Assessing societal relevance from a regional development agency perspective – using a Design Research method

Master thesis

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Abstract

In the last decades researchers, companies, investors and governments have increasingly acknowledged that companies can create both financial- and societal value. In this, the private sector is aligning more and more with the public objectives of policy makers. Governments recognize the need for more collaboration between the private- and the public sector to solve the societal challenges we are facing today. Although the societal intentions are promising, attention should be paid to the measurability and assessment of these societal intentions. Governments, investors, companies and the academic field acknowledge the challenges in measuring and assessing the societal relevance of companies and projects in determining their societal significance. There is need of practical frameworks based on solution oriented research using small data determining causation between output and impact. The goal of this research is developing a tool to assess the societal relevance of a company's project ex-ante in determining to (financially) support it for the regional development agency called Oost NL, in specific the Start and Growth Program (SGP) which is focussed on start-ups and SMEs. Hereby using a Design Research method adopting a triangulation approach including interviews, databases and literature. By combining an Impact Investing perspective with the Theory of Change an ex-ante assessment tool is developed that supports in making a systematic assessment of societal relevance based on hard underlying criteria. This assessment is comprehensive although leaving room for professional judgement. Thereby the tool could be used on different aggregations levels and is understandable for both the professional and entrepreneur. Including societal relevance indicators based on central governmental policy documents results in a tool that is recognizable and useful for multiple organisations executing governmental policy. Therefore this tool will support in sustainably strengthening the (regional) economy.

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1. Introduction

In the last decades researchers, companies, investors and governments have increasingly broadened their view on how companies can create both financial as social and environmental value (KNAW, 2018; Lazzarini, 2018; EFAMA, 2016; Agrawal & Hockerts, 2019). In this development social and environmental issues are more often and more explicitly addressed to companies (Impact Centre Erasmus, 2019). Shared values among companies emerged to build profitable operations including social and environmental issues, like Corporate Social Responsibility practises, ESG (Environmental, Social & Governance) practises, Socially Responsible Investing and Impact Investing (Lazzarini, 2018). The market for contributing societal products and services is growing, where entrepreneurs become more and more aware of the role they can play in this development (Impact Centre Erasmus, 2019).

A widespread and commonly used concept regarding social and environmental values are the 17 Sustainable Development Goals (SDGs) created by the United Nations (2015). According to the research of Cordova & Celone (2019) there is a positive trend of business attitudes towards the SDGs where also the efficiency of implementing the SDGs (in general) improved over time (see figure 1).

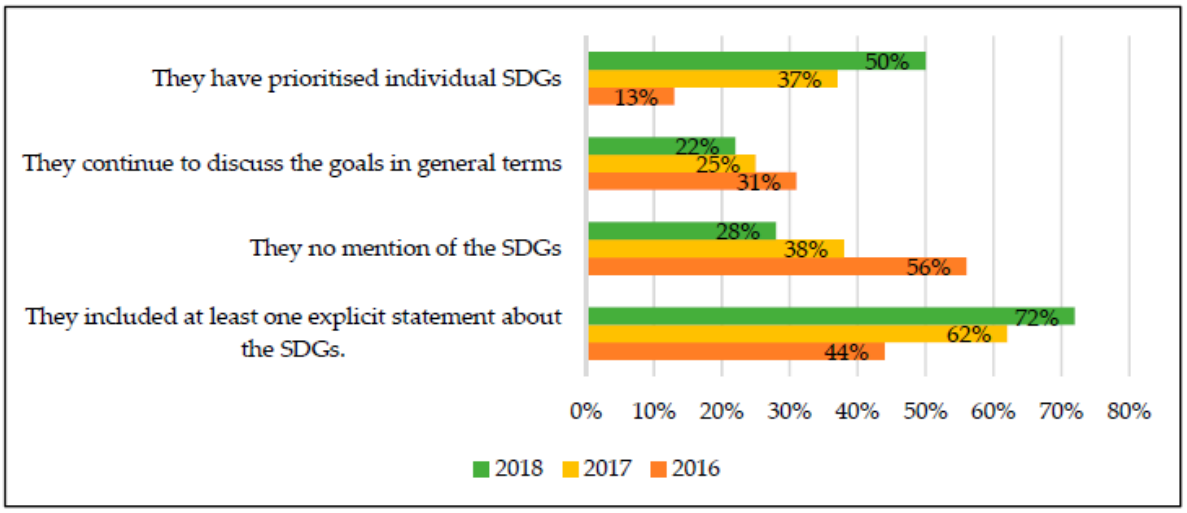


Figure 1. Business attitudes toward the SDGs (Cordova & Celone, 2019, p.7, based on PWC data (2015, 2016, 2017)).

In this, the private sector is aligning more and more with the public objectives of policy makers and public managers, thereby increasingly collaborating to generate positive outcomes to the whole society (Lazzarini, 2018; Mahoney, McGahan & Pitelis, 2009).

On global, national and regional level countries emphasize the societal relevance of the private sector increasingly, hereby acknowledging the need to establish collaborations between the private- and the public sector (Lazzarini, 2018). Also in the SDGs both companies and the government are equally addressed in the creation of a more sustainable future. Because, among other things, of the financial crisis, limited public development budgets and the large scale of global development challenges, the eyes of the public sector have become focussed on supporting the private sector to

address societal issues. In this the private sector has the strength of innovation, responsiveness, efficiency, capability and leadership to cope with these challenges (Scheyens, Banks & Hughes, 2016; Besley & Ghatak, 2007; Cordova & Celone, 2019). Here the government could take the role of 'commissioner', helping companies to make a significant societal impact (Social Impact Investment Taskforce, 2014a).

Also in the Netherlands the central government acknowledges the need to establish collaborations between the private- and the public sector for establishing societal impact (Keijzer, 2019b). The Ministry of Economic Affairs and Climate Policy initiated in collaboration with the top sectors, knowledge institutes, companies, societal organisations and regional governments a 'missiondriven topsectors and innovation policy'. In the centre of this innovation policy are four societal themes: energy transition and sustainability; agriculture, water and food; health and healthcare; and security and safety. These societal themes are positioned as the starting point of innovation and knowledge development (Keijzer, 2019b).

Regional policy is increasingly important in this, because here the societal challenges are experienced, concretely meaning that also the societal innovation capacity will be addressed (Stam et al., 2017; Rathenau, 2020). By pursuing solutions for the societal themes the national and regional government are supporting companies that contribute to innovations that are both societal- and economical relevant. The innovation policy especially underlines the importance of start-ups, scale ups and SMEs by positioning them in a prominent place, hereby providing extra allowances to stimulate the collaboration between the public– and private sector contributing to the societal challenges (Rijksoverheid, 2018).

As a bridge between government, companies and knowledge institutes the regional development agencies are one of the significant vehicles used by the government to stimulate the private sector in strengthening the economy and addressing societal issues. A regional development agency has a significant position in catalysing and fostering the societal impact of start-ups and SMEs. The early stage capital is risky for investors in which regional development agencies could fill the gap with funding (Rijksoverheid, 2018; Keijzer, 2019b). With this funding it is possible to explore and test dynamic market-driven solutions to urgent problems influencing business and innovation, that could make a future societal impact (Trautwein, 2020; Schaltegger and Wagner, 2011; Social Impact Investment Taskforce, 2014a). Especially start-ups with a key role in accelerating sustainable transitions (Trautwein, 2020) and SMEs responsible for over 71% of employment and 62% of value-added in 2018 in the Netherlands (Nederlands Comité voor Ondernemerschap, 2019), the improvement on stimulating the societal relevance and consequently the established societal impact by innovation is significant.

It would be interesting to look further into regional development agencies and its role in executing the governmental policy concerning the societal challenges. Therefore in this research the East-Netherlands development agency Oost NL is at the centre. Specifically the focus will be on the

unit Business Development, which supports the regional economy in bringing innovations to the market and accelerating the growth of companies (Oost NL, 2018). In this unit there are two programs which will be the focus point of this study: 'De Startversneller' (Start Accelerator) and 'De Groeiversneller' (Growth Accelerator), hereafter mentioned as Start and Growth Program or SGP. These programs are focussed on start-ups and SMEs. Following the mission driven innovation policy of the central government also the focus of Oost NL is shifted from a mostly economic approach to a combination of an economical *and* societal approach. For SGP this concretely means that in (financially) supporting projects of start-ups and SMEs these projects should address the societal challenges.

Although the global, national and regional societal intentions and goals are promising, attention should be paid to the measurability of these intentions and targets. Without measuring it is not clear how societal relevance can be stimulated and established, hence remaining unclear about reaching the set goals. This has led to a greater interest in practical tools that assess societal relevance hereby defining, measuring and communicating this relevance (Diez-Canamero, Bishara, Otegi-Olaso, Minguez & Fernández, 2020; Trautwein, 2020; UN economic and Social Council, 2015; Hubbard, 2006; Verrinder, Zwane, Nixon & Vaca, 2018).

For regional development agencies and investors that increasingly entered the field of 'responsible investing' this measuring issue also arises (EFAMA, 2016). Funding companies or projects, not only based on their economic relevance, but also on their social and environmental relevance requires a different and unconventional approach. Investors have concerns on defining investments as societally significant because the lack of investment standards, investment processes and selection methods, and the quality of data that is available to assess the societal relevance of companies (Trautwein, 2020; Allen, Metternicht & Wiedmann, 2018; Widyawati, 2019; EFAMA, 2016; Maas & Crieco, 2017; IFC, 2020; Verrinder et al., 2018).

Also the academic field acknowledges that the research field of societal related investing lacks theoretical and empirical studies to determine the best way to invest for the best societal and economical relevance (Agrawal & Hockerts, 2019; Widyawati, 2019; Tekula & Shah, 2016). Adding to that, there is a great need for solution oriented research concerning the impact of societal relevant activities, reconceptualizing this research field to a research of design, focussing on action, experimentation and design with practical frameworks instead of only analysis (Blowfield, 2005; Barnett, Henriques & Husted, 2020). Therefore it is important "to know what is working, what is lagging, and what adjustments are necessary" (IRIS+, 2019b, p. 2).

Not only for the development agencies but also for companies itself this translation from general societal goals to measurable and relevant indicators on company level is difficult to make (Diez-Canamero et al., 2020). Start-ups and SMEs have problems with measuring societal relevance because of the lack of simple and wide accepted tools, making the process often too complicated and too expensive (Trautwein, 2020; Avance, Social Enterprise NL & Impact Centre Erasmus, 2020). Even

in Social Enterprises, where societal relevance is the core, very limited societal relevance measurement takes place (Maas & Crieco, 2017; Avance et al., 2020). Barnett, Henriques and Husted (2020) argue in their review about the assessment of CSR activities that even the highly cited studies fall short assessing societal relevance mostly measuring CSR activities, immediate outputs and benefits to specific stakeholders instead of intermediate outcomes, impacts and benefits to the wider society. Rather than using big, public secondary data for CSR performance researchers should move towards small data determining causation instead of correlation (Barret, Henriques and Husted, 2020).

With the increasing political focus on societal relevance through innovation policy, the lack of tools and consensus on assessing (potential) societal relevance from a development agency and company perspective, and the huge significance of start-ups and SMEs in the society it would be interesting to look deeper in the process of assessing societal relevance of company's projects, from a regional development agency perspective.

This leads to the goal of this research which is developing a tool to assess the societal relevance of a company's project *ex-ante* in determining to (financially) support it for the regional development agency called Oost NL, in specific the Start and Growth Program (SGP). This tool will help assessing *if* there is a societal relevance, *what* this societal relevance is and to *what extent* the project is societally relevant.

The objectives of this tool are to make systematic assessments based on hard underlying criteria about societal relevance, communicate these to stakeholders and support companies by making the concept of societal relevance more tangible. Hence, creating a solid base under the concept of societal relevance in SGP. Hereby following the underlying belief of accountability, meaning that measurement will clarify if there is success or failure, rewarding according to this measurement, learn from it and demonstrate it to create public and stakeholder support (Peguero, 2010).

The central question in this research:
How could the societal relevance of a company's project be assessed ex-ante in determining to (financially) support it by a regional development agency?

With the sub questions:

- What is societal relevance?
- How could societal relevance be assessed?
- What is societal relevance according to Oost NL (SGP)?
- What are the objectives of Oost NL (SGP) concerning societal relevance?
- Which characteristics are required in a tool to assess societal relevance at Oost NL (SGP)?
- How could the tool be implemented at Oost NL (SGP)?
- To what extent could Oost NL (SGP) reach her objectives with this tool?

The reason the research questions use the term 'assessment' rather than 'measurement' is that the societal relevance is not only measured and clarified but also assessed on its significance.

Practical contribution

This research supports decision-making, evaluation and reporting for (regional) development agencies, and in particular Oost NL (SGP), in assessing company's projects on their societal relevance and the worthiness to (financially) support these projects. Other regional development agencies could use this tool to develop policies improving the societal relevance according to the methods and indicators provided in the tool, by more precise means. Also, regional development agencies get insight in the data that are useful and needed in assessing the societal relevance of companies. Hence this tool contributes to the measurement and management of societal relevance hereby stimulating the discourse of societal relevance among the local and regional agencies (Widyawati, 2019).

Further, this tool provides support for (governmental) policymakers to determine in which projects and especially innovations should be invested to improve societal relevance. Giving them insight in what is working, what is missing and what adjustments are necessary to foster societal relevance (IRIS+, 2019b). Hence, societal relevant innovations can be stimulated by more precise means, improving the effectiveness of policy instruments.

Also leaders in the field of Impact Investing stress the importance of systematically and methodically assessing anticipated societal relevance (IFC, 2019b, GIIN, 2018; PCV, 2019a). This research supports the construction of better impact portfolios.

For companies itself the resources to create impact "are limited but the societal needs are not" making it essential to gain insight in the process of impact creation (Barnett, Henriques & Husted, 2020, p.938). Especially start-ups and SMEs have often a limited infrastructure in addressing societal challenges (Shields & Shelleman, 2017; Trautwein, 2020). Through this research these companies are provided with criteria that are relevant in attracting new investors and therefore additional capital. Hereby improving the ability to reveal weaknesses, strengths, opportunities and risks in communicating the societal relevance of their activities. Consequently complying with the demand of customers for sustainable corporate practises, future laws and regulations concerning sustainability which will lead to better economic and sustainable effects (Trautwein, 2020; UNpri, 2020; PCV, 2019a).

Academic relevance

In the last decades of organization research and organisation design the focus was on making companies more efficient and profitable instead of focussing on the societal issues associated with companies (Dunbar & Starbuck, 2006). This research will contribute to new insights concerning the lack of societal relevance standards, tools to assess societal relevance ex-ante and the lack of available data. Besides that, it provides more detailed information about the methods and theories that can be

used to assess societal relevance ex-ante. Moreover, this research adds to methods of developing tools in assessing societal relevance, moving the field forward in the concepts of the selection process of projects, performance reporting and opportunity recognition (Agrawal & Hockerts, 2019). Thereby adding to the improvement of defining, measuring and communicating societal relevance (Verrinder, et al., 2018).

The empirical evidence could contribute to a more broad accepted consensus about achieving societal relevance (Widyawati, 2019). Hereby fostering internal alignment around the intended societal relevance and its priorities (PCV, 2019a). Also it is desirable to collect more 'small data' about project-specific outcomes to compare them with other activities and other firms determining causation instead of correlation between input and impact (Widyawati, 2019; Brest & Born, 2013; Barnett, Henriques & Husted, 2020).

Further, according to Barnett, Henriques & Husted (2020) the gap between analysis and impact should be bridged focussing on the science of design which is action oriented and solution driven. By using the Design Research method on a business case, the theoretical concepts get tested resulting in recommendations for future research. Because of the design approach the created artifact is unique for the organisation, and therefore adding less to generalizable implications. However, this research developed a field-tested understanding of the problem and a solution concept providing grounding for a more widely application to other fields, sectors and organisations (Dunne, 2018; Barnett, Henriques & Husted, 2020; Collatto, Dresch, Lacerda & Bentz, 2017; Warren, Scharding, Lewin & Pandya, 2020).

Finally, this research contributes to the scarce academic literature about Impact Investing, the limited attention to the challenges of implementing Impact Investing in practise and the combination with the Theory of Change (Clarkin and Cangioni, 2015; Argrawal & Hockerts, 2019; Jackson, 2013). Thereby little research is done about the effectiveness of innovations in meeting societal needs and limited literature exists about assessment approaches focussed specifically on start-ups and SMEs, which will be addressed in this research (Trautwein, 2020; Avance et al., 2020; Warren, Scharding, Lewin & Pandya, 2020).

Design Research

This research will be done according the Design Research method to answer the research questions and reaching the research goal. Because a specific tool will be developed in this research the Design Research method is combined with certain practical design guides, specifically addressing the topic of assessing societal relevance ex-ante. The data will be collected in iterative steps through semi-structured interviews, a workshop, presentations, internal databases and organisational- and public documents.

Outline

In the next chapter the theoretical framework of this research will be described, answering the first two sub-questions explaining the concept of societal relevance and how societal relevance could be assessed. The third chapter contains the methodology explaining the phases in this Design Research, the data collection and data analyses. In chapter four the definition and objectives of societal relevance according to Oost NL (SGP) will be addressed. Moreover, the objectives and characteristics of the desired tool are investigated. By doing this, sub-questions three, four and five are answered. Chapter five will describe the tool itself, the verification of the tool and provides insights for the implementation of the tool, hereby answering sub-questions six and seven. The last chapter of this research contains a discussion and conclusion, where the findings, limitations and future research will be discussed.

2. Theoretical framework

2.1 Defining societal relevance

To assess societal relevance, first the term 'societal relevance' has to be defined. Societal relevance is a broad term and therefore it is difficult to come to one all-encompassing definition. In academic literature several definitions exist of societal relevance, in a business context also mentioned as 'impact', 'societal impact', 'social impact', 'environmental impact', 'corporate social responsibility' or 'ESG (Environmental, Social and Governance) factors (Social Impact Investment Taskforce, 2014a; Impact Centre Erasmus, 2019; EFAMA, 2016; Govindan, Shankar & Kannan, 2018).

In this research societal relevance is shortly said a combination of intended or unintended, directly or indirectly net social value and net environmental value created by companies through a project (Impact Centre Erasmus, 2019; Maas & Crieco, 2017; OECD, 2010; Vanclay, 2003).

It is explicitly chosen to use the broader term 'societal relevance' instead of the narrow term 'societal impact', because determining the *real* impact is often complex and not unilateral (KNAW, 2018). This research follows the line of thought of the KNAW (Royal Dutch Academy of Sciences) that societal relevant initiatives are initiatives "in which it is plausible that it will lead in the end to societal impact" (KNAW, 2018, p.42).

The process of creating societal relevance is structured in several phases, also known as the 'Impact Value Chain'. In figure 2 below this Impact Value Chain is defined and explained (Social Impact Investment Taskforce, 2014b):

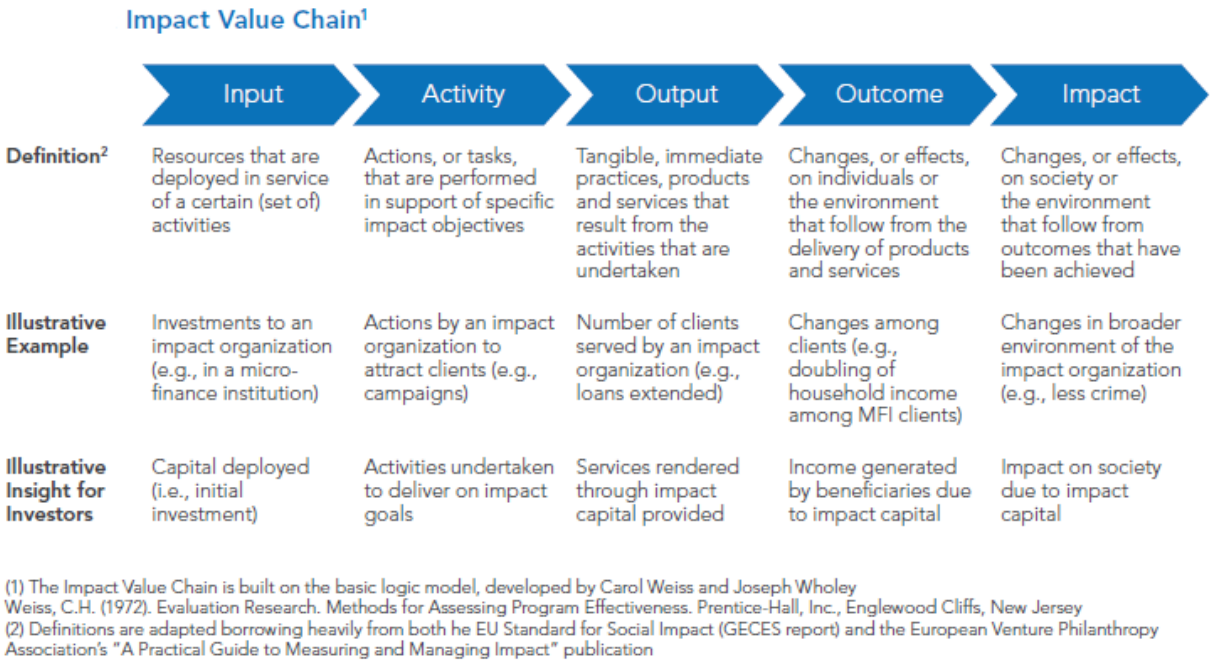


Figure 2. Impact Value Chain (Social Impact Investment Taskforce, 2014b).

The assessment process of societal relevance occurs *ex-ante*, so every phase of the Impact Value Chain could indicate societal impact in the future. Therefore this model is an important base for thinking

and working with societal relevance, and assessing it ex-ante, which will be elaborated in the next chapter.

Because there is a certain timespan and a clear difference between output and the impact, the distinction between the last three phases in the Impact Value Chain need attention (Brest & Born, 2013; Social Impact Investment Taskforce, 2014b; KNAW, 2018; DNB, 2017; NPC, 2014; Maas & Crieco, 2017):

- The *output* is the result of the activity, a tangible product, service or facility generated by the project, mostly visible in the short term.
- The *outcome* is the effect of the output on people's lives (social value) or the direct natural and physical environment (environmental value) which is often visible in middle-long term and has often a direct link with the (societal) goal of the project.
- The *impact* is the effect of the accumulations of the outcomes on the society or the environment. These effects are visible in the long term.

The significance in societal relevance of a project increases moving to the right of the spectrum. However, at the same time the influence diminishes of the project on these aspects. Determining the output is often simple and reliable but the outcome and impact have an increasing complexity, nuance and uncertainty, and therefore complex measurability. The non-linear aspect of innovation is one of the aspects contributing to this complexity (Social Impact Investment Taskforce, 2014b, KNAW, 2018). Moreover, no case is the same and could be influenced by multiple different external factors in which impact creation is not solely a result of one project. A typical example of difficulties in determining impact is the severe struggle of governments at the moment to decide what corona measures will achieve the desired impact: decreasing the number of illnesses.

Because of this complexity the *when* and in *what degree* impact takes place is often arbitrary and differs among stakeholders, making the assessment of societal relevance challenging. Therefore outputs and outcomes could be used as proxies for the optimal but very hard to measure potential impact (Social Impact Investment Taskforce, 2014b, KNAW, 2018; DNB, 2017; Roche, 1999; Jackson, 2013; Avance et al., 2020). Hence, if the project should contribute to a better outcome, it is presumed this will eventually contribute to the impact (IFC, 2019b; KNAW, 2018; Jonkers et al., 2018).

The focus in this research is on start-ups and growing SMEs, therefore the focus group of the tool is extremely diverse in size, sector and purpose (Impact Centre Erasmus, 2019). This means that societal relevance could be established in a great variety of ways and contexts. Therefore societal relevance should be assessed in the broadest sense to cover the whole spectrum.

A company has two fundamental ways of creating societal relevance: 1) result-oriented, where the societal relevance comes from the products or services 2) process-oriented, where the societal relevance comes from the internal management practices (Brest & Born, 2013). The effects from operations are often mentioned as ESG (Environmental, Social and Governance) effects. Positive ESG effects are positive effects on social- and environmental aspects related to business operations,

meaning that the internal policies and procedures of a company fit the good business practice standards (PCV, 2019a; Best and Harij, 2012). These effects are closely related to Corporate Social Responsibility, influencing standards and ethical- and social norms in companies (EFAMA, 2016).

Hence, societal relevance is a result of the project's products and services creating impact in social or environmental areas, but may also include positive ESG effects derived from the project (IFC, 2019). Examples of result-oriented initiatives are hard requirements like demonstrable performance (energy reduction or better health treatments). Examples of process-oriented initiatives could be participation, improvement and learning processes (employees with a work disability or reducing waste in the manufacturing process) (Gjolberg, 2009; Brest & Born, 2013). Taking the impact of products and services together with the ESG effects provides a holistic approach representing a wide spectrum of positive and negative aspects of societal relevance.

Because a development agency is at the centre of this research, the goal of societal relevance stand not on its own but is connected to an other goal: economic relevance. The traditional thought is that you "either do well or do good" hereby separating the economic- and societal relevance (Emerson, 2003, p.35). However, some argue that the economic relevance is part of the societal relevance (KNAW, 2018; Impact Centre Erasmus, 2019) and that these two concepts are blended, also named Blended Value (Emerson, 2003) and Shared Value Creation (Porter and Kramer, 2011). In this the general idea is that all companies create economic, social and environmental value, which are non-separable (Maas & Crieco, 2017).

In this research economic relevance and societal relevance will be seen as interrelated taking the Blended Value perspective (Emerson, 2003). However, the development agency is in transition from the mostly economical perspective to a broader perspective adding societal relevance. Therefore the developed tool will complement the already existing economic relevance assessment with a societal relevance assessment. Consequently in this research the economic perspective is excluded and will be solely focused on the societal perspective. This does not mean that there could be no overlap or mutual benefits/disadvantages in striving for economic- and societal relevance.

What societal relevance and the definition in more detail entail depends on the goals and societal challenges the organization, in this case SGP, wishes to address. Moreover, societal relevance is a fluid definition that is evolving through time and could differ per project, as an organization and the people working in it face new challenges and dilemmas, new ways of processing the relevant data and integrating it in their way of working (Social Impact Investment Taskforce, 2014b). In chapter four the definition of societal relevance and the objectives of Oost NL, specifically SGP, will be investigated in more detail.

2.2 Assessing societal relevance

SGP as part of a development agency has the goal to create economic- and societal relevance by supporting and stimulating start-ups and SMES. Resources are used to catalyse and improve the results of the companies addressed. Therefore the financing of projects can be seen as a form of investing, where an economic- and societal return for the region is expected. The field of investing is especially focused on measuring and assessing returns, therefore providing useful insights for tool design. Besides that, this field highly values the due-diligence process of a potential investment, which aligns with the focus of the ex-ante assessment in this research. In this research the investing perspective is taken as starting point for the ex-ante assessment of the societal relevance of a company's project.

Looking into the area of financing and investing that add to a positive societal relevance different terms are used. Examples are Ethical Investing; Socially Responsible Investing; Environmental, Social, Governance Screening; Social Finance; Sustainable Investing, Themed Investing, Social Impact bonds, Venture philanthropy, Microfinancing, Impact Investing or Double/Triple Bottom-line Investing (Agrawal & Hockerts, 2019; Hebb, Louche and Hachigian, 2014; EFAMA, 2016).

In this jungle of concepts, terms and definitions the specific investing perspective that is followed in this research is Impact Investing. This is a relatively new form of investing in which the societal- and economic goals are pursued simultaneously, hereby getting increasing attention from society, institutions and businesses (Vecchi, Casalini, Balbo & Caselli, 2015; Rizzello et al., 2016; Entrepreneurship, 2012). It is seen as "one of the most creative and promising areas of innovative development finance" (Jackson, 2013, p. 96). Clarkin and Cangioni (2016) argue that the research in Impact Investing is mostly led by practitioners, looking at the wide and great interest from the practitioners field. Also political leaders on the highest level like the OECD, the World Economic Forum and the G8 see the potential of Impact Investing, where the G8 established in 2013 a Social Impact Investment Taskforce with the goal to support the development of Impact Investing (EFAMA, 2016; Social Impact Investment Taskforce, 2014a). The Social Impact Investment Taskforce (2014a) argues that Impact Investing is a response on societal challenges which cannot be solved by the government or the social sector alone. The types of impact investors are very broad, such as banks, pension funds and wealth managers to institutional and family foundations to government investors, local government agencies and development finance institutions (GIIN, 2020a; Littlefield, 2011; Tekula & Shah, 2016).

The Impact Investment field is still emerging and consensus on the definition of Impact Investing is not achieved (Agrawal & Hockerts, 2019). In this research Impact Investing can be defined as investors who intentionally seek opportunities for financing projects that produce next to sustainable financial returns also measurable social and/or environmental benefits (Tekula & Shah, 2016; Quinn and Munir, 2017; GIIN, 2020a; Clarkin and Cangioni, 2015). Adding to this, Impact

Investing implies a highly engaged relationship with the investee and the impact creation process of the organisation that is invested in (Agrawal & Hockerts, 2019).

The concept of impact investing has four key elements (GIIN, 2020b; IFC, 2019a):

1) **Intentionality**. Impact Investing has the goal to contribute to social and environmental solutions by identifying outcomes that will be pursued.

2) **Financial returns.** Impact Investing has the goal to create financial return, which can range from below market rate to risk-adjusted market rate.

3) **Contribution.** Investors follow a credible narrative that describes the impact pathway from investment to the intended impact goal.

4) **Impact measurement.** There is a commitment of the investor to measure and report social and environment impact of the made investments.

Impact Investing goes a step further than other types of societal related investing. This type of investing puts the societal relevance equally next to the economical relevance. Impact Investing focusses on having a *positive effect* on society, thereby looking at the achievement of impact goals, combining intent with tangible evidence of the impact (Jackson, 2013). This is in contrast with most other forms of societal related investing where the financial return has the highest priority, focussing mostly on avoiding negative effects and on the intention of the company rather than the achieved impact (Quinn and Munir, 2017; Flynn, Young, & Barnett, 2015; O'Donohoe, Leijonhufvud, and Saltuk 2010; Social Impact Investment Taskforce, 2014a). Impact Investing is positioned in the spectrum between Sustainable- and Responsible Investing (SRI) and philanthropy, as can be seen in figure 3 (Social Impact Investment Taskforce, 2014a). Figure 3 shows the main types of investing and the differences between them.

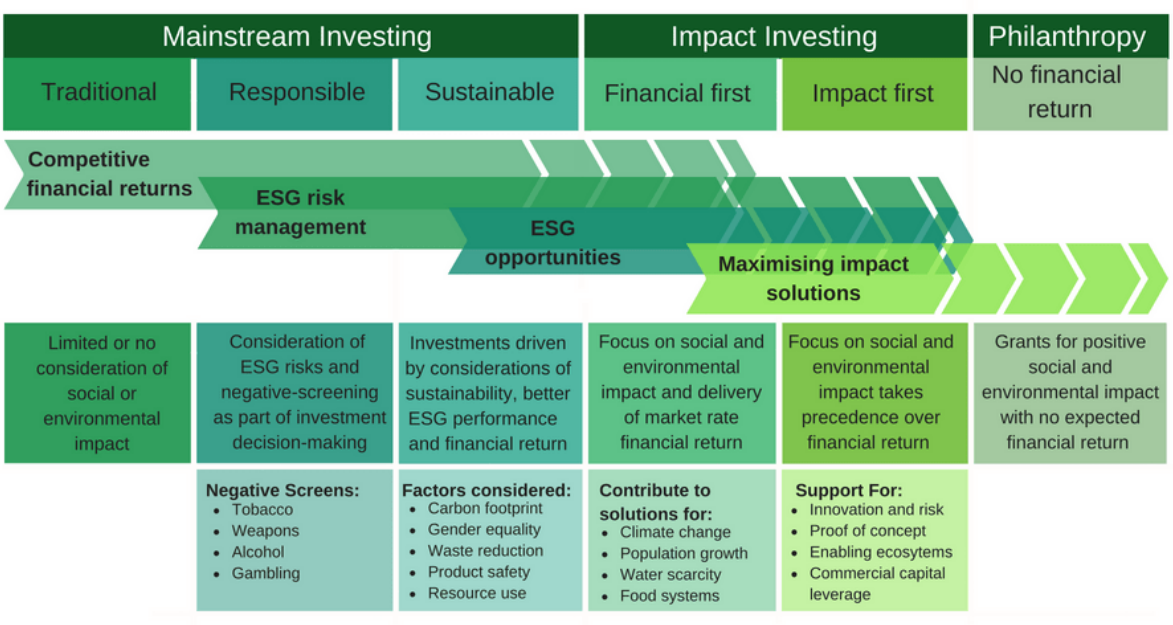


Figure 3. Impact Investing Hub. (n.d.) - based on the Impact Investment Spectrum by Sonen Capital.

The Impact Investing perspective is chosen for this research based on four factors that characterize this type of investing (Agrawal & Hockerts, 2019): 1) the high degree of engagement with the entrepreneur 2) the important process of selection of projects to invest in 3) the high focus on social and commercial outcomes and 4) the importance of reporting outcomes. These four factors are in line with the goals of SGP. However, a significant difference between Impact Investing and the support of SGP is the amount of capital that is used (Agrawal & Hockerts, 2019). This directly has consequences for the resources that are made available for assessment. Meaning, that the input for the assessment must be fitting the return of that assessment.

That said, the Impact Investing perspective is still highly relevant because of the portfolio approach and the similar goals with the developed tool. Thereby a development agency is focussed on growing, implying economic growth meaning that the (financial) support must lead to an economical return, therefore creating similar expectations as a private investor.

This research is mainly focussed on the societal relevance whereby the Impact Investing standpoint provides a good direction to investigate and develop a tool to assess societal relevance ex-ante. This investors perspective focusses on the right questions to ask and data categories that are important to answer these questions, to make a solid impact assessment.

However, taking solely the investing perspective is not enough. Asking the right questions concerning societal relevance from an investor perspective is one thing, but providing the answers from a company perspective is another. The data collection is dependent on the entrepreneur and its company who will deliver this data. Next to that, the company's project itself determines the eventual societal success. Commitment and motivation of the entrepreneur are essential here, but are often failed to be detected in an ex-ante assessment (Smart, 1999). Therefore the assessment could not be only viewed from one side (OECD, 2019; Agrawal & Hockerts, 2019). Hence, the Impact Investing perspective should be complemented by the perspective of the company, that is the target group of the (financial) support and creating the societal relevance. In other words: a CSR (Corporate Social Responsibility) perspective.

CSR is defined differently through the years but shortly said in this context the process of integrating social and environmental factors in the activities and projects of a company, maximizing the impact for their stakeholders and society at large (European Commission, 2011). The companies that will be supported are start-ups and SMEs that are willing to grow. These companies are often not explicitly aware of the potential impact they could create. According to the European Commission (2011) "for most small and medium-sized enterprises, especially micro-enterprises, the CSR process is likely to remain informal and intuitive" (p. 6). They are lacking a solid infrastructure addressing societal relevance, have limited resources, a high volatility of outcomes, low formalization and high flexibility (Trautwein, 2020; Shields & Shellemann, 2017).

Consequently, it is good to investigate simple CSR models which companies could use to define their societal relevance related to their projects. In this way it is understandable and realistic for

entrepreneurs to define their societal relevance. However, literature emphasizes that it remains a major challenge to assess the effectiveness of CSR initiatives and the causation with the actual impact, hereby using a simple model (Barnett, Henriques & Husted, 2020; Shields & Shelleman, 2017; Trautwein, 2020).

By combining an Impact Investing model (development agency's perspective) with a CSR model (company's perspective) a combined model arises. In the next (sub)chapters the two models that are used will be explained.

2.3 Assessment focus

In this research the focus is on assessing societal relevance ex-ante, or in other words estimating the relevance for due diligence, which is relatively limited systematically addressed by investors and researchers but a crucial part of the investment process (Agrawal & Hockerts, 2019; PCV, 2019a; IRIS+, 2020b). The focus on ex-ante assessment differs from ex-post assessment. Although the eventual societal relevance of the project is important and linked to the prediction indicators there is a nuance in ex-ante predicting indicators of impact and ex-post measuring indicators of impact. For example, smoke is an indicator of fire, but measuring smoke does not say the actual impact of the fire, it is a prediction indicator. Thereby in this example smoke isn't the only factor determining how big the fire is. Also fuel and wind play a part here among other things. As a consequence predicting the fire contains a lot of factors that need to be considered, where measuring fire ex-post focusses on measuring the impact itself. Predicting societal impact is therefore a complex and delicate process.

The advantage about predicting the societal relevance of a company's *project* instead of the *company* itself is the improvement of the causal pathways between activities and outcomes. With only evaluating on firm level the real relationships between the activities and its consequences are hidden. Focussing on project level the development agency can predict the direct outcomes and also keeping the project financed accountable for that (Salazar, Husted & Biehl, 2011).

Avance et al. (2020) describe five aggregation levels of societal relevance assessment which a social organization needs to follow through time. These levels determine the assessment depth and are used in this research to illustrate the assessment focus:

1) Determining social mission and impact objectives explicitly.
2) Create a change-model.
3) Tracking outputs.
4) Measuring mission related effects (Outcomes and Impacts).
5) Reaching full knowledge and skills of assessing impact.

This research investigates the first four levels, creating a tool that could be used on these four levels of assessing societal relevance. Developing a new societal relevance assessment tool costs time and resources (which are limited in this research) and should strive to be as easily adoptable as possible, reducing potential burdens on users (PCV, 2019a; Avance et al., 2020).

2.4 Principles for assessing societal relevance

This chapter focusses on the principles of assessing a company's project ex-ante for SGP. There is no standard recipe for a perfect impact assessment with a list to tick off (European Commission, n.d.a.). The European Commission (n.d.a) however states that an impact assessment should contain several aspects. These aspects stand not on their own and are intertwined. Therefore determining these aspects is necessarily an iterative process.

These aspects are (European Commission, n.d.a):

1) The societal problem and the reason why this is a problem.
2) What the goal is of the project concerning the problem.
3) Options in which the goal could be achieved .
4) The quality of the options (effectiveness, efficiency, coherence).
5) The economic, social and environmental impact.
6) Managing monitoring and retrospective evaluation.

According to the European Commission (n.d.a) it is important to consider the right focus and depth of analysis, concentrating only on the aspects that are most significant. For each step in the analysis this consists of the aggregation level, specific focus and most relevant factors. The more complex the problem that is addressed and the impact that comes with it, the more desired an in-depth analysis is. However, in the assessment the resources and time available (data collection, stakeholder consultations and conducting external studies) should be taken into account (European Commission, n.d.b).

The starting point of the assessment are already existing evaluation frameworks used on the project (economical and/or societal) and frameworks used by other programs or business units of the organisation (European Commission, n.d.a). Useful are best practises and industry standards of for example IRIS+, GIIRS and SASB (IFC, 2020). For the collection of data and the analysis of the impact an appropriate method should be chosen which could be supported by external studies. Through the whole assessment the findings should be supported by evidence (data, scientific findings etc.) if possible, if not, than the reasoning behind the findings should be explained explicitly (European Commission, n.d.a). The assessment should enable direct comparisons between different projects by generalizable questions and indicators. Sector-specific questions and indicators could be necessary and therefore used as addition for the best measurement in diverse portfolios (PCV, 2019a).

Next to these factors the stakeholders should be consulted to ensure that the stakeholder view is coherent with the result of the assessment. Involving stakeholders perspectives as much as possible is wise to create the most impact, decrease impact risk, and assess the contribution of SGP and the company's project (European Commission, n.d.a, PCV, 2019b). SGP should clearly assess if the project leaders understand their impact goal, needs of key stakeholders and robustness of their impact measurement and management system (PCV, 2019b).

A tool needs "consistent language, appropriately balance rigor and efficiency, and seek to understand the expectations of internal and external audiences" (PCV, 2019b, p.11). Aligning the assessment with the SDGs ensures the connections with the global development agenda and fit to the common language of social challenges, fostering communication (PCV, 2019b; IFC, 2019a).

There are seven main challenges of assessing societal relevance to overcome:

1) **Diversity.** Because SGP has different sectors (and more specific: cases) to support with different intentions, missions and visions, different indicators could be relevant. This makes it difficult to meet all the needs to assess the great variety of different cases and construct a one size fits all assessment system (Best and Harij, 2012; EFAMA, 2016).
2) **Standardization.** Comparability and consistency are benefits of systematically assessing societal relevance. However, standardization could reduce the professional freedom of the professionals and the precision in which the professional could gather information about societal relevance. Therefore the complex phenomenon of societal relevance should not necessarily be simplified for the purpose of standardization (Best and Harij, 2012; EFAMA, 2016).
3) **Capacity and Cost.** Metrics may require intensive data collection and analyses, resulting in an expensive and resourceful process. As a consequence it could be that more weight of the professional's tasks will be assigned to value assessment instead of value creation, which could be questionable (Best and Harij, 2012; EFAMA, 2016).
4) **Logistics.** It could be difficult to quantify aspects of societal relevance, access the data and interpret them, determining the indirect impact pathways and the direct causation between the project and the final impact (Best and Harij, 2012; EFAMA, 2016; Social Impact Investment Taskforce, 2014b).
5) **Integration in deeply rooted market dynamics.** The integration of social and environmental aspects in the already existing economical assessment process could complement each other but could also contradict (Social Impact Investment Taskforce, 2014b).
6) **Fluid definition of impact.** The definition of societal impact varies and develops over time among and between sectors, companies and the professionals inside the organisation (Social Impact Investment Taskforce, 2014b). This fluid definition should always be revaluated through time and among stakeholders.
7) **Limited consensus around best practises.** Assessing societal relevance is based on the collaboration of different parties involved which possibly having different opinions about what an assessment should include (Social Impact Investment Taskforce, 2014b).

Below two models will be described that are at the centre of the assessment tool. Model 1 is a model from an investor's perspective supporting the design of questions needed to be answered and the data categories that are important to make a solid societal relevance assessment. Model 2 is a model from

the company's perspective supporting the answering of the questions of model 1 clarifying the specific data that is needed and describing the societal impact creation for a solid societal relevance assessment.

2.5 Model 1: The six IRIS+ key questions

The GIIN, the main organizing instrument of the Impact Investing industry (Jackson, 2013), created IRIS+ (Impact Reporting and Investment Standards) which is a generally accepted accounting system for measuring, managing and optimizing impact, providing consistency and comparability in information for decision making (IRIS+, 2019a). Based on best practises (PCV, 2019b) the IRIS+ key questions (2019a) and the IRIS+ Decision-making guide (2019b) are used. These key questions are aligned with the five dimensions of impact from the IMP (Impact Management Project), which is the leader in the field of Impact Investing collaborating with more than thousand stakeholders in the industry. These five dimensions are a useful and widely accepted set of norms helping to understand and collect data concerning social and environmental relevance, from an investors perspective (PCV, 2019b). The five dimensions describe the What, Who, How Much, Contribution and Risk of an investment (IMP, n.d.). These five dimensions are specifically useful for company's projects "to ensure their impact goals are sufficiently comprehensive" (PCV, 2019b, p.17).

IRIS+ (2019b) uses six questions which are recommended as a base for a metrics system by multiple organisations and are based on the five dimensions of impact (IRIS+, 2019c; PCV, 2019b; IMP, n.d.):

1) **What is the goal?** Articulating goals and outcomes of a project and the importance of the outcomes to stakeholders, to ensure that the goal is relevant to people most affected.
2) **Who is affected?** Understanding which stakeholders (could also be organisations or the planet (Mayne, 2015)) are experiencing the effect (European Commission, n.d.c).
3) **How much change is happening?** Clarity about performance in terms of depth (degree of change experienced by stakeholders) and scale (number of stakeholders experiencing outcome) which is emphasized by Mayne (2015) as being an important factor in an impact pathway. The IMP (n.d.) and Mayne (2015) add a third dimension which is duration (timeline when and for how lang stakeholder experiences outcome).
4) **What is the contribution?** The contribution of the project to the outcomes. Specifically this means that the outcomes and impact are adjusted for "effects achieved by others (alternative attribution), for effects that would have happened anyway (deadweight), for negative consequences elsewhere (displacement), and for effects declining over time (drop off)" (GECES, 2013, p.iii).
5) **What is the impact risk?** Main risk factors to the social- and environmental outcomes and impact that the results will be different than expected. These risks could consist of evidence risk (outcomes and impact based on low quality evidence), external risk (external factors limiting outcomes and impact), execution risk (activities that do not create desired outcomes

and impact) and stakeholder participation risk (stakeholders that will limit or counteract outcomes and impact) (IMP, n.d.; European Commission, n.d.b).

6) **How is change happening?** Helps the investor to connect the means and the ends. Providing for example insight on business processes. Here bad assumptions could be detected (European Commission, n.d.c).

It could be in practise that one or more dimensions are less relevant in the final impact (PCV, 2019). Also the six questions could be applicable in different phases of the Impact Value Chain.

In these questions, especially question six, it must become clear what the logical reasoning is that links the problems and goals to the impact, hereby explaining the underlying causes, who will be affected and how they will be affected (European Commission, n.d.a). For describing the change process of creating societal relevance a second model is used which will complement the five dimensions of impact. Next to intent and (potential) impact Jackson (2013) and Verrinder et al. (2018) argue that a third element is important in Impact Investing which is the Theory of Change (ToC), originating in the field of program evaluation (Jackson, 2013). This theory "is a tool that can be creatively and productively blended with other evaluation methods and applied at various levels" (Jackson, 2013, p.103).

The ToC complements the six questions from the development agency perspective with a simple and logical model that provides a theory which is useful for start-ups and SMEs to assess societal relevance, covering the company's perspective thereby answering the six IRIS+ key questions (Verrinder et al., 2018). This will strengthen the process of change, making change explicit for all parties and aligning the intention of change with the actual results (Jackson, 2013).

2.6 Model 2: The Theory of Change (ToC)

The Theory of Change are models that show how change is happening and how the project is aligned with the intended impact results (Mayne, 2017; Jackson, 2013). This theory with its Impact Value Chain is the most common planning framework used by development agencies and is broadly used to evaluate the performance of governmental and non-profit initiatives (Barret, Henriques and Husted, 2020; Roche, 1999; Mayne, 2017).

This theory can be used for different stages of monitoring and evaluation of a project (IPA, 2016; KNAW, 2018). In the developed tool this theory is used as measurement tool to assess the societal relevance of a project ex-ante by starting at the input working to the impact. The theory is most suited for predicting potential impact because the impact is to be realised on long term and can therefore not be measured directly. This means that the causality that eventually will lead to impact needs to be determined in a systematic and disciplined way (Jackson, 2013; Jonkers et al., 2018). Using the Theory of Change creates a shared understanding of the project's societal relevance by assisting in opening up the 'black boxes' of causation (NPC, 2014).

Moreover, the Theory of Change lends itself (and would be best) for participatory use engaging key stakeholders, in which the company has a significant role to play. The ToC is relatively simple to understand, especially in an organisation that is limited familiar with societal relevance assessment this is useful, like start-ups and SMEs (Verrinder et al., 2018; Avance et al., 2020). This theory is flexible for adaptation to a specific organisation with the possibility of choosing different levels of detail and can be combined with other evaluation methods (Mayne, 2015; Jackson, 2013; Avance et al., 2020). It detailly shows how impact is created in a clear overview which allows for better communication (Verrinder et al., 2018; Avance et al., 2020). This model increases impacts and enables the business developers to account companies for their project's impact (Jackson, 2013). Further, it is in general a cost- and resource effective way of performing a societal relevance assessment (Jackson, 2013). However, this theory has a wide variation in the developed models and in how it is used, therefore it should be applied carefully (Mayne, 2017).

The ToC shows the process of societal relevance (Impact Value Chain) from the input to the impact, thereby making the context, assumptions, enablers and supported evidence explicit for all parties (NPC, 2014; FBK, n.d.; IPA, 2016; Mayne, 2017; Jackson, 2013). The impact pathways describe the causal links between the different steps of the Impact Value Chain. An activity could have several pathways to impact (Mayne, 2017).

The assumptions between every step in the Impact Value Chain should be made explicit to transform the model into a Theory of Change (Chen, 2015; Avance et al., 2020). These assumptions contain the causal links between the phases and underlying beliefs about *how* a project will work and *why* change is established (FBK, n.d.; NPC, 2014; Mayne, 2015, 2017). Assumptions are important in determining the threats of not reaching impact and the creation of potential solutions to cope with failed assumptions.

Hereby the enablers of impact are explicitly determined. Enablers are the conditions that are necessary to allow a project to achieve societal impact. There are internal enablers which are the internal conditions necessary in the project and are in the sphere of influence of the company (examples are quality of services, relationships and culture in the project). External enablers are part of the external context or environment influencing the impact process of the project, beyond immediate control of the company (examples are economic, social, cultural and political factors but also law and regulations) (NPC, 2014).

In this research the Theory of Change will be expressed in this Impact Value Chain (see figure 4).

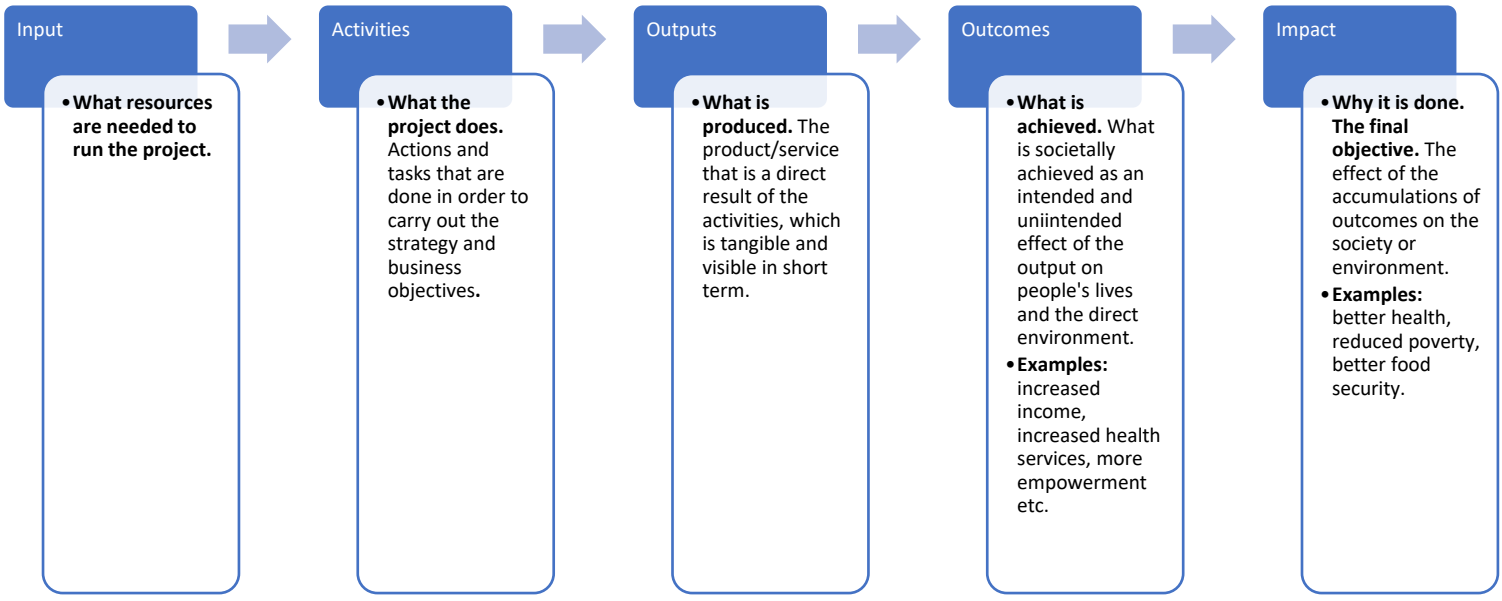


Figure 4. Impact Value Chain Societal Relevance.
Based on: Mayne, 2015, 2017; GECES, 2013; EVPA, 2013; Brest & Born, 2013; Social Impact Investment Taskforce, 2014b; KNAW, 2018; DNB, 2017; NPC, 2014; Maas & Crieco, 2017.

The disadvantages of this method are that the link between cause and effect is limited in scope, easily skipped or seen as straightforward. It is tempting to see the phases as separated administration blocks that could be filled in as isolated phases. Thereby it gives the impression that impact is created in a linear process, but different impacts occur on different points in time, making it a challenge to establish credible contribution and identify concrete outcomes (NPC, 2014; Wilson-Grau & Britt, 2013).

Also, seeking attribution instead of contribution is an important pitfall. Intending to create impact does not automatically mean that the societal relevance intended should solely be attributed to the project. Often a project contributes to an outcome indirectly, partially or unintentionally (Wilson-Grau & Britt, 2013). Further, it is always a prediction of societal relevance, so the value of using this model ex-ante could be discussed (Mayne, 2015).

There are six factors that need to be considered in the creation of the ToC for a solid and plausible design for assessing societal relevance ex-ante (NPC, 2014; IPA, 2016; Peguero, 2010; Mayne, 2017):

- **Meaningful.** Is it clear which impact goal the project wants to reach? Is the project described in a way that the company and stakeholders agree with? Is it logically coherent?
- **Plausible:**. Is it realistic to reach that goal with the level of effort? Will the activities contribute to the desired outcomes and impact? Are parties outside the organization likely to belief it?

- **Prioritized.** Are the most critical components of the project addressed? Are the assumptions necessary and independent from each other?
- **Well defined.** Are all the aspects (e.g. stakeholders, impacts, causations) well defined? Are the assumptions, enablers, context, evidence, and risks made explicit?
- **Comprehensible.** Is the project with this model explainable for everyone in a couple of minutes?
- **Testable.** Is the model measurable in causation and eventually impact? What is the status of the evidence?

2.7 Societal relevance indicators

The six IRIS+ key questions and the ToC are used as a framework to identify what should be measured, but are not sufficient for collecting data and robustly measure impact itself (Jackson, 2013; Verrinder et al., 2018). As mentioned before, the steps from input to output are often more straightforward, however the steps from output to outcome to impact is often very complicated to account for. And these outcome and impact are exactly the two most important aspects which should be measured for a solid assessment. The impact itself is often very difficult to determine and attribute to one project, therefore outputs and outcomes could be used as proxies for the optimal but very hard to measure potential impact (Social Impact Investment Taskforce, 2014b, KNAW, 2018; DNB, 2017; Roche, 1999; Jackson, 2013; Avance et al., 2020). Consequently, indicators should be developed in which the project should contribute to a better outcome, presuming this will eventually contribute to the impact (IFC, 2019b; KNAW, 2018; Jonkers et al., 2018).

Specific indicators make the measurement process more tangible and therefore easier to categorize, assess and compare. Indicators provide practicable, actionable and comparable information about the performance of a project concerning the key dimensions of societal relevance, making it possible to understand the societal relevance that is made. These indicators allowing for standardization, comparison between data and therefore projects, and give direction to the measurement of societal relevance (IRIS+, 2019a; Jonkers et al, 2018). Indicator based assessments facilitate simple and clear communication based on evidence, reducing complexity and measurement costs. It makes it possible to assess progress, report trends and articulating outcomes (Eurostat, 2014; Lazzarini, 2018).

The most significant, material, useful and feasible outcomes and impacts should be determined first whereafter selected outcome indicators could be established (EVPA, 2013). Indicators should be aligned with the purpose of the organisation and should be clearly defined for reliable measuring and comparison, preferably more than one indicator per outcome (EVPA, 2013). According to Jonkers et al. (2018) indicators should be carefully chosen whereby indicators that are too narrowly defined will influence the measurement in a negative way. Indicators should also be created according to fairness (key characteristics), added value, transparency, independence of data,

cost effectiveness of requiring data and the behavioural impact, meaning the effect on the way of working in the organisation (Jonkers et al., 2018).

A selection of indicators is never perfect in the beginning and needs therefore iterative testing, as will be done in this research (PCV, 2019a). Thereby, it helps the professional to get used to the tool and give an idea of the extra information that is needed to interpret these indicators.

2.8 Data collection and analysis of the assessment

If it is clear what should be assessed the data collection approach is important to collect the right data for the assessment. In figure 5 PCV (2019a) describes three approaches to collect and process data:

APPROACH	THIS APPROACH IS BEST FOR INVESTORS WHO...
NARRATIVES OF EXPECTED IMPACT	• Want to adopt a consistent approach to impact due diligence and document expected impact • Lack the capacity to build or implement a due diligence questionnaire or a quantitative tool
IMPACT-FOCUSED DUE DILIGENCE QUESTIONNAIRE	• Are interested in developing a deeper, more systematic approach to understanding anticipated impact • Have the capacity to ask each investee a standard list of questions, and revise their questions accordingly to assess impact • Have sufficient organizational buy-in to use the responses to inform decision-making
QUANTITATIVE IMPACT DUE DILIGENCE TOOL	• Are interested in systematically comparing quantitative assessments of anticipated impact across a portfolio • Manage, or expect to manage, a portfolio of at least twenty investments • Have the capacity to thoughtfully develop, methodically test, systematically implement, and continuously refine their tool • Have a project lead who can dedicate at least five hours weekly for four to twelve months to the design and implementation of the tool • Have sufficient organizational buy-in to use the scores produced by their tool to inform decision-making • Would like to understand their portfolio's aggregate level of anticipated impact over time • Are interested in developing a deeper understanding of the strongest predictors of impact over time

Figure 5. Data approaches (PCV, 2019a).

Many investors use two of the three approaches explained in figure above (PCV, 2019a). Social entrepreneurs use often interview and/or questionnaires to collect data (Avance et al., 2020). In this research the input process is a fixed variable consisting of a Quickscan in which the entrepreneur answers an online questionnaire with short answers, an intake meeting where the entrepreneur is interviewed and documents about the financials that are provided by the company.

Questionnaires provide easier analyses, where the interviews provide a broad story including developments (Avance et al., 2020). A questionnaire provides a holistic view on the societal relevance of the project (PCV, 2019a). This allows the entrepreneur to think about their societal relevance before answering, provides uniformity in questions for all cases and can be coded consistently (Baker,

2000). It also gives the opportunity to ask for relevant documents that could be used as underlying evidence for the claim of creating societal impact.

It is important to note that a developed societal relevance-focused questionnaire is not enough. The most significant risks of only using a questionnaire and indicators with a limited breadth of answer possibilities are (KNAW, 2018):

- Incomplete picture of societal relevance.
- Focus on optimizing the results of the indicators (gaming) instead of the created societal relevance.
- For comparability reasons for every case the same indicators are used, which could differ in their importance.

To cover the disadvantages of a questionnaire an interview is used. An intake interview gives the opportunity to pursue unanticipated lines of inquiry and investigate issues in depth like social processes and structure, and institutional behaviour (Baker, 2000). Thereby emphasizing case-specific aspects and reveal the underlying risks and assumptions of a case.

In developing the list of questions for the questionnaire and interviews four factors are important (PCV, 2019a):

1) Simplify and reduce the list of questions to reduce the burden on the professional and entrepreneur. Minimizing duplication is important here because a lot of information is already available from the economical assessment.
2) Ensure applicability for the whole range of (potential) projects. Combining groups of questions to higher-level questions. This will reduce the burden on the professional by only asking relevant questions, fosters the adoption of the tool and ensures it is systematized across all the project assessments.
3) Covering the five dimensions of impact (IMP). The factors 'Contribution' and 'Risk' are cited by investors as more challenging, so attention should be paid to that.
4) Use IRIS+ as guidance for linking strategic goals to outcomes and impacts.

These questions should be streamlined, standardized and ensure complete coverage of the six IRIS+ key questions and the factors that are identified as important in the Theory of Change (PCV, 2019a). The approach should address different stakeholder groups, types of outcomes and impacts (e.g. environmental, social) and types of processes/practises (PCV, 2019a).

A narrative will be used to connect all the phases in the Impact Value Chain on the base of causality and adds extra relevant factors (Mayne, 2015). In this narrative the context, evidence, enablers, risks and conditions will return (FBK, n.d.; NPC, 2014). A narrative is a summary explaining how and to what extent impact is realised and is necessary to build context and meaning around an indicator (Triodos Investment Management, n.d.). This can be seen as the public theory of change and will used in the public summary of the cases described (Mayne, 2015).

A narrative has two goals: 1) showing the societal relevance process as a whole 2) covering aspects which need further explanation (Theory of change, n.d.). Narratives are critical in impact assessment to comprehensively communicate expected impact, the capital's role in impact, unique considerations and applicable risks, also to stakeholders less familiar with societal relevance assessment (PCV, 2019; KNAW, 2018; Penfield, 2014; Jonkers et al., 2018). Moreover, it is possible to require qualitative and quantitative data. Thereby it is more flexible to adapt to different cases (Penfield, 2014).

However, narratives have also disadvantages (KNAW, 2018; Penfield 2014; Jonkers et al, 2018):

- Written from a personal perspective and dependent on the writing skills of the practitioner to articulate cases.
- Comparing narratives of different cases is difficult.
- Standardized data collection is difficult.
- Investing relatively much time and therefore money.

Because of these disadvantages the four eye principle should always be followed to check the assessments.

For this research developing a quantitative tool is outside the scope. Such a tool will measure very specifically certain indicators in which they are a proxy for real societal impact. This means that the tool should be comprehensive enough that the quantitative data provide a fair picture of the reality, in which the numbers are valid. Especially for the topic of societal relevance a lot of societal factors are not quantitatively measurable (EVPA, 2013). Further, as stated in the figure above, a quantitative tool requires significant and structural extra time and resources, which are not available in this research (PCV, 2019a; Jackson, 2013). This step could be done in future development after the tool is refined.

3. Methodology

The goal of this research is developing a tool to assess the societal relevance of a company's project ex-ante, for a regional development agency called Oost NL and in specific SGP. This research goal with an explorative and designing character could be placed in the Design Science Research field. In business administration "Design Science Research proved adequate because it contributed directly to reducing the gap between theory and practice, since this method addresses problems both on the interest of professionals in organizations and academic interests" (Hughes et al, as cited in Dresch, Lacerda, Miguel, 2015, p. 1124). This field of research is in business relatively new (Dresch, Lacerda, Miguel, 2015). Multiple scholars argue the importance of developing knowledge from practice settings by not only explaining or describing a given situation but also designing or prescribing the situation (Goldkuhl, 2013; Dresch, Lacerda, Miguel, 2015).

With this type of research scientific knowledge is acquired concerning the development of innovative constructions, solving practical problems and new design principles addressing a class of problems that is innovative (Sein et al., 2011; Dresch, Lacerda, Miguel, 2015). This approach differs from the traditional sciences which is limited to exploring, describing and possibly predict phenomena (Van Aken, 2014). In Design Research describing only is not enough. Management in general seeks to solve problems or design artifacts that can be directly used in daily operations (Dresch, Lacerda & Miguel, 2015).

In this research the tool will be designed, tested and refined. This method uses iterative steps to construct the design in collaboration with stakeholders of SGP. Hereby not only the correctness of the design itself is important but also the way it is shaped and transcended to the practitioners that have to work with it (Spinuzzi, 2005). In Design Research only designing the artifact is not sufficient. The research must show that through the artifact the desired objectives are achieved. Thereby the solutions must be generalized to a certain class of problems, so the research contributes to the constructment and improvement of theories (Dresch, Lacerda, Miguel, 2015).

The pitfall of this type of research is that it requires a great extent of time, resources and commitment from the researcher and the participants (Spinuzzi, 2005). The collaborative way the researcher works with the practitioner requires well managing of the relationship and the involving expectations, opinions and biases (Spinuzzi, 2005). This research presents a change in working *and* thinking. Therefore, the stakeholders should be approached in a collaborative way where they are part of the change and could give direction to this change.

Because there needs to be a consensus with practitioners about the design it could influence the quality of the artifact (Spinuzzi, 2005). This will cost time and meetings to get a consensus on the optimal quality. The way to cope with this is by translating a broad and extensive tool into a workable and simple tool to use. By using this method the researcher should be alert on the fact that the Design Research method involves several different phases with a different purpose that are often intertwined in the whole iterative process, making it complex. It is important to have a structured way of working

with specific questions to ask to the right persons, especially with the limited possibilities of contact concerning the Covid limitations.

The method that is used in this research is the Design Research method from Peffers et al. (2006, 2007) which is aligned with March and Storey (2008), Manson (2006) and Takeda et al. (1990) which also mention these phases as the core elements (see figure 6).

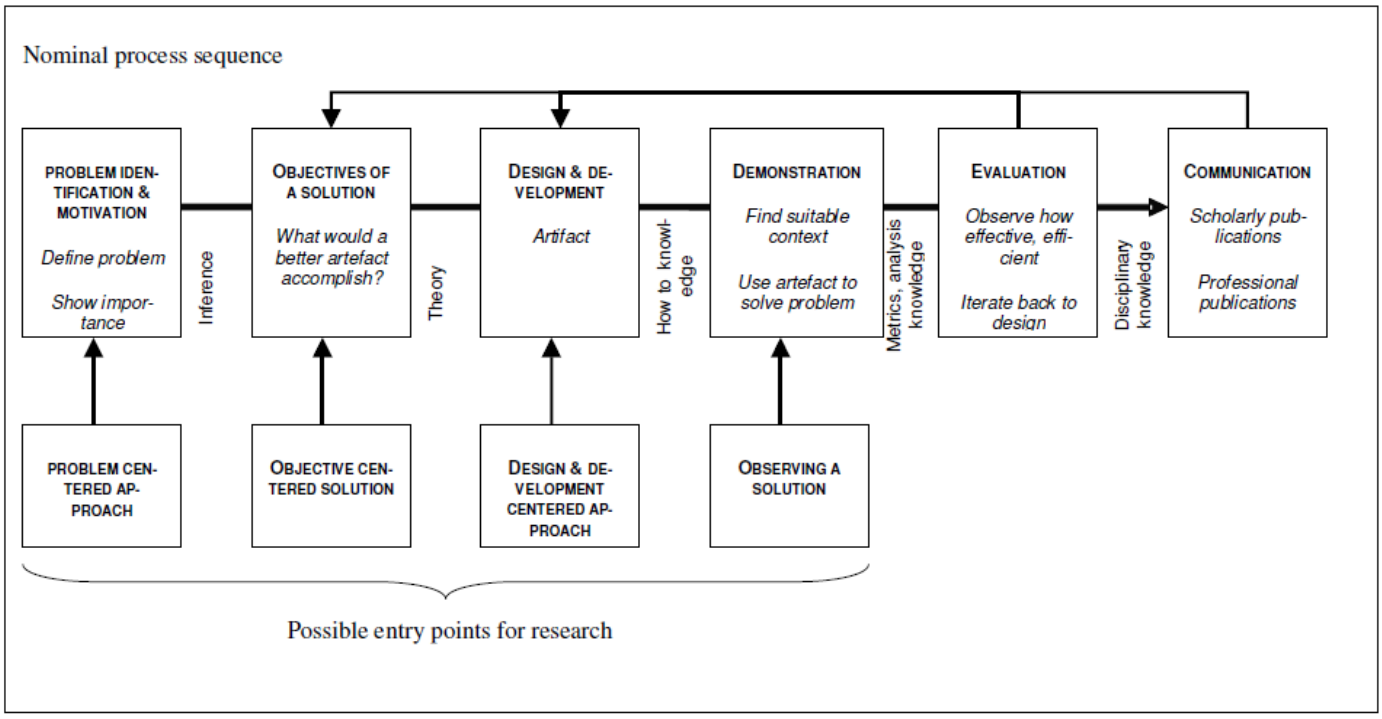


Figure 6. Design Science Research Process (DSRP) model (Peffers et al., 2006).

In this research the research method with the phases of Peffers et al. (2006, 2007) is complemented with principles from the field of impact assessment which are practical guidelines to develop a tool focussed on assessing societal relevance. In this way both the academical and the practical interests are covered.

Phase 1: Problem identification and motivation. Defining the research problem and the significance of an effective artifactual solution that justifies the research (Peffers et al., 2006, 2007; March and Storey, 2008). Also it is important that the possible interrelations with the context and the environment external to the problem are mapped (Dresch, Lacerda, Miguel, 2015). At the same time organisational support is created through stressing the importance of a new tool, proposing the process of developing the tool and receiving thoughts and feedback (PCV, 2019a).

Phase 2: Objectives of a solution. Stating the objectives of a solution related to the problem definition. The solution could be better than the current ones, which is named a quantitative solution. Or the solution is new and not in this way addressed before, named a qualitative solution (Peffers et al., 2006, 2007). This research is the latter one. Also a set of possible artifacts could be given here where a selection is made to advance to the next stage. This 'suggestion stage' is essentially creative and

therefore should be done in a structured and systematic way for the internal validity of the research (Manson, 2006).

The organization develops in collaboration with the researcher consensus about the target stakeholders, objectives and scope in which it will be aligned with the finance strategy (IFC, 2020a; EVPA, 2013, IRIS+, 2020b; PCV, 2019a). This step is extremely important in addressing the right overarching social issues and create a common understanding of the societal relevance that the organisation wants to achieve, speaking the same language. Thereby the requirements about the time and resources that is dedicated to the tool will be made clear (EVPA, 2013).

Phase 3: Design and development. Creating the artifactual solution by determining the desired functionality and its architecture (Peffers et al., 2006, 2007). In this assessment the translation of the objectives to measurable results in the form of outputs, outcomes an impact are shown (EVPA, 2013).

Phase 4: Demonstration. Demonstrating the efficacy of the artifact to solve the main problem through, for example, experimentation, simulation or a case study (Peffers et al., 2006, 2007).

Phase 5: Evaluation. Evaluating in terms of measuring and observing to what extent the artifact supports a solution to the problem, both practical as academical. In this the objectives of a solution are compared with the actual results (utility and viability aspects) of the artifact (Peffers et al., 2006, 2007; March and Storey, 2008; PCV, 2019a).

Phase 6: Communication. Communicating the "problem and its importance, the artifact, its utility and novelty, the rigor of its design, and its effectiveness to researchers and other relevant audiences, such as practising professionals" (Peffers et al., 2007, p.92). Hereby making clear that it contributes to theoretical knowledge and practical implications (March and Storey, 2008).

As seen in figure 6 different entry points are possible to start this research. This research starts at phase 1: Problem identification and motivation. Because the concept of assessing societal relevance is relatively new at SGP it is of high importance to determine the context and the exact problem that needs to be solved. Further, as described in the previous chapters the topic of societal relevance is seen as difficult to define but also to translate into practise. Therefore, the first two phases are of high importance for a solid artifact. This entails that investigating the third, fourth and fifth sub-question about the definition and objectives of societal relevance, and the requirements for the tool will take much time and input, from different parties.

3.1 Research design

This research consists of multiple iterative steps that characterizes a design research (see appendix G for the extensive research design). Because of the iterative process the phases of Peffers et al. (2006, 2007) will repeat itself until every part of the puzzle is complete. In consultation with the client, it was decided to keep the interview reports confidential in order to be able to achieve full openness in the conversations with the respondents. Committee members did see these reports. The results of the interviews were fully utilized in the design and testing of the designed tool.

3.1.1 Setting the scene and development Alpha version 1.0 tool

The first step is 'setting the scene' by mapping the context and consequently developing the *Alpha version 1.0* of the tool. The main characteristics of the tool will be investigated like the organisational context, current way of working, tool objectives, tool requirements and points of attention for designing. Besides that, ideas and possible tools will be investigated in this step. This step is of high importance to set the scene.

The data is collected through nine explorative semi-structured interviews with the program managers of SGP, business developers of different sectors, policy officers from the provinces, staff members of Marketing and Communication and of the business unit Capital, and a consultant working with ESG (Environmental, Social & Governance) practises. This variety of parties provides a broad picture on the positioning of the concept of societal relevance in general, at Oost NL and at SGP. Besides that, the internal and external documents of Oost NL are investigated looking for potential indicators. In academic and business literature methods for societal relevance assessment are investigated.

The data analysis is done by consolidating and summarizing the interviews in one document, resulting in an overview mapping the main characteristics and requirements of the tool. This consolidated document will be send to the interviewees for feedback. The *Alpha version 1.0* of the tool is designed according to the interviews and academic and practical literature.

3.1.2 Evaluating Alpha version 1.0 tool and development Beta version 1.0 tool

The next step is to process the feedback on the mapping of the context, indicators of main factors, the assessment process and practical feasibility. Further, potential paths/suggestions for indicators are provided on which the program managers of SGP could choose. Especially the categorization of societal relevance indicators is a detailed and sophisticated process.

The tool will be further developed in iterations in collaboration with the program managers of SGP resulting in the *Beta version 1.0* of the tool. The data collection and analysis is done by weekly meetings with the program managers of SGP discussing the decisions to take. In this decision-making process, three indicator structures are provided to choose from, containing different factors as SDGs, governmental policy and recently developed metrics. Next to that, literature research has an important role in supporting the developed tool.

3.1.3 Evaluating Beta version 1.0 tool and development Gamma version 1.0 tool

After designing, the *Beta version 1.0* of the tool will be tested. Testing a tool is generally the most effective when direct practitioners who are going to work with the tool are engaged and therefore share actionable feedback to move the tool forward based on their understanding of what information is relevant (PCV, 2019a). The goal of this step is to test *Beta version 1.0* of the tool in which the

mapped context is checked again and feedback is gathered about the relevance, efficacy and comprehensiveness of the tool.

The data collection will be done by semi-structured interviews with four staff members of different sectors (Energy, Health, Food and Tech) who will be directly involved in working with the tool. This will provide feedback that is directly relevant. Next to that, knowledge managers of the business unit Capital are interviewed for feedback. Further, a workshop is given where 10 business developers that are handling the most cases will be present. This allows for discussion and feedback.

The data analysis consists of summarizing the interviews, checked by the interviewees, and process them in the tool. Thereby discussing possible future improvements in the workshop. This information will lead to the *Gamma version 1.0* of the tool, which is the final tool.

3.1.4 Verification Gamma version 1.0 tool

Finally, the final tool will be verified. The goal of this step is to compare the result of the tool with the results in the already existing cases of SGP and verifying reaching the set objectives of the tool, SGP, Oost NL and the provinces. This step gives a final image on the difference between the new approach using the tool and the current way of working. Also this will provide insight in the efficacy of the tool and the quality of the data, providing input for statements about in which situation the tool works best. Besides that, a first direction will be given about which data categories should be considered for the implementation of the tool into the Quickscan.

The data collection is done by collecting Quickscan- and business developer assessment data from 50 already existing cases out of the ERP-CRM system of Oost NL. Next to that, a semi-structured verification interview with a program manager of SGP will be done. Also a presentation is given to the manager of business unit Business Development and a staff member of Marketing and Communication, in which the tool will be discussed afterwards.

The first part of the data analysis consist of comparing the data from 50 cases and consolidating these into categories of differences and contributions (see appendix K). Next to that, summarizing and consolidating the interview and feedback in order to determine if the set objectives of the tool, SGP, Oost NL and the provinces are reached.

4. Setting the scene

An important aspect of assessing societal relevance is the step before the assessment itself: knowing what to assess. This will be different for every organisation, therefore a tool cannot be copied one-to-one to another organisation (Trautwein, 2020). So, the first thing to do is setting the scene.

This chapter describes the policies and objectives of Oost NL and SGP concerning societal relevance, the current assessment process, the experienced problems, the objectives of the tool, the requirements of the tool and the points of attention in the development of the tool. This will provide a solid base for designing the tool.

By taking a multi-perspective approach different types of stakeholders of SGP are interviewed combining this information with internal and external documents, hereby setting the scene of the tool. The interviewees consist of program managers of SGP, direct practitioners (business developers), policy officers from the provinces Gelderland and Overijssel, staff members of the business unit Capital and Marketing and Communication of Oost NL, and a consultant working with ESG (Environmental, Social & Governance) practises. Through iterative steps this chapter is created and verified through several feedback loops.

4.1 'De Startversneller' and 'De Groeiversneller' (SGP)

The tool that is developed is applicable to two programs:

- 'De Startversneller' helps start-ups in the province of Gelderland and Overijssel (younger than 5 years) with the development of their innovation by providing them coaching and training. Vouchers with a minimum of €500,- and a maximum of €1.000,- are provided to entrepreneurs, which could be spend on coaching in the areas of finance, acquisition and management skills, for example. A second voucher with a maximum of €1.000,- could be spend on a subject-based training. The entrepreneurs get a compensation of 80% of the costs (Oost NL, n.d.d).
- 'De Groeiversneller' helps SMEs in the province of Gelderland with the potential and ambition to grow. The support of this program is focused on creating employment opportunities and contributing by innovation to the societal challenges. The support consists of a financing advice, access to a big network and providing a voucher with a minimum of €1.000,- and a maximum of €10.000,- to hire external advice in the areas of market research, financial advice or specific knowledge of a subject, for example. With the voucher entrepreneurs get a compensation of 50% of the costs (Oost NL, n.d.e).

4.2 Definitions and objectives of Oost NL and SGP concerning societal relevance

In 2018 the Ministry of Economic Affairs and Climate Policy of the Netherlands communicated a mission driven innovation policy involving economic opportunities on societal challenges and the ambition to play an important part concerning key enabling technologies (Rijksoverheid, 2018).

Working from a mission driven standpoint is in this context an integrated approach of specific goals where different parties of the whole research and innovation chain join forces focussing on concrete results (Wiebes, 2018).

The coalition wants that the top sectors in the Netherlands use their innovation strength to solve societal challenges in the fields of (Keijzer, 2019a):

1) Energy transition & Sustainability
2) Agriculture, Water & Food
3) Health and Healthcare
4) Security and Safety

Hereby using the key enabling technologies. A key enabling technology is a technology with a broad application area or reach in innovation or sectors, which has the potential to change the way we live, learn, innovate, work and produce (DutchDigitalDelta, n.d.; Keijzer, 2019a).

The top sectors created KIAs (public-private Knowledge and Innovation Agendas) articulating their role and the envisioned realisation of the 25 missions and 8 key enabling technologies. In these KIAs is prioritized on which societal challenges will be focussed and which not. Several missions of the Sustainable Development Goals (SDGs) of the United Nations are also aligned in here (Keijzer, 2019b).

The Ministry of Economic Affairs and Climate Policy notes that the collaboration with the region is essential for the execution of the mission driven innovation policy. The province of Gelderland emphasizes on fostering the clusters which are the strongest: Agrofood; Health; Sustainability; and High Tech manufacturing (Province of Gelderland, 2020). The province of Overijssel follows the line of the central government on the four themes: Energy & Sustainability; Agriculture, Water & Food; Health; and Security (Province of Overijssel, 2020). Because of the focus, the region East-Netherlands contributes to the four main themes of the central government and strengthen the clusters it excels in (Province of Gelderland, 2019; interviewee 8).

Oost NL follows the focus strategy of the central government and the provinces with the vision that in 2020 East-Netherlands will be the most attractive region for innovative companies active in the fields of:

1) Food
2) Health
3) Tech
4) Energy

(Oost NL, n.d.b; Oost NL, 2018; interviewee 1).

The mission of Oost NL: “Development Agency Oost NL sustainably strengthens the economic infrastructure in East-Netherlands” (Oost NL, n.d.b; Oost NL 2018). Oost NL finds it important to align the economic relevance with the societal relevance. The missions are (almost) fully covered by the core activities of Oost NL. In the sectors Food, Health, Tech and Energy the biggest opportunities lie

for value creation. The 80/20 rule is important here: 80% focus on the four major themes and 20% on the rest. The 'security' theme is for now placed under the sector Tech (Oost NL, 2019).

The ambition is real focus on big strategic societal themes. Making the governmental- and province's policy of the four main sectors more specific. Hereby increasing the societal relevance and improve the competitive position of companies (Oost NL, 2018). Oost NL intents to support the province Gelderland and Overijssel with the translation of (societal) policy to the execution and realisation of this policy (Oost NL, 2018).

The increasing focus on societal challenges has also consequences for the programs 'De Startversneller' and 'De Groeiversneller' (SGP). For SGP this means that the societal relevance in the form of societal challenges increases in significance, next to the economic relevance in narrow sense (employment and turnover) (interviewee 1,2,3,7,9; Oost NL, n.d.c).

The definition of the concept of societal relevance for SGP is in line with the policy of Oost NL, resulting in addressing the eight societal challenges of the top sectors (all interviewees Oost NL and Provinces):

MU 1. Sustainable energy and CO2 reduction
MU 2. Healthy, sustainable produced food
MU 3. Effective, affordable healthcare
MU 4. Water management and climate change
MU 5. Circular economy
MU 6. Clean, safe efficient mobility & transport
MU 7. The safe society
MU 8. Inclusive, innovative society

In theory this seems as a broader approach than the provinces and Oost NL communicate, however in practise most requests can be categorized in the four focus areas of Food, Health, Energy and Tech. The rest is part of the 20% (interviewee 1).

Next to the eight societal challenges the key enabling technologies are seen as important and should be therefore included as societal relevant (interviewee 1,3,8):

ST 1. Chemical technologies
ST 2. Digital technologies
ST 3. Engineering and fabrication technologies
ST 4. Photonics and light technologies
ST 5. Advanced materials
ST 6. Quantum technologies
ST 7. Life science technologies
ST 8. Nanotechnologies

Lastly, (technological) innovation is a key characteristic of societal relevance for the (potential) supported project. (Technological) innovation consists of (all interviewees Oost NL and provinces):

1. Innovation (product/service)
2. Market
3. Organisational

Summarizing, Oost NL and specifically SGP, aims to sustainably strengthen the economic infrastructure in East-Netherlands by supporting projects which contribute to the eight societal challenges and the key enabling technologies by (technical) innovation. Hereby categorizing the projects in the four main sectors Food, Health, Tech and Energy.

4.3 Current societal relevance assessment of a project

In the current way of working a company's project is categorized in one societal challenge and one sector (Food, Health, Energy or Tech) by a business developer. This categorization is based on the input of a Quickscan which is filled in by the entrepreneur and an intake meeting with the entrepreneur. For the assessment of societal relevance, the business developer uses mostly undefined criteria. The cases will be discussed in the projectteam of the business developers where the arguments and considerations are explained. For the end judgement, to (financially) support the project or not, the four eyes principle is applied. Accounting to the stakeholders takes place through analyses, public summaries and conversations (interviewee 1,2,7,8,9,11).

4.4 Problem description of the societal relevance assessment

There are limited systematic assessment criteria concerning the assessment of societal relevance ex-ante of a company's project, resulting in:

- assessments which are not based on fixed underlying criteria (choice societal challenge and to what extent). The assessments of the projects could therefore vary in validity and reliability, possibly resulting in incorrect conclusions and problematic comparisons between projects (interviewee 1,2,7,8,9).
- limited reporting to stakeholders[1] of SGP based on fixed underlying criteria concerning the societal relevance of a project (excluded CO2 reduction and energy transition) (interviewee 1,2,7,9).
- limited criteria for entrepreneurs to determine 'when' and 'how' their projects contribute to the societal challenges, in the perspective of SGP (interviewee 1,2,4).

[1] Stakeholders of SGP consist in this thesis of Oost NL as organisation, the main shareholders (province of Gelderland and province of Overijssel) of Oost NL and the directly involved entrepreneurs.

4.5 Objectives of the tool

The tool has the following objectives:

- supporting SGP by assessing ex-ante the societal relevance of company's projects, in a systematic way, improving the impact of financing by transparency, increasing the credibility of societal performance data, facilitating project comparability and improve impact benchmarking (GIIN, 2011; interviewee 1,2,7,8,9).
- accounting to the stakeholders of SGP in a systematic way, concerning the societal relevance of (financially) supported projects. In this the vision of Oost NL concerning societal relevance is strengthened (interviewee 1,2,7,8,9).
- informing companies of the values and the methods SGP is using concerning the theme of societal relevance and providing them support in making this societal relevance explicit (interviewee 1,2,8,9,11,12).

4.6 Requirements tool

4.6.1 General requirements

The tool:

- defines and extend the understanding of the concepts of the societal challenges (interviewee 1,2,3,7,8).
- measures *if* and *to what extent* the assessed project contributes to the societal challenges (interviewee 7,8,9).
- focusses only on the societal relevance and is used next to the assessment of the economic relevance (interviewee 1).
- is compatible and not in conflict with the method and system of the assessment of the economic relevance (interviewee 1). These different assessments can be seen as filters that should be aligned, ultimately resulting in an assessment that is supporting the desired projects and types of organisations.
- has a fixed input process containing the Quickscan and the intake meeting. However, the content of the process (e.g. asked questions, structure, scoring) could be customized for the purpose of the tool (interviewee 1,2).
- could be used (with minimal adjustments) in the rest of the organisation to assess societal relevance (interviewee 7,8).
- is developed such that the societal relevance could be evaluated in the future (if desired then) (interviewee 4,8,9).
- does have a benchmark to determine if the project is assessed as satisfactory (interviewee 2,8,9).

- communicates in a clear and meaningful way the societal relevance to the stakeholders, and in specific to the entrepreneurs and shareholders (interviewee 1,2,7,8).
- provides clarity for entrepreneurs about what societal relevance entails according to Oost NL and more specific SGP (interviewee 1,2,8,9,11,12). This will give direction for entrepreneurs to foster their societal relevance.

4.6.2 Content requirements

The tool:

- uses the missions of the top sectors- and innovation policy with its Knowledge- and Innovation Agendas (KIAs) and the Sustainable Development Goals (SDGs) as starting point (interviewee 1,3,7,8,9,12).
- includes the societal challenges (all interviewees Oost NL and provinces) and key enabling technologies (interviewee 1,3,8,12) because of their significance in the concept of societal relevance.
- has an explicit connection between societal relevance and (technological) innovation (interviewee 1,2).
- highlights the 80/20 rule with the focus of 80% on the four main themes (Food, Health, Tech & Energy) and 20% on the other sectors (interviewee 1).
- has indicators and questions that fit the target group which are start-ups and SMEs. This group has limited resources to demonstrate their societal relevance with quantitative and qualitative data (interviewee 2,3).
- balances the practicality with the comprehensiveness. An in-depth analysis is dependent on the limited time and resources of the business developers. Implicit this means that some aspects of societal relevance will be addressed on a brief level (interviewee 2,4).
- has SMART indicators (specific, measurable, achievable, relevant and time-bound) which could be both quantitative as qualitative.

4.6.3 User requirements

The tool:

- should be simple, compact and user-friendly which supports the assessment process of a project. This results in avoiding unnecessary administration, a significant increase of time and resource investment, (training) skills or additional data (in addition to the input) (interviewee 4,9,10).
- has as base the societal challenges and key enabling technologies to categorise the societal relevance, which is recognizable through the whole organisation and fits in the accounting system of the organisation (interviewee 4).

- could be applied broadly in terms of assessing the concept of societal relevance, but uses limited questions. The underlying indicators may however be extensive and very specific (interviewee 1).
- balances the wish for professional freedom and protocols in such a way that the tool does not become a goal on itself, but a (supporting) mean to come to the right societal relevance assessment (interviewee 2,4,8).
- is developed for the four different sectors (Health, Tech, Energy and Food). The societal relevance is for some sectors (Health, Energy) easier to determine than other sectors (Tech). This means that the indicators should include both perspectives but may vary in the use of the tool (interviewee 10,11,13).
- could give the entrepreneur an active role in determining the societal relevance (interviewee 1,2,3,10).

4.7 Points of attention for designing

The following points of attention need to be considered in the development of the tool:

- most interviewees see the importance of using a tool, however specific ideas about what could work, how the tool should be designed and which factors should be included are missing (all interviewees). Therefore testing and feedback are important to indicate what the right direction is.
- the different accumulated goals of SGP must be aligned in practise, meaning that the right projects and right types of organisations are supported. Start-ups and SMEs want (financial) support but *must* comply with the requirements concerning societal relevance. This societal relevance does not always have the first priority (interviewee 1,7,8,11). Consequently, a tension could exist between the requirements of the tool and the eventual objectives of SGP (interviewee 12).
- the focus in the societal challenges are prioritized to what is desired by the central government and more specific the region. Because of the broad scope of SGP it could be that some initiatives of organizations have societal relevance, but not align with the focus policy of the central government and the region (interviewee 1).
- the difference in focus between the central government/top sectors and the region East-Netherlands concerning the main theme Security. The question is to what extent this theme should be stimulated in the region East-Netherlands, and which position it should have in the tool (interviewee 9).
- the societal relevance of a project could be somewhere else than where the project takes place (interviewee 3). An example is the production of sustainable packaging which are exported to outside the region East-Netherlands.

- the tool is initiated from SGP which could lead to a change in uniformity in the measuring systems of Oost NL (interviewee 4,7). The question in the future is to what extent the tool could and/or should be applied through the whole organisation, keeping the results comparable and consolidable.
- that the project is contributing to the societal challenges but that the organisation as a whole has a negative impact on these societal challenges (interviewee 5,6). An example is making a soda factory more sustainable, which contributes positively to the theme of sustainability. However, the question is if a luxe product should be supported which in the end has a negative impact on health and/or the environment.
- the project itself could have a conflicting contributions, in which the societal relevance is not unambiguously (interviewee 1,8,9,11). A project could for example have a positive contribution to healthcare but at the same time increasing the production of environmental waste. The question here is how these different contributions relate to each other and to what final assessment this will lead.
- the tool should be careful with fully attribute societal results to one project that are not solely created by that project. Therefore creating an incorrect picture of societal relevance (interviewee 9).
- a frequently heard desire is a practical tool which is simple, meaning for some employees a maximum of 5 questions (interviewee 4,10). Because of this, quality and practicability could be contradictory (interviewee 15). This desire could lead to a limited picture of societal relevance and decisions based on incomplete data.
- the business developers who will work with the tool have to get used to the focus shift of mostly economic relevance to also societal relevance. They struggle in searching for a way to make the concept of societal relevance tangible and therefore systematically measurable (all interviewees).
- the communication about societal relevance should be used by the provinces. In this there is a possibility that the societal relevance topic becomes political. Some issues could be overshadowed, because they are difficult to indicate, but nevertheless important (interviewee 11).
- the tool leaves room for professional judgment of the business developer because of the broad concept of societal relevance, for a better overall assessment. This provides the opportunity for the business developer to make a fitting assessment, but also a possibility to leave a subjective mark (interviewee 4,9,10). Therefore attention should be paid by the management to the business developer in using the tool and the way of working in assessing societal relevance.

5. The tool

Based on the findings of chapter four an initial tool was designed: the *Alpha version 1.0.* This tool is through multiple iterative steps developed to the *Gamma version 1.0*. Each version will be explained and evaluated resulting in a description of the process, results and verification of the tool.

5.1 Alpha version 1.0 tool (see appendix C)

In the process of setting the scene interviewees found it hard to articulate the desired design of the tool. Therefore an initial tool was created as starting point for stimulating and receiving feedback about the desired design. The initial tool was meant to indicate the right direction and to evoke ideas and opinions about several aspects of a societal relevance assessment. The fit of the tool with the practitioner's wishes depend on the existing mental models, ways of working and vision on how the tool should be designed. Therefore iterative steps are important for improving the tool.

The *Alpha version 1.0* of the tool contains two layers. Each layer contains an assessment in which the business developer scores the key factors on sufficiency. If the business developer assesses the factors of the first layer as sufficient, the assessment is proceeded to the next layer. The distinction of two layers is because of saving time and resources, meaning that if the basic characteristics of the first layer are not sufficient the second layer is not relevant anymore. The first layer checks the necessary basic characteristics of a project: 1)societal challenge 2)(technological) innovation (including key enabling technologies) and 3)sector. These three characteristics should result in *if* and *what* category of societal relevance is present, resulting in a yes or no and the categorization of it. The amount of yeses determines the assessment result and if this result is sufficient.

The second layer in this version exists of the six IRIS+ key questions (2019c), with sub questions. This version was based on the fifteen impact data categories of the IMP (see appendix D). These questions indicate the relevance and possibilities for data collection for these categories. A five point Likert scale was used (as done in the business unit Capital) to answering these questions, resulting in an accumulated score form 'very bad' to 'very good' (see appendix E). For an elaborated explanation of certain concepts qualitative questions were added.

Also a dashboard was added to summarize and communicate the results of the assessment. This dashboard also has two layers. The first layer shows the three basic characteristics 'societal challenge', '(technological) innovation' and 'sector'. The second layer shows the most important aspects of the assessment: 'stakeholders', 'societal impact' and 'risks'. Thereby two colours show the assessment results of the layers based on the Likert scale. The end result is shown in wording above the overview, ranging from 'very bad' to 'very good'.

5.2 Evaluation Alpha version 1.0 tool

The alpha version 1.0 is evaluated in collaboration with the two program managers of SGP. The distinction in layers between the basic characteristics answering the *if* and *what* questions and the

second layer determining the *to what extent* questions is seen as relevant (interviewee 1,2). The first layer contains all the relevant basic characteristics (interviewee 1,2). Next to that the dashboard is a good step to communicate the results (interviewee 1,2).

The main point of improvement is that the categorization of the societal challenges is not clear and not extensive enough (interviewee 1). The use of indicators should be simple, but the design could be comprehensive (interviewee 1). Besides that, there where problems with interpreting the answer possibilities (interviewee 1). Also the colours are not supporting the tool (interviewee 1).

5.3 Beta version 1.0 tool (see appendix B)

As mentioned in the theoretical framework the steps from input to output are often straightforward. However, the steps from output to impact are often very complicated to account for. Therefore these last steps of the Impact Value Chain from output to impact are supported by indicators making these steps explicit and measurable. For improving the indicators of the alpha version, out of three options an indicator decision tree is chosen (interviewee 1,2).

The eight societal challenges are used as backbone of the outcome and impact indicators. The outcome and impact indicators itself are based on the mission driven innovation policy of the Dutch central government, which the top sectors translated to the KIAs (public-private Knowledge and Innovation Agendas) articulating their role and the envisioned realisation of the 25 missions and 8 key enabling technologies (Keijzer, 2019b).

The outcome indicators refer to the multi-year mission-driven innovation programs (MMIPs) and the missions itself are appointed as the eventual impact indicators. In later development the SDGs were added to the decision tree (interviewee 1,2) and linked to the impact to clarify the relationship with the worldwide goals, which foster communication outside Oost NL. This results in an eventual design of 173 outcome- and 27 impact indicators that is simple in use but comprehensive in content (interviewee 1).

Further, in layer two, the questions about *how* and *how much* societal relevance is measured are described in more detail and divided in more factors attempting to foster a more accurate analysis and providing more direction in using the tool. The qualitative answers are transformed to qualitative categories improving the clarity of the desired answer possibilities.

5.4 Evaluation Beta version 1.0 tool

The evaluation of the *Beta version 1.0* was done through interviews with business developers, staff members of the business unit Capital and a workshop with business developers who assessed the most projects in the past.

The structure of the first layer was recognizable from the current assessment used and mostly agreed upon among the practitioners (interviewee 10,12,13;workshop). The key enabling

technologies are however less/not integrated in the current way of working and seen as less relevant for the sector Health and Energy (interviewee 10,11). For the sector Health this first layer will probably always result in a positive result, therefore this layer will not contribute much to this sector (interviewee 11). For the sector Energy the characteristic 'innovation' should *not* be present because of different requirements than other sectors (interviewee 10). For the sector Tech the societal challenge is often difficult to determine (interviewee 13). The strict conclusion of denying a project in case the project does not meet the requirements in the first layer is seen as too compelling, leaving no room for professional judgement (interviewee 10,12).

The indicator decision tree was received positively by most staff, seen as a comprehensive support for decision making (interviewee 1,2,4,11,12,13). Using the KIAs of the top sectors as base for these indicators is seen as justified in terms of direction and quality (interviewee 12). The pitfall of this decision tree is the comprehensiveness which could cause resistance through its complexity (interviewee 4,10;workshop). The sector Health was limited addressed in specific innovation missions in the KIA, also the main missions where focussed on certain specific parts of the field. Consequently the base of these indicators was limited. Therefore these indicators are developed in collaboration with a business developer specialized in the sector Health for the Gamma version 1.0.

In the second layer of the *Beta version 1.0* the interviewees had trouble with:

- understanding the questions. The questions where too broad, abstract or not clearly defined. Specifically the questions concerning the *who*, *how* and *how much* appeared to be difficult to answer or were seen as arbitrary (interviewee 4, 11,12;workshop). It was also not clear who or what the target group of the questions were, therefore misinterpreting these questions (interviewee 12,13). The term stakeholder should also be explained or framed (interviewee 4,10,11,12,13). The broad focus of the tool was chosen for a broad indication of societal relevance, but also for utility reasons to keep the tool simple. This, however, resulted in low standardization, low reliability, low consistence and low adaptation for the users.
- seeing the relevance of the questions. The tool looks complicated, interviewees questioning the need of collecting all these data for the limited financial support that is given and questioning if the provinces really desires this data (interviewee 10,11,13;workshop). This could lead to avoiding the use of the tool (interviewee 10). Further, interviewees being reserved about the extra administration (interviewee 4,10).
- answering the questions. The scoring on a Likert scale was difficult in most cases and difficulty was experienced to pin down answers in one number on the Likert scale (interviewee 13). Hereby creating false assumptions that impact is easily quantifiable in gradations (interviewee 4,10).

- the end result of the tool. The result was easily influenced by 'gaming', resulting in what the business developer wanted it to be (interviewee 10). Thereby incorrectly implying that the quantified end result contained an exhaustive picture of the societal relevance.

The opinion about the dashboard was positive because of the clear overview of the final results it provides (interviewee 10,12).

5.5 Gamma version 1.0 tool (final tool) (see appendix A)

The final tool consists of four parts: 1) Impact Value Chain 2) Aspects for a solid Impact Value Chain 3) Checklist Impact Value Chain and 4) Dashboard with the assessment results. These four parts will acquire input from the Quickscan and the intake meeting.

The final tool consists of two layers which follow each other. The assessment result of these layers are stated as an advice in which the business developer always has the veto to act different than the advice (interviewee 10,11,12).

In the first layer this basic characteristics of a project will be assessed:

- Motivation entrepreneur of societal relevance, including the addressed societal challenge.
- (Technological) innovation (innovation (product/service), market and/or organisational).
- Focus sector (Food, Tech, Health, Energy).
- Key enabling technology (decision tree).

These are the main characteristics in the definition of societal relevance of SGP. Especially for the sector Tech where business developers have trouble to determine the societal relevance (interviewee 8,13), the key enabling technologies will provide an extra metric to determine the societal relevance (interviewee 4). To make the key enabling technologies more tangible a decision tree is created with 51 indicators to support the assessment process (see appendix A).

The second layer assesses *if*, *what* and *to what extent* a company's project is societal relevant. The Impact Value Chain provides the chronical structure from input to the impact. Because the assessment is ex-ante it is wise to follow this chronological order to determine and predict the potential impact in a logical and explicit way. This way is simply to understand for business developers and entrepreneurs, therefore fostering the data collection, assessment and communication.

The tool uses the six IRIS+ key questions (IRIS+, 2019c; IMP, n.d.) and the Theory of Change as base. Especially in start-ups and SMEs the societal relevance is often implicit (European Commission, 2011) which should be made explicit in a simple way to assess the societal relevance of a project. For most companies societal relevance is a buzz word. Not only assessing societal relevance is important, but also improving societal relevance of a company by providing direction is seen as relevant (interviewee 11,12). The ToC will provide an overview of mostly *if* and *how* the change is happening (question six of the IRIS+ key questions). Hereby accounting for the expected societal relevance a project will have. Around this model the six IRIS+ key questions (2019c) are integrated

covering the five dimensions of impact (IMP, n.d.) to provide a more comprehensive and in-depth analysis, thereby putting relatively more weight on *to what extent* societal relevance is present.

Because of the complexity of the subject a limited set of quantitative questions will not cover and measure what should be measured. The reason for this is the variety of cases and the limited amount of data that is available. Therefore, the newer version of the tool takes a qualitative approach where the important factors will be given as direction but not tested as 'hard' quantitative criteria. Besides that, concerning the limited amount of money per project that is issued, the tool should be initially simple and not too time consuming. A qualitative approach with underlying indicators will be easy to integrate in the Quickscan and the intake meeting and can be used to the assessed project in a way the business developer sees fit (interviewee 2; workshop).

The indicator decision tree is seen as a helpful contribution in the assessment, making the categorization of societal relevance very specific (interviewee 1,4,11,12,13). Thereby providing 173 outcome- and 27 impact indicators based on policy documents that are recognizable and supporting the assessment. The downside of this extensive decision tree is that it could be seen as cumbersome (interviewee 4,10).

IRIS + provides indicators useful for every phase in the investment cycle from screening to monitoring hereby using agreed-upon norms and standard metrics adoptable by every tool for analysing, managing and reporting impact performance (IRIS, 2019a). However, these indicators are very specifically addressed to certain SDGs and still in development. The choice for the KIAs as base instead of metrics from IRIS+ or other developed widely accepted indicators has several reasons:

- societal relevance at Oost NL is not seen lose from innovation. This means that an indicator of societal relevance ideally includes an innovative aspect.
- because the provinces are the clients and align their policy with that of the central government, it is logical that Oost NL follows this policy and pursuing the missions of the central government and the top sectors. These policy documents define societal relevance for the Netherlands, based on corporate- and societal input (interviewee 12).
- pursuing only the SDGs would be a misfit in some cases, because not all SDGs have the highest importance in the Netherlands referring to these that are less relevant, like poverty or hunger. Therefore a nation specific and region specific perspective is wise here.
- the KIAs are extensive providing the indicators a solid and extensive reference document in which the background of the indicators are elaborated and explained in cohesion. This will be recognizable and will support the assessment, accounting and communication process (interviewee 12,13).

A project has (multiple) outcomes and impacts (positive or negative) which should be assessed *to what extent* they are societal relevant. This step is at the end of the assessment and significant for comparison between the internal outcomes and impacts of the project itself but also for comparison

between projects. The outcomes and impacts are scored on a six point Likert scale ranging from three pluses to three minuses. Three options are possible (see table 1).

	- - -, - -	-, +	++, +++
Outcome	The outcome is negative to causing serious harm concerning a societal theme.	The outcome is just more or less than obligatory or naturally concerning a societal theme.	The outcome is positive to necessary concerning a societal theme.
Impact	The impact is negative to causing serious harm concerning a societal theme.	The impact is just more or less than obligatory or naturally concerning a societal theme.	The impact is positive to necessary concerning a societal theme.

Table 1. Score results.

The broad and highly diverse societal challenges and sectors that are addressed in the tool makes scoring outcomes and impact complicated and very hard to protocolize. Consequently, the tool is partially standardized providing flexibility to cope with the broad range of factors involved. Moreover, through pursuing the multiple objectives of SGP (economic and societal) there should be freedom to act in the spirits of these objectives (interviewee 10,11,12). Therefore the tool is supporting the assessment but is not a substitute for it (interviewee 10). Meaning that the business developer, the professional, keeps the freedom to make the best assessment possible in every situation (interviewee 10,12). This is similar to a doctor that makes a diagnosis taking the context of the patient into consideration.

The second part of the tool, which supports the first part, is the list of 'aspects for a thorough Impact Value Chain'. This list provides the most relevant aspects next to filling in the Impact Value Chain, that need to be considered for a comprehensive analysis. In this list the six IRIS+ key questions are integrated. These aspects include the change process with its problem, goal, assumptions and enablers. Also the target group (customers, employees, suppliers, local community or environment) and the amount of effects the outcomes have on the target group are addressed. Further, the risks of reaching the outcomes and impact, the contribution of Oost NL to the outcomes and impacts, and the ESG factors are considered. These aspects are seen as the most important aspects for a solid assessment. In a manual an explanation and definitions are given to support the use of these aspects (interviewee 4,10,11,12,13,15).

Because assessing societal relevance with a tool is new for the business developers, the Impact Value Chain and the aspects for a thorough Impact Value Chain are separated to create aggregation of complexity. The Impact Value Chain is mostly focussed on the *if* and *what* societal relevance is

established on a general level, where the 'Aspects for a solid Impact Value Chain' provide an in-depth layer for making explicit what underlies the Impact Value Chain. Thereby providing an extra focus on *to what extent* there is societal relevance. In this way the organisation could more gradually implement the tool. However, it is highly recommended to use the Impact Value Chain in combination with the 'Aspects for a solid Impact Value Chain' to get a comprehensive and thorough assessment.

The administration of this tool happens through filling in the Impact Value Chain and writing a narrative including the 'Aspects for a solid Impact Value Chain'. The Quickscan could provide much of the information whereafter the intake meeting could ask in-depth questions to the entrepreneur to complete the assessment.

The third part of the tool is the Impact Value Chain checklist. In the end of using the tool when all the data is collected and is transformed to information, a short and simple checklist is used to check the Impact Value Chain and the aspects in consideration. This checklist highlights if the Impact Value Chain is meaningful, plausible, prioritized, well defined, comprehensible and testable. This is important for aligning the use of the tool with the goals of the tool. Hereby filtering unnecessary data that is used or noticing information that is missing for a proper assessment.

The fourth and final part of the tool is the dashboard which summarizes and structures the main results of the assessment. This dashboard contains the basic characteristics of layer one with its assessment result. Further it contains the target groups, outputs, outcomes and impacts of the project with the assessment result. Based on this dashboard the assessment result could be communicated in a simple and systematized way to the stakeholders (interviewee 10,12).

5.6 Verification Gamma version 1.0 tool (final tool)

In this chapter the tool is verified to demonstrate the efficacy of the tool and evaluating to what extent the tool supports the solutions to the problems. This verification will be done by testing the tool on 50 cases and by verification interviews. The objectives of the tool are compared with the actual results (utility and viability aspects) of the tool (Peffers et al., 2006, 2007; March and Storey, 2008; PCV, 2019a).

5.6.1 Cases

The tool is tested on 50 cases which will be categorized according to the tool. The data for testing is collected from the internal database in which the Quickscan results and categorization of the business developer's are used. The goal of this testing is to investigate how the tool will categorize the cases into the societal challenges with the related outcomes and key enabling technologies. The categorization of the tool will be compared with the current categorization of the business developer. Because the tool is not implemented yet this test will solely answer the question *if* and *how* the projects could be categorized according to the tool, which is possible to answer based on the data of cases in the past.

The results show that 70% of the cases is categorized similar in the tool as in the current categorization. 30% of the cases is differently categorized according to the tool in comparison with the current categorization. This 30% consists for 18% of cases that could not be categorized by the tool, 10% is differently categorized compared to the current categorization and 2% is categorized according to the tool, but not in the current categorization (see figure 7).

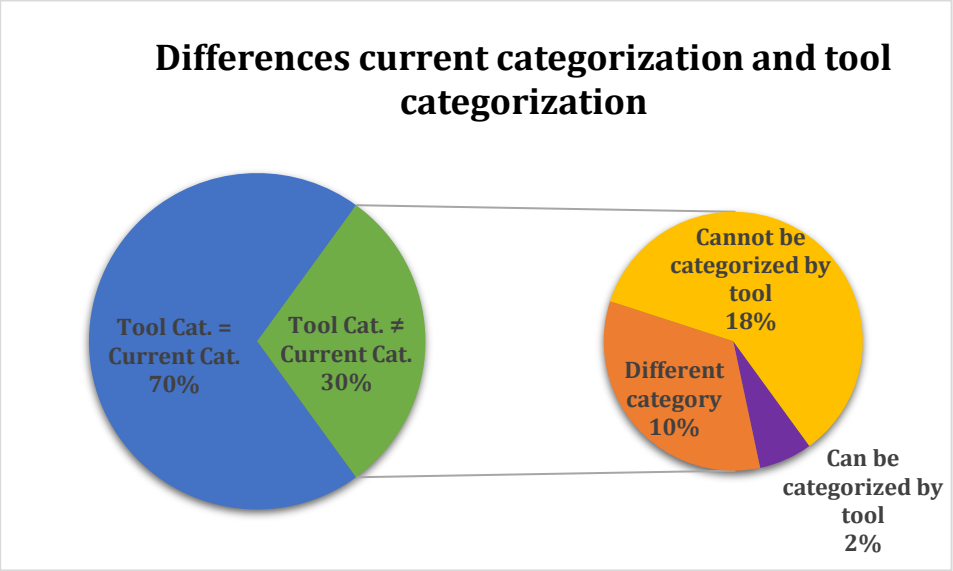


Figure 7: Difference current categorization and tool categorization.

The 18% of the cases that could not be categorized by the tool is currently divided by 10% categorized in MU 9. Others., 6% in MU 8. Inclusive, innovative society. and 2% in MU 7. The safe society (see figure 8).

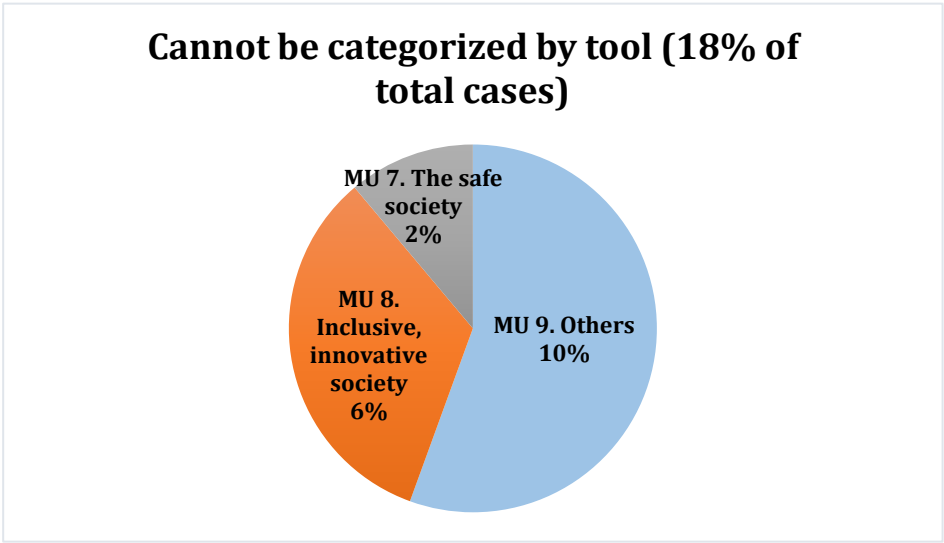


Figure 8: Cannot be categorized by tool.

In the sector 'Others' 50% of the currently categorized cases in this sector could not be categorized according to the tool, which is 8 cases. These 8 cases (50%) consist of 5 (31%) currently categorized cases in MU 9. Others., 2 (13%) currently categorized cases in MU 8. Inclusive, innovative society. and 1 (6%) currently categorized case in MU 2. Agriculture and food (see figure 9).

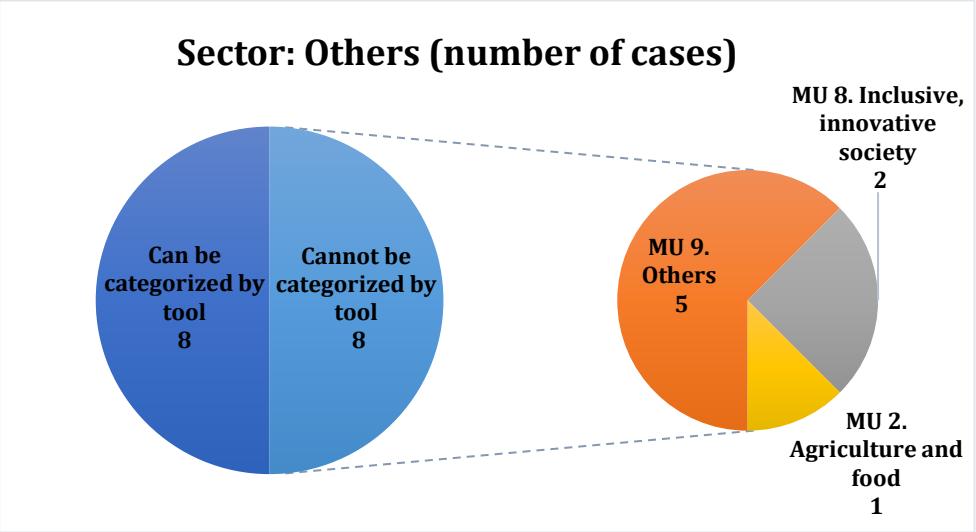


Figure 9: Sector Others.

30% of the total cases is categorized by the tool in a key enabling technology. 40% of the total categorized key enabling technologies is appointed to the sector Tech, 27% to the sector Health, 20% to the sector Others, 7% to the sector Energy and 6% to the sector Food (see figure 10).

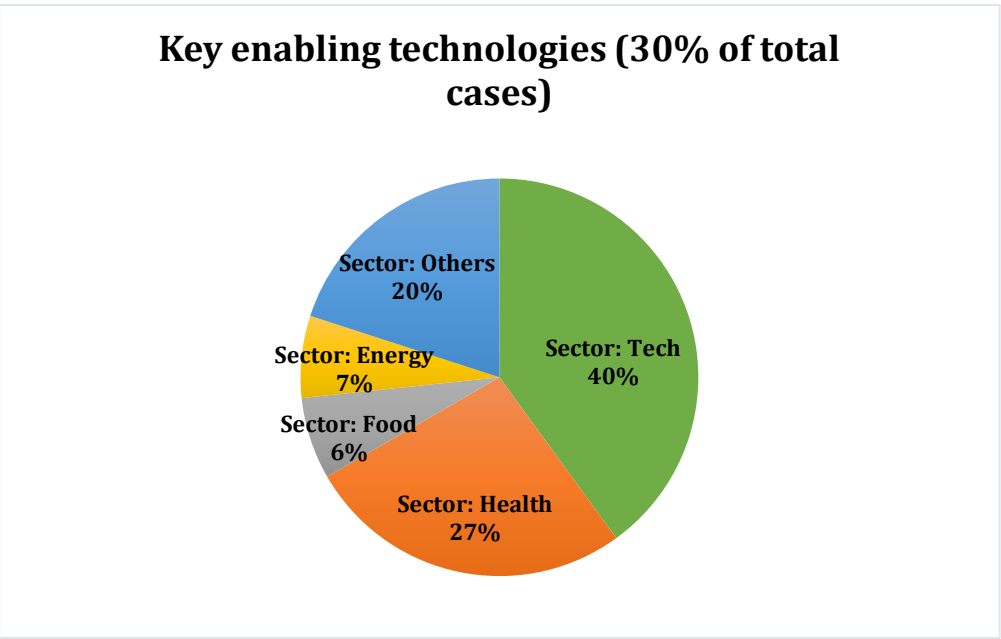


Figure 10: Key enabling technologies

Further, the results show that 2 out of 3 currently categorized cases in MU 7. The safe society. could not be categorized by the tool. For MU 8. Inclusive, innovative society. this is 5 out of 9 cases and for MU9. Others. this is 5 out of 5 cases.

Concluding, most cases are categorized in the tool as in the current categorization. From the differences between the tool's categorization and the current categorization strikes that the cases that are currently categorized in MU 7. The safe society., MU 8. Inclusive, innovative society. and MU 9. Others. are mostly differently categorized than the categorization of the tool. This shows that these categories are differently interpreted in the current categorization than in the tool's categorization. Further, in the sector Others half of the cases could not be categorized according to the tool and show therefore also a different interpretation of the categories. Finally, the category of the Key Enabling Technology provides an extra measure for societal relevance, hereby mostly relevant for the sector Tech, Health and Others.

5.6.2 Objectives tool

1. *Supporting SGP by assessing ex-ante the societal relevance of company's projects, in a systematic way, improving the impact of financing by transparency, increasing the credibility of societal performance data, facilitating project comparability and improve impact benchmarking (GIIN, 2011).*

SGP concludes that the main question of Oost NL is answered and that this objective "is achieved for 100%" (interviewee 1). The implementation could be in a further phase if it was not for the corona measures. As a result the interaction with the business developers was limited. This implementation will follow in the coming future, starting at the Quickscan analysis (interviewee 1).

The tool satisfies most of the general requirements. The requirement for a benchmark is however limited fulfilled. The reason for this is that no case is the same in the broad field of eight societal challenges. Therefore the benchmark should be set by the business developers in the future through iterative testing and discussion. This process takes time because of the great variety of cases.

The content requirements are mostly met. However, using SMART indicators is limited applied. This because of the great size of the assessment field. The tool had to moderate on the specificness and timebound aspects for the purpose of practicability.

The user requirements are also satisfied. However, as noticed in the interviews, the discussion of what balances practicality and comprehensiveness will remain to exist. This should in future iterations being refined. The tool intentionally provides different levels of analysis in both the ToC as in the indicator decision tree, which will be useful in the process of choosing the right focus. Next to that, the qualitative approach makes the tool dependent on the integrity and skills of the business developer to act in the spirit of the objectives. Further, administration is increased with the tool which is inherent to measuring. Also some sort of training should be given to work with the tool. These aspects will be topic of discussion, but are necessary for a proper use of the tool.

2. *Accounting to the stakeholders of SGP in a systematic way, concerning the societal relevance of (financially) supported projects. In this the vision of Oost NL concerning societal relevance is strengthened.*

SGP concludes that this objective is reached, although to a lesser extent than the first objective. Better decision making will result in better accounting, therefore using the result of the first objective for future reporting (interviewee 1). For the department of Marketing and Communication this tool helps to improve and extent the public summaries. Especially the outcomes and impacts are useful for public summaries. Also communication of the societal relevance to the client and entrepreneur strongly depends on the analysis of the business developer, therefore communication will improve if the analysis will improve (interviewee 14).

The future improvement lies in the exact registration of the tool and the main factors to communicate it. Providing a dashboard aimed to cover this aspect and is positively received, but could be refined in the future according to the wishes of the provinces.

3. *Informing companies of the values and the methods SGP is using concerning the theme of societal relevance and providing them support in making this societal relevance explicit.*

This objective is achieved according to SGP, although to a lesser extent than the first objective. The tool improves the public summaries of cases and helps business developers to explain the entrepreneur what societal relevance entails. Hereby providing direction for the entrepreneur to improve this societal relevance. The exact details of the tool are however not relevant, and should be therefore communicated in an inspirational and illustrating way to the entrepreneur (interviewee 1). This last step is in line with the last step of the second objective, meaning that in the future should be decided how to communicate the tool.

5.6.3 Objectives provinces, Oost NL and SGP

Reaching the tool objectives leads to goal oriented, effective and accountable support in contributing to the societal challenges. Hereby adding to the translation of the societal policy of the provinces Gelderland and Overijssel to the realisation of societal impact. Hence, fostering the sustainable strengthening of the economic infrastructure in East Netherlands. Therefore, it can be concluded that the tool fits the objectives of the provinces Gelderland and Overijssel, Oost NL and SGP, which are aligned. Besides that, the tool is useful in general sense reaching further than only SGP (interviewee 1).

5.7 Implementation in Quickscan analysis

The program managers communicated that the implementation of the tool will start at the Quickscan analysis (interviewee 1,2). Investigating the Quickscan questionnaire gives an indication which Quickscan factors interact with aspects of the societal relevance tool. A hard separation could be made between economic aspects and societal aspects of the Quickscan. However, as mentioned before, economic relevance and societal relevance could, and often do, overlap (Emerson, 2003; interviewee 2). Therefore table 2 shows the factors of the Quickscan that interact with the societal aspects of the tool. This provides direction on how the aspects of the tool could be implemented in the Quickscan.

Aspects tool	Factors Quickscan
1. Characteristics project	- Brief idea description
Societal challenge	- Societal challenge
(Technological) innovation	- New products/services – New markets – New businessmodels
Key enabling technology	
Sector	- Sector
Societal target group	- Market
2. Input	- Investments and financing
3. Activities	
4. Outputs	- Turnover - Product
5. Outcomes	
Range Outcomes	- Market - Export
Intensity Outcomes	- Societal advantages - Extra labor places created
Time span till Outcomes	- Planning and time to market - Crucial milestones - Phase of development
Time span of effects Outcomes	- Personal ambitions - Crucial milestones
Alternative contribution	- Collaboration partners
Deadweight	- Market - Market developments
Displacement	
Drop off	- Market developments

6. Impacts	
Assumptions	
Enablers	- Collaboration partners - Personal ambitions entrepreneur - Contact of Oost NL
Evidence	- Documents
External risk	- Obstacles growth - Competitors - Market developments
Execution risk	- Obstacles growth - Phase of development
Contribution Outcomes and Impact Oost NL	-Goal support - Type of support - Type of financing - Need of financing (in euros)
ESG (Environmental, Social and Governance) company	- Personal ambitions entrepreneur - Organisation

Table 2. Quickscan analysis.

Table 2 indicates that most societal aspects of the tool are already to some extent addressed. Future research should investigate to what extent these questions of the Quickscan will provide the right amount of input for the tool, and which questions should be adjusted or added to create a solid data input for assessing the societal relevance of a project.

6. Discussion and conclusion

The goal of this research is developing a tool to assess the societal relevance of a company's project *ex-ante* in determining to (financially) support it for a regional development agency called Oost NL, in specific for the Start- and Growth Program (SGP).

The leading question in this research is:

How could the societal relevance of a company's project be assessed ex-ante in determining to (financially) support it by a regional development agency?

To answer this question and to achieve the research goal a tool is developed to assess societal relevance ex-ante for the development agency Oost NL and specifically SGP. The three objectives of the tool were to support SGP by systematically assessing the societal relevance ex-ante of company's projects, accounting the assessment to the stakeholders of SGP and supporting companies in making societal relevance explicit. All three objectives are reached in which the last two objectives in particular provide opportunities for further development.

This research aimed to transform the intangible concept of assessing societal relevance into a simple and applicable tool. This transformation is never a quick fix but takes time and resources to optimize, and is therefore an on-going process. Testing and developing the tool provides some interesting insights about assessing societal relevance.

The first important aspect of assessing societal relevance is the step before the assessment itself: knowing what to assess. This will be different for every organisation, therefore a tool cannot be copied one-to-one to another organisation. So, the first thing to do is setting the scene. It is important to define societal relevance for the organisation by prioritizing areas of society that should be addressed, identifying the target group of the activities and the boundaries of the definition in terms of ESG effects to product outcomes and intention to achievement.

This research chose to use the umbrella term societal relevance instead of the narrow term societal impact for assessment. As explained in chapter two the main implication is that a project could be societal relevant if it is plausible that it in the future will lead to societal impact (KNAW, 2018). Using the term societal relevance covers a broader spectrum which is especially important in ex-ante assessment where the societal impact does not yet exist. This means that the earlier steps of the Impact Value Chain like the outputs and outcomes are relevant and seen as proxies for the eventual societal impact. Therefore these earlier steps in the Impact Value Chain should be included in the assessment.

Further, the definition of societal relevance is fluid because of changing perspectives on society (Social Impact Investment Taskforce, 2014b). Concretely this means that a project could be seen as societal relevant this year but could not be next year. Therefore the definition and objectives concerning societal relevance should be revaluated through time, resulting in changes in the scope of the tool.

Also the connection of the societal goals with economical goals should be made explicit, determining the overlap and interaction. This research chose for the blended value (Emerson, 2003) approach in which a company's project creates an economic relevance and the societal relevance. Hereby the company's project must contain an innovating aspect. The effect of this choice is that the tool, although focussed on the societal goals, is compatible with the economic goals. This however means that the definition of what is societal relevant is limited to a focus on future societal challenges providing economical- and societal impact. Therefore some projects could exist that are societal relevant in other tools but not in this one because of lacking the economic- and innovative aspects.

Next to the definition the societal objectives should be clear in terms of what should be pursued. These objectives provide direction in building the assessment tool but also in executing the tool. Especially in using a tool with mostly qualitative aspects and room for professional freedom it is important that these objectives are clear. This way the professional could make the assessment according to the spirit of the objectives. The objectives should be linked to the strategies of the company and consequently the finance strategy and other factors that are directly or indirectly involved in pursuing these objectives.

Besides the objectives of the organization and the definition of societal relevance, the objectives of the tool, requirements of the tool and preferably attention points of the tool should be determined. This process translates the objectives to the right context for the development of an assessment tool.

In the process of setting the scene, next to gather information from different stakeholders, it is very important to win organisational support. By collaborating with all stakeholders that will directly or indirectly experience the effects of the tool a co-creation is established, resulting in organisational support in the future. This way the professionals directly working with the tool are engaged and committed to let the tool succeed. Especially in organisations which make the transition of a mostly economic focus to a blended focus including societal relevance this collaborative process is key.

Next to setting the scene it is evident that the assessment itself is important. The models that are used for the assessment are dependent on the set scene. In the case of this research the entrepreneur as the provider of input data for the tool is of high importance. Therefore the questions that are asked from a development agency perspective should be able to being answered from a company perspective.

The tool created in this research is based on two models: the six IRIS+ key questions (2019c) and the Theory of Change. The IRIS+ key questions, based on the five dimensions of impact (IMP, n.d.), are widely accepted norms in Impact Investing for assessing societal relevance. These six key questions provide a good backbone for the most important aspects that need to be measured to make a sophisticated analysis. However, a tool based solely using the six question of IRIS+ appears difficult to answer. Next to this, the change process itself is limited addressed. The tool assesses societal

relevance ex-ante, meaning that some sort of prediction should be done. Showing the change process with its context is especially for ex-ante assessment of high importance for the prediction of the societal relevance.

As a consequence of the blended value (Emerson, 2003) approach an Impact Investing perspective was applicable for this tool. The Impact Investing perspective provided the translation of the concept of societal relevance to a tool conforming the blended value idea. As explained in chapter two this perspective aligns on most aspects on the development agency perspective, except for the main difference in capital that is used. The amount of capital determines also the resources made available to execute an assessment. Therefore mostly the higher level (with the main factors of societal relevance assessment) of the Impact Investing tools where applicable. The lower levels appeared to specific and therefore not useful for the use in less used capital like SGP.

The Theory of Change complements the six IRIS+ key questions by explicitly showing this change process with its context, assumptions, enablers and supported evidence. These factors are simple and well understandable for both the professional as the entrepreneurs. Moreover, the ToC offers the possibility to use different aggregation levels in the tool, fitting multiple assessments. Because of the qualitative approach of the ToC it is useful to check the ToC on these factors: 1) meaningful 2) plausible 3) prioritized 4) well defined 5) comprehensible and 6) testable. This will support the alignment of the ToC with the objectives of the program, organisation and the assessment.

Using the Theory of Change as underlying model the change process from input to societal impact is made explicit. This change process is however a prediction of the potential impact. After the prediction the real societal impact must still be established, which is rarely an straight path. For maximizing the realisation of this impact the ToC should ideally be monitored and refined through the change process (Jackson, 2013; KNAW, 2018). If this monitoring does not take place the predicted societal impact is more volatile, which should be taken into account.

To support the often problematic linkage of the output with the outcomes and impacts an indicator structure is created in the form of a decision tree. These indicators are based on the factors that are seen as important by the organisation and are widely accepted in it. Using these indicators provides a link from output to outcome to impact giving an explicit understanding of societal relevance and is therefore highly contributing to the societal relevance assessment. Integrating SDGs is preferable for the communication of the societal relevance to other organisations.

The developed tool uses policy documents of the central government with missions, submissions and innovation programs as base for the indicators. Where the outcomes are specific, the impact indicators are general missions. As defined in this research the impact is an accumulation of outcomes, hereby presuming that these outcomes will eventually contribute to the impact (IFC, 2019b; KNAW, 2018; Jonkers et al., 2018). This also implies that one single project with its outcomes will not solely be responsible for achieving societal impact (KNAW, 2018). Therefore one should be reluctant to attribute full societal impact to one project and thus creating a form of ‘impact washing’.

There are several limitations of using a qualitative approach to assess societal relevance. A relatively high dependence lays on the integrity and skills of the professional to use the tool in the spirit of the objectives. Thereby benchmarking is difficult lowering the reliability of the assessments. This also means that training and support is important in this. Further, administration is increased because of the multiple extra qualitive factors which have to be answered in wording. Even though these limitations exist, the tool provides a systematic assessment fitting the objectives of SGP, Oost NL and the provinces.

6.1 Validity, reliability and limitations of this research

Because a societal relevance assessment tool is developed for one organization the external validity of the results is low. As mentioned, every organisation has it own objectives and therefore assessment approach. This means that the generalizability is limited possible to other organizations.

Although, more regional development agencies are aligning their policy with that of the central government, which the developed tool is based on. Also because of the different aggregation levels the tool is applicable on multiple cases. Therefore the tool may be useful for organizations who struggle with the same problems.

Looking at the indicators, the broad objectives of Oost NL result in outcome and impact indicators in the decision tree that are limited tested due to limited time. Although the indicators are derived from wide accepted policy documents, the indicators are not used before as in this tool. The internal and external validity of these indicators should be further investigated in the future.

Further, Avance et al. (2020) describe five levels of measuring impact which an organisation needs to follow over time: 1) Determining social mission and impact objectives explicitly 2) Create change-model 3) Tracking outputs 4) Measuring mission related effects (Outcomes and Impacts) 5) Full knowledge and skills of measuring impact. In this research I followed the first four levels to create a tool that could be used on these four levels of assessing societal relevance. Because taking four levels at once there was little room for the organisation to develop the four phases separately. Therefore some design aspects could be missed which only become visible over time.

The internal validity of the results in this research is high through triangulation using multiple interviews with different parties, regular feedback sessions, workshops, presentations, internal databases and policy documents of the controlling parties. The methods, models and sources used are a combination of academic literature and practical guides from best practises in the field, therefore combining academics with practise.

However, testing *the Beta version 1.0* was done with direct practitioners which will work with the tool and staff members of the business unit Capital. This means that the variety of the test group is small. Therefore a one-sided perspective of the efficacy and relevance of the tool could exist.

The implementation of the tool was limited because of the corona measures which limited the direct communication and direct contact with the practitioners. Therefore solely the prototype and

fit with the Quickscan factors is tested, meaning that in the future the implementation should be further developed and investigated.

Also, the verification of the tool is based on existing cases that are already categorized and documented in the internal database. This means that the data input is limited fitting the needs of the tool. Therefore solely the categorization could be tested, not to what extent the project could be categorized.

The reliability is in qualitative research less than in quantitative research and is therefore limited. Where the data collection to 'set the scene' of the tool has great variety and size, the data collection of testing the *Beta version 1.0* of the tool was relatively small. Moreover, the sample of 50 cases of the approximately 500 cases (this year) that were categorized, although carefully selected, is limited in representativeness.

Also, testing the tool on cases in the past is done by the researcher and not by the direct practitioners, meaning that the test results are to some extent influenced by the subjectivity of the researcher, referring to the room for professional judgement of the tool. Next to that, especially in the topic of societal relevance, the results are subject to the change of objectives and definitions meaning lowering the reliability.

6.2 Future research

This research aimed to predict societal relevance. Future research could investigate if the real societal relevance is similar to the predicted societal relevance. The results will show the quality of the tool and provide possible improvements for a better assessment.

Moreover, the tool could be tested on a greater sample of cases among more professionals in the organisation. This will improve the validity and reliability of the tool.

Next to researching this development agency other agencies could be investigated through Design Research comparing the results with the results of this research. Also this tool could be tested in other agencies and comparing the results. Hereby investigating the fit of the Impact Investing perspective and Theory of Change with development agencies.

Further, in future research the indicators could be tested on validity and reliability. Hereby prioritizing the indicators and/or assigning quantitative factors. Following this, quantitative benchmarks could be developed for a more accurate assessment.

Besides that, the implementation phase could be tested focussing on the practicability of the tool. New cases could be assessed hereby implementing the tool in the Quickscan analysis and the intake meetings. Next to that research could be done on how to align the tool with the way of working in the whole organisation. Thereby looking at different companies with different available data, different sizes and different nationalities.

6.3 Conclusion

This research shows that an assessment tool could be developed that combines an Impact Investing perspective with the Theory of Change to assess societal relevance ex-ante for a regional development agency. Integrating an indicator decision tree out of governmental policy documents into the two models provide together a useful qualitative ex-ante assessment of societal relevance. This assessment is comprehensive although leaving room for professional judgement. Thereby the tool could be used on different aggregations levels and is understandable for both the professional and entrepreneur. Hereby adding to the literature of practical frameworks based on solution oriented research, using small data.

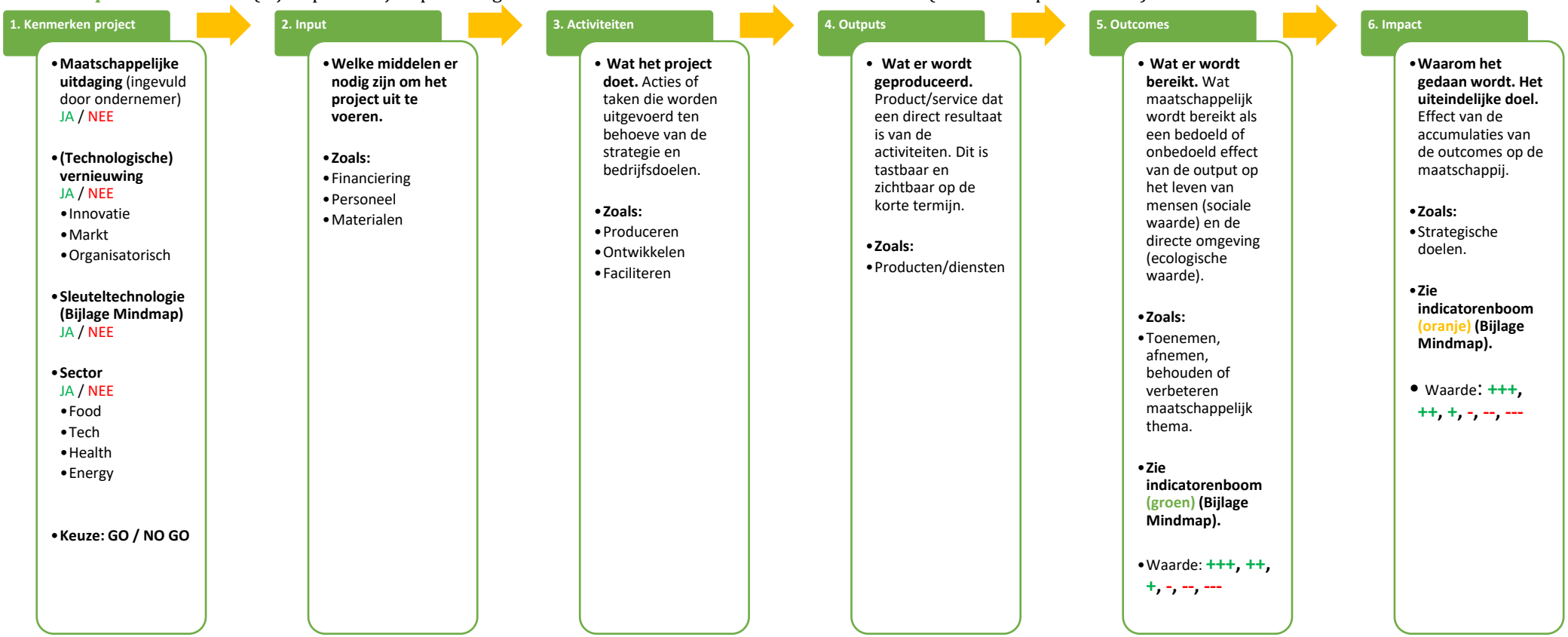
7. Appendices

Appendix A: Gamma version 1.0 tool

Tool maatschappelijke uitdagingen De Startversneller en De Groeiversneller

Deze tool is gebaseerd op de Theory of Change (ToC). Hierin wordt beschreven *waarom*, *op welke manier* en *in hoeverre* een project bijdraagt aan de maatschappelijke uitdagingen zoals vermeld in het missiegedreven topsectoren- en innovatiebeleid (2019). Dit wordt in kaart gebracht door middel van een Impact Value Chain (zie hier beneden), die de connectie legt tussen de activiteiten en de uiteindelijke (voorspelde) maatschappelijke impact. Daarnaast worden er op de pagina hieronder aspecten benoemd ter overweging voor een gedegen Impact Value Chain, ter ondersteuning van de beoordeling.

Impact Value Chain (bij stap 1 en bij stap 5 en 6 gebruik van een ondersteunende *indicatorenboom* (zie Mindmap bestanden).



2.2 Aspecten ter overweging voor een gedegen Impact Value Chain[2]

- Manier waarop het project wordt aangepakt om tot een maatschappelijke Impact te komen:
  - Probleem, maatschappelijke uitdaging die wordt geadresseerd en het maatschappelijk doel.
  - Product of service dat het project realiseert.
  - Input, Activiteiten, Outputs, Outcomes en Impact.

- Aannames en enablers van het project (noodzakelijke condities om de Impact tot stand te laten komen):
  - Causale relaties en aannames tussen verschillende schakels Impact Value Chain (Activiteiten t/m Impact).
  - Data voor de verbanden die leiden tot maatschappelijke Impact (onderzoek, vergelijking andere bedrijven, ervaring etc.).
  - Contextfactoren en enablers relevant voor het plaatsvinden van maatschappelijke impact.

- Maatschappelijke target group van het project:
  - Klanten; werknemers; leveranciers; lokale gemeenschap; environment.
  - Socio-economisch, demografisch, gender etc.

- Mate van beïnvloeding van de target group van het project:
  - Bereik Outcomes (mensen en organisaties; regionaal, nationaal of internationaal).
  - Intensiteit Outcomes (mate van verandering).
  - Tijdsduur tot Outcome plaatsvindt.
  - Tijdsduur van het effect van de Outcome.
  - Outcomes en Impacts gecorrigeerd voor 'alternative attribution', 'deadweight', 'displacement' en 'drop off' (definities zie handleiding).

- Risico's voor bereiken Outcomes en Impact, en in welke mate:
  - Extern risico (politiek, economisch of sociale instabiliteit, etc.).
  - Uitvoeringsrisico (afhankelijkheid stakeholders project, afname product/service, etc.).

- Bijdrage (financiële)ondersteuning Oost NL aan Outcomes en Impacts:
  - In hoeverre Oost NL bijdraagt aan de Outcomes en Impacts d.m.v. kennis en kunde; financieel; netwerk; overige.

- ESG (Environmental, Social and Governance) factoren bedrijf zijn acceptabel:
  - Negatieve factoren: tabak, alcohol, etc.
  - Positieve factoren: CO2 voetafdruk, gender gelijkheid, minimale vervuiling, product veiligheid, etc.

[2] Voor definities zie 'handleiding tool maatschappelijke uitdagingen Oost NL'.

2.3 Checklist Impact Value Chain

- Meaningful

- Is het duidelijk welke impact het project wil bereiken?
- Is het project op een logische manier beschreven, die ook de ondernemer en stakeholders ondersteunen?

- Plausible

- Is het realistisch om het maatschappelijke doel te bereiken met deze mate van inspanning?
- Hebben de activiteiten van het project een bijdrage aan de impact?
- Zullen partijen buiten Oost NL de maatschappelijke relevantie aannemelijk vinden?

- Prioritized

- Zijn de meest belangrijke aspecten meegenomen?
- Zijn de aannames noodzakelijk en onafhankelijk van elkaar?

- Well defined

- Zijn alle aspecten (stakeholders, Impacts, causale relaties) goed beschreven?
- Zijn de aannames, enablers, context, ondersteunende data en risico's expliciet gemaakt?

- Comprehensible

- Is het project met dit model uit te leggen in een paar minuten?

- Testable

- Zijn de uiteindelijke Impact en de causale relaties te bevestigen in de toekomst?
- Wat is de status van de data voor de (potentiële) impact ?

2.4 DASHBOARD MET RESULTATEN

Resultaat: -

Kenmerken

Maatschappelijke uitdaging --> JA/NEE

-

(Technologische) vernieuwing --> JA/NEE

-

Sleuteltechnologie --> JA/NEE

-

Sector --> JA/NEE

-

4x JA	2x of 3x JA	1x JA
Voldoet volledig aan criteria	Voldoet middelmatig aan criteria	Voldoet zeer beperkt aan criteria

Impact Value Chain

Target group

-

Output

-

Outcome

-

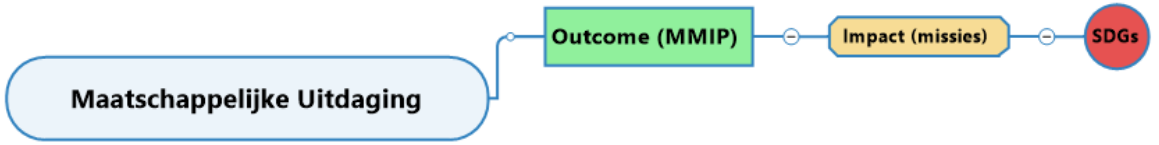
Impact

-

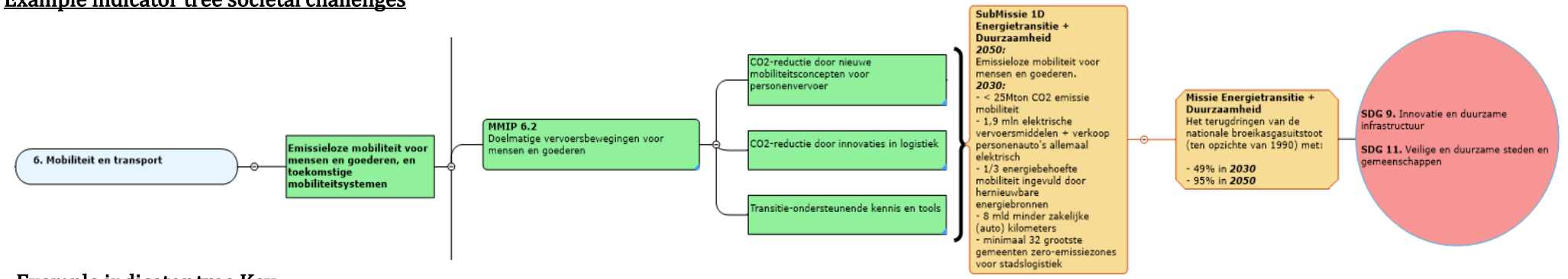
Positieve impact	Negatieve impact

Outcome-, Impact- and Key Enabling Technology indicators (examples)

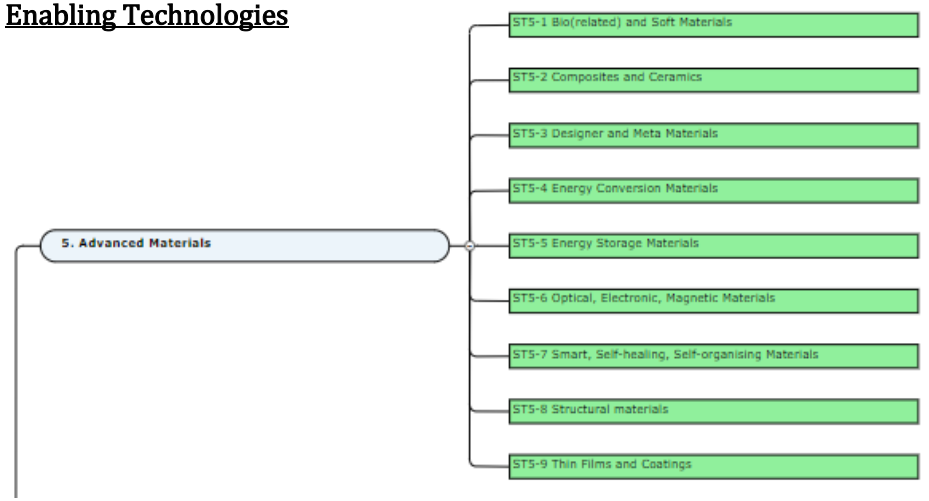
Structure indicator tree societal challenges



Example indicator tree societal challenges



Example indicator tree Key Enabling Technologies



Appendix B: Beta version 1.0 tool

Tool maatschappelijke relevantie (bèta versie 1.0)

Disclaimer: de tool is een eerste opzet die onderhevig is aan veranderingen en bedoeld is als startpunt voor discussie.

De tool bestaat uit twee verschillende schillen die elkaar opvolgen. De uitkomst van de eerste schil dient positief te zijn om verder te gaan met de volgende schil. Er is gekozen voor deze methode zodat de essentiële factoren aanwezig zijn alvorens er wordt gekeken naar de verdiepende factoren. Uiteindelijk is er een kwantitatieve score die aangeeft in hoeverre het project maatschappelijk relevant is, ondersteund door kwalitatieve gegevens.

Schil 1

Vraag 1: Wat is het maatschappelijk doel?

8 maatschappelijke uitdagingen *(aangeven ja/nee + categorie + subcategorie)* **ja/nee**

(Zie 'Mindmanager' bijlage voor beslisboom en indicatoren om MU te bepalen)

- 1. Duurzame energie en CO2 reductie
- 2. Landbouw en voeding
- 3. Gezondheid en zorg
- 4. Klimaat en water
- 5. Circulaire economie
- 6. Mobiliteit en transport
- 7. De veilige samenleving
- 8. Inclusieve, innovatieve samenleving

(Technologische) vernieuwing *(aangeven ja/nee + categorie + subcategorie)* **ja/nee**

- Product/dienst
- Markt
- Organisatorisch
- Sleuteltechnologieën
  - Quantum/nanotechnologie
  - Geavanceerde materialen
  - Geavanceerde fabricagesystemen- en processen
  - Biotechnologie
  - Fotonica
  - Micro- en nano-elektronica
  - ICT
  - Ruimtevaartonderzoek
  - Meet- en detectietechnologie
  - Elektronische conversie en materialen

Sector *(aangeven ja/nee + categorie)* **ja/nee**

- Food
- Tech
- Health
- Energy

Uitkomst schil 1

3x JA	2x JA	1x JA
Goedgekeurd → Verder schil 2	**Aanhoudend → Overleg tussen business developers**	**Afgekeurd → Stoppen beoordeling**

Schil 2

Vraag 2: Wie ervaart de maatschappelijke gevolgen van het project?

- 2.1. Welke stakeholders worden maatschappelijk beïnvloed door het project?

2.1. Kwalitatief antwoord (type en kenmerken stakeholders)

1	2	3	4	5

- 2.2. Hoe belangrijk zijn de maatschappelijke uitkomsten voor de stakeholders van het project?

1	2	3	4	5

- 2.3. Komen de maatschappelijke gevolgen ten goede aan de regio Oost?

Vraag 3: Hoe vindt de maatschappelijke impact plaats en hoe groot is die invloed?

- 3.1. Op welke manieren wordt de maatschappij beïnvloed?

3.1. Kwalitatief antwoord (outputs)

- Hoe groot is die invloed op de maatschappij:
  - 3.2. Aantal stakeholders bereikt?

1	2	3	4	5

  - 3.3. Mate van invloed op stakeholders?

1	2	3	4	5

  - 3.4. Tijdsduur dat stakeholders invloed ervaren?

1	2	3	4	5

Vraag 4: Wat is de kans op het plaatsvinden van de maatschappelijke impact?

- 4.1. Welke risico's zijn er dat de impact *niet* plaatsvindt?

4.1. Kwalitatief antwoord (stakeholders niet bereikt, externe risico's (overheid, economie, markt etc.))

1	2	3	4	5

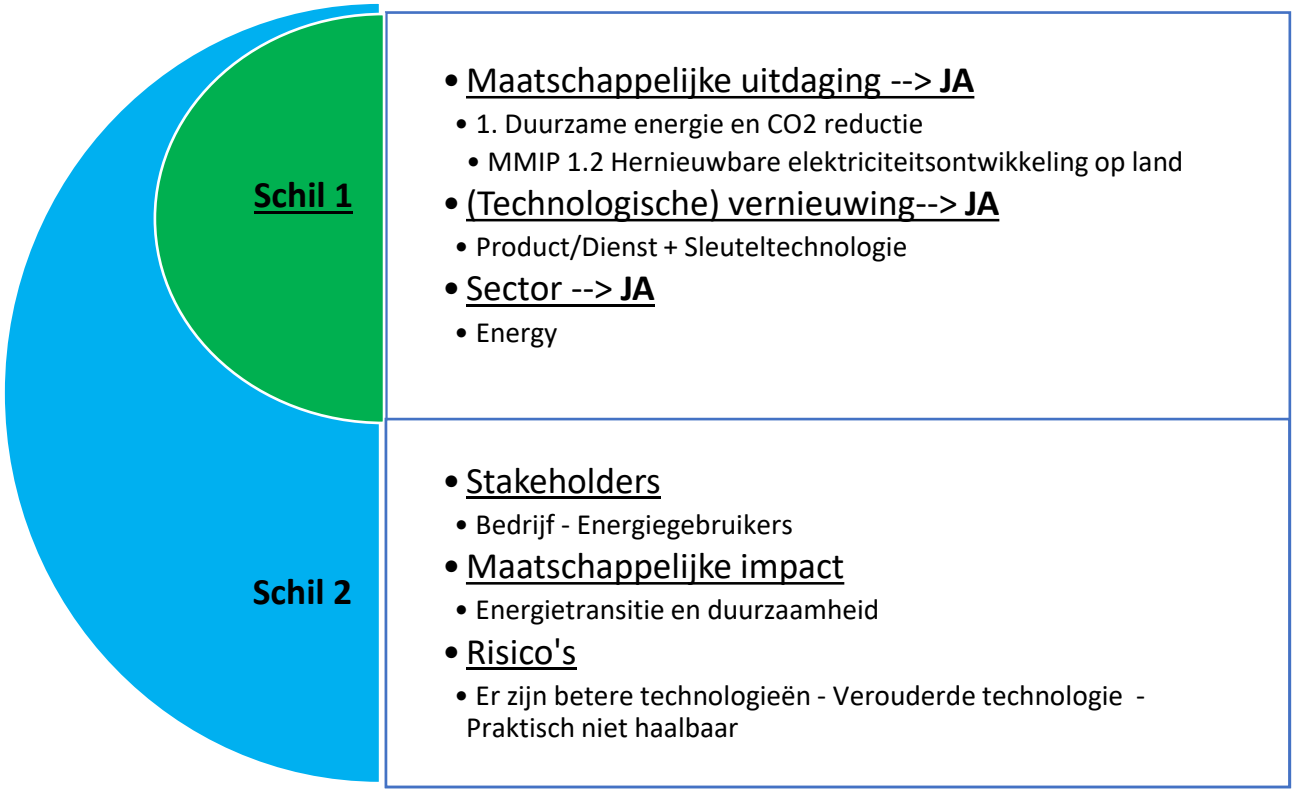
- 4,2 Hoe groot is de kans dat de impact plaatsvindt?

Uitkomst schil 2

Zeer slecht	Slecht	Middelmatig	Goed	Zeer goed
≥6	≥12	≥18	≥24	30

Uitkomst Dashboard (fictief voorbeeld)

Resultaat: Zeer goed



- Maatschappelijke uitdaging --> **JA**
  - 1. Duurzame energie en CO2 reductie
    - MMIP 1.2 Hernieuwbare elektriciteitsontwikkeling op land
- (Technologische) vernieuwing--> **JA**
  - Product/Dienst + Sleuteltechnologie
- Sector --> **JA**
  - Energy

- Stakeholders
  - Bedrijf - Energiegebruikers
- Maatschappelijke impact
  - Energietransitie en duurzaamheid
- Risico's
  - Er zijn betere technologieën - Verouderde technologie - Praktisch niet haalbaar

Appendix C: Alpha version 1.0 tool

Tool maatschappelijke relevantie (alfa versie 1.0)

Disclaimer: de tool is een eerste opzet die onderhevig is aan veranderingen en bedoeld is als startpunt voor discussie.
De tool bestaat uit twee verschillende schillen die elkaar opvolgen. De uitkomst van de eerste schil dient positief te zijn om verder te gaan met de volgende schil. Er is gekozen voor deze methode zodat de essentiële factoren aanwezig zijn alvorens er wordt gekeken naar de verdiepende factoren. Uiteindelijk is er een kwantitatieve score die aangeeft in hoeverre het project maatschappelijk relevant is.

Schil 1

Vraag 1: Wat is het maatschappelijk doel?

8 maatschappelijke uitdagingen *(aangeven ja/nee + categorie + subcategorie)* **ja/nee**

- 1. Duurzame energie en CO2 reductie
  - Duurzame energie (water, wind, zon, H2 etc.)
  - Energie efficiënt
- 2. Gezond, duurzaam geproduceerd voedsel
  - Duurzaam geproduceerd voedsel (lage milieubelasting, voedselveiligheid etc.)
  - Gezond geproduceerd voedsel (gezonde producten etc.)
- 3. Effectieve, betaalbare zorg
  - Betaalbare zorg (efficiëntie, preventie etc.)
  - Gezonde zorg (effectiever, veiliger, toegankelijkheid etc.)
- 4. Watermanagement en aanpassing aan klimaatverandering
  - Schoon water
  - Conditie landbouwgrond/grond water
  - Bescherming hoog water
- 5. Circulaire economie, maximalisatie circulair gebruik grondstoffen
  - Efficiënt gebruik grondstoffen
  - Hergebruiken producten, componenten en grondstoffen
- 6. Schoon, veilig efficiënt vervoer en transport
  - Veilig vervoer
  - Efficiënt/schoon vervoer
  - Verbeteren bereikbaarheid
- 7. De veilige samenleving
  - Veilige systemen
- 8. Inclusieve, innovatieve samenleving
  - Verbeteren sociale cohesie (diversiteit etc.)
  - Verbeteren sociale ongelijkheid (vrouwen in management etc.)

(Technologische) vernieuwing *(aangeven ja/nee + categorie + subcategorie)* **ja/nee**

- Product/dienst
- Markt
- Organisatorisch
- Sleuteltechnologieën
  - Quantum/nanotechnologie
  - Geavanceerde materialen
  - Geavanceerde fabricagesystemen- en processen
  - Biotechnologie
  - Fotonica
  - Micro- en nano-elektronica
  - ICT
  - Ruimtevaartonderzoek
  - Meet- en detectietechnologie
  - Elektronische conversie en materialen

Sector *(aangeven ja/nee + categorie)* **ja/nee**

- Food
- Tech
- Health
- Energy

Uitkomst schil 1

3x JA	2x JA	1x JA
Goedgekeurd → Verder schil 2	**Aanhoudend → Overleg tussen business developers**	**Afgekeurd → Stoppen**

Schil 2

Vraag 2: Wie ervaart de maatschappelijk gevolgen van het project?

- Welke stakeholders worden maatschappelijk beïnvloed door het project?

Kwalitatief antwoord

- Hoe belangrijk zijn de maatschappelijke uitkomsten voor de stakeholders van het project?

1	2	3	4	5

- Komen de maatschappelijke gevolgen ten goede aan de regio Oost?

1	2	3	4	5

Vraag 3: Hoe vindt de maatschappelijke impact plaats?

- Op welke manier wordt de maatschappij beïnvloed?

Kwalitatief antwoord

- Hoe groot is die invloed op de maatschappij:
  - People?
  - Planet?

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

- Hoe groot is de bijdrage van het project op die invloed?

Vraag 4: Wat is de kans op het plaatsvinden van de maatschappelijke impact?

Welke risico's zijn er dat de impact *niet* plaatsvindt?

Kwalitatief antwoord

Hoe groot is de kans dat de impact plaatsvindt?

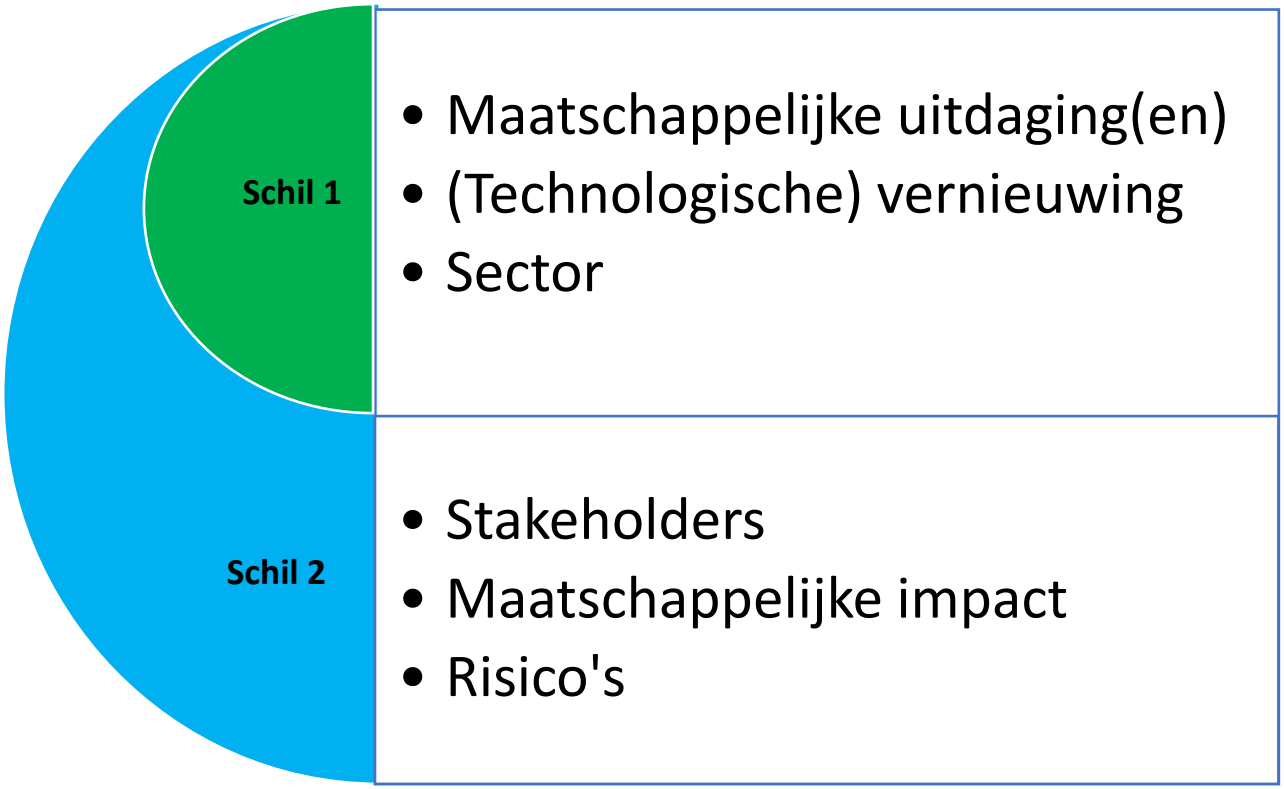
1	2	3	4	5

Uitkomst schil 2

Zeer slecht	Slecht	Middelmatig	Goed	Zeer goed
≥6	≥12	≥18	≥24	30

Uitkomst

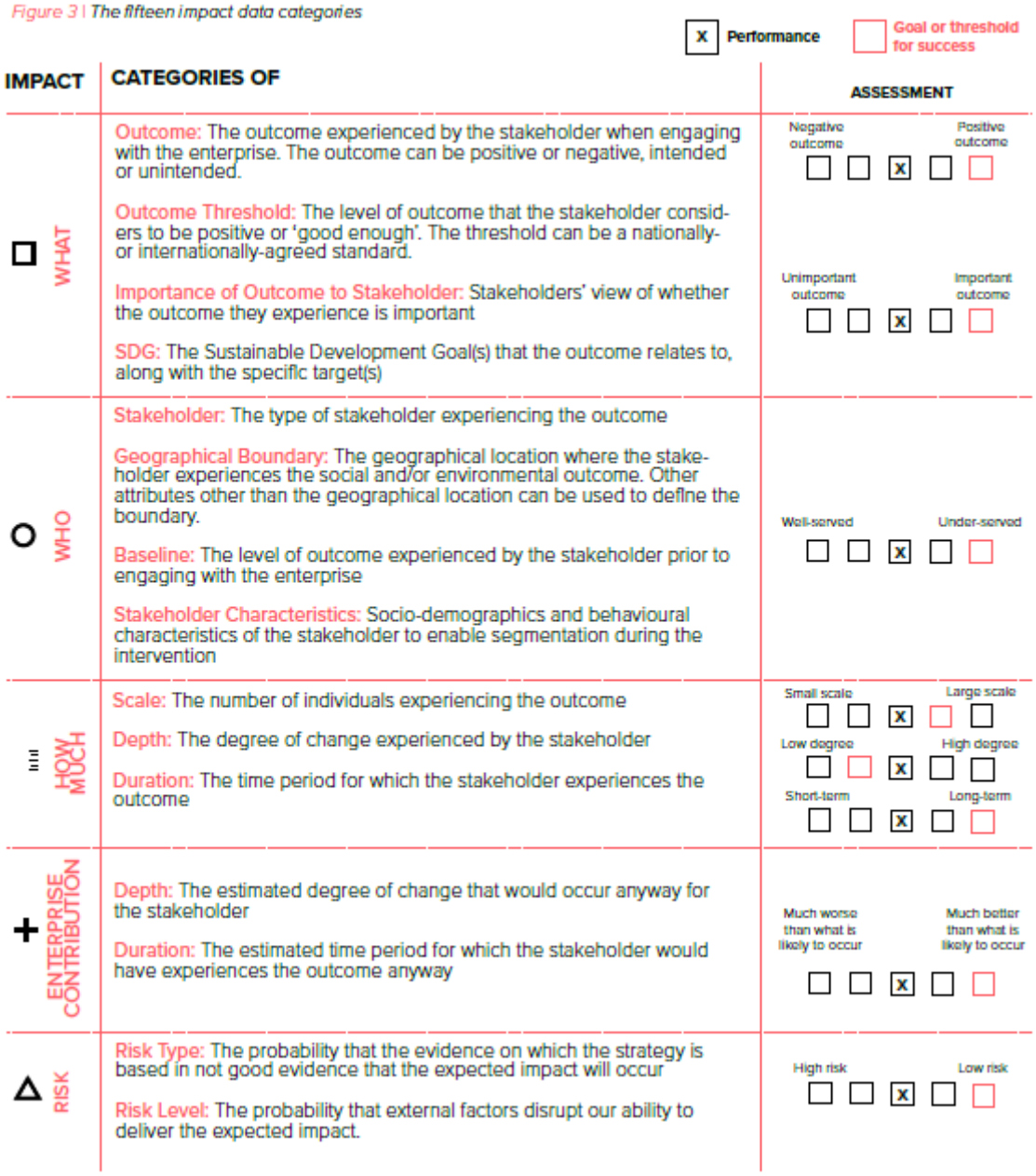
Resultaat: Zeer goed



Via een software programma (bijv. Dynamics of Excel) kunnen de achterliggende missies voor de topsectoren en innovatiebeleid, MMIP's en de SDGs worden gelinkt aan de (sub)categorieën bij de maatschappelijke uitdagingen en sleuteltechnologieën. Hierdoor is er de mogelijkheid om de uitkomst van de tool uitgebreider te maken zonder dat de business developer hier handmatig extra indicatoren voor moet invullen.

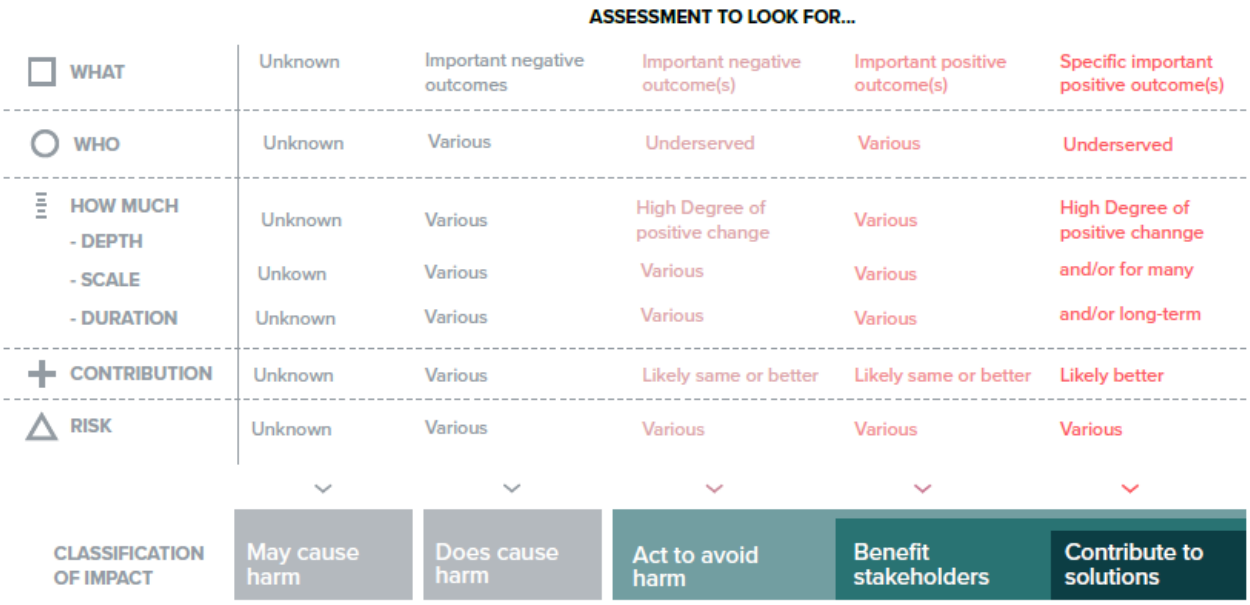
Appendix D: Fifteen impact data categories

Figure 3 | The fifteen impact data categories



Source: IMP (2018). A guide to classifying the impact of an investment.

Appendix E: Scoring categories.



Source: IMP (2018). A guide to classifying the impact of an investment.

Appendix F: Key questions testing tool

CONSIDERATIONS	KEY QUESTIONS
INDICATORS	• Are the indicators intelligible to those who are not deeply familiar with our approach? • Are there any sets of indicators that feel duplicative? Any areas where there is an opportunity to streamline? • Are there any indicators that are missing? Are there any gaps or areas not covered?
CLARITY / APPROPRIATENESS OF SCORING GUIDELINES	• Are there scoring guidelines that are confusing or ambiguous? • Are there scoring guidelines that don't accurately reflect the organization's intended impact?
USER EXPERIENCE	• Are there elements of the tool that are confusing or difficult to use? If so, what are they?
SCORES	• Are there sets of indicators for which the scores are closely correlated? If so, is there an opportunity to streamline? • Are there indicators for which all investees, or nearly all investees, receive the same score? If so, is there an opportunity to streamline? • Are the investments that the organization believes to be most impactful receiving the highest scores? If not, why? • Are the investments that the organization believes to be least impactful receiving the lowest scores? If not, why?

Source: PCV (2019). Impact Due Diligence Guide.

Appendix G: Research design.

Below the steps will be given in chronological order in which this research takes place. The phases of Peffers et al. (2006, 2007) are used as guideline. Because of the iterative process the phases of Peffers et al. (2006, 2007) will repeat itself until every part of the puzzle is complete. Besides that, the phases of the PCV Due Dilligence Impact Guide are also mentioned through the whole research, which are taken into consideration as the practical guide for building the tool.

Step 1: Mapping context + developing tool *(Alpha version 1.0)*

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 1 Problem identification and motivation - Phase 2 Objectives of a solution - Phase 3 Design and Development	1. Winning organisational support 2. Developing Impact goals 3. Identifying the appropriate approach to impact due diligence for the organisation

Goals of this step

The first goal of this step is mapping the context by getting a clear image of:

- The (policy)context Oost NL is operating in, concerning societal relevance.
- General goals of Oost NL concerning societal relevance.
- Current way of working concerning societal relevance.
- Challenges current way of working.
- (Sub)goals of the tool.
- Requirements of the tool.
- Assumptions and starting points tool.
- Considerations and possible tensions.

The second goal of this step is determining how to assess the societal relevance of a company's project ex-ante in determining the worthiness to finance by a public development agency. This will be done by:

- Developing indicators which *categorise* the societal relevance and other main factors that are seen as important by Oost NL.
- Developing relevant aspects that determine the *amount* of societal relevance.
- Developing an overview with the important outcomes of the predicted societal relevance.

Who are involved in the data collection

- Program managers.
- Business developers from different sectors (direct practitioners).
- Policy officers from the provinces 'Gelderland' and 'Overijssel' (initiators of working with societal relevance).
- Staff members of the business unit 'Capital' (also working with societal relevance).
- Staff member of Marketing and Communication (communicating about societal relevance).
- Consultant working with implementing ESG (Environmental, Social & Governance) policy.

How

- 9 semi-structured explorative interviews based on 5 topics (questions see appendix):
    - Professional background.
    - Societal relevance in general.
    - Societal relevance at Oost NL/provinces/companies.
    - Current way of working societal relevance at Oost NL/provinces/companies.
    - Goals/needs tool of predicting societal relevance.
- These 9 individual interviews are explorative and approached as a brainstorm session to think out loud. To foster this brain storm process, with short (and therefore partly) answers on big questions, the results of these interviews will not be reported separately but summarized in the alpha version of the tool, which includes setting the scene. In step 3 of the research process this overall summary in the alpha version of the tool will be reported back to the interviewees for feedback and control.
- Further, the tool will be developed by internal literature, external literature and academic literature. The literature will be linked to the interviews and must give direction to:
    - Kind of questions that need to be asked concerning societal relevance, coming from:
        - Clarifying definitions, setting the scene and state of the art information about the concept societal relevance.
        - Policy of the government, provinces and Oost NL.
        - Methods already used predicting societal relevance.
    - The content of the tool questions:
        - Specific indicators.
        - Criteria for quality of questions.
    - Design of the tool:
        - Qualitative.
        - Quantitative.
        - Structure.
        - Outcome.

- Communication.

Step 2: Evaluating tool *(Alpha version 1.0)*

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 4 Demonstration - Phase 5 Evaluation	- 3. Identifying the appropriate approach to impact due diligence for the organisation

Goals of this step

Goals of this step are to evaluate the mapping of the context, indicators of mainfactors, impact prediction and practical feasibility.

Who are involved in the data collection

- Program managers SGP

How

- Sending the tool and the mapped context to the program managers via email. They can give written feedback per person, where after the suggestions will be discussed in a virtual meeting.

Step 3: Redeveloping tool *(Alpha version 2.0)*

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 3 Design and Development	- 3. Identifying the appropriate approach to impact due diligence for the organisation

Goal of this step

Goal of this step is to process the feedback on the mapping of the context, indicators of mainfactors, impact prediction and practical feasibility. Further, provide potential paths/suggestions on which the program managers could choose. Especially the categorization of societal relevance in indicators is a detailed and sophisticated process.

Who are involved in the data collection

- Program managers SGP

How

- Processing feedback on the context, indicators of main factors, impact prediction and practical feasibility.

- Providing the program managers with three options of indicator structures in which they can choose. Also a combination is possible. The intent of these choices are to create a constructive discussion which way to go.

Step 4: Evaluating tool *(Alpha version 2.0)*

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 4 Demonstration - Phase 5 Evaluation	- 1. Winning organisational support - 2. Developing Impact goals - 3. Identifying the appropriate approach to impact due diligence for the organisation

Goals of this step

Goals of this step is to evaluate the mapping of the context, indicators of mainfactors, impact prediction and practical feasibility.

Who are involved in the data collection

- Program managers SGP

How

- Sending the tool and the mapped context to the program managers via email. They can give written feedback per person, where after the suggestions will be discussed in a virtual meeting.

Step 5: Redeveloping tool *(Beta version 1.0)*

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 3 Design and Development	- 3. Identifying the appropriate approach to impact due diligence for the organisation

Goals of this step

Goal of this step is to process the feedback on the mapping of the context, indicators of main factors, impact prediction and practical feasibility.

How

- Process feedback on the context, indicators of main factors, impact prediction and practical feasibility.

Step 6: Testing tool (Beta version 1.0)

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 4 Demonstration - Phase 5 Evaluation	- 1. Winning organisational support - 2. Developing impact goals - 3. Identifying the appropriate approach to impact due diligence for the organisation

Goal of this step

Testing a tool is generally the most productive when employees who are going to work with the tool are engaged and therefore share actionable feedback to move the tool forward based on their understanding of what information is relevant (PCV, 2019a). The goal of this phase is to test the *Beta version 1.0* of the tool with four staff members of different sectors (Energy, Health, Food and Tech) who will be directly involved in working with the tool. This will provide feedback that is directly relevant. Also the interviewees of Step 1 will be asked for feedback about the set scene and the tool itself. Especially in this case setting the scene will be important because it is based on their input. Further, a workshop is given where 10 business developers will be present for discussion and feedback.

Who are involved in the data collection

- Four Business Developers (Energy, Health, Food and Tech).
- Staff members of business unit Capital
- Staff members that have been interviewed in phase 1.
- 10 Business Developers present at the workshop.

How

- A semi-structured interview is constructed based on the most relevant and most significant factors of the tool. These questions are a checklist to structure the feedback process of the tool (see appendix I).
- The tool will be send to the interviewees of step 1 and asked for feedback. The form of this feedback could be written or in a meeting, depending on the time and wishes of the interviewees.
- A workshop will be given to the business developers about the tool, where feedback is given. The workshop consists of 20 minutes of presentation and 25 minutes of discussion.

Step 7: Verifying tool on real cases

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 4 Demonstration - Phase 5 Evaluation	- 3. Identifying the appropriate approach to impact due diligence for the organisation - 4. Integrating impact due diligence into existing process

Goals of this step

Goal of this step is to compare the output of the tool with the output in the already existing cases in the ERP-CRM system of Oost NL. This gives a final image on the difference between the new approach using the tool and the current way of working. This will determine the quality of the tool and the quality of the data, providing input for statements about in which situation the tool works best and which data input should be considered in the future to let the tool function well. Next to this, there will be investigated to what extent the required input of the tool fits the input of the Quickscan. Further, reaching the objectives of Oost NL and objectives of the tool are verified through a semi-structured interview with the program manager and a staff member of Marketing and Communication. Next to that a presentation is given to the Business Unit manager whereafter feedback is collected.

Who

- Program manager SGP 1.
- Staff member of Marketing and Communication.
- Business Unit manager

How

50 Case samples will be taken based on these multiple factors (see appendix K):

  - all sectors covered.
  - cases with Key Enabling Technologies.
  - cases MUs covered.
  - public summary and complete Quickscan entrepreneur available.
  - assessment done by different business developers.
- The tool will be used to process the already available data of the cases. At the end the result of using the tool will be compared with the current result.
- Comparing the aspects of the tool with the aspects of the Quickscan.

- A semi-structured interview is constructed based on the objectives of Oost NL and the objectives of the tool. These questions are a checklist to structure the feedback process of the tool (see appendix J).

Step 8: Final tool *(Gamma version)* + report

Peffers et al. (2006, 2007)	PCV (2019a)
- Phase 6 Communication	- 4. Integrating impact due diligence into existing process

Goals of this step

Goal of this step is to provide a final tool that is ready to be used. Next to the tool, a report will be provided with the background, decisions and a manual for using the tool.

Appendix H: Explorative Interview questions (Dutch)

Interview opzet

Hoofdvraag:

- Hoe kan de maatschappelijke relevantie van een bedrijfsproject *ex-ante* worden beoordeeld door Oost NL (SGP) bij het bepalen van de geschiktheid om te financieren?

Deelvragen:

- Wat is maatschappelijke relevantie?
- Hoe is maatschappelijke relevantie meetbaar?
- Wat is maatschappelijke relevantie volgens Oost NL (SGP)?
- Wat zijn de doelen van Oost NL (SGP) omtrent maatschappelijke relevantie?
- Welke eigenschappen moet een tool hebben die de maatschappelijke relevantie meet bij Oost NL (SGP)?
- Hoe kan de tool worden geïmplementeerd bij Oost NL (SGP)?
- In hoeverre kan Oost NL (SGP) haar doelstellingen behalen met deze tool?

Interview gids

Allereerst bedankt voor uw tijd en energie die u vrijmaakt voor dit interview.

Zoals stond in de mail, ben ik een Masterstudent Bedrijfskunde aan de Universiteit Twente. Momenteel ben ik bezig met een afstudeeropdracht bij Oost NL onder begeleiding van de managers van de Startversneller en de Groeiversneller. In de afstudeeropdracht onderzoek ik hoe een raamwerk kan worden ontwikkeld die de maatschappelijke waarde van projectaanvragen in kaart brengt, voor de Startversneller en de Groeiversneller. Het doel van dit onderzoek om uiteindelijk nauwkeuriger te kunnen bepalen of een toekomstig project van een bedrijf waarde toevoegt aan de maatschappij.

Is het idee van het onderzoek en het onderzoeksdoel duidelijk voor u?

De resultaten van dit interview zullen anoniem worden verwerkt. Echter wordt er wel gevraagd naar bepaalde eigenschappen van uw functie. U bent ten alle tijden bevoegd om het antwoorden op vragen te weigeren.
De resultaten voor dit interview zullen uitsluitend voor deze thesis verwerkt worden. Uiteindelijk zal deze thesis worden openbaar gemaakt op het internet onder de naam van Universiteit Twente en zal uiteraard Oost NL een exemplaar ontvangen.

Het interview duurt maximaal een uur en bestaat uit algemene vragen zoals uw functieomschrijving en achtergrond, en specifieke vragen omtrent het onderzoek naar de maatschappelijke uitdagingen. Ik wil u vragen om zo bondig mogelijk te antwoorden.

Graag zou ik van dit interview een audio-opname willen maken zodat ik het interview op een later tijdstip kan terugluisteren, aan het einde van het onderzoek zal ik het wissen. Er zijn geen goede of foute antwoorden, het gaat enkel om uw ervaringen en uw mening.

Gaat u akkoord met deze voorwaarden?

Interview: medewerker Oost NL.

Doel interview: inzicht vergaren in de huidige werkwijze, uitdagingen, doelen en de implementatie om de maatschappelijke relevantie van bedrijfsprojecten ex-ante te beoordelen bij Oost NL. Daarnaast wordt er gevraagd naar design aspecten van de tool, zoals eisen, methoden en vormgeving.

Onderdeel 1: Functieomschrijving/professionele achtergrond

Het eerste deel van dit interview zal gaan over uw functie en professionele achtergrond.

Wat houdt uw functie in?

Hoelang werkt u bij dit bedrijf?

Op welke manier bent u verbonden met De Startversneller en De Groeiversneller?

Onderdeel 2: Maatschappelijke relevantie[3]

A- Welke rol speelt maatschappelijke relevantie in het bedrijfsleven volgens u?

A- Op welke manier werkt u met maatschappelijke relevantie bij Oost NL?

A- Wat houdt volgens u maatschappelijke relevantie in?

B- Wat is volgens u de visie van Oost NL over maatschappelijke relevantie?

B- Welke doelstellingen wil Oost NL halen met betrekking tot de maatschappelijke relevantie?

B- In hoeverre kan Oost NL haar doelstellingen behalen met de tool die wordt ontwikkeld?

C - Hoe wordt de maatschappelijke relevantie op het moment gemeten bij projectaanvragen, door Oost NL?

[3] Vragen gebaseerd op de EVPA (2013) – A Practical Guide to Measuring and Managing Impact.

C- Welke kenmerken zou een tool moeten hebben die ex-ante de maatschappelijke relevantie kan meten?

C- Hoe zou de maatschappelijke relevantie volgens u het beste gemeten kunnen worden bij projectaanvragen bij Oost NL? En in welke vorm?

D- Op welke manieren kan de tool worden geïmplementeerd bij Oost NL?

D- Waar in het proces zou deze tool passen en door welke functionaris zou deze gebruikt moeten worden?

Tips/suggesties/valkuilen voor dit project?

Interview: opdrachtgevers Oost NL (provincie, Rijk etc.).

Doel interview: inzicht vergaren in de huidige werkwijze, uitdagingen, doelen en de implementatie om de maatschappelijke relevantie van bedrijfsprojecten ex ante te meten bij Oost NL. Daarnaast wordt er gevraagd naar design aspecten van de tool, zoals eisen, methoden en vormgeving.

Onderdeel 1: Functieomschrijving/professionele achtergrond

Het eerste deel van dit interview zal gaan over uw functie en professionele achtergrond.

Voor welk bedrijf bent u werkzaam en wat houdt uw functie in?

Hoelang werkt u bij dit bedrijf?

Op welke manier bent u aan Oost NL verbonden en specifiek met De Startversneller en De Groeiversneller?

Onderdeel 2: Maatschappelijke relevantie

A- Welke rol speelt maatschappelijke relevantie in het bedrijfsleven volgens u?

A- Op welke manier werkt u met maatschappelijke relevantie?

A - Wat houdt volgens u maatschappelijke relevantie in?

B- Wat is volgens u de visie van uw organisatie over maatschappelijke relevantie?

B- Welke doelstellingen wil uw organisatie halen met betrekking tot de maatschappelijke relevantie?

B- In hoeverre kan de tool van Oost NL bijdragen aan het behalen van de doelstellingen?

C - Hoe wordt de maatschappelijke relevantie op het moment gemeten bij u in de organisatie?

C- Welke kenmerken zou een tool moeten hebben die ex-ante de maatschappelijke relevantie kan meten?

C- Hoe zou de maatschappelijke relevantie volgens u het beste gemeten kunnen worden bij projectaanvragen bij Oost NL? En in welke vorm?

D- Op welke manieren kan de tool worden geïmplementeerd?

D- Waar in het proces zou deze tool passen en door welke functionaris zou deze gebruikt moeten worden?

Tips/suggesties/valkuilen voor dit project?

Interview: medewerkers bedrijven werkende met maatschappelijke relevantie.

Doel interview: inzicht vergaren in de huidige werkwijze, uitdagingen, doelen en de implementatie om de maatschappelijke relevantie van bedrijfsprojecten ex-ante te meten bij Oost NL. Daarnaast wordt er gevraagd naar design aspecten van de tool, zoals eisen, methoden en vormgeving.

Onderdeel 1: Functieomschrijving/professionele achtergrond

Het eerste deel van dit interview zal gaan over uw functie en professionele achtergrond.

- Voor welk bedrijf bent u werkzaam en wat houdt uw functie in?

- Hoelang werkt u bij dit bedrijf?

- Op welke manier bent u aan Oost NL verbonden en specifiek met De Startversneller en De Groeiversneller?

Onderdeel 2: Maatschappelijke relevantie

A- Welke rol speelt maatschappelijke relevantie in het bedrijfsleven volgens u?

A- Op welke manier werkt u met maatschappelijke relevantie?

B- Wat is volgens u de visie van uw organisatie over maatschappelijke relevantie?

B- Welke doelstellingen wil uw organisatie halen met betrekking tot de maatschappelijke relevantie?

C - Hoe wordt de maatschappelijke relevantie op het moment gemeten bij u in de organisatie?

C- Welke kenmerken zou een tool moeten hebben die ex-ante de maatschappelijke relevantie kan meten?

C- Hoe zou de maatschappelijke relevantie volgens u het beste gemeten kunnen worden? En in welke vorm?

D- Op welke manieren kan de tool worden geïmplementeerd?

D- Waar in het proces zou deze tool passen en door welke functionaris zou deze gebruikt moeten worden?

Tips/suggesties/valkuilen voor dit project?

Appendix I: Interview questions testing Beta version 1.0 tool (Dutch)

Hoofdvraag:

- Hoe kan de maatschappelijke relevantie van een bedrijfsproject *ex-ante* worden beoordeeld door Oost NL (SGP) bij het bepalen van de geschiktheid om te financieren?

Deelvragen:

- Wat is maatschappelijke relevantie?
- Hoe is maatschappelijke relevantie meetbaar?
- Wat is maatschappelijke relevantie volgens Oost NL (SGP)?
- Wat zijn de doelen van Oost NL (SGP) omtrent maatschappelijke relevantie?
- Welke eigenschappen moet een tool hebben die de maatschappelijke relevantie meet bij Oost NL (SGP)?
- Hoe kan de tool worden geïmplementeerd bij Oost NL (SGP)?
- In hoeverre kan Oost NL (SGP) haar doelstellingen behalen met deze tool?

Interview gids

Allereerst bedankt voor uw tijd en energie die u vrijmaakt voor dit interview.

Zoals stond in de mail, ben ik een Masterstudent Bedrijfskunde aan de Universiteit Twente. Momenteel ben ik bezig met een afstudeeropdracht bij Oost NL onder begeleiding van de managers van de Startversneller en de Groeiversneller. In de afstudeeropdracht onderzoek ik hoe een tool kan worden ontwikkeld die de maatschappelijke waarde van projectaanvragen in kaart brengt ex-ante, voor de Startversneller en de Groeiversneller. Het doel van dit onderzoek om uiteindelijk nauwkeuriger te kunnen bepalen of en in welke mate een toekomstig project van een bedrijf waarde toevoegt aan de maatschappij.

Is het idee van het onderzoek en het onderzoeksdoel duidelijk voor u?

De resultaten van dit interview zullen anoniem worden verwerkt. Echter wordt er wel gevraagd naar bepaalde eigenschappen van uw functie. U bent ten alle tijden bevoegd om het antwoorden op vragen te weigeren.
De resultaten voor dit interview zullen uitsluitend voor deze thesis verwerkt worden. Uiteindelijk zal deze thesis worden openbaar gemaakt op het internet onder de naam van Universiteit Twente en zal uiteraard Oost NL een exemplaar ontvangen.

Het interview duurt maximaal een uur en bestaat uit algemene vragen zoals uw functieomschrijving en achtergrond, en specifieke vragen omtrent het onderzoek naar de maatschappelijke uitdagingen. Ik wil u vragen om zo bondig mogelijk te antwoorden.

Graag zou ik van dit interview een audio-opname willen maken zodat ik het interview op een later tijdstip kan terugluisteren, aan het einde van het onderzoek zal ik het wissen. Van dit interview maak ik een compact verslag die ter controle aan u wordt voorgelegd ter goedkeuring, waarna het verwerkt wordt in de thesis. Er zijn geen goede of foute antwoorden, het gaat enkel om uw ervaringen en uw mening.

Gaat u akkoord met deze voorwaarden?

Interview: medewerkers Oost NL
Taak: beoordelen bedrijfsprojecten voor de geschiktheid van financiering.

Hoofdvraag: Hoe kan de maatschappelijke relevantie van een bedrijfsproject *ex-ante* worden beoordeeld door Oost NL (SGP) bij het bepalen van de geschiktheid om te financieren?

Doel interview: inzicht vergaren in de kwaliteit en toepasbaarheid van de ontwikkelde tool (Bèta versie 1.0). Daarnaast worden de huidige aanpak van projectaanvragen, probleemstelling van huidige aanpak en de (sub)doelen van de tool nogmaals gecheckt.

Toegestuurde documenten voor het interview

- Kader van de tool (setting the scene)
- Tool
- Beslisboom indicatoren maatschappelijke uitdagingen

De vragen zijn gebaseerd op the key questions in (PCV, 2019a) (see appendix F)

Onderdeel 1: Functieomschrijving/professionele achtergrond
Het eerste deel van dit interview zal gaan over jouw functie en professionele achtergrond.

- Wat houdt uw functie in?

- Hoelang werkt u bij dit bedrijf?

- Op welke manier bent u verbonden met De Startversneller en De Groeiversneller?

Onderdeel 2: Maatschappelijke relevantie – testen tool

- Heeft u de kans gehad om de toegestuurde documenten door te lezen?

<u>Context tool reflecteren d.m.v. vragen</u>

- Huidige aanpak projectaanvragen?
- Welke methoden/structuren worden er gebruikt?
- Veelal persoonlijke criteria voor maatschappelijke relevantie gebruikt?

<u>Probleemstelling</u>

- Beoordeling, verslaglegging en handvaten voor ondernemers zijn beperkt en niet gebaseerd op harde criteria?

(Sub)doelen tool

- Op systematische wijze de maatschappelijke relevantie van een projectaanvraag ex-ante te beoordelen?
- Verantwoording afleggen omtrent de maatschappelijk relevantie naar stakeholders?
- Het informeren van bedrijven over de waarden en methoden die 'De Startversneller' en 'De Groeiversneller' gebruiken omtrent het thema maatschappelijke relevantie.

Tool reflecteren d.m.v. vragen

Algemene vragen

- Is het duidelijk hoe de tool werkt?
- Wat is uw eerste indruk van de tool?
- Zijn 2 schillen de juiste werkwijze?
- Ziet u uzelf hier mee werken?

1e schil

- Bevat de 1e schil alle belangrijke factoren?
- Is de factor (technologische) vernieuwing op de juiste manier verwerkt?
- Is de factor sector op de juiste manier verwerkt?
- Is het tellen van de 'ja's' de juiste keuze? Ook het advies bij elk soort aantal 'ja's'?

Indicatoren

- Zijn de indicatoren om maatschappelijke relevantie vast te stellen van goede kwaliteit en in voldoende mate aanwezig?
- Wat vindt u van de diepgang?
- Wat vindt u van de breedte?
- Is het werkbaar op deze manier?

2e schil

- Bevat schil 2 alle belangrijke factoren?
- Zijn de factoren verdiepend genoeg?
- Wat vindt u van de combinatie van kwalitatief en kwantitatieve vragen?
- Wat vindt u van de uitkomst van schil 2? En van de kleuren?
- In hoeverre is de tool werkbaar op deze manier?

Dashboard

- In hoeverre is de uitkomst van de tool duidelijk?

- In hoeverre geeft het dashboard een volledig beeld?
- Is de uitkomst goed samengevat in het dashboard?
- Kwalitatieve gegevens?
- Kwantitatieve gegevens?
- Is de tool werkbaar op deze manier?

Laatste vraag: Tips/suggesties/valkuilen voor deze tool?

Appendix J: Interview questions verification tool (Dutch)

Hoofdvraag:

- Hoe kan de maatschappelijke relevantie van een bedrijfsproject *ex-ante* worden beoordeeld door Oost NL (SGP) bij het bepalen van de geschiktheid om te financieren?

Deelvragen:

- Wat is maatschappelijke relevantie?
- Hoe is maatschappelijke relevantie meetbaar?
- Wat is maatschappelijke relevantie volgens Oost NL (SGP)?
- Wat zijn de doelen van Oost NL (SGP) omtrent maatschappelijke relevantie?
- Welke eigenschappen moet een tool hebben die de maatschappelijke relevantie meet bij Oost NL (SGP)?
- Hoe kan de tool worden geïmplementeerd bij Oost NL (SGP)?
- In hoeverre kan Oost NL (SGP) haar doelstellingen behalen met deze tool?

Toegestuurde documenten voor het interview

- Tool
- Beslisboom maatschappelijke uitdagingen
- Handleiding tool

Onderdeel 1: Resultaat

- Wat is uw mening over het resultaat?
- In hoeverre kan deze tool geïmplementeerd worden?

Onderdeel 2: Doelen tool

- In hoeverre zijn de doelen van de tool behaald?
    - Het ondersteunen van 'De Startversneller' en 'De Groeiversneller' door op systematische wijze gebaseerd op harde criteria de maatschappelijke relevantie van een aanvraag *ex-ante* te beoordelen, om te bepalen of er financiering moet worden toegekend.
    - Verantwoording afleggen naar stakeholders van 'De Startversneller' en 'De Groeiversneller' omtrent de maatschappelijk relevantie van gefinancierde projecten, die gebaseerd zijn op harde onderliggende criteria. Hiermee wordt de visie van Oost NL met betrekking tot duurzaam ondernemen kracht bijgezet.
    - Het informeren van bedrijven over de waarden en methoden die 'De Startversneller' en 'De Groeiversneller' gebruiken omtrent het thema maatschappelijke relevantie.

Onderdeel 3: Doelen opdrachtgevers (provincie), Oost NL en SGP

- In hoeverre draagt deze tool bij aan het behalen van de doelen van de provincie?
    - Provincie Gelderland wil deze maatschappelijke clusters verbeteren door middel van innovatie: Agrofood, Health, Sustainability en High Tech manufacturing.
    - Provincie Overijssel: Energy & Sustainability; Agriculture, Water & Food; Health; en Security.
- In hoeverre draagt deze tool bij aan het behalen van de doelen van Oost NL?
    - De regio Oost-Nederland is in 2022 de meest aantrekkelijke regio voor innovatieve bedrijven in Food, Health, Tech en Energy. Dit wordt gerealiseerd door de economische infrastructuur duurzaam te versterken in Oost-Nederland.
- In hoeverre draagt deze tool bij aan het behalen van de doelen van SGP?
    - SGP's missie is het vergroten van het toekomstig verdienvermogen van start-ups en MKB door hun innovatie- en vernieuwingskracht in te zetten bij de oplossing van maatschappelijke uitdagingen voor een duurzame groei van de economie in Oost-Nederland.

Onderdeel 4: Toekomst

- Wat moet er in de toekomst verder onderzocht/uitgewerkt worden?
- Welke relevante ontwikkelingen voor volgende projecten hebben zich voorgedaan?
- Zijn er nog onderwerpen die niet aan bod zijn gekomen tijdens het interview, maar die u wel belangrijk vindt om te vertellen?

Appendix K: Design verification tool on 50 cases

Because the tool should still be implemented and with the corona restrictions it is difficult to test the tool on a new case in the right setting. However, the data that is collected in the past on 50 cases will be used as input for the tool and tested. The goal of this testing is to compare the categorization of the tool with the categorization in the past and determine the differences, similarities and added value of the tool. This will lead to three subgoals:

- if and how the tool will categorize the cases in one of the eight societal challenges as a result.
- what differences in categorization will the tool provide in comparison with the current categorization.
- what the potential problems or tensions are in using this tool.

Requirements cases for testing:

- all sectors covered.
- cases with key enabling technologies.
- cases with a variety of societal challenges (MUs) covered.
- public summary and complete Quickscan entrepreneur available.
- current assessment by different business developers.

Indicators for testing tool:

- tool categorization = current categorization.
- tool categorization ≠ current categorization.
- defining differences tool categorization and current categorization.
- categorizing cases in key enabling technology.

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