economic and technical transition: “yes, actually it is all a little. It is just quite complicated” (interview 4). An overall opinion about what kind of transition the transition to a circular economy is does not exist, however, all circular champions agree that there are technical, economic, and social challenges to overcome. The distinction in what kind of transition the transition to a circular is cannot be linked to the distinction in preachers, entrepreneurs and reformers. In figure 14 the distinction in perspectives of the transition to a circular economy are made visible.

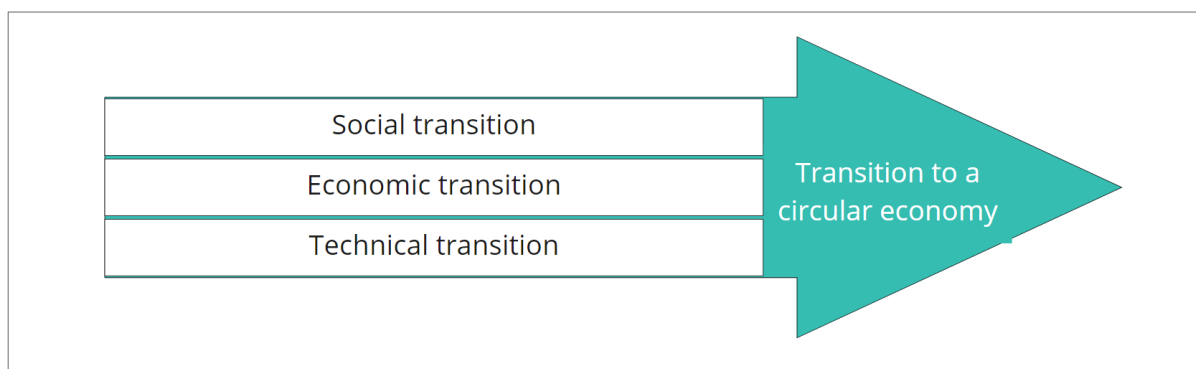


FIGURE 14: TRANSITION TO A CIRCULAR ECONOMY

4.9 Future

At the end of all interviews, the circular champions are asked what is necessary for the years ahead to accelerate and make the transition to a circular economy happen. First of all, the involved circular champions are aware of the uncertainties in the development of a circular economy in the Netherlands in the coming years: “I find it very exciting which concepts will be scaled up” (interview 1). Furthermore, a wide variety of answers to this question exists. Circular champions often focus on the sector they are working in with answering this question.

In the answer to the question what is needed in the coming years, it is often referred to law and regulations: “I think that you can do a lot with legislation by simply raising that lower limit” (interview 10). Circular champions do not designate the government as the only responsible organization. Different parties play a role in the transition to a circular economy: on the one hand, the governments have a major role, but also entrepreneurs: “especially that entrepreneurs will develop new business models based on the service economy” (interview 5). Circular champions also mention “whether you can make the circular economy more measurable” (interview 2) as a topic of focus. “It is difficult to determine what it will yield, but knowing why you do something and what it will yield is also nice” (interview 4), so more clarity about the yield of a transition to a circular economy can contribute to the acceleration of the transition. Besides the focus on the government and entrepreneurs, also some circular champions focus on the social side of the transition to a circular economy: “we have to reconsider everything, well, and that is what we want to teach, so we are mainly on the social innovation side” (interview 11). All in all, the answers to the question which is necessary in the coming years differ a lot, but after this research, it can be assumed that a role exists for all kinds of circular champions in this transition.

5. Conclusion

This research investigated the role of circular champions in the transition to a circular economy. In this conclusion, first of all, the sub-questions will be answered. This chapter finishes with an answer to the research question:

What is the role of circular champions in the transition to a circular economy within an organization or sector in the Netherlands?

Most circular champions who participated in this research were involved in sustainability issues before they became active in the circular field. Circular champions got involved in the transition for different reasons. One aspect which all circular champions have in common is their passion and intrinsic motivation to contribute to the transition to a circular economy. One of the main reasons for this is the necessity for the planet. All circular champions agree that continuing the linear economic system which we have right now is unsustainable and therefore no option.

Three types of circular champions are distinguished: preachers, entrepreneurs, and reformers. Within this role, circular champions use a lot of different strategies and they contribute to different components which are necessary for a successful transition to a circular economy, established by Hanemaaijer et al. (2021). Preachers focus on the exchange of knowledge, by telling and showing as many people as possible about the possibilities of the circular economy, they use attention and support-seeking strategies. Entrepreneurs turn ideas into practice, they develop new services and products by which they make the circular economy more tangible and available for everybody. Within this, they use attention and support-seeking strategies as well, complemented with arena strategies. By making the circular economy practical and tangible, entrepreneurs contribute to the components of Hanemaaijer et al. (2021) entrepreneurship and breaking through resistance. Reformers fulfill their role much more in the background. They aim to connect people with themselves, with organizations, or to connect different (kind of) organizations. They use linking strategies and relational management strategies to establish these connections. Within this, they contribute to the development and exchange of knowledge and breaking through resistance. Entrepreneurs and reformers often also fulfill partly the role of a preacher, by using attention and support-seeking strategies to make people enthusiastic about the circular economy.

All circular champions have their own way and strategies to accelerate the transition to a circular economy. Within these strategies; preachers, entrepreneurs, and reformers are all complementary to each other and all contribute to the acceleration of the transition to a circular economy in their own way. To fulfill their role as circular champions, certain conditions are necessary and some barriers need to be overcome. All circular champions agreed on the fact that collaboration and transparency are essential in fulfilling the role of a circular champion. For preachers, it is important to have people around them who are enthusiastic, from which they get energized. Entrepreneurs need network and collaboration built on trust to become successful as circular champions. For the last group, the reformers, space to try, develop, and fail is necessary. Reformers and entrepreneurs often run into the barrier of the entrenched linear economic system. Next to this barrier, many more barriers exist.

In this research, the focus was on circular champions. The most important difference between circular and environmental champions is their focus and their view on sustainability and the circular economy. Most circular champions see the circular economy as a more practical completion of sustainability. Sustainability is about reducing, while the circular economy is about organizing processes differently, without necessarily reducing certain processes. Another difference is that within the circular economy, it is about a system change with a clear economic focus; this differs from sustainability which is much broader and less practically defined.

To conclude, circular champions contribute to the acceleration of the transition to a circular economy. They contribute to this acceleration with entrepreneurship, knowledge exchange, knowledge development, and breaking through resistance. Preachers, entrepreneurs, and reformers all have another strategy to reach the involvement of more people in the transition to a circular economy.

In figure 15, a schematic overview of the three identified circular champions with their necessary conditions, strategies, and contributions is shown.

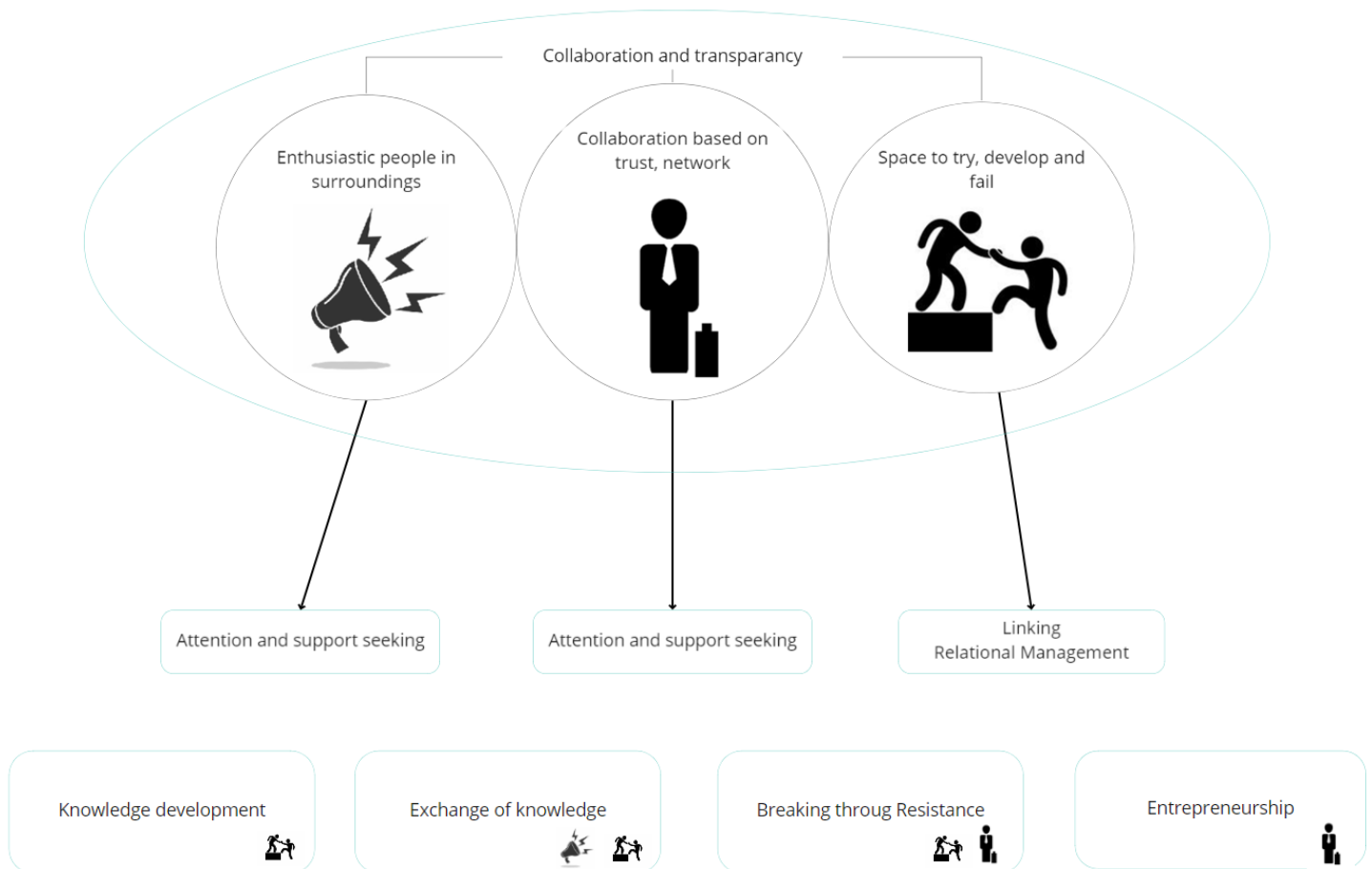


FIGURE 15: CONCLUSION

6. Discussion

After presenting the results and the conclusions, in this chapter, they will be discussed. The results and conclusions are linked to the theoretic framework that was developed. Furthermore, the research limitations, recommendations and opportunities for further research are discussed.

6.1 Interpretation

The goal of this thesis was to investigate the role of circular champions in the transition to a circular economy. Beforehand, it was assumed that there was just a single type of circular champion. However, during the interviews and the analysis of the results, it was discovered that multiple types can be distinguished. Therefore, a new framework was developed based on three types: preachers, entrepreneurs and reformers. It is found that all types of circular champions fulfill a different role within the transition to a circular economy. Three types of circular champions are distinguished, but not every circular champion can be assigned to just one role. These double rolls make it more difficult to divide circular champions into groups. Furthermore, circular champions are often unaware of the role they fulfill. Within earlier research on environmental champions, a distinction in types of champions is not found. Taylor et al. (2012) already stated that more research should be done on different types of (environmental) champions. So far however, research has mainly focused on champions in general. The distinction in different types of champions is an addition to the champion literature, which can be interesting to elaborate on further.

To determine if someone was a circular champion, a list of characteristics was established. All circular champions who are interviewed meet the characteristics of a circular champion which were based on scientific literature and set up in advance. Circular champions do have experience in the circular economy. Furthermore, they are committed to the involvement of more people in the transition and they have the power of influencing these people. As a result of the conducted research, additional characteristics were identified. This research makes clear that the intrinsic motivation to contribute to the transition to a circular economy is a similarity between all circular champions. Another characteristic that all circular champions refer to is having courage. These characteristics may, after more extensive research, be added to the definition of a circular champion.

Furthermore, all circular champions are asked for their definition of a circular economy. The answers to this question differ a lot. This differentiation corresponds to the scientific literature, in which also many definitions exist (Kirchherr et al., 2017). On the one hand, circular champions see the circular economy as a part of sustainability, as 'one of those many puzzle pieces' of sustainability, on the other hand, circular champions describe the circular economy as something different than sustainability. They see the circular economy as a new, better opportunity than sustainability. All involved circular champions agree about the technical and practical part of the circular economy, however, some circular champions focus mostly on social aspects. They focus on another "attitude" (interview 4), or "another way of thinking" (interview 12). The focus in scientific literature matches the more technical and practical interpretation of the definition. This social aspect is mostly not included in definitions of the circular economy in contrast to the definition of many circular champions.

The used strategies described by the circular champions fit well in the theory of Brouwer & Huitema (2018). Three strategies are easy to distinguish and appointed to different types of circular champions; the fourth category, the arena strategies, however are more difficult to find back in the collected data for this research. It seems to make sense that all circular champions use arena strategies, however, this is not clearly apparent in this research. Only for entrepreneurs the arena strategies are clearly found in the data. Within the theoretical framework, also the championing activities of Andersson & Bateman (2000) are distinguished. This research on circular champions shows that circular champions

mostly use 'packaging' and 'selling' environmental issue activities. The activity of 'identification of behavior' is not clear from this study. When circular champions are asked for their role in the transition or how they did involve more people, they did not refer to the identification phase. However, that does not mean that they do not play a role in this.

This research shows that circular champions are mostly contributing to 4 of the 8 components of Hanemaaijer et al. (2021); knowledge development, knowledge exchange, breaking through resistance, and entrepreneurship. Besides these components, the circular champions involved in this research show that connection and collaboration between people are important components for a successful transition to a circular economy. More research is necessary to study if the components of connection and collaboration need to be added to the list of necessary components for a successful transition to a circular economy.

In the theoretical framework, it was assumed that the phase of the transition to a circular economy influences the strategies of circular champions. Different phases of a transition are elaborated in the theoretical framework. During this research it became clear that the transition to a circular economy is still in the pre-development phase. An exception is the construction sector, where they are already more in the start-up phase. The fact that the transition is in these phases, causes a differentiation between which strategies are undertaken in which phases cannot be made. The involved circular champions would like to move to the speed-up and the stabilize phase, but according to them we are not there yet. It would be interesting to do a similar research in a few years, because it is expected that the strategies of circular champions change or that the role of a circular champion even disappears when the transition comes to the stabilize phase.

6.2 Research limitations

The theory and methods used in this research are limited. The theory of the circular economy is very broad. All circular champions in this research are involved in the transition to the circular economy, but they are working on just a part of this transition. The broadness of the transition to a circular economy, which is a system change, causes that no one can oversee the total transition. This makes it difficult to claim something about the transition to a circular economy in general.

Furthermore, 14 circular champions, who are working in different sectors are involved in this research. All these circular champions are interviewed in a semi-structured interview. The method of interviewing has ensured that all circular champions were able to give in-depth answers to all questions. At the start of this research, it was intended that half of the interviews would be with circular champions and that the other half would be with people who were involved in the circular economy by a circular champion. It was the goal to reflect on the role and strategies of circular champions with the people who have experienced how the circular champions fulfilled their role. However, it turned out to be difficult to come into contact with the people who got involved in the transition by circular champions. Due to limited time, it turned out to be impossible to reach more people who got involved in the transition by circular champions, therefore, it is decided to mainly focus on interviewing circular champions themselves.

At last, all interviews were online because of the COVID-19 restrictions. The online interviews caused that the small talk before and after the interview was not there; the meetings were really focused on the interview. In addition, the online interviews made it harder to read and anticipate to body language.

6.3 Recommendations

The outcomes of this research are interesting for NGOs and policymakers who are working on the acceleration of the transition to a circular economy and for the ones who advise these policymakers. It is made clear that all three types of circular champions are necessary and complementary. Policymakers can use the knowledge about different types of circular champions in involving the right people or in creating teams. For the latter, the focus should be on a diverse team, in which the role of preacher, entrepreneur, and reformer are present. Furthermore, this research shows the conditions in which circular champions can fulfill their role best. This can be used to create the right atmosphere for circular champions to excel. The right involvement of circular champions and creating good conditions for different types of circular champions can help in accelerating the transition to a circular economy.

Also, for circular champions themselves the results of this research are interesting. Circular champions can use the results to become aware of the role they play on the one hand. On the other hand, they can use the results to get insight into which other circular champions they can collaborate to achieve even more.

6.4 Further research

The involvement, stimulation, and activation of circular champions can accelerate the transition to a circular economy. However, more research is necessary to generalize the outcomes of this research and be sure about the exact roles of preachers, entrepreneurs, and reformers. For further research, it is recommended to take a larger sample of circular champions, because the sample in this research is quite small. Because of this small sample, generalization is not possible. The outcomes of this research are however promising and can affect the transition to a circular economy. Furthermore, the distinction in the different types of champions is interesting to investigate further.

During the analysis of the results, a distinction is made between preachers, entrepreneurs, and reformers. The distinction afterwards, causes an unequal distribution between the different types of circular champions in this research. In further research, it is recommended to think about the division of the different types of circular champions on beforehand, and take it for example in the online screening. Furthermore, with a bigger sample, the distribution between the different types of circular champions can also be examined. It can be interesting to gain insight into the percentage distinction of circular champions of each type.

Furthermore, it would be interesting to find more people who can reflect on circular champions. In this research, 14 circular champions and 2 people who are involved in the transition to a circular economy by circular champions are interviewed. It turned out to be very difficult to get in touch with this last group of people. Due to the limited time, it was decided to mostly focus on circular champions themselves. In further research, it would be interesting to interview more people who can reflect on how circular champions were successful in involving them in the transition to a circular economy.

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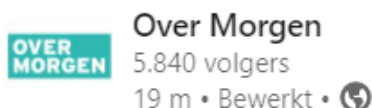
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Appendix 1 – LinkedIn Interview and message



Circulaire koplopers zijn nodig om de transitie naar een circulaire economie te versnellen.

Op dit moment ligt de focus in onderzoek vaak op de technische kant van circulariteit.

Een circulaire economie bereiken we echter juist ook door een sociale transitie.

Marinda Bosman doet momenteel onderzoek naar circulaire koplopers. Het investeren en stimuleren van circulaire koplopers kan een belangrijke stap zijn om de transitie, ook binnen een organisatie, op gang te brengen.

Wil je weten hoe jij een circulaire beweging in gang kunt zetten in jouw bedrijf of organisatie? Neem dan contact op met **Malu Hilverink**

Marinda komt graag in contact met meer circulaire koplopers. Ken jij of ben jij er eentje? Mail haar dan: marinda.bosman@overmorgen.nl

https://lnkd.in/d_PdD33 ✓

#overmorgenbegintnu #toekomstbestendigeleefomgeving #circulaireeconomie
#pionieren #waarmaken

The interview can be read via the following link: <https://overmorgen.nl/nieuws/koplopers-versnellen-transitie-naar-circulaire-economie/>

Appendix 2 – E-mail to circular champions

This e-mail is adjusted to each situation and to the contact Malu, Thijs or I already had with the circular champion.

Goedemiddag ...,

Voor het weekend stuurde Malu u een mail over het meewerken aan mijn afstudeeronderzoek. Fijn dat u aangaf dat ik u mag benaderen. In deze mail stel ik mezelf graag even voor en leg ik iets meer uit over het onderzoek waar ik mee bezig ben.

Mijn naam is Marinda Bosman en op dit moment ben ik bezig met mijn afstudeeronderzoek voor mijn master Environment and Society studies aan de Radboud Universiteit in Nijmegen. Voor dit afstudeeronderzoek loop ik stage bij Over Morgen. Ik doe mijn afstudeeronderzoek naar de rol en invloed van zogenoemde 'circulaire aanjagers'. Dit is iemand die bereid en in staat is anderen te betrekken en te leiden in de transitie naar een circulaire economie. Het gaat niet om een formele rol, maar om de kracht om anderen te beïnvloeden en mee te nemen (bijv. door enthousiasme, kennis en doorzettingsvermogen).

Ik zou heel graag met u in gesprek gaan over hoe u een circulaire aanjager bent geworden, hoe u uw

eigen rol hierin ziet en hoe u meer mensen hebt betrokken bij de transitie naar een circulaire economie.

Zou u aan dit onderzoek willen meewerken? Ik zou dan erg graag een online interview (van ongeveer een uur) met u inplannen.

Ik hoor heel graag van u en ik hoor ook graag wanneer een online interview u zou uitkomen.

Met vriendelijke groet,

Marinda Bosman

Appendix 3 – Interview questions

The interviews were held in Dutch, so the interview questions are also in Dutch. For the interviews with the persons involved by the circular champions, the interview guide was adapted a little bit.

1. Betrokkenheid circulaire economie

Hoe ben jij betrokken geraakt bij de (transitie naar een) circulaire economie?

Hoe lang ben je al betrokken in de transitie naar een circulaire economie?

Weet je nog je eerste kennismaking met de circulaire economie?

In welk(e) project(en) ben jij betrokken met betrekking tot de transitie naar de circulaire economie?

Zijn er andere projecten waar je graag betrokken bij zou zijn?

2. Definitie circulaire economie

Wat is jouw definitie van een circulaire economie?

Waarom geloof jij in een circulaire economie?

Waarom wil jij bijdragen aan de transitie naar een circulaire economie?

3. Rol in de transitie naar een circulaire economie

Wat is jouw rol (geweest) in het in gang zetten van de transitie naar een circulaire economie?

Is deze rol altijd hetzelfde geweest? Of heb je verschillende rollen gespeeld?

Welke eigenschappen heb je hiervoor nodig gehad?

Wat maakte dat jij succesvol was in het aanjagen van de transitie naar een circulaire economie?

Wat waren barrières/waar liep je tegenaan bij het aanjagen van de circulaire economie?

In welke fase van de transitie ben jij ingestapt? Waren mensen al bekend met de circulaire economie?

Eventueel uitleg 4 fasen; daarna vragen welke fasen hij/zij herkent.

4. Activiteiten ondernomen om anderen te betrekken

Zijn er door jouw activiteiten meer mensen betrokken geraakt bij de transitie naar een circulaire economie?

Ja/Nee + uitleg.

Wat had jij nodig om anderen te betrekken bij de transitie naar een circulaire economie?

Welke activiteiten heb jij ondernomen om anderen te betrekken in de transitie naar een circulaire economie?

5. Betrokkenheid meer mensen circulaire economie

Denk jij dat het belangrijk is om meer mensen betrokken te krijgen bij de transitie naar een circulaire economie?

Ja/Nee + uitleg

Wat is er volgens jou nodig om meer mensen te betrekken in de transitie?

6. Overig

Heb je nog andere dingen die je graag kwijt wilt over de transitie naar een circulaire economie?

Zijn er mensen die via jou betrokken zijn geraakt bij de transitie naar een circulaire economie? Zou ik hen kunnen bereiken om mee te werken aan dit onderzoek?

Appendix 4 – Coding Table

Code Group	Code	Amount
No group	Definition Circular Economy	40
	First Acquaintance CE	28
	Reflection Circular Champions	24
Barriers	A lot	3
	Definition	12
	Social	19
	System	49
Motivation	Planet	12
	Practical	4
Necessary	For Future	18
	People in surroundings	32
	Personal factors	21
	Practical	28
	Space	14
Personal Characteristics	Communicative skills	7
	Courage	20
	Decisiveness	8
	Innovative	6
	Intrinsic Motivation	40
	Knowledge	3
	Modesty	4
	Perseverance	10
	Resilience	8
Phase	Future	7
	Pre-development	18
	Start-up	18
Role Circular Champions	Entrepreneur	28
	General	141
	Preacher	55
	Reformer	121

Strategies	Attention and support-seeking	48
	Linking	3
	Relational Management	4
Transition	Breaking Through Resistance	11
	Entrepreneurship	16
	Knowledge Development	12
	Knowledge Exchange	16