Professional MBA
Entrepreneurship & Innovation

Digital representation of an innovation cycle in the FMCG industry

A Master's Thesis submitted for the degree of
“Master of Business Administration”

supervised by
Dr. Michael König

Martin Amon MSc. M.A.

51807428

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Affidavit

I, **MARTIN AMON MSC. M.A.**, hereby declare

1. that I am the sole author of the present Master's Thesis, "DIGITAL REPRESENTATION OF AN INNOVATION CYCLE IN THE FMCG INDUSTRY", 64 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted the topic of this Master's Thesis or parts of it in any form for assessment as an examination paper, either in Austria or abroad.

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Abstract

Companies often find it difficult to depict a continuous innovation and project process and to live it in daily practice. At the same time, companies are also faced with the challenges of exploiting current and new potentials of process digitalization.

This thesis deals with how an innovation cycle can be mapped digitally and which concrete opportunities for improvement result from this. Innovation software platforms are offered as a commercially available solution for this.

In recent years, these platforms have taken up new technologies like Artificial Intelligence for more intelligent search tasks and more customer benefits. Digital trend radar and AI-supported patent searches can open up new potentials especially in the areas of the market research, technology watching and trend intelligence. The master thesis examines the evolution of this software and how it supports promising practices in innovation management.

It is shown that modern Innovation Platforms support all phases of the innovation cycle and enhance adaptive intelligence. Idea generation is spread across the whole company and digital collaboration enables a transparent evaluation and selection of ideas.

The advantages and functions of innovation software are then discussed in a case study to determine the concrete requirements of a company in the food industry.

The case study deals with how information on trends in the food industry should be collected and structured. It is about how new ideas for food products should be evaluated and prioritized. Finally, the question of how the introduction of such software would affect the team culture is also addressed. Based on empirically evaluated interview questions, a target process is worked out which could be used in the innovation software workflow. The result is an implementation plan for the introduction of such software.

Table of Contents

1 Introduction 6

1.1 Problem Formulation 6

1.2 Course of Investigation 7

1.3 Vivatis Holding AG 8

1.4 The Maresi GmbH 9

1.5 VIVATIS Innovation Cycle 9

1.6 How Do Search Field Workshops Take Place at Maresi GmbH 12

2 Literature 15

2.1 "How to Innovate?" - The Status of Innovation Management and How Leading Companies Differ from Laggards? 15

2.2 Literature and Evolution Analysis on Innovation Management Software Platforms 18

2.3 Forrester Research on Innovation Management Tool / Software Platforms (IMSP) 19

2.3.1 Market Readiness for IMSPs by 2013: 21

2.3.2 Innovation Platforms Become More Important as Firms Mature 21

2.3.3 IMSP Market Readiness Status 2016 22

2.3.4 IMSP Market Trends 2016: Innovation Management Solutions have Become More Mainstream 22

2.3.5 IMSP Market Trends 2016: Enterprise Collaboration Tools Lay the Groundwork for New Innovation Approaches 23

2.3.6 IMSP Mobile IMSP Application Status 2016 23

2.3.7 IMSP Market and Software Trends 2020 23

2.3.8 Ecosystems 24

2.3.9 Advanced Artifical Intelligence /Machine Learning Capabilities 25

2.3.10 The Overall Evaluation of Current Vendors and Possible Potentials of Innovation Software 25

2.4 Artificial Intelligence in the Foresight Process 26

2.5 Typical Process in Ideation Software 29

2.6 How Innovation Software Supports McKinsey´s 8 Essential Innovation Patterns and Which Advantages are Relevant for Maresi GmbH 36

2.6.1 Practice 1: Aspire: Set Goals and Cascade Them 36

2.6.2 Practice 2: Choose Portfolios 37

2.6.3 Practice 3: Discover New Problems and Insights 40

2.6.4 Practice 4: Evolve New Business Models 41

2.6.5 Practice 5: Accelerate with Quick Launches 41

2.6.6 Practice 6: Scale Right by Balanced Resources 42

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2.6.7 Practice 7: Extend with Networks and to Crowd 42
2.6.8 Practice 8: Mobilize People 42
2.7 Challenges which managers face with the type and level of activity on IM platforms 43
3 Case Study – Implementation concept 45
3.1 Case study interview 46
3.2 Which specific requirements on innovation software does Maresi GmbH have? 46
3.3 Implementation concept 48
3.3.1 Define goals and expectations of the program 48
3.3.2 Define searchfields 49
3.3.3 Design Trendradar 50
3.3.4 Create communication plan and excitement at pre-launch because it's all about attention 51
3.3.5 Describe to staff how it works 51
3.3.6 Define roles (admin, participants, moderators, subject matter experts, legal advise, data analyst, leaders) 52
3.3.7 Workflow on the platform 52
3.3.8 Design reward system 53
3.3.9 Demonstrate senior management buy-in 54
3.3.10 Measure Activity 55
3.3.11 Communicate results 55
3.3.12 Introduce and promote new challenges 55
3.4 Cultural breaking up of brand teams 55
3.5 System break between innovation software and project software 56
3.6 Software indication prices 56
4 Empirical part 57
4.1 Comments of the questionnaire participants 58
5 Conclusion and discussion 60
5.1 Summary 60
5.2 Outlook for Future Research 61
5.3 Conclusio 61
Bibliography 62

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List of Abbreviations

IMSP	Innovation Management Software Platform
UI	User Interface

List of Figures

Figure 1: Vivatis Logo 8
Figure 2: Brands Related to Vivatis Holding AG 9
Figure 3: Maresi Milk Logo 9
Figure 4: The Big Picture Innovation Model used by Vivatis Holding AG and scope of thesis (Lercher, 2020) 10
Figure 5: Maresi GmbH Search Fields Overview of Workshop in 2019 13
Figure 6: Clustered Search Fields Terms 14
Figure 7: McKinsey Survey of 2,500 Global Executives, Nov 2012 (Marc de Jong, 2015) 15
Figure 8: Eight Essential of Innovation and Key Behavior (Marc de Jong, 2015) 17
Figure 9: Platforms Support Activities Across a “dual” Path Innovation Flow (Brian Hopkins, 2020) 19
Figure 10: Maturity Stages of Innovation Practises (Brian Hopkins, 2020) 22
Figure 11: Innovation Management Solutions are Part of a Continuum of Collaboration Tools (Brian Hopkins, 2020) 23
Figure 12: Exploit the Full Innovation Ecosystem for Maximum Benefits 24
Figure 13: Innovation Management Platforms (Brian Hopkins, 2020) 25
Figure 14: Can AI Help with Foresight? (Itonics, 2019) 28
Figure 15: Exemplary Start Screen by Planbox 29
Figure 16: Exemplary Submission Form 30
Figure 17: Sample for a Pairwise Evaluation 31
Figure 18: Head-to-Head Results 31
Figure 19: Graph Format Evaluation 32
Figure 20: Model Business Canvas Fill Out Form 32
Figure 21: User Profile 33
Figure 22: Planbox Center of Excellence 34
Figure 23: User Activity Dashboard 34
Figure 24: User Activity Charts 35
Figure 25: Innovation Dashboards in Planbox Software 36
Figure 26: Innovation Portfolio Mix 37
Figure 27: Iterative Process of Experiments and Business Prototypes (Alexander Osterwalder, 2020) 38

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Figure 28: Portfolio Analysis by Planview Software 39
Figure 29: Maresi Evaluation Matrix (Own Composition) 40
Figure 30: Key features of software with high relevance 46
Figure 31: Mintel insight platform 47
Figure 32: Mintel Content Filter 47
Figure 33: Possible UI of a searchfield with linked data sets 49
Figure 34: Set up four trendradar 50
Figure 35: Trend Radar Concept agreed 50
Figure 36: Campaign Boosting rates by Qmarkets 51
Figure 37: Two phases of idea evaluation 53
Figure 38: Reward logic in terms of meaning and cost (Planbox Inc., 2018) 53

List of Tables

Table 1: Questions and Insights that arise for Maresi GmbH upon thinking about what a digitalization of innovation processes means 11
Table 2: Software Features along with the Innovation Phases 18
Table 3: Evolution of IM Software Platforms 21
Table 4: Rating scale in words and figures 45

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1 Introduction

The company, where the author works, named Maresi GmbH is a branding & distribution company dealing with milk, snack, and convenience products. Maresi Gmbh is part of the Vivatis Holding AG which is an Upper Austrian food group and agricultural marketing and distribution company based in Linz with over 2,600 employees. Within the group, almost every company has its own innovation manager. The holding would like to examine possibilities of how innovation cycles and processes can be better mapped digitally. These potentials play a role both from the perspective of the individual companies and cross-company innovation efforts. These considerations have provided the impulse for this thesis.

1.1 Problem Formulation

The Vivatis Group Innovation Manager sees the greatest challenge in innovation as being the early recognition of "real" trends in order to be able to react to them or to align the innovation strategy accordingly. Aligning activities with the strategy requires that the innovation is focused on the defined search fields and specific framework conditions.

In the case of Maresi, these can be product categories such as a sausage snack for children or a milk drink with cereals. The requirement to recognize trends therefore also refers to these specific search fields. It is important to follow which new customer behavior is emerging and/or what new products are being added to the market. A structured digital trend radar would create transparency and help to address the right topics in search fields.

Currently, innovation and market knowledge of Maresi GmbH or Vivatis Holding AG are often not stored in a structured way or are not available in a structured way so that a lot of knowledge is only available to individual persons or departments, or is redundantly available and stored. So far, occasional activities have been carried out in this area at Maresi GmbH. If the knowledge of trends and competitive data is transferred to good summaries, that would be of great profit for search field workshops.

At present role responsibility, collaboration process and continuous innovation work are little embedded in a systematic and comprehensible process. The innovation practice is laborious and incomplete due to the missing structure and gaps in processes. Connections between trends can be identified quickly within a trend radar so that the search fields could be thought of more broadly. This would be helpful for new employees to have a quick overview. Everyone would have transparency about who is working on what and where, and which information comes from where. Within a digital tool, the whole thing would still be

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online and could be operated and viewed from anywhere. This leads to the following research questions:

1. How should the early phase of the Vivatis Holding innovation cycle at Maresi Austria GmbH be represented as a digital tool?
2. What are new possibilities for trend research which could be integrated?

To answer the first research question, this master thesis describes available software features within innovation platforms and evaluates their supporting impact on innovation practices or patterns of innovation. The master thesis clarifies which software features are possible and determines focal points with a survey in which the innovation managers participate. The results are then subjected to further discussion to provide a deeper qualitative statement and a subsequent implementation concept.

To address the second question, the thesis investigates newer approaches of Artificial Intelligence and Natural Language Processing for trend and patent research. The thesis develops possible courses of action to exploit these potentials. These findings thus offer concrete benefits for Maresi and the group holding.

1.2 Course of Investigation

The thesis is structured as follows:

Chapter 1 provides a short introduction of Maresi GmbH and Vivatis Holding. Next, it deals with the Innovation Cycle of Vivatis Holding which raises a series of questions that Maresi GmbH has also confronted with. In the food retail industry, consumer trends and changing consumer behavior play a major role. Therefore, a food company faces the challenge to watch trends on macro and micro levels. Chapter 1.6 highlights some of these trends. Maresi GmbH needs to continuously develop an understanding of search fields in a structured form to make the whole development process more comprehensible. In addition, this chapter breaks down the research questions into further detailed questions. **Chapter 2** reviews the practices of innovation and their relation to digital innovation platforms. The literature analysis contains the evolution of those software systems and notable key features of the software. As a source, Forrester Research Documents are used. A typical process of working with innovation software is shown. To complete the picture, the chapter contains some content of artificial intelligence in the foresight process. Chapter 2 discusses how innovation software fosters innovation practices that are proven to

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be successful by McKinsey research. After this, a section highlights the challenges managers face at introducing such software.

Chapter 3 contains a presentation of the project as an explorative and revealing a single case study. It describes why a single case study seems to be the most appropriate method to answer the research question. The requirements for the software are collected through a questionnaire. Based on the identified focal points, an implementation concept for the introduction of the software is worked out.

Chapter 4 contains the empirical data on this thesis, an interview summary and some statements of survey particpants including interpration.

Chapter 5 provides a summary, a future outlook and conlusio. The thesis proofs above average relevance of concept for Maresi GmbH and it is recommended to implement an innovation software.

1.3 Vivatis Holding AG

Vivatis Holding AG is one of the largest purely Austrian companies in the food and beverage industry. As an important partner of Austrian farmers, the company processes and refines high-quality raw materials from the Austrian homeland. In 2017, Vivatis Holding achieves sales of EUR 882 million with a workforce of around 2,700 employees.

Figure 1: Vivatis Logo

Under the umbrella of VIVATIS as a strategic management holding company, along with some of the important production and service companies, there are some well-known small and medium-sized companies from the food sector. One of these companies is Maresi Gmbh.

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Figure 2: Brands Related to Vivatis Holding AG

Figure 3: Maresi Milk Logo

1.4 The Maresi GmbH

MARESI Austria GmbH Austria is an Austrian distribution and service company with headquarters in Vienna. The full owner is Vivatis Holding. In addition to its own brand "Maresi Alpenmilch" and the products of several acquired food manufacturers, the company also distributes and markets brands from other manufacturers in its markets. The company is also active in food broking and has foreign subsidiaries in Hungary, Romania, the Czech Republic, and Slovakia.

1.5 VIVATIS Innovation Cycle

Since the beginning of 2010, the VIVATIS Group has paid attention to "innovation". At the end of 2013, the VIVATIS Group Innovation Management was launched. At the beginning of 2016, the VIVATIS Innovation Cycle Guide followed as a further step towards institutionalizing innovation work. The VIVATIS Innovation Cycle Guide is an adaptation of the innovation model BIG Picture™ framework which has been individually developed for the VIVATIS Group. The VIVATIS Innovation Guide was developed by Dr. Hans Lercher and is continuously evolving as a holistic, strategy-oriented, and cyclical model (Lercher, 2020). The elaboration was done with the inclusion of valuable contributions of the VIVATIS

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innovators and the result defined a new valid set of rules to navigate pragmatically and efficiently through the VIVATIS innovation process. The BIG Picture™ innovation model makes the complex topic of innovation with its strategy integration, the possible types and classes of innovation, the operative processes and decision steps tangible and understandable at a glance. The Innovation Cycle is characterized by the following three perspectives:

1) Innovation as a project
2) Innovation as a generally valid process
3) Innovation as a holistic task

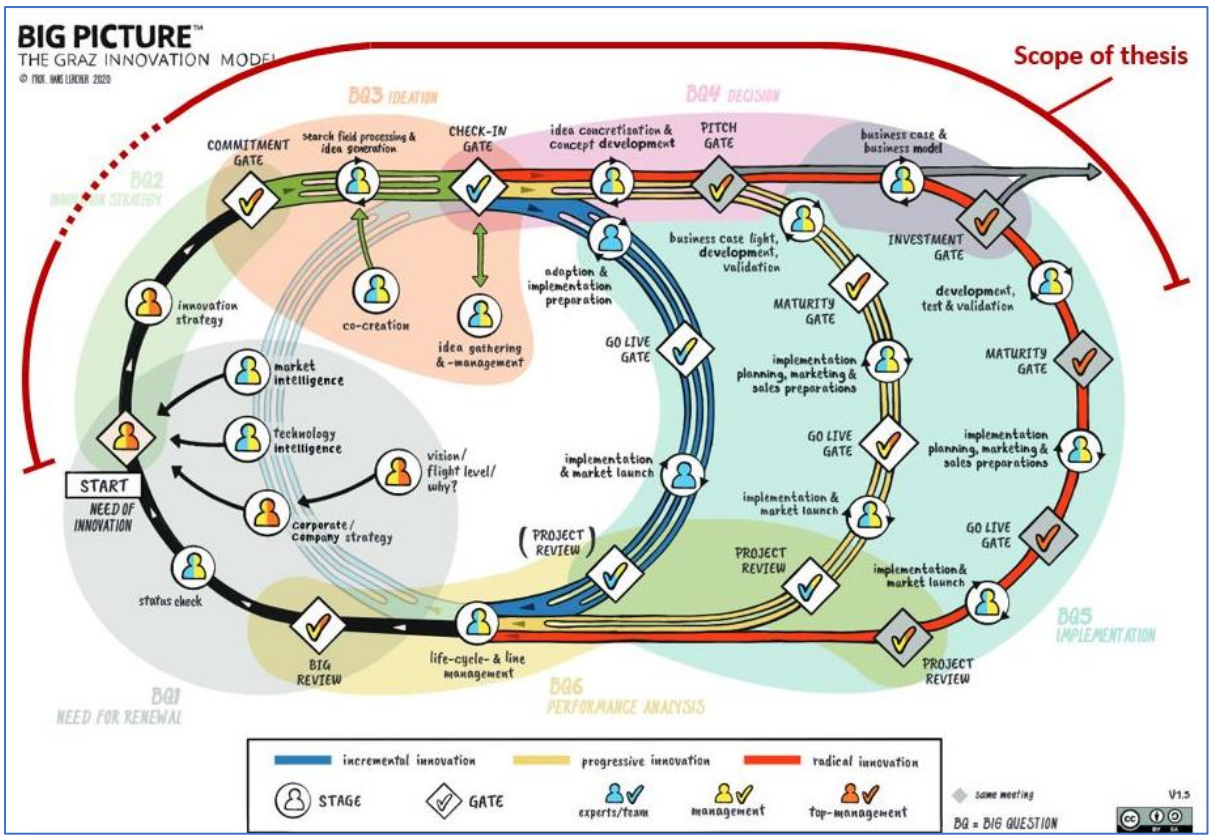

Figure 4: The Big Picture Innovation Model used by Vivatis Holding AG and scope of thesis (Lercher, 2020)

The thesis provides a short summary of this model to reference further questions about how to digitalize those processes and elements. The model is divided into phases that combine individual work packages (stages) and decision points (gates) into logical units. The starting point and first track which this thesis refers to is called “Need for Renewal”. The second track is named “Innovation Strategy” and the third one is “Ideation”. The fourth track in the model is the “decision”. The thesis deals with the processes from Need for renewal to Business Model and Testing as pointed out graphically in figure 4. In specific,

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processes that are reviewed as follows. The list raises questions which are dealt with in different depths in this thesis.

Table 1: Questions and Insights that arise for Maresi GmbH upon thinking about what a digitalization of innovation processes means

Process or practice (Scope of this Thesis)	Questions and Insights that arise for Maresi GmbH upon thinking about what a digitalization of innovation processes means
• Market Intelligence	**Questions**: **1.** How can Maresi GmbH collect useful market data, from which sources and how to condense that knowledge? **2.** How can insights be effectively made available within a digital tool?
• Technology Intelligence	**Same questions** as for market intelligence but for technology-related issues.
• Vision/ Flight level/ why?	Vision and flight levels are textual descriptions or visualization of strategy that can be easily displayed digitally. Therefore, no related question comes up.
• Corporate/ Company Strategy	
• Defining the need for renewal	**Questions**: **1.** Why and where do we need innovation? **2.** What do we need to renew? Strategic goal setting usually takes place in workshops. However, a combination with a digital tool where evaluations, discussions, and reflections take place is also conceivable. In Hoshin Kanri strategy deployment, for example, targets are cascaded from higher levels to lower levels. Strategic collaboration in large companies makes a digital tool indispensable.
• Innovation Strategy	
• Co-creation	In co-creation, firms work together with external people and may also use crowd approaches. Digital tools are excellently suited for this. Integrating this data into an internal platform offers newer potentials in innovation management since open innovation became popular. **Questions**: Which external sources are relevant and how would Maresi GmbH like to cooperate?
• Search Field Processing & Idea Generation	Since working with search fields should be a continuous task, digital workflows are suitable. **Question**: How are search fields continuously developed at Maresi GmbH?
• Idea Gathering & Management	Typically, different creativity techniques are available for idea generation and workshop formats such as brainstorming sessions are most commonly used. A digital tool for posting an idea is always a possible addition and creates a processual framework. Digital workflows are particularly well suited for the evaluation of ideas. **Question**: How are ideas evaluated and prioritized?

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• Idea Concretization & Concept Development	On a digital platform, discussions or additions to the idea can be made available independent of time and place. At Maresi GmbH, concepts are elaborated in Powerpoint. A collaboration platform like Microsoft Sharepoint is used to refine the concept. Digital workflows beyond this are not relevant from a management perspective.
• Business Case & Business Model	At Maresi GmbH, business cases are presented in Powerpoint or Excel. These files can be used on a digital platform. There is no question from the current point of view.
• Development, Test & Validation	Market surveys are conducted for new food products. **Question**: Should and can Maresi GmbH also collect customer surveys or consumer data?

1.6 How Do Search Field Workshops Take Place at Maresi GmbH

Harold McAlindon said, "The world leaders in innovation and creativity" will also be the world leaders in everything else" (McAlindon, December 1989)". Organizations today must work very hard to stay competitive and survive in the marketplace, but just surviving is not good enough. Companies want to grow in size and ultimately grow in value to their shareholders, but the ways of doing that are limited. The only true, sustainable, and virtually unlimited source of new growth for any organization is innovation.

Everyone agrees, but what does innovation mean for snacks, milk, and convenience products as Maresi does? The retail chains want an active product range and want to animate plus activate their customers with new products. Curiosity and fresh customer experiences can lead to increased sales. For this reason, new products appear regularly in the rhythm of a few months. These new food products are subject to constant innovation as Maresi GmbH does and understands. In practice, it is mostly about improved parameters such as taste and ingredients or a new brand experience. It is about greater enjoyment or a contribution to a healthy diet. At the same time, it is also about satiety. The balance between taste (sweet) and health aspects is often a tightrope walk. Maresi GmbH wants to communicate an even more positive attitude towards life as a brand value. The firm puts the digestibility and organic origin in the foreground. The regionality of food is important too for many people. The type of packaging, the design, and a take-away pack are further factors. Many different manufacturers are tweaking these factors. Customers find an oversupply in the supermarket and Maresi faces strong competition in this situation.

Research shows a series of global food trends and some general characteristics can also be identified (Mintel Group Ltd., 2020). In the food industry, consumer behavior changes

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quickly and often, and new products are often launched on the market. Changes in culture, markets, and brands are sometimes regional. Large supermarket chains rely on their own brands and are increasingly replacing their suppliers. There are numerous food micro-trends along with a mixture of more general trends. At the same time, there is cash register data from market research companies like Nielsen (https://www.nielsen.com) or Mintel (https://www.mintel.com) which shows different market movements in short-time cycles. Together with an Innovation Consultancy, Maresi GmbH worked out detailed search fields in a creative workshop in spring 2019. Roughly speaking, the company has worked on the search field definition for the following product categories.

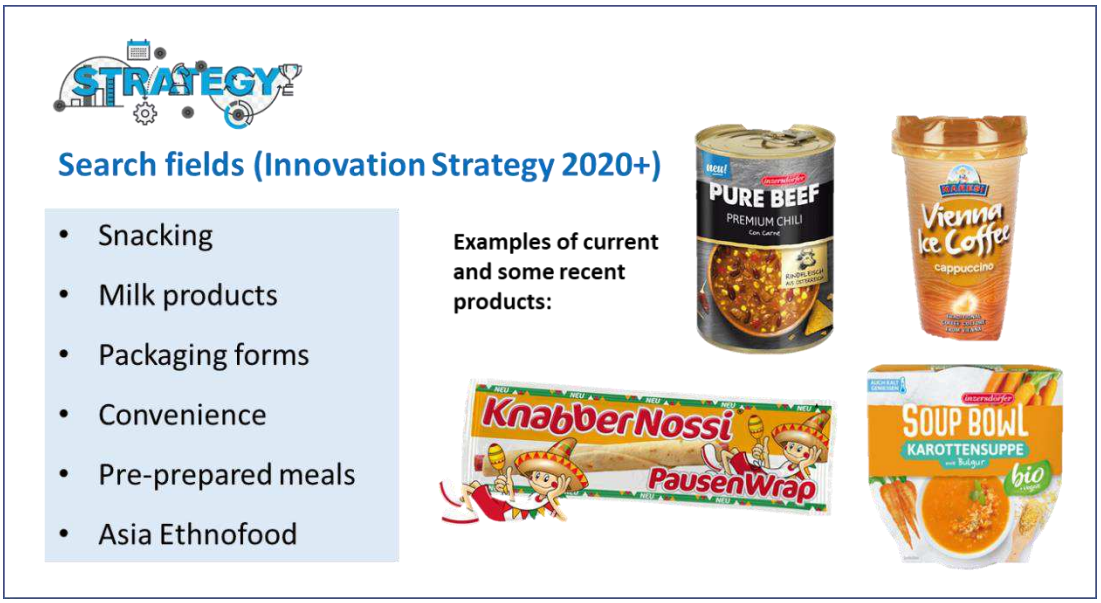

Figure 5: Maresi GmbH Search Fields Overview of Workshop in 2019

In the workshop, some creativity methods have been used. There was deliberate nagging at the products and then participants could imagine the ideal product. The polarity between the two extremes created a creative field of tension. These creative techniques led to relevant influencing factors. These influencing factors were then clustered into search fields in a further step. The following picture shows how the topics were clustered.

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Figure 6: Clustered Search Fields Terms

These clusters were processed in the next step to search field definition. Two examples are given below. These textual search field definitions could be extended with market and competitor data. Comparisons of other products could be used as an impulse for ideas. Of course, Maresi GmbH works partly in this way, but all these elements are not brought together in one platform.

Knabbernossi search field: Quality/recipe image
In the short term, we are looking for possibilities to use the existing advantages (e.g. handmade and beechwood, etc.) in communication. Cult factor + relativizing criticism (50% fat = 6g).
In the medium term, we are looking for ways to adapt the recipe in such a way that the nutritional values improve without worsening the taste.

Shan Shi search box: Sourcing

We are looking for...Europe/EU suppliers

- present line
- novel products
- new sourcing channels for products that inspire, surprise, and differentiate
- à la Art Cooking
- sourcing from own history (6+ year)

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2 Literature

As a theoretical starting point, the thesis provides a review of "How to innovate?" and what distinguishes successful companies from less successful companies in terms of innovation? This research is based on a McKinsey study (Marc de Jong, 2015). The thesis outlines that the identified innovation patterns can be related and facilitated in an innovation management software platform. The literature research illustrates an overview of the innovation software market and its evolution in the last 7 years. A compact description of some features of these software platforms follows. As a next step, the thesis will elaborate on "How are the McKinsey patterns supported?".

2.1 "How to Innovate?" - The Status of Innovation Management and How Leading Companies Differ from Laggards?

Strategic and organizational factors are what separate successful big-company innovators from the rest of the field. In a survey with more than 2,500 executives in over 300 companies in 2012, McKinsey found a set of eight essential attributes that are present, either in part or in full, at every big company that is a high performer in the product, process, or business-model innovation (Marc de Jong, 2015). Since innovation is a complex company-wide endeavor, it requires a set of crosscutting practices and processes to structure, organize, and encourage it. Taken together, the eight essentials described constitute just such an operating system (Marc de Jong, 2015).

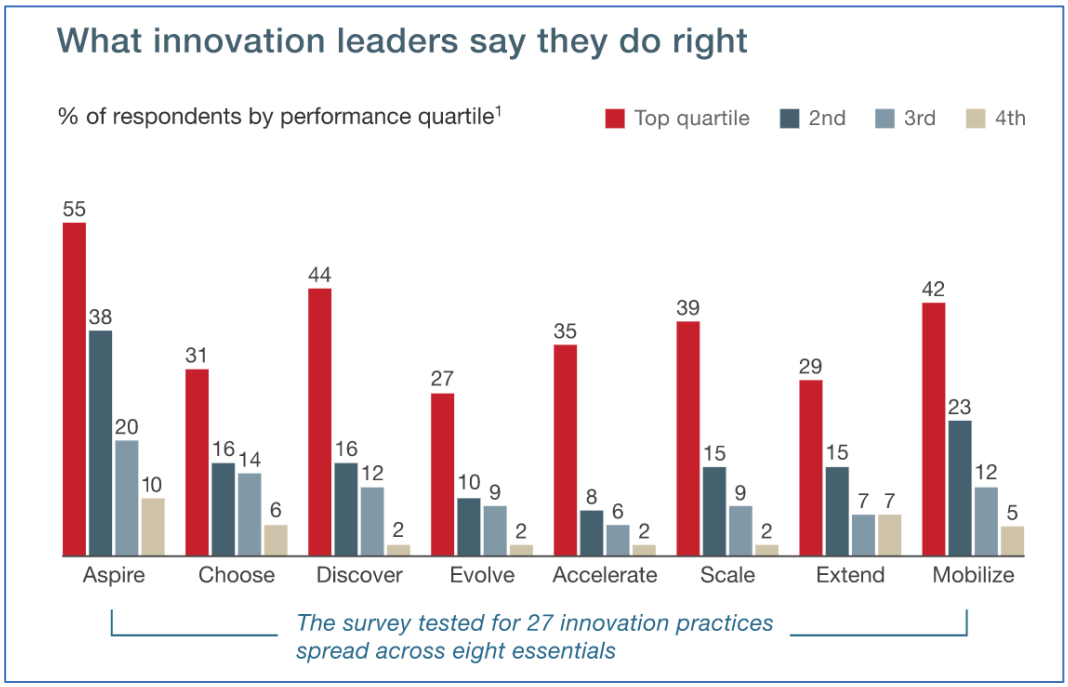

Figure 7: McKinsey Survey of 2,500 Global Executives, Nov 2012 (Marc de Jong, 2015)

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These practices are expressed in the following types of behavior. The McKinsey statistics can only prove correlation but are not a formula (Marc de Jong, 2015).

Practice	Key Question	Further Aspects and Key Behavior
Aspire	Does the company regard innovation-led growth as critical, and does it have cascaded targets that reflect this?	Quantitative innovation target values which are apportioned to relevant business owners and cascaded down to their organizations in the form of performance targets and timelines.
Choose	Does the company invest in a coherent, time, and risk-balanced portfolio of initiatives with resources to win?	Firms struggle to **determine which ideas** to support and scale particularly during market discontinuities. Getting the most from a portfolio of innovation initiatives is more about **managing risk** than eliminating it. Create some **boundary conditions** for the opportunity spaces they want to explore. Thoughtfully **prioritizing opportunity spaces** and **investment** behind the most valuable opportunities. **Constantly assesses** not only the expected value, timing, and risk of the initiatives in the **portfolio,** but also its overall composition. A fast and agile **resource-reallocation** process is critical.
Discover	Does the company have differentiated business, market, and technology insights that translate into winning value propositions?	Companies that effectively collect problems to solve and technology insights, synthesize, and "collide" them, stand the highest probability of success. The **insight-discovery process**, which extends beyond a company's boundaries to include insight-generating partnerships, is the lifeblood of innovation.
Evolve	Does the company **create new business models** that provide defensible and scalable profit sources?	Use **market intelligence**, better to separate signal from noise. Establish **funding vehicles** for new businesses that don't fit into the current structure. Re-evaluate their position in the value chain. Sponsor **pilot projects** and experiments away from the core business. **Stress-test** newly emerging value propositions.
Accelerate	Does the company beat the competition by	**Testing** promising ideas with customers **early**. Cross-functional collaboration, continuous learning cycles,

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	developing and launching innovations quickly and effectively?	quick and frequent feedback for the project team.
Scale	Does the company launch innovations at the **right scale** in the relevant markets and segments?	Explicitly considering the **appropriate magnitude** and reach of a given idea is important to ensure the right resources.
Extend	Does the company win by creating and **capitalizing on external networks**?	High-performing innovators work hard to develop the ecosystems that help deliver these benefits. Find out which **partners** are fitting and join networks. Strong innovators also regularly **review their networks**, **extending** and **pruning** them as appropriate, and using sophisticated incentives and contractual structures to motivate high-performing business partners. Clarify what a **partnership** can offer the junior partner.
Mobilize	Are people motivated, rewarded, and organized to innovate repeatedly?	Minds are focused on innovation by targets and defined market spaces. Help people to share ideas and knowledge freely. Ensure that **lessons learned** from success and failure are captured and assimilated.

Figure 8: Eight Essential of Innovation and Key Behavior (Marc de Jong, 2015)

Big companies do not easily reinvent themselves as leading innovators. Too many fixed routines and cultural factors can get in the way. For those who do make attempt, innovation excellence is often built in a multiyear effort that touches most, if not all, parts of the organization. McKinsey´s experience and research suggest that any company looking to make this journey will maximize its probability of success by closely studying and appropriately assimilating the leading practices of high-performing innovators. Taken together, these form an essential operating system for innovation within a company's organizational structure and culture (Marc de Jong, 2015).

Personal Interpretation:

The efficiency and effectiveness of innovation processes in companies consist of many components and elements. By analogy, McKinsey refers to this as an operating system that

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networks, manages, and allocates resources to these components. The tasks of an operating system can be summarized as follows: It communicates with users, initiates programs, manages and allocates processor time, and manages internal storage space for applications and access restrictions. This analogy is very similar to an innovation software platform as the thesis describes in chapter 2.6. In addition, eight (8) essential elements of innovation are related to software features.

2.2 Literature and Evolution Analysis on Innovation Management Software Platforms

Most software platforms for innovation started around the turn of the millennium. For example, Brightidea launched its first product in 1999 and Hype Innovation in 2001. Today modern Innovation Management Software tools provide a comprehensive set of innovation process management tools and generally cover five innovation phases targeting, ideation, incubation, business plan, creation, or commercialization. Furthermore, there are software vendors who mainly focus only on the first two phases. The following illustration lists the functionalities in the different phases.

Five Innovation Phases and Supporting Software Features				
1. Targeting	**2. Ideation**	**3. Incubation**	**4. Business Plan Creation**	**5. Commercialization**
Trend Discovery	Idea Evaluation & Selection	Facilitate MVP	Collaborative Work Management	Project Management
Idea Challenges	Gamification	Customer Experience Data & External Data	Business Model Canvas	Visualization Features for Analytics
	Crowdsourcing	Customer Validation		Roadmapping
	Survey			

Table 2: Software Features along with the Innovation Phases

General Software Capabilities: Discussions-Threads, Engagement-Control, Workflows, Feedback-Management, Collaboration

These 5 phases can be seen in the following diagram of Forrester Research. Note the distinction between two paths for long-term and short-term ideas. For long-term ideas, external commercialization is conceivable. The innovation management software should be able to support all these phases. Still, there are differences between the support functions which vendors offer.

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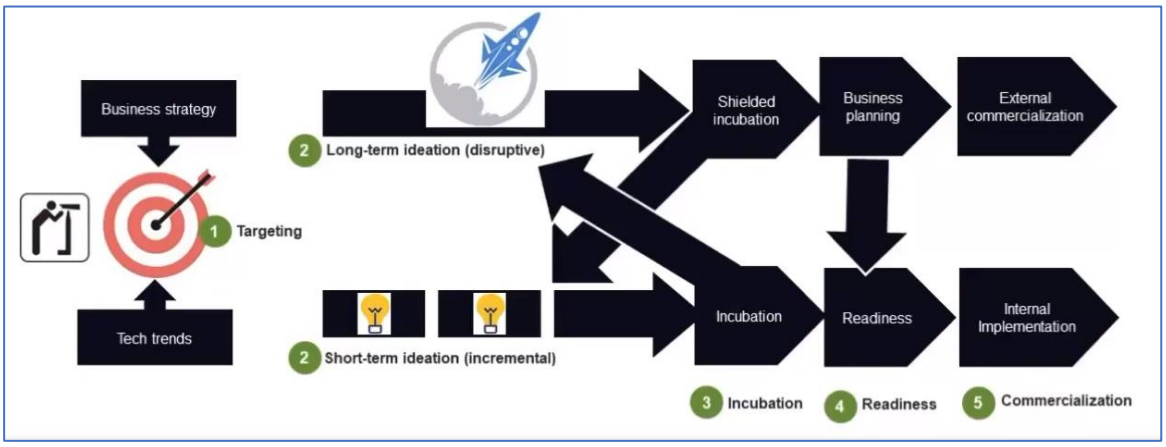

Figure 9: Platforms Support Activities Across a "dual" Path Innovation Flow (Brian Hopkins, 2020)

Innovation Management (IM) systems started out as a departmental solution used by a few to generate ideas. With the recently published ISO 56000:2020 as a globally-recognized standard for innovation management, IM tools are rapidly gaining momentum as a must-have system of record for innovation, widely adopted by organizations looking to formalize and systematize their innovation management practices and processes (Melik, 2019).

When an organization rolls out a run-the-business type solution like Customer Relationship Management (CRM), Enterprise Resource Planning (ERP), or financial applications, the emphasis is on achieving cost savings, compliance, and efficiency. In general, the owners and managers of these enterprise systems don't think twice about user adoption, since everyone is just expected to use these applications on a daily basis to get work done and run the business. IM solutions are different (Melik, 2019). Innovation is all about sparking creativity, thinking differently, and discovering new opportunities for improvement or transformation. Therefore, how people feel about innovation processes and programs truly matters.

2.3 Forrester Research on Innovation Management Tool / Software Platforms (IMSP)

(Abbreviation in this document: IMSP)

Forrester Research reports provide an evaluation of innovation management solutions providers and analyze multiple vendors. The thesis looks at some key aspects of the evolution of these software tools and their main capabilities. Following are the sources presented and condensed:

The Forrester Wave™: Innovation Management Tools, Q3 2013 by Chip Gliedman, July 11, 2013

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- **The Forrester Wave™:** Innovation Management Solutions, Q2 2016
  The 15 Innovation Management Solutions provider that matter most and how they stack up by Dan Bieler

- **The Forrester Wave™:** Innovation Management Platforms, Q1 2020
  The 13 Providers that matter most and how they stack up

Overall, the following generic differences between earlier and current software solutions are evident. On one hand, newer approaches such as Lean Startup or Business Model Canvas have been taken up and on the other hand, the further development of the software naturally results from newer technologies such as Big Data, Machine learning or Data Science.

Evolution of Innovation Management Platforms in Recent Years (e.g. Planbox, Qmarkets, etc.)	
Former Features	**Recent Trends in Software**
Internal innovation campaigns, focusing on ideation and incubation	Full ecosystem engagement with expansion to include innovation networks and open innovation.
Focus on ideation phase	Platform and accelerator modules supporting solutions for all innovation phases.
Tighter software features	Accelerator modules for building specific applications such as technology scouting, agile idea incubation, and innovation business plan development.
Collection of internal data for innovation	Data integrations with internal and third-party systems, providing customer and market insights, emerging technology and start-ups data, academic publications, patents, and more
Innovation Management (IM) systems started out as a departmental solution, used by a few to generate ideas, develop new	Allows clients to aggregate adaptive intelligence to their innovation campaigns by collecting and aggregating customer needs, insights from their

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concepts, or run "Shark tank" style business competitions.	firms, ecosystem members, and independent third parties.
Less consulting around the platform	Software suppliers offer professional services to help companies adopt market best practices for innovation
No ecosystem approach	Access to start-up ecosystems, innovation networks, and collaboration opportunities with other platform customers
No AI/ML capabilities	Advanced AI/ML capabilities were observed for idea creation and brings data-validation to idea selection, incubation, and commercialization

Table 3: Evolution of IM Software Platforms

2.3.1 Market Readiness for IMSPs by 2013:

The innovation tools market of 2013 is still immature and highly fragmented, reflecting a shallow penetration of the tools into organizations. Although many of the vendors in the space have offered solutions for five or more years, the total revenue of the 14 vendors evaluated remains at less than $ 70 million annually. One vendor, Spigit, represents approximately 28 % of this revenue with the remaining 13 vendors averaging $ 4 million per year. Though the market is immature, Forrester found virtually all of the tools they evaluated to be fairly mature and, when paired with the appropriate organizational needs, quite useful. It appears that the maturity of the tools exceeds the average innovation maturity of large organizations.

2.3.2 Innovation Platforms Become More Important as Firms Mature

Forrester research identifies 3 stereotypes of innovators' maturity. Their need and scope of innovation software differs. **First,** companies who are doing ad hoc innovation with low customer analytics and lower project scopes, are doing business-unit-level innovation efforts that may be loosely coordinated, bottom-up efforts, and "let the best ideas win".

In the **second stage** of maturity, firms are more customer-led and collect more data about customers. This data needs to be handled somewhere. In this stereotype, the business units are more connected and coordinating efforts across them speaks for more usage of

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innovation platforms. When balancing a portfolio is more relevant or targeting to achieve strategic priorities is important, this means more innovation maturity.

In the **most mature stage,** companies are customer-led and technology drives innovation. All the insights of new technologies are collected on one platform. Those firms validate ideas against future customers' needs and disruptive threats. The 3 stages are visualized in figure 10.

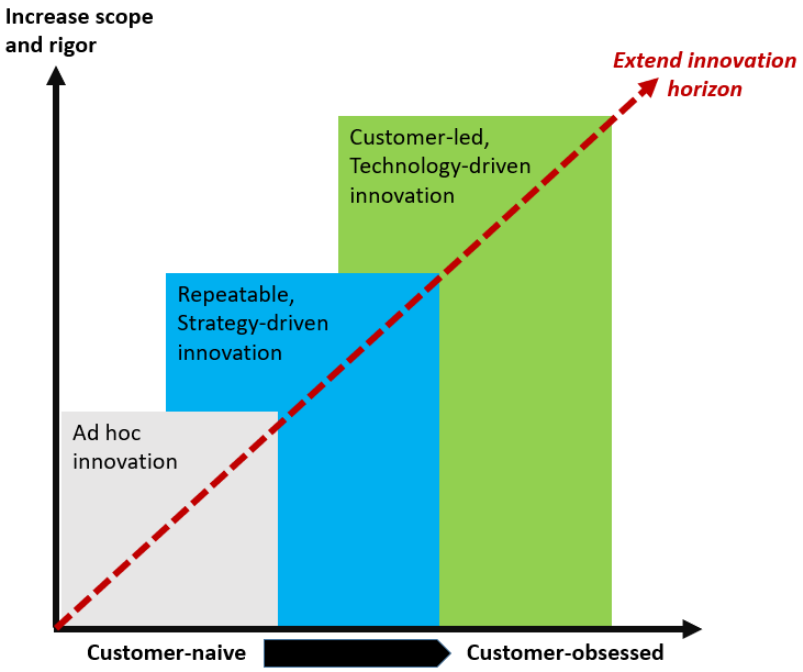

Figure 10: Maturity Stages of Innovation Practises (Brian Hopkins, 2020)

2.3.3 IMSP Market Readiness Status 2016

The innovation management market is growing in 2016, but at a market size of approximately $ 150 to $ 200 million, it remains very small when compared with other software segments. Spigit is the largest vendor of innovation management solutions but the market is characterized by a very long tail of very small vendors. No innovation management solution vendors who have been evaluated had a strong vertical focus, although many of them bring country-insights as a result of their different geographic locations.

2.3.4 IMSP Market Trends 2016: Innovation Management Solutions have Become More Mainstream

Many corporate innovation initiatives are embracing idea crowdsourcing, open innovation, design thinking initiatives, hackathons, innovation labs, 20 percent-time, and lean start-up. Forrester also sees that dedicated innovation managers are emerging. But most businesses are challenged to effectively manage these diverse innovation initiatives, and CIOs (Chief Information Officers) must learn how to support optimal innovation.

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2.3.5 IMSP Market Trends 2016: Enterprise Collaboration Tools Lay the Groundwork for New Innovation Approaches

Businesses are increasingly using enterprise social platforms like Jive, Chatter, Quip, or Slack to work in a more collaborative and innovative manner. Many features of such collaboration tools and social enterprise platforms are also found in innovation management solutions. This similarity in features and functions facilitates the uptake and use of innovation management solutions.

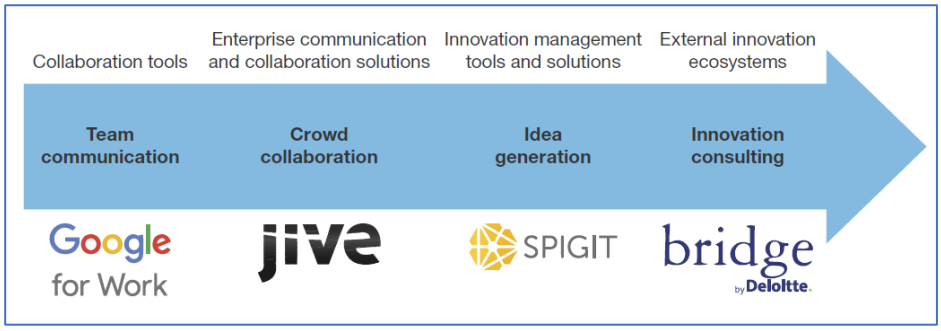

Figure 11: Innovation Management Solutions are Part of a Continuum of Collaboration Tools (Brian Hopkins, 2020)

Also, in 2016, patent recognition plays a bigger role in the economic return of innovation initiatives.

2.3.6 IMSP Mobile IMSP Application Status 2016

Mobility is weak for most innovation management solutions vendors. Most vendors do not even have a native mobile app, although some have developed HTML5-based mobile websites.

2.3.7 IMSP Market and Software Trends 2020

Forrester Research sees advanced firms moving beyond internal idea management innovation processes. Leaders provide platforms that accelerate the development of specific applications across five distinct innovation activities — targeting, ideation, incubation, business planning, and commercialization. Software platforms enable connections to external data sets and adaptive intelligence. Advanced firms are moving beyond the collection of internal data for innovation. The leading platforms help to leverage both internal and external data to target campaign focuses and validate participant ideas, selections and iterations. They provide many data integrations with internal and third-party systems, providing customer and market insights, emerging technology and startups data, academic publications, patents, and more to ensure companies drive the best efforts and implementations. The best platforms allow clients to aggregate adaptive intelligence to

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their innovation campaigns by collecting and aggregating customer needs, insights from their firms, ecosystem members, and independent third parties.

2.3.8 Ecosystems

Figure 12 shows a wide range of different types of third parties and stakeholders. This is not only about inviting these ecosystem partners to contribute ideas or insights, but also about developing them together and bringing them to the market. Sometimes ideas are brought to the market through third parties. In this case, the innovation software platform is even more relevant to enable collaboration along all stages.

For example, on the platform of Innosabi software, customers can flexibly integrate 100 or 100,000 people. Company manager Catharina van Delden reports that, at first, some large consumer goods manufacturers found it unusual to exchange information with strangers about their own products and new developments on the internet before they were launched on the market. But since social networks have become established and everyone wants to have a say everywhere, interest in crowdsourcing is also growing on the corporate side - especially since it is also excellent for customer retention or marketing.

This includes open challenges, for example, names or appearance for new products, requests for bonus programs, or additions to the existing range.

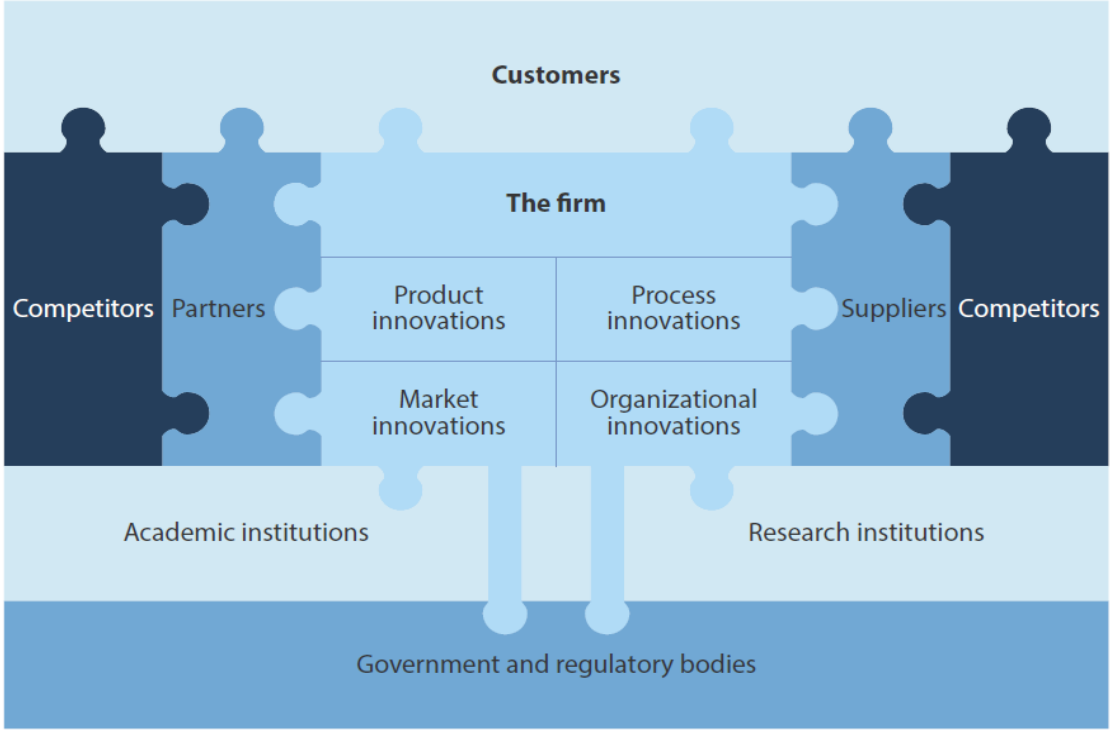

Figure 12: Exploit the Full Innovation Ecosystem for Maximum Benefits

Another example of crowdsourcing in retail can be found at Waltmart Inc. Open Call is the name of an open program and two-day event for their buyers to meet face-to-face with

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entrepreneurs of American products. Any company can apply for a Walmart commitment to purchase an additional $ 250 billion in products made, sourced, or grown in the U.S.

2.3.9 Advanced Artifical Intelligence /Machine Learning Capabilities

The platforms have started to implement advanced Machine Learning (ML) applications around 2018 ago. In this way, vendors' solutions are clearly differentiated according to their ML capabilities. The use of the applications consists of the following points:

- To match ideas with suitable information or relevant articles to support and inspire ideation. By using Natural Language Processing (NLP), external documents are searched and evaluated for relevance. On this basis, the ML engine recommends useful articles or information.
- To match idea with similar ideas and avoid duplicates
- To match ideas with relevant talent

2.3.10 The Overall Evaluation of Current Vendors and Possible Potentials of Innovation Software

Based on numerous criteria, Forrester published this evaluation matrix in early 2020. Some of these 22 criteria are Support for innovation management accounting, Ecosystem empowerment and expansion, Tech trend and emerging tech tracking, solution implementation, Vision, Execution roadmap, Market approach, Financial performance, Partner ecosystem and Commercial model.

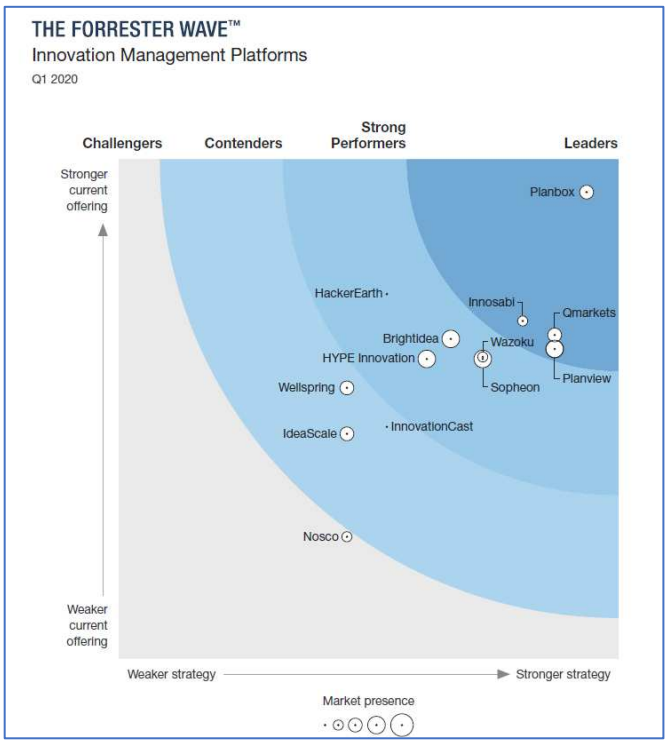

Figure 13: Innovation Management Platforms (Brian Hopkins, 2020)

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2.4 Artificial Intelligence in the Foresight Process

In foresight research, tools of artificial intelligence are increasingly used. To recognize trend signals or to scan new patents, intelligent search algorithms are available which are also able to search for specific patterns. Natural Language Processing is used to identify relevant content.

On February 20, 2019, there was the first AI-enabled Tech Foresight Summit in Berlin. See https://www.tech-foresight-summit.com for more information.

Sixty (60) participants, including renowned AI and foresight speakers, startup founders, innovation experts, heads of innovation, and foresight departments from companies such as Intel, Adidas, BASF, Daimler, and SAP have been part of this summit. The thesis reviews some insights from each keynote presentation at the summit which shows the latest developments for AI in foresight activities (Itonics, 2019).

Keynote 1: Knowledge Analytics for Technology & Innovation with IBM Watson (Itonics, 2019)

Combining years of experience in data-driven technology foresight at Fraunhofer INT, Dr. Marcus John and his team run the KATI project as a unique 360° technology scanning and monitoring service. Dr. John calls it a "science observatory". KATI aims to unlock the vast amount of information available including scientific publications, patents, and internet sources for technology foresight. The software tool is developed based on IBM's Watson and integrates many new features and significantly improves the analytics capabilities within the dedicated use case. The project is designed to explore the application of cognitive computing and machine learning in technology foresight. Dr. John explained how Fraunhofer INT makes use of their comprehensive graph database to scan more than 2 million scientific publications per year. The summit participants had the chance to take a deeper look into KATI during our open session in the afternoon.

Keynote 2: AI-based Patent Valuation (Itonics, 2019)

In his presentation, Tim Pohlmann of IPlytics GmbH talked about humans having valuable domain knowledge but not the capacity of searching a million documents in a few minutes. AI algorithms leverage human input to provide very fast output close to a human's research that would take significantly more time. Deriving insights from multiple data sources is quite a resource-consuming manual process for corporates, which spend a lot of time searching, understanding, and updating even a single dataset. Automated estimation of patent

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portfolio value is possible by using litigation, usage, and interest data. Patent value indicators help corporates to process millions of documents efficiently.

Keynote 3: Insights and Analytics at Intel: TrendScape (Itonics, 2019)

Speaker: John Miranda, Market Insights Manager, Intel Corporation

John's presentation about "Global insights and analytics – TrendScape – Intel's early warning system for emerging trends" provided great insights on how Intel created a market and technology foresight system (based on ITONICS Trend Radar) and what the current challenges and benefits are. AI tools are mostly used to validate trend and technology data in terms of "is this trend picking up in speed/relevance?" or "why is this technology relevant to us?". Specifically, connecting the dots to identify primary forces that shape computing over the horizon is where the value for strategy, business units, and planning is created. Aside from the methodology and software tools used, John focused on how to drive action with leadership based on the generated insights.

Keynote 4: AI in Precision Medicine (Itonics, 2019)

In previous decades, healthcare has focused on working out general solutions that treat the largest number of patients with similar symptoms. Due to disruptive technologies and the rise of digital health solutions, healthcare has been going through sweeping changes. For example, artificial intelligence laid the foundations for precision medicine development. Professor Dr. Magnus Boman from Royal Institute of Technology (KTH)

explained that he teaches how to program learning machines and not machine learning. According to him, learning machines will allow breakthroughs in precision medicine. In the end, he added "How do you learn to learn? If we have to foresight, we have to step on whatever we know until now".

The use of artificial intelligence might allow finding correlations between variables that humans fail to detect. Plus, it will speed up and even automate the research phase and allow humans to focus on the interpretation and sense-making rather than pure research. This slide from John Miranda's presentation supports the underlying idea:

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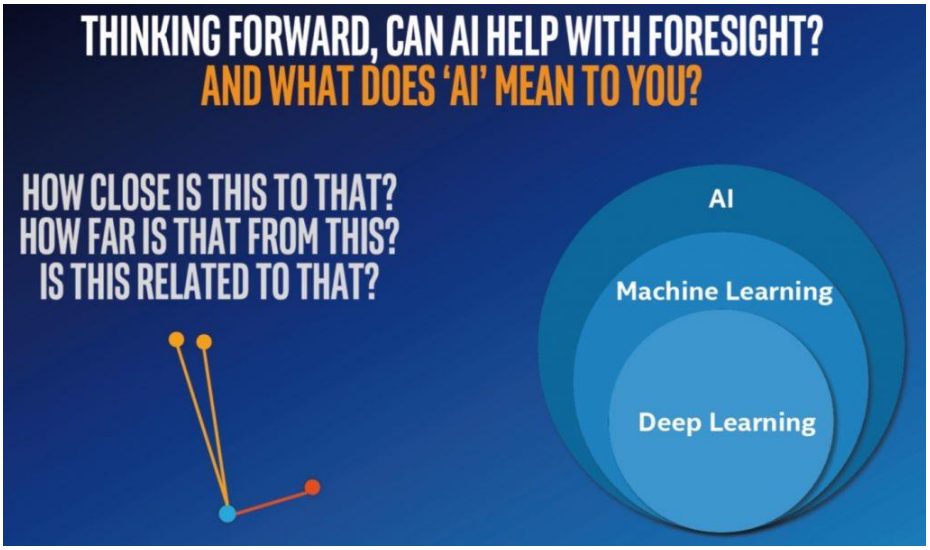

Figure 14: Can AI Help with Foresight? (Itonics, 2019)

AI-driven foresight has an immense potential to provide precise insights, covering political, technological, social, and economic aspects. Technology foresight helps industry experts understand how frontier technology will shape their industry and which technologies will soon become ubiquitous. The tipping point could be predicted with much higher precision and potential disruptions could be identified much earlier. This will shape decision making and strategic planning as well as managing innovation portfolios.

The correlation of successful organizations and their foresight maturity was proven e. g. by Rohrbeck and Kum. Therefore, the early experimentation with AI in foresight is crucial to stay ahead of the competition and lead by a sustainable strategy and innovation function. Still, there is no best practice available now, many startups are working on various approaches as well as established tech companies.

Maresi GmbH is confronted with the task of collecting early market and technology intelligence. The company uses market data and consulting content to a large extent. It would probably be too much effort for the company to conduct AI-supported foresight research itself. However, it would be possible to clarify with the consulting firms how they go in this direction and Maresi GmbH could participate early in a beta version.

Maresi GmbH is affected by industry trends, opportunities and development forecasts in categories, new product introductions, and consumer research. Besides industry, also consumer trends are relevant on a micro and macro level that record changes in consumer behavior in general and are categorized according to 7 factors by Mintel Group Ltd. (Global Consumer Trends 2030)

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1. WELLBEING: Seeking physical and mental wellness.
2. SURROUNDINGS: Feeling connected to the external environment.
3. TECHNOLOGY: Finding solutions through technology in the physical and digital worlds.
4. RIGHTS: Feeling respected, protected, and supported.
5. IDENTITY: Understanding and expressing oneself and one's place in society.
6. VALUE: Finding tangible and measurable benefits from investments.
7. EXPERIENCES: Seeking and discovering stimulation

When customer behavior shifts and customers tend to buy new products, the most important thing for Maresi GmbH is to find the right time early. The timing is important because the development of a product also takes six to twelve months. It is tested if the product will last as long as it promises to. These steps take time.

The decision to develop a product is, therefore, to be made 1 year before going live. At this time, the consumer trend could be too weak, just right, or already advanced. Generally, it is important to choose the right moment and therefore early trend knowledge is very valuable.

2.5 Typical Process in Ideation Software

This section of the thesis outlines a common process in an innovation software using Planbox (leading vendor according to Forrester Research) as an example. Innovation management software platforms start their functionality in most cases by posting an idea or taking part in a challenge. On the landing page (see Figure 15), users are usually able to submit their ideas through a centralized platform.

Figure 15: Exemplary Start Screen by Planbox

Automated workflows allow to set up a number of submission options all with different workflow processes. For example, some firms use a standard single submission form for

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freestanding ideas but a more detailed 7 step submission process for projects. This is how companies can manage different processes.

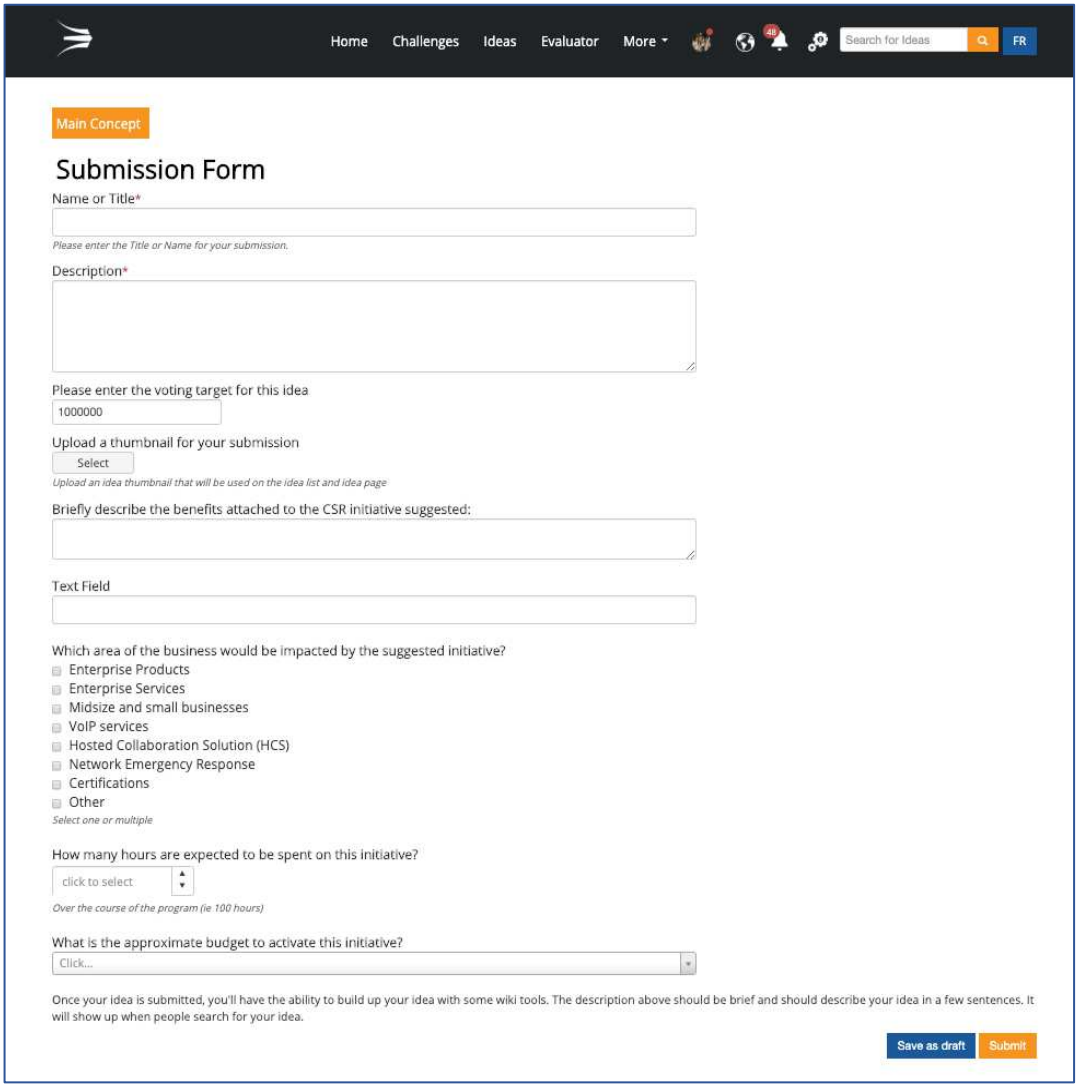

Figure 16: Exemplary Submission Form

An idea can be defined in many adjustable ways. Companies can choose which data fields they want to use. Figure 16 is just an example. Once users have submitted ideas, they will be routed through to the idea repository. This is where users can view all the ideas that have been submitted. This can be filtered by idea category, area, and submission date etc. Users can vote on ideas, see top trending ideas, or click into the individual idea to read more and collaborate.

From within the ideas area, users can add comments and suggestions as part of collaboration features. These can be public or private messages and our real-time language translator ensures everyone can get involved without any language barrier.

Throughout the entire process, the company can configure automated notifications and reminders to ensure users are consistently engaging with their target audience. This can be to encourage to submit an idea, to advise them their idea has changed status or to advise

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users how many views their idea may have received. This consistent feedback loop helps drive a culture of innovation and ensures strong communication of innovation efforts across all business units.

Once ideas have passed through the platform, automated workflows will then route these ideas through to the relevant subject matter expert who can assist in the assessment and evaluation. This may happen once an idea reaches a certain number of votes, a certain number of views, or even automatically once an idea had been submitted.

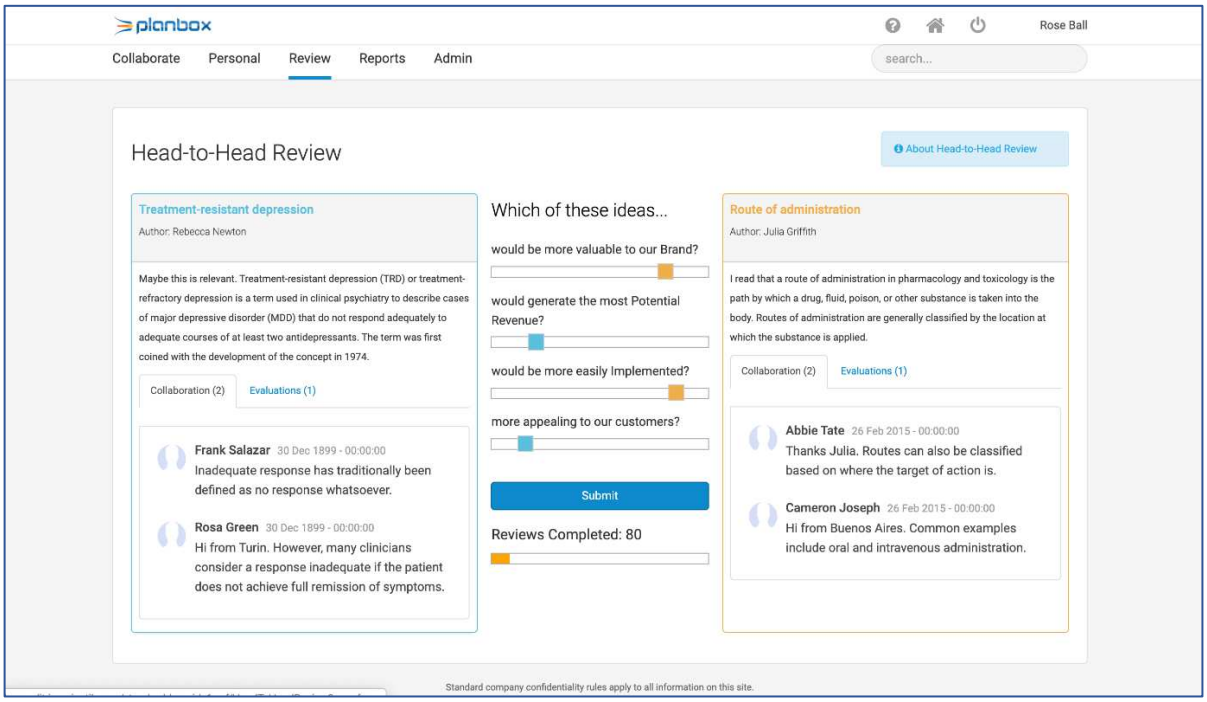

Figure 17: Sample for a Pairwise Evaluation

There can be many different approaches to evaluate ideas. One way can be pairwise, other ways are, for example, expert interviews or projections.

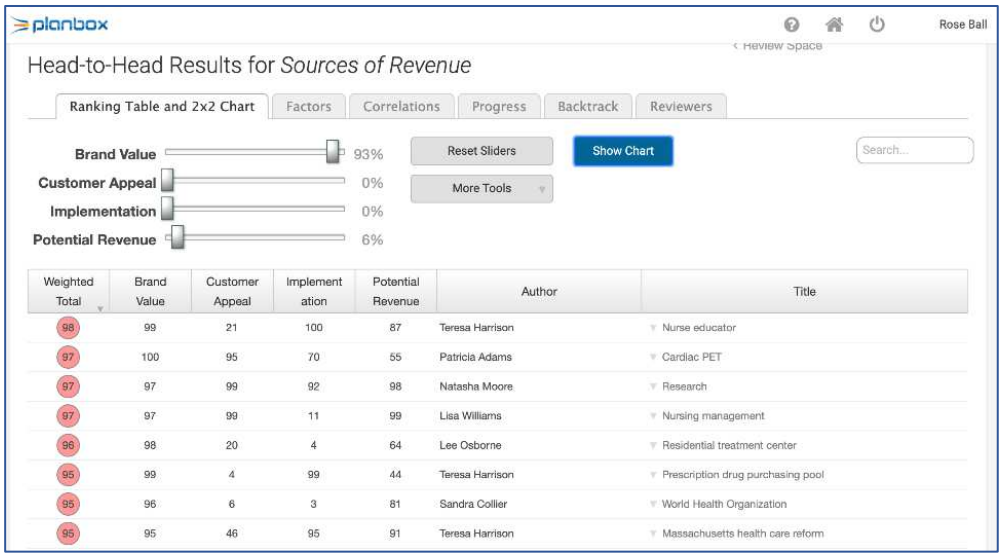

Figure 18: Head-to-Head Results

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Using a Head to Head comparator, users can then position ideas side by side and using a sliding scale to select which ideas align best with the evaluation criteria. When users view results, they can then view in either a table or graph format (Figure 19) and retrospectively change the weighting of their evaluation criteria to see which ideas rank best for each.

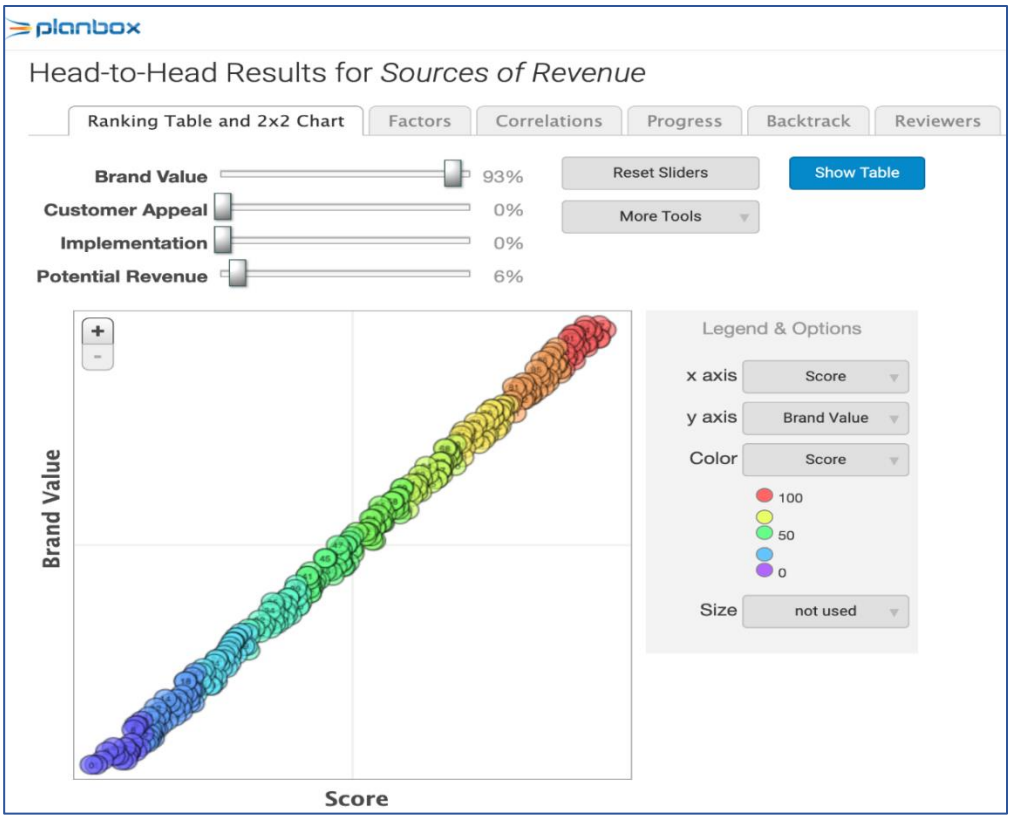

Figure 19: Graph Format Evaluation

Once all participants have evaluated ideas and decided which ones to move forward with, they may need to create a business case to receive a budget or get approval from an executive committee.

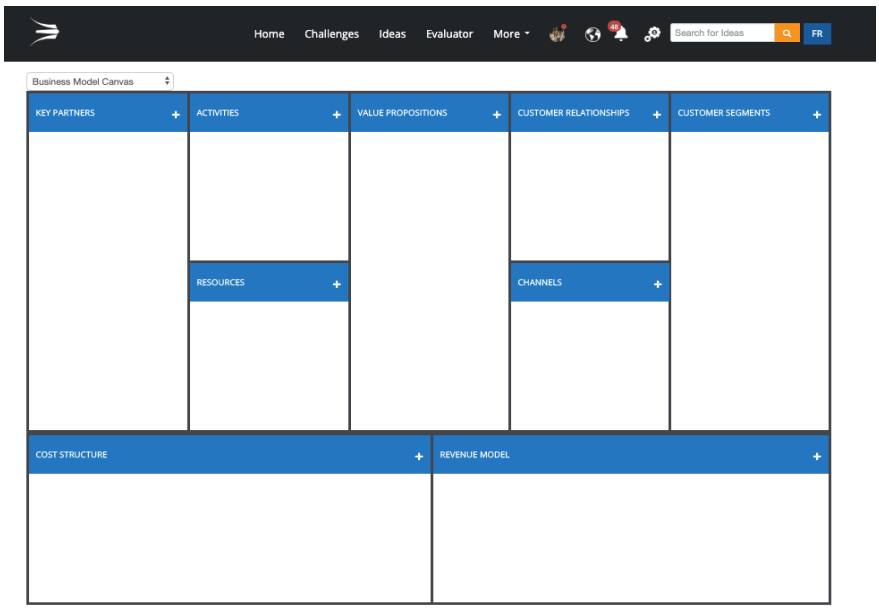

Figure 20: Model Business Canvas Fill Out Form

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The interactive and collaborative business model canvas (Figure 19) allows users to work as a team to create that business case. Users can be invited to complete various sections of the business model canvas to allow work as a team to complete this effectively. For example, one user could be filling out the value proposition and another user could help to fill out the required partners. Once this is complete, it can be exported and provided to an executive team to review to either provide a budget or sign off on the project.

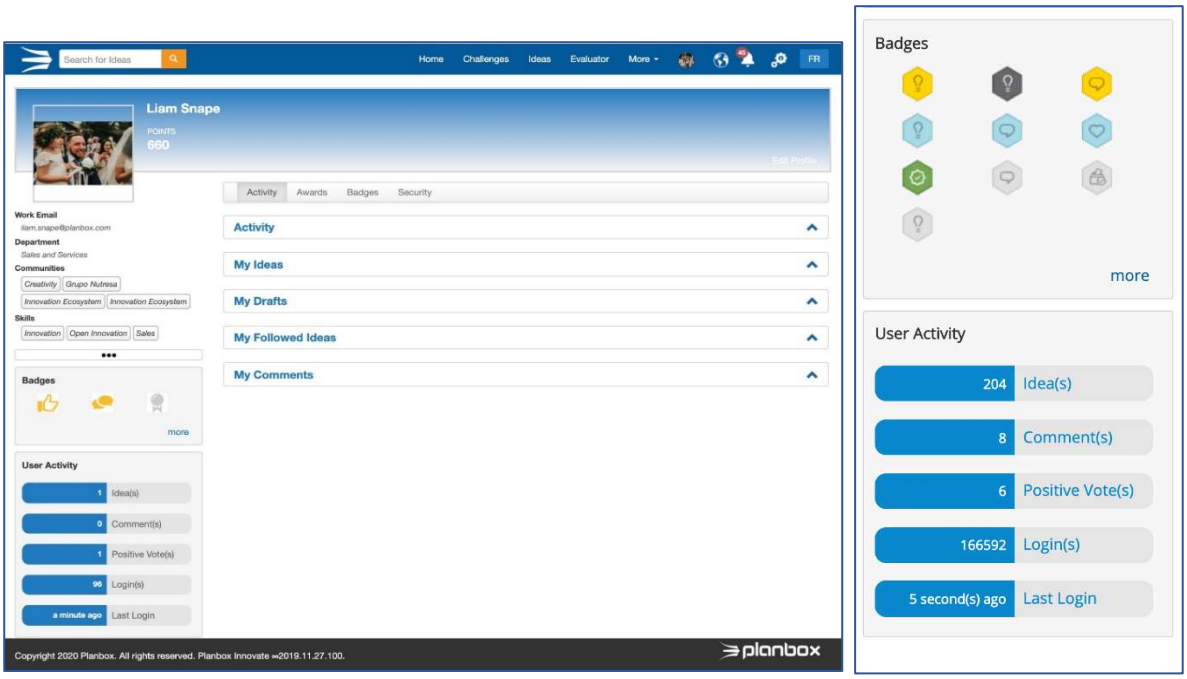

Figure 21: User Profile

What is shown here are user profiles. Each employee has his/her own user profile, within this area the user can see his/her own engagement and the team activity including how many ideas they've submitted, how many votes they have cast, and their engagement rate for example. Within this area, a user is also able to view any awards or batches that have been awarded to that user for participation in the innovation program. This area is where a user can also select his/her language preference to ensure that the real-time language translator kicks in when collaborating with users who may speak in a different language.

When looking at challenge-driven innovation, users can see on their profiles that each user can be allocated into a community or communities as well as being allocated certain skills against their profiles. This becomes very useful when launching challenges as it allows users to target specific communities or skill sets in order to address a business challenge. When a challenge is launched, any user within the relevant community or who owns the relevant skill will receive a notification via email encouraging them to participate in the innovation challenge.

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Figure 22: Planbox Center of Excellence

Within Planbox, there is an Innovation Centre of Excellence which is split into 5 key areas. The first area is the **innovation team**. This provides users visibility on the Key Contacts for innovation to ensure that if they have any questions, they know who to reach out to. The second area is that of **resources**. This acts as a centralized knowledge base for all innovation resources that users may find helpful. This can include the likes of guides, white papers, videos, and brochures that may help them generate unique ideas. The third area is that of **innovation program**. This provides a summary of the innovation objectives and gives users clear visibility over what the company is trying to achieve as part of its innovation efforts. The 4th area is **activities** and this provides a full innovation activity calendar. Users can have access to keep up to date with the relevant challenges or initiatives that they are running across the year. These calendars can be synced to their local calendar to ensure they are not missing out on any event or initiative that they may want to be involved in. The final area is that of **successes and learnings**. As mentioned before, this is an area for the company to share the successes and shortfalls or previous ideas and projects to allow for transparency and a consistent feedback loop for those users involved in the innovation process. The Centre of Excellence is a great way to build a **culture of innovation** that provides one centralized area within the platform for users to access all of the key data about the Innovation program.

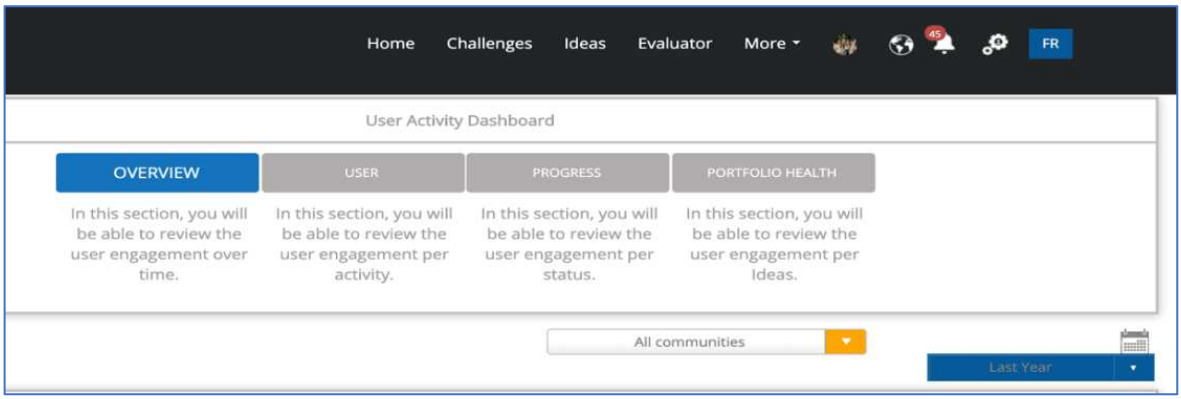

Figure 23: User Activity Dashboard

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Planbox offers full user engagement dashboards (Figure 24) to allow users to have clear visibility on the program's success. This allows participants to see engagement against previous months or quarters to identify any spikes in activity and to replicate that accordingly. This includes things such as total ideas submitted, total comments, unique users logging into the platform and total number of options complete. This provides a company ~~a~~ clear visibility over the entire innovation program and it shows that users can report on this usage accurately.

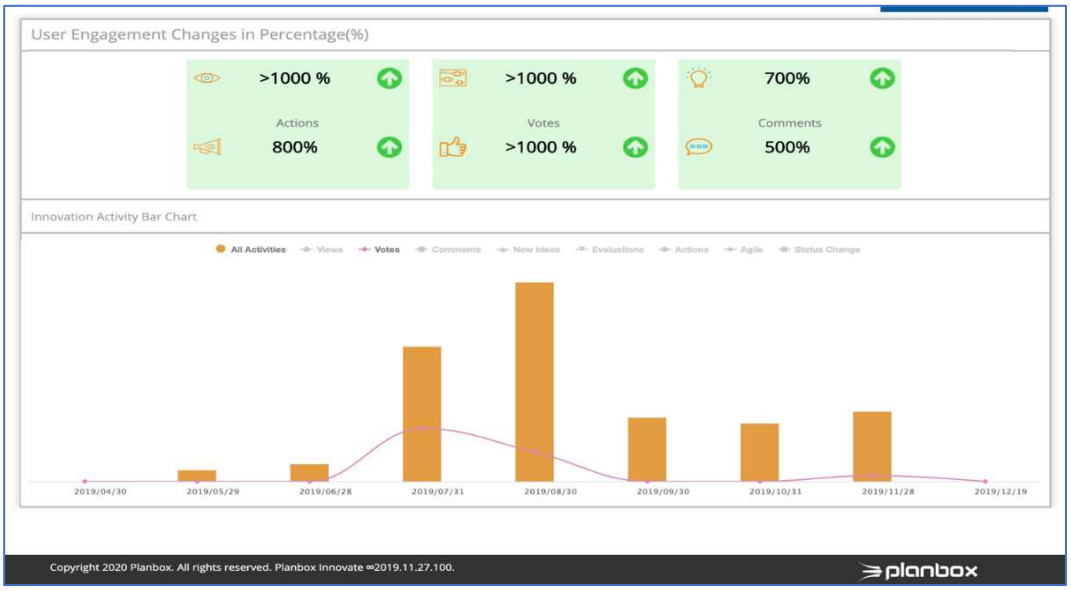

Figure 24: User Activity Charts

When looking at the analytics and reporting functions of Planbox, users can report on any custom or standard field within the solution. These reports can be produced in a visual format such as sunburst charts or bar graphs and all reports are exportable. The company can have several dashboards configured which display different information. It may be that the firm has a dashboard for the innovation team and a separate dashboard for the executive team that reflects completely different data on each. Users can have these dashboards automatically sent to the relevant individual on a recurring basis to ensure regular updates are provided to the relevant persons within the innovation team and the executive team. Planbox offers a set of standard reports that are available out of the box and can be selected as part of customer deployment. Some of these reports include idea count, idea per status, stage definition and cost of ideas or potential revenue per stage, engagement rate, challenge type, idea type, and idea comparison to name a few of the report types that are available out of the box. Within Planbox, it is possible to report on all custom and standard fields as well as leveraging data collected through 3rd party systems through an Open Rest API. This makes the dashboard and reporting functions highly flexible

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in what customers can report on. As long as the data exists in Planbox or is connected to a 3rd party solution, users can report on it.

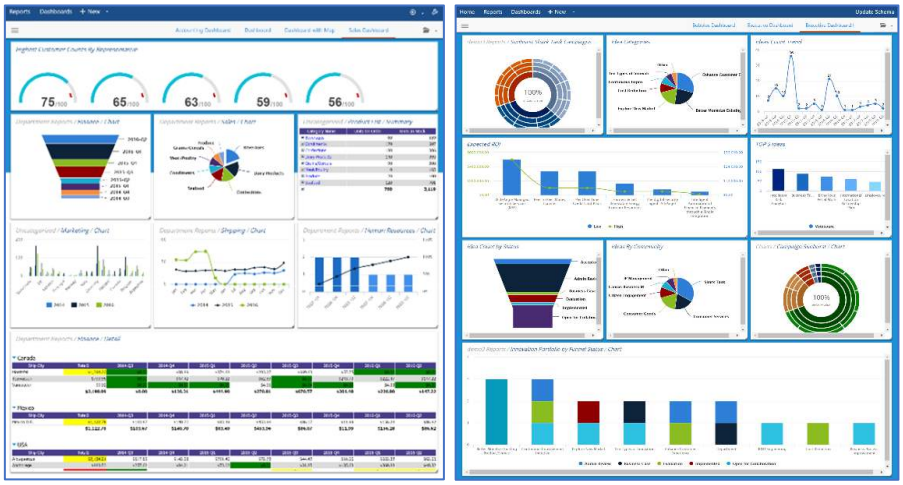

Figure 25: Innovation Dashboards in Planbox Software

2.6 How Innovation Software Supports McKinsey´s 8 Essential Innovation Patterns and Which Advantages are Relevant for Maresi GmbH

The author reflects on which features of software foster which innovation practices and how they provide value for Maresi GmbH and Vivatis AG. The combination of practices with software functions promotes versatile aspects to the day. Of course, innovation projects move around culture, people, and organizational dynamics, but the systemic approach via digital processes creates a framework for efforts.

2.6.1 Practice 1: Aspire: Set Goals and Cascade Them

Innovation software is very well suited for defining goals and measuring key figures. As shown in Figure 25, the number of ideas and contributions can be evaluated. In principle, all data fields can be used for KPIs. In addition, a cascading logic can be easily mapped in a tree structure and such a logic can be mapped digitally. There are roles and user profiles on the platform to which goals can be assigned. Setting up timelines in software is a standard feature too. More cohesive and structured strategy alignment is realized on a central IM platform.

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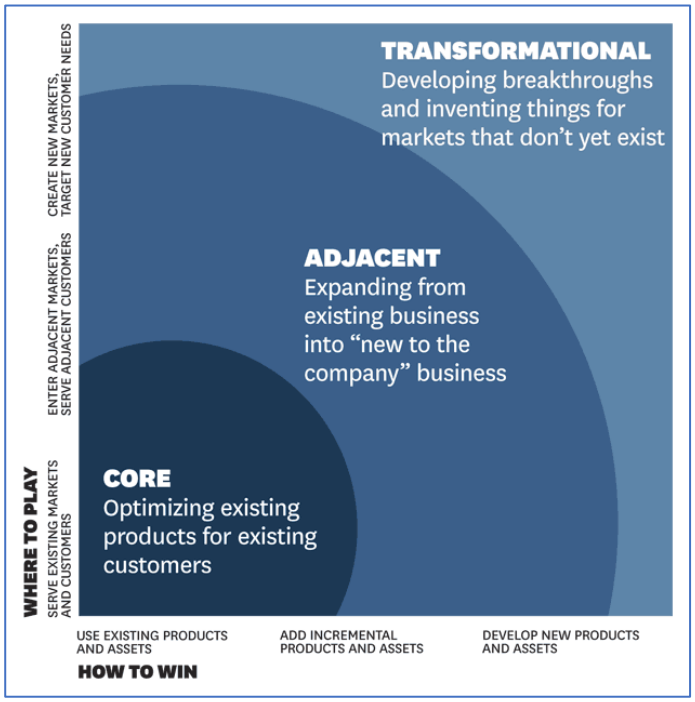

Figure 26: Innovation Portfolio Mix

It is recommended in theory that companies develop new products that appeal to existing customers by slightly improving the existing products, but also those companies invest part of their money in risky breakthroughs that appeal new customers with completely new products. Maresi GmbH has defined up to 15 search fields in 2019. These search fields could be weighted according to the risk and allocated budgets. The balance and prioritization in the portfolio mix could be more clearly controlled on the platform through parameter settings. Distribution of the innovation portfolio according to the core, adjacent, and transformational can also be established in the database of the platform and then measured continuously. These functions support innovation in a proper way.

2.6.2 Practice 2: Choose Portfolios

The software platform helps to determine which ideas to follow. The evaluation process and further sourcing of information are driven by workflows.

Maresi GmbH uses classic market research by, for example, Gfk (Gesellschaft für Konsumforschung) or surveys by marketagent.com. On the IM platform, the company would conduct both internal reviews and market research and store this data with the ideas.

From the author's point of view, it is also important to make hypotheses according to the lean startup method for the ideas. In the mature consumer market for food, such experiments are usually covered by market research.

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Author Alexander Osterwalder offers in his recent book (Alexander Osterwalder, 2020) a complete framework for Hypothesis, Experiments, Learning, and Deciding. For testing hypotheses, following four dimensions need to be evaluated.

1. **Desirability**: Does the market want the idea?
2. **Feasibility**: Can we deliver at scale?
3. **Viability**: Is the idea profitable enough?
4. **Adaptability**: Can the idea survive and adapt to a changing environment?

The review of platforms for this thesis showed that only a few platforms offer functions for testing.

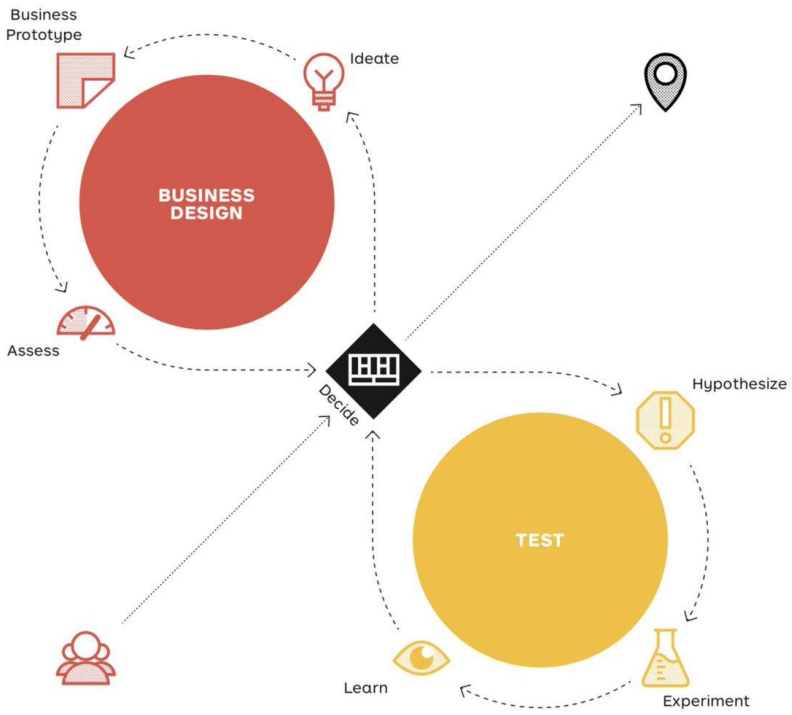

Figure 27: Iterative Process of Experiments and Business Prototypes (Alexander Osterwalder, 2020)

At managing risk, the portfolio view and its related timeline in the software provide high value. In the portfolio, it is important to react quickly to changes or to shift budgets when priorities change. Depending on the speed of implementation in product development and the availability of resources, complex timelines for different market launches may be subject to dependency or collision. In how far risk assessments are covered in the software the author has not seen in practice, however, it can be suspected that the functionalities are possible through complementary data fields. Innovation platforms enable companies to create some boundary conditions for the opportunity spaces in digital ways. By

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describing the search field as a challenge, the aim to focus innovation efforts is clearly realizable.

To prioritize opportunity spaces and investments behind the most valuable opportunities is a key task for portfolio management. During the research for this thesis, the author noticed that the software from Planview offers leading functions for portfolio management. Planview supports prioritizing the product pipeline with powerful what-if scenario capabilities. The Software enables analyzing initiatives for technical viability, financial impact, resource use, complexity, and commercialization success to ensure an optimal portfolio mix that will achieve revenue targets, given the constrained resource pool. To plan product development resource capacity, the software uses robust portfolio comparison features to ensure that the required skill sets and people are available when they're needed, and they can shift resources as priorities and schedules change. To understand the ripple effect of small delays is quite complex when looking on multiple projects. Planview software groups products by release and projects by product for roadmap views that truly help stakeholders. Additionally, it is possible to monitor in-market product performance and show dependencies to maintenance efforts.

External resources play an important role for Maresi GmbH. It is a question of how quickly and how much, for example, milk producers can produce? The speed at which the company can bring a new product to the market depends on external lead times.

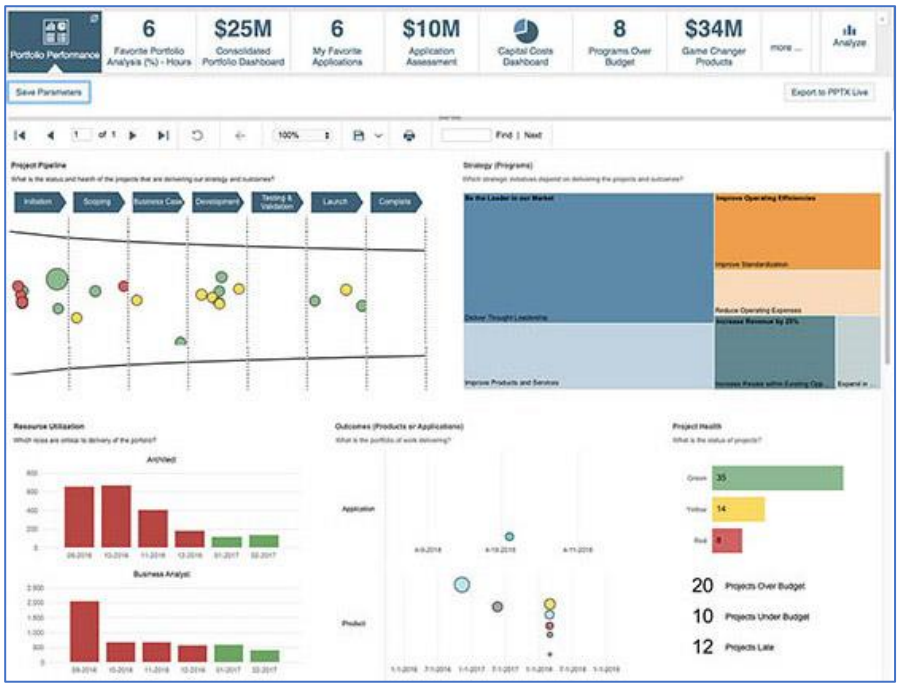

Figure 28: Portfolio Analysis by Planview Software

It is critical to constantly assess not only the expected value, timing, and risk of the initiatives in the portfolio but also its overall composition. Getting an overview of projects using a

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software suite is key from the author's perspective. A fast and agile resource-reallocation process also needs administration and scenario capabilities within ~~a~~ the software to be able to handle that complexity. Innovation management software can be an enabler to managing complex and scalable innovation programs but for Maresi GmbH internal resource reallocations play a little role.

2.6.3 Practice 3: Discover New Problems and Insights

Companies must search for problems to solve and technology insights, synthesize and combine them. This insight-discovery process beyond a company's boundaries can be time-consuming. It can also be very difficult to find the right data sources and to integrate possible experts into the process. The crowd and some people in the external world hold knowledge that waits to be discovered. Innovation software enables to get ideas from more sources (internal and external). Exploiting diverse innovation sources will expand the breadth of suggestions to explore the depth of available solutions to existing problems. In any case, tapping data sources on the internet or adopting market or trend data allows for a broader view and additional information.

Another advantage is that the input from contributors can be managed in a manner that it is both secure and controllable. How this data is evaluated and what conclusions are drawn is still a decision of the user.

Maresi GmbH decided on the following evaluation criteria at the beginning of 2020. It relates to the cost structure on one axis and projected net sales on the other axis.

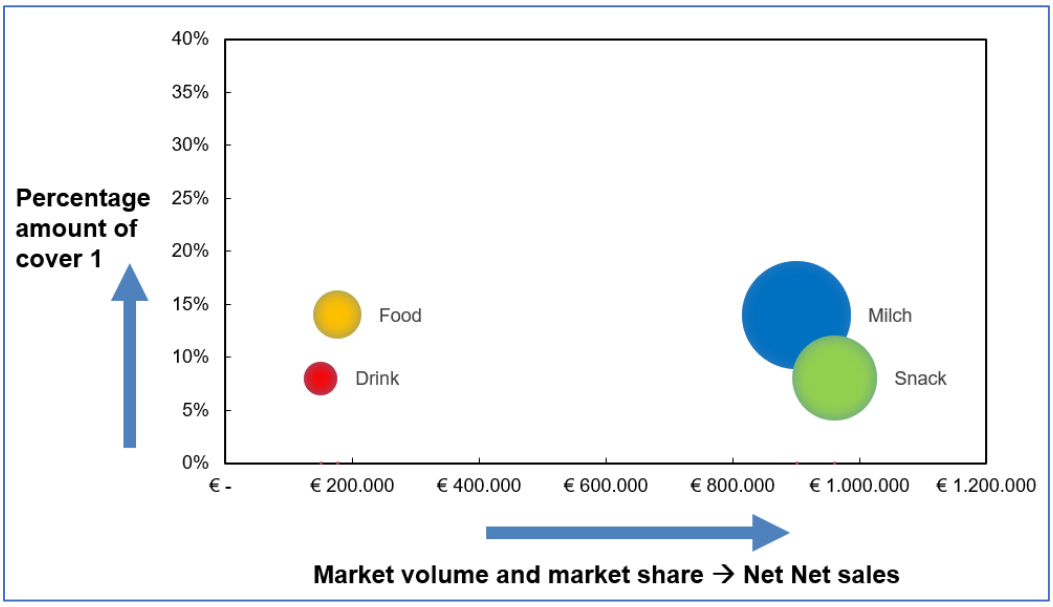

Figure 29: Maresi Evaluation Matrix (Own Composition)

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Another advantage of digital processes is the early arrival of information. In theory, software systems even allow real-time reactions. A software platform provides capabilities to collect more data and information to collaborate with experts and to enable detection of trend signals. Finally, the software makes it possible to handle extensively large volumes of diverse input and forms a digital space to stimulate the exchange of knowledge and expertise.

2.6.4 Practice 4: Evolve New Business Models

In disruptive times companies need to think about further business models to evolve into new positions. Various action options are available for selection. Acquiring an idea, partnering for an idea, and investing in an idea are some exploit actions for portfolios.

Especially using market intelligence data to bolster ideas is a functionality of IM software platforms. The software can support the process of employees at different locations working together on new business models. For separating trend signals from noise, the software will serve a support function. How innovation projects are funded is a management decision. Funding vehicles are a definition, but a platform makes them more available. Everybody can take part in a challenge for a new business.

Some managers think that disruptive ideas need secrecy and complete isolation from the core business. That sort of separation can be important especially in companies where bureaucracy tends to neutralize new ideas. In many cases, this is done inside an innovation lab. Instead of this, an IM software platform can define different access areas. The difficult work is to determine how new ideas will be executed. Especially for this purpose, clear rules should be defined in the software.

2.6.5 Practice 5: Accelerate with Quick Launches

The practice of carrying out simple to more complex experiments has been strengthened in recent years since Lean Startup (Ries, 2011). Therefore, it is more common to test promising ideas with customers early. If we use examples like customer interview, discussion forum, clickable prototype, explainer video, simple landing page, or online ad and we ask a question of how a platform supports this, most likely by tracking the data points like google analytics. Probably IM software can promote innovations quickly and effectively. It is obvious that less bureaucratic hurdles are built into the platform. Due to the transparency of the process and people involved, there may be fewer power games or self-dramatization of people. On a general level, IM software enables faster time-to-value for promising ideas. By following the process workflows defined in the software, the duration of decisions can be streamlined.

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Uncertainties in interfaces due to missing information can be reduced on the platform by consolidated information.

When new products are introduced to the market at Maresi GmbH, numerous administrative processes take place. This involves the creation of master data, logistical data, and notification in the GS1 Austria system to determine the EAN code (GTIN).

At this point, the interaction of IM software with ERP and ECM systems plays a role.

The Integration with other systems like Sharepoint, ERP (Enterprise Resource Planning) or ECM (Enterprise Content Management) is a specific feature that differs in reviewed vendor's offerings.

2.6.6 Practice 6: Scale Right by Balanced Resources

When a product or service goes live or is launched, there are considerations about where and in what quantities it should be offered. It is usually the task of marketing to make these decisions. These functions are not part of IM software. To plan projects, project management software is used. To plan production, a manufacturing execution system (MES) is used.

At Maresi, these quantities are planned with the supplier and supply chain. This planning then flows into demand planning in ERP. Portfolio management software is the best way to plan resources for projects. IM software has only little added value when scaling the ideas.

2.6.7 Practice 7: Extend with Networks and to Crowd

IM software helps and enables capitalizing on external networks. Special crowdsourcing projects are made possible by platforms. For Maresi GmbH, it would be interesting to involve food technologists and market experts directly in the brainstorming process. These specialists could provide contributions to refine ideas or to evaluate concepts.

Such an ecosystem could help to deliver benefits. To find out which partners are fitting search efforts are necessary which are not a part of the innovation software. Once the partners have been found, it is important to think about how these people can benefit from their cooperation. Contractual structures to motivate high-performing business partners need to be defined. For setting up a network, the software helps less, but instead in the collaboration, preparation, and provision of information.

2.6.8 Practice 8: Mobilize People

Some platforms try to motivate employees by giving points to users who actively participate. This can also lead to action. If you consider classic motivation factors such as

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appreciation of the idea, honesty, and feedback culture regarding ideas, then a software platform leads to more transparency. Users can see how ideas are evaluated and commented on. One question is whether such evaluations should also be anonymous or not?

Many companies make use of innovation events like an annual workshop in a cool hotel. On that day, suddenly everyone is supposed to be innovative. In contrast, an IM platform is a continuous approach. This is more in line with the idea that a company should continue to innovate.

At Maresi GmbH, usually, a few ideas for new products are presented in a meeting every 2 months. A quantified evaluation of the idea is not carried out. The committee tends to be more consensus-oriented. On an IM platform, the evaluation is transparent.

The teams at Maresi GmbH work rather isolated from each other, ideas are not shared or discussed across teams. On one platform, every employee could see every idea.

Lessons learned from success and failure are captured and assimilated through informal ways.

2.7 Challenges which managers face with the type and level of activity on IM platforms

At Planbox's 2019 user conference (Melik, 2019), innovation managers shared some of the challenges they faced with the type and level of activity by participants. They started out running a few challenges and giving points to people to submit an idea. But they got many low-value entries and had to spend a lot of time going through them. As a result, they decided to stop giving points for just submitting an idea. They added the practice of giving points for people to comment and vote on ideas. What ended up happening was some people started voting and commenting on each other's ideas just to collect points.

Innovation manager wanted people to really think it through and submit just well-developed idea. So, they required more information and asked more questions in the idea submission and evaluation processes. It was hard to strike the right balance between making it easy to share and explore, yet ensuring that the collaboration leads to real improvement or innovation. So, this begs the question: How to encourage people to be creative, to submit high-value ideas, sponsor and support the best ideas, and collaborate as a team on developing concepts that have the highest potential for success?

It's important to consider the psychological mechanisms that lead to innovation. The key is for leaders to understand what they must do to create the right corporate culture and

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mindset that encourage purpose-driven collaboration, abstract thinking, risk-taking without the fear of failure, persistence, open-mindedness, and rebelling against the status-quo (Melik, 2019). To introduce such software the vendor companies, provide comprehensive guides. This thesis develops based on these recommendations an implementation concept for Maresi GmbH. Managers must design the Innovation Management Program Launch and communication plan. Executive support in many terms is truly needed and communicating the program extends over 4 phases (pre-launch, launch, post launch, challenge driven).

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3 Case Study – Implementation concept

A case study is used as a method to answer the research questions. With the case study, the thesis focuses on the specific requirements of Maresi GmbH.

The current situation of an analogous innovation process shall be examined and possible improvement potentials shall be identified. The case study should illuminate the topic of a digital innovation cycle from different perspectives and combine it with theory. The goal is to understand exactly what benefits an innovation software brings and how Maresi would use such a software in its context. A questionnaire and an interview with the innovation management is used as a method to collect the requirements for innovation software.

In the previous chapters, this thesis reviewed the features, values and new technology approaches within innovation software platforms. Based on this research and summary, the subsequent case study delves into the realities of actual requirements for an innovation software at Maresi GmbH.

It seeks to firstly, examine the status quo of some innovation practises and secondly, to assess the focal points in using such a software. A questionnaire with 20 questions was used to measure the relevance and variability of software options. An evaluation range from 1 to 7 was used as a scale, where 1 means no relevance and 7 greatest relevance.

Additionally this focal points have been discussed in an interview. Subsequently, the findings are presented and integrated into a concept for implementation.

Table 4: Rating scale in words and figures

1	no relevance
2	very low relevance
3	relevance is reasonable
4	medium relevance
5	rather strong relevance
6	great relevance
7	greatest relevance

The ratings result in an average value which is visualized in Figure 30. Higher scores of some questions are considered as thematic priorities. The thesis deals with some of these key aspects in the following.

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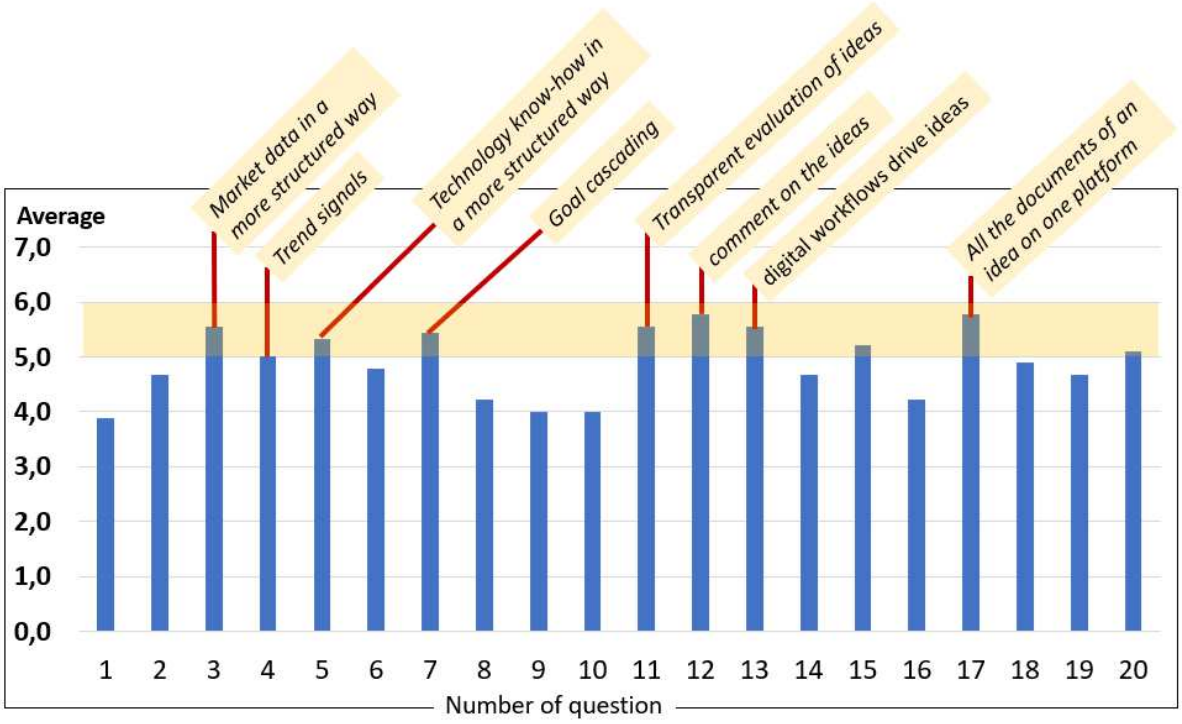

Figure 30: Key features of software with high relevance

3.1 Case study interview

In an interview with the innovation manager at Maresi Gmbh on june 4, 2020, the implementation design of an innovation software was discussed. Further points of discussion were the team culture, the number of desired trend radars and the evaluation types. First approaches were discussed how Maresi GmbH wants to reward ideas. Furthermore, a separation of trend research into macro-trends (3 - 7 years) and micro-trends was defined. Maresi also wants to evaluate the relevance of trends together. The interview ended with the agreement to summarize the design elements and present them later to the leadership.

3.2 Which specific requirements on innovation software does Maresi GmbH have?

The section refers to the empirical data which is presented in chapter 4. Particularly in the area of market and technology intelligence, respondents gave high relevance values from 5 upwards. Across Maresi GmbH and some Vivatis Holding managers of innovation would like to store market data more structured, to use trend signal reporting by software and store technology intelligence in a more structured way automatically.

So the question is how to get that data and how to arrange storing?

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To make better use of possible sources of information, the platform of Mintel Consulting is considered first. Here clients have the opportunity to filter product and market insights by criteria. There is a possibility to personalize the platform through email alerts. For example categories such as milk drinks can be selected.

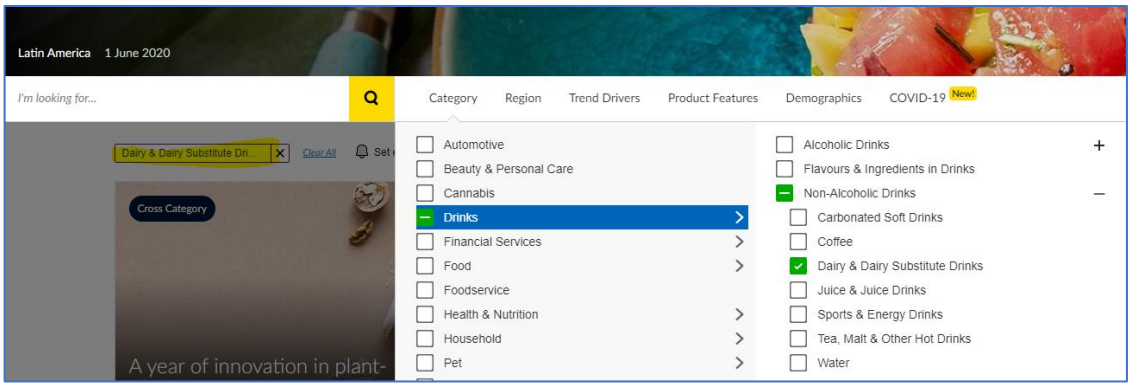

Figure 31: Mintel insight platform

In addition, the results can be further limited according to different contents (e.g. innovative products in the category. Or users can also leave all content filter and receive emails about everything where milk drinks are mentioned.

Figure 32: Mintel Content Filter

Much valuable information is available on the Mintel platform. This information could be linked to the innovation platform. This would involve an appropriate interface and metadata that would enable structured data transfer and storage. The technical requirements for this API are currently not available from Mintel. This is about advancing the issue with Mintel and following its further development.

Trend Signals

Trend signals are known from stock and stock exchange trading. When forecasting prices, attempts are made to use mathematical models. For example, a breakout from the Bollinger Bands suggests that the price movement will continue in the direction of the breakout. This is especially true if the Bollinger Bands were near their moving average at the time of the

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breakout. Similar Maresi GmBH is increasingly identifying trend signals and considers the medium-term integration of this data on an innovation platform to be relevant.

The survey confirmed the benefit of a transparent evaluation. It is desirable for participants to be able to comment on ideas at a standardised level. The same applies to digital workflows. Employees want to be reminded of deadlines and be able to easily track the status of the idea.

3.3 Implementation concept

The implementation concept describes the steps and design of the introduction and functions of the innovation software for Maresi and its requirements. The implementation concept answers the research question 1 on the "How". Chapter 3.2 contains in detail how the early phase process of innovation at Maresi GmbH should be digitally represented.

3.3.1 Define goals and expectations of the program

These goals are related to the Vivatis Innovation Report as well to Maresi GmbH related innovation goals. A number of strategic and operative execution projects is wanted by Vivatis Holding and effects out of innovation projects are measured. Maresi GmbH has the goal of successfully establishing innovative products in the milk, snack and ready meal segments. The results of these innovation and project activities are regularly reported to Vivatis Holding.

For this purpose, there is a predefined Inno Report which is filled out every quarter year. This results in reporting requirements for the innovation software. The Big Picture Project Framework distinguishes between strategic projects (feasibility analyses) and operational projects (implementation). Vivatis Holding queries the following key figures:

- Total of ongoing strategic innovation projects at the end of the period
- Total of ongoing and completed operational innovation projects at the end of the period
- Implementation rate of innovation projects in %
- Effect on earnings from innovation projects (36 months) in T€
- Degree of innovation in % → This key figure (percentage) describes the proportion of sales of products/services that are less than 3 years old in relation to total sales
- Innovation cost ratio in %
- Innovation structure factor in % → The innovation structure factor considers the number of employees working in the innovation environment in relation to the total number of employees of the company.
- Number of ideas per employee

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- Ø Time to market in days

The Maresi controlling department provides many of these key figures on the basis of sales revenue. The number and type of projects is shown in the project overview and project reporting. Project reporting is a task of the project management office. Project reporting is done in Microsoft Excel. Out of this key performance indicators especially “Numbers of ideas per employees” can be measured with an innovation software.

The innovation software would be worth more in the area of commitment and culture than for quarterly reporting. Maresi would see how actively people participate and this says a lot about the corporate culture.

3.3.2 Define searchfields

The innovation search fields in the software should be defined analogous to the search fields from chapter 1.6. The value of the innovation platform results from the link to further data sets. The search field is linked to industry trends and consumer trends matching the specific food product of the searchfield. Industry Trends are global reports that summarize trends, opportunities and development forecasts in categories - all supported by analysis of new product launches, consumer research (Mintel Group Ltd., 2020). Consumer trends are micro and macro trends that record changes in consumer behavior in general and are categorized by (trend drivers). The principle of linking and metadata is shown in the following diagram. The picture shows what a possible user interface could look like.

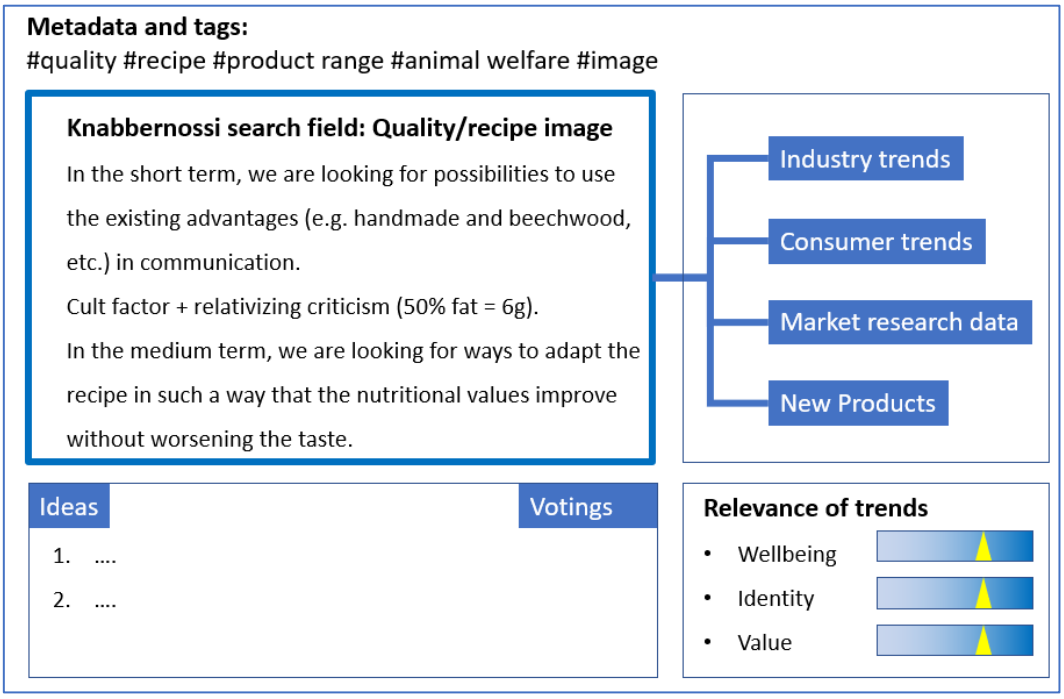

Figure 33: Possible UI of a searchfield with linked data sets

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3.3.3 Design Trendradar

For Maresi GmbH, the development of trend scouting, trend evaluation and trend knowledge in an innovation software is of general importance. It is the opinion that there is potential for improvement in these fields. In the discussions, four segments were agreed upon and for each of these segments it is intended to build up a trend radar.

The four product categories are as follows:

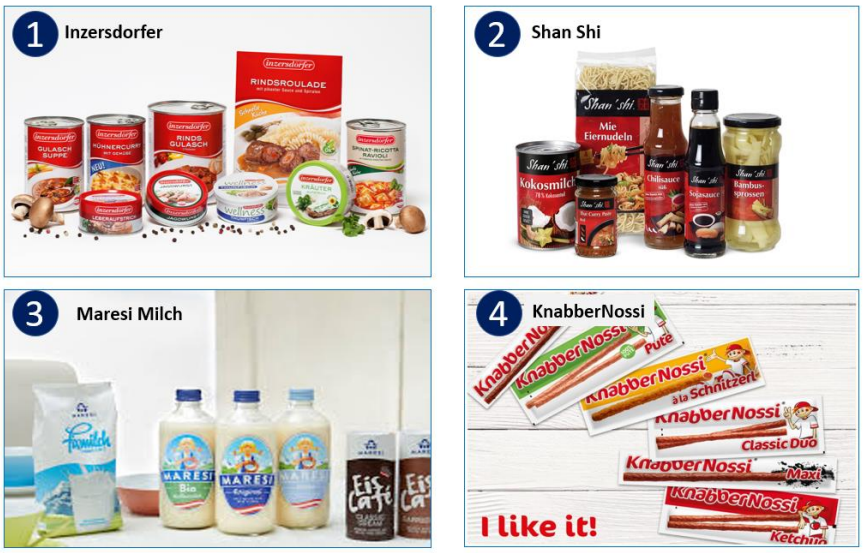

Figure 34: Set up four trendradar

The following elements and criteria have been agreed upon for the design of the trend radar. The aim is to distinguish between macro and micro trends, as well as to show the customer benefit and the chances of success through trends.

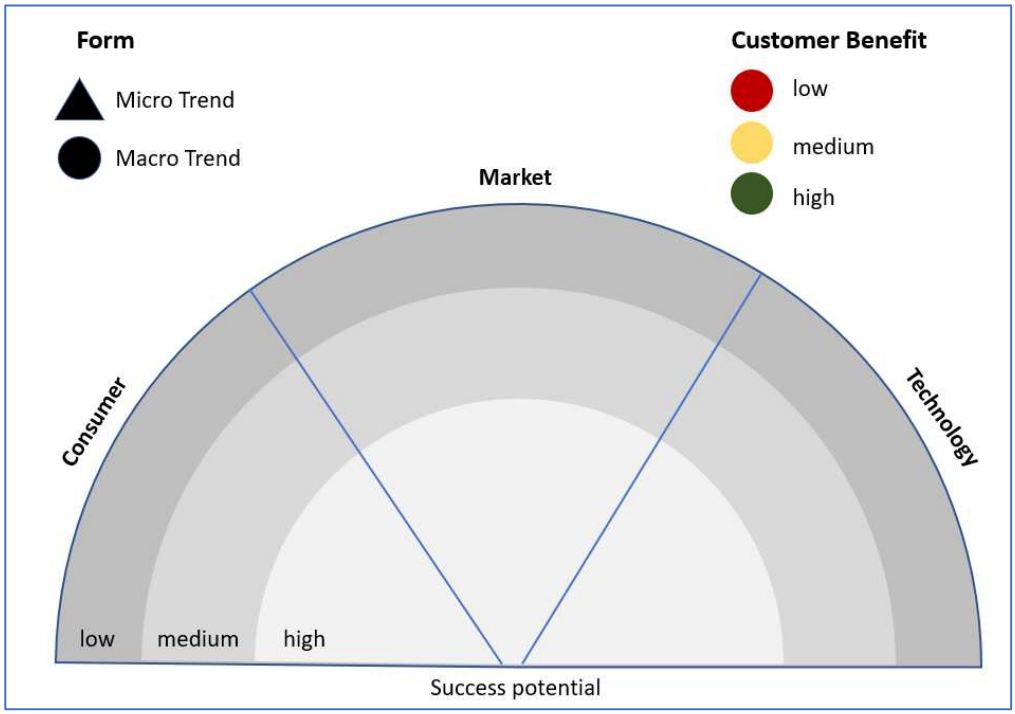

Figure 35: Trend Radar Concept agreed

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3.3.4 Create communication plan and excitement at pre-launch because it's all about attention

Maresi GmbH would announce the program with a countdown to create curiosity. The firm understands this as competing for your employees' attention. More and more details would be published and combined throughout different channels. Sending emails, posting in intranet, delivering video messages and interesting rewards would be our multiple attention winning approach. Qmarkets company shows the response rate of various channels in Figure 36. For campaign boosting a combined communication plan is recommended. Maresi GmbH want to follow this communication strategy.

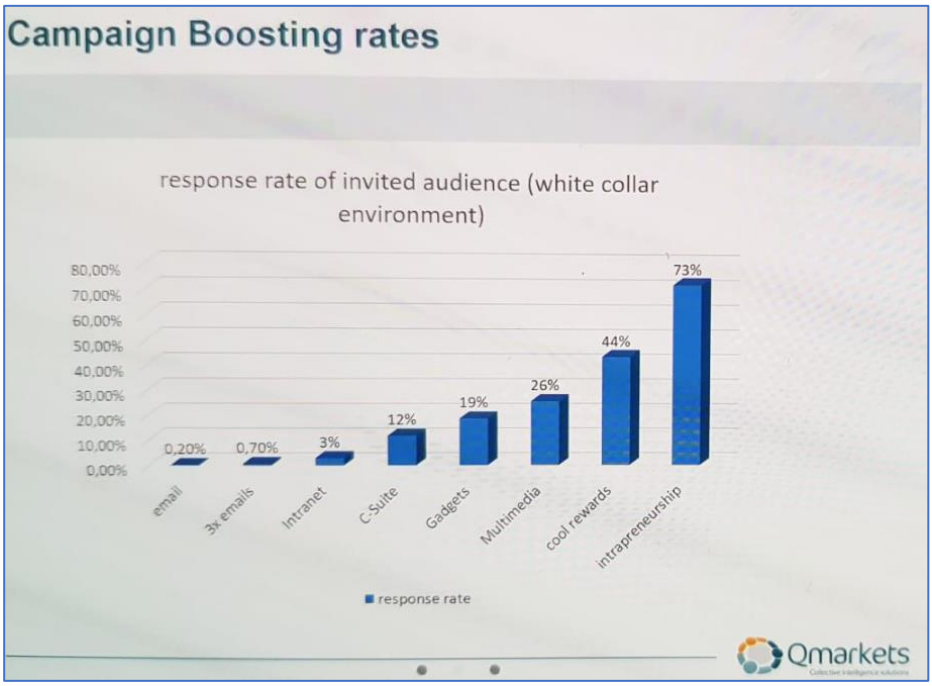

Figure 36: Campaign Boosting rates by Qmarkets

3.3.5 Describe to staff how it works

Maresi would record some videos on how to use the software. Users have to know how the software manages all processes, notifications and how it nudges to encourage engagement. Another important part is game design.

Maresi GmbH understands that game design elements make innovation fun and engaging. There has been a discussion of the firm about those elements:

- **Understand the player:** Skills, experience and interests
- **Point system:** develop a point system that measures any action taken by the user based on its value

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- **Levels and badges:** decide whether you will award badges and design levels that show who are the most engaged and expert participants
- **Rewards:** Define and promote soft and stuff rewards for innovation activity
- Measure results, redesign if needed and take action based on the stats

More details on how these elements are mapped will follow in the following sections of the implementation chapter.

3.3.6 Define roles (admin, participants, moderators, subject matter experts, legal advise, data analyst, leaders)

At Maresi GmbH there is an innovation manager who would act as moderator. The author of this thesis would assume the role of administrator. The brand managers from the marketing department are preferred participants. All other employees are regular participants. The managing directors take the role of the leaders. Our legal manager is able to take the legal advise role. Updating and monitoring the trend data and market research data is done by several brand managers and customer development employees.

3.3.7 Workflow on the platform

The firm agrees that all employees should be able to post an idea on the software platform. In internal discussions about the innovation software, the firm determined that this software should collect the ideas and manage them until two evalutions are done. Maresi Gmbh wants to evaluate these raw ideas together and thus prioritize them. Therefore it is not planned to introduce a continuous workflow for an idea to the project and progressing to the product. Project management is done in another software tool.

To support continuous innovation work, a time span of 8 to 12 weeks is set with notifications in which the users of the platform must react and be reminded to set activities of evaluating or commenting.

In the first phase before the Check-in Gate, the company wants to have the idea assessed by several people without prior market analysis. The criteria for evaluation are market attractiveness, competitive strength of the product, strategic fit to the product line and degree of novelty of the product.

From the evaluations results an overall score which ranks the ideas. The ideas with the best overall scores should then go into the Check-in Gate with a Powerpoint presentation. In the Check-in Gate, the planned process takes two paths. An idea that passes the Check-in gate

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positively is added to the project list. From this point on, more detailed market research and an analysis of competing products is carried out. These analyses serve as a basis for decisions in the pitch gate.

In the innovation software, Maresi GmbH wants to use a second evaluation in the Pitch Gate. Thus, two evaluations are planned in the innovation software. The first is a rough evaluation before the Check-in gate and the second is a more precise evaluation due to more data before the Pitch gate. Figure 37 illustrates those two assessments before the Check-in and the Pitch-Gate.

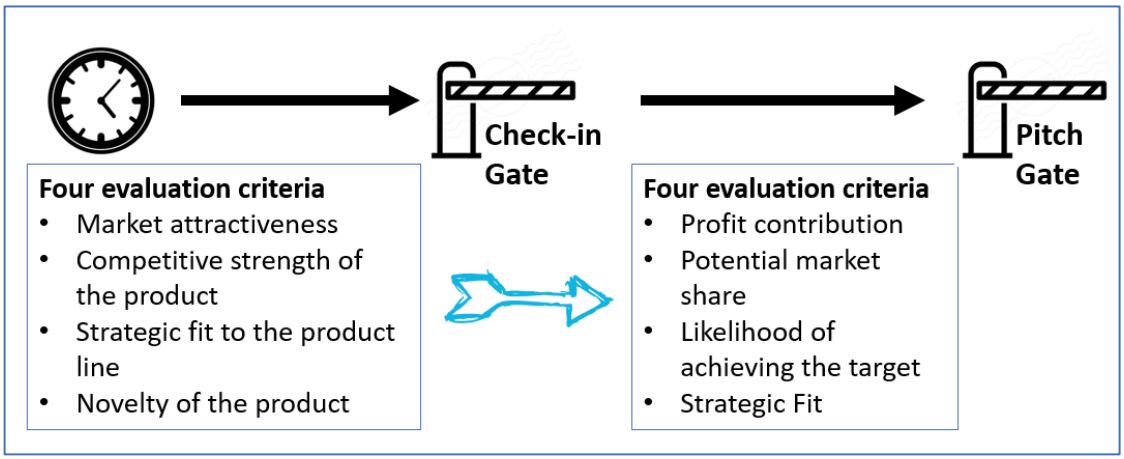

Figure 37: Two phases of idea evaluation

3.3.8 Design reward system

Maresi GmbH follows the reward logic proposed by the company Planbox in Figure 37. Rewards are categorized into four areas and assigned to their cost and relevance. Examples of rewards are given and then the chosen rewards from Maresi are listed.

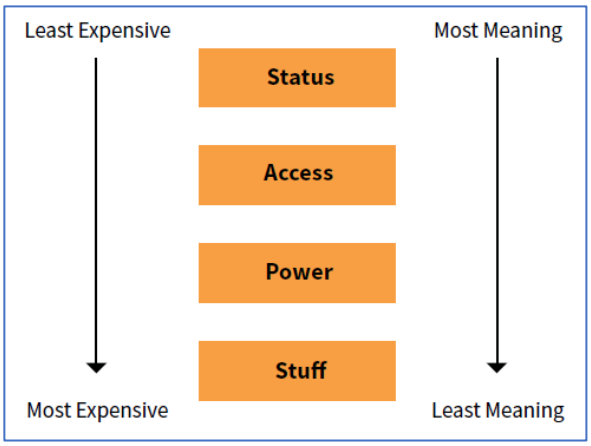

Figure 38: Reward logic in terms of meaning and cost (Planbox Inc., 2018)

A firm must use all these elements of rewarding people. Some examples are worth giving here (Planbox Inc., 2018):

Examples of **status rewards** at work:

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- LinkedIn recommendation letter
- Hand-written thank you note presented at an all-hands meeting
- Awards: plaques, certificate of achievement, medal
- Leaderboards, badges and levels displayed on a frequently accessed corporate social portal

Examples of **access rewards** at work:

- First to see sneak preview of new product investments
- Attend next senior executive closed-door meeting on innovation
- Access to confidential competitive analysis, or research information
- Lunch with a senior executive, mentorship, reserved parking

Examples of **power rewards** at work:

- Being a community moderator or reviewer
- Own the development of a set of ideas as idea champion
- Participate in budgeting and approval of innovation experiments/projects
- Gets first pick on vacation dates, office with a window, reserved parking spot

Examples of **stuff rewards** at work:

- T-shirts, mugs, gift cards, travel voucher
- Can be a drawing or awarded to a specific person for a specific achievement
- 1 out of every 20 participants wins a prize
- May include a more expensive sought after grand prize
- Earn more vacation days, work half a day Friday, skip Monday

<u>Maresi GmbH has agreed to the following rewards:</u>

Maresi status rewards: Awards: plaques / Leaderboards & Certificate of achievement

Maresi access rewards: Lunch with a senior executive

Maresi power rewards: participation in product development

Maresi stuff rewards: vacation days

3.3.9 Demonstrate senior management buy-in

Maresi GmbH has defined observable behavioral elements:

- The CEO is visible, stays involved and communicates what's going on

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- The CEO will personally present awards and recognize individual and group achievement
- The CEO is prepared to make strategy adjustments based on feedback
- The CEO contributes to refreshing innovation portal and challenges on a quarterly basis based on evolving corporate goals

3.3.10 Measure Activity

Maresi wants to measure the classical engagement indicators:

- Number and % participants generating ideas
- Number and % participants voting and commenting
- Approved ideas by participant or group
- Number of active champions

3.3.11 Communicate results

There will be a monthly short report and a more comprehensive report every 3 months. The responsibility for the report generation is assigned to one person. Most of the data needed for the report can be easily collected.

3.3.12 Introduce and promote new challenges

Periodic campaigns around idea themes are an effective way of keeping things fresh and exciting. The use of challenges also enables the organization to address topical or timely issues in a responsive, opportunistic and pro-active fashion.

In addition to the search fields, which are also a challenge, there will be several more challenges at Maresi. These can be problems concerning process improvements or IT topics.

3.4 Cultural breaking up of brand teams

Up to now there has been a responsible brand manager for each brand. This employee naturally knows all facets of the brand best and is familiar with the structure of the product range, the brand message and the targeted customer benefits.

The introduction of an idea platform means that employees of other brands or employees from other functions can also publish ideas. In a sense, this means that outstanding ideas would invade the territories of brand managers. Secondly, each idea would be evaluated by more people than before. The responsibility for evaluation shifts from the responsible brand managers to a broader group of employees. Both aspects cause or require a cultural change. It sometimes means that a brand manager takes up and pushes ideas that are not

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his own. Maresi Gmbh pays attention to this topic in its communication and defines specific cultural measures to monitor and control this change.

3.5 System break between innovation software and project software

The actual project management or commercialization of the idea is no longer an area of application for Maresi GmbH in the innovation software.

This situation has a significant disadvantage. The process from the idea to the finished product is managed in different software systems. In addition to this system discontinuity, duplicate entries and manual merging of new project updates occur.

As a subsidiary, Maresi GmbH is dependent in this context on the guidelines of the holding company. Vivatis Holding's requirements for central project reporting necessitate the decision to use software that all subsidiaries use. At present, no such software is in use, neither for project management nor for idea generation and idea evaluation.

3.6 Software indication prices

Ideadrop Software:

- £3,000 for 50 licenses
- One-time charge of £4,995 for on-boarding and implementation.

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4 Empirical part

The following evaluation results resulted from the survey:

Nr.	Survey question	Average	Variation range
1	How well do Vivatis companies collect market and technology data today?	**3,9**	**3,0**
2	How useful would it be in your company to collect market data more automatically? The IM software platform allows updating from data sources (e.g. Mintel, Nielsen, etc.)	**4,7**	**4,0**
3	How useful would it be to store market data in a more structured way on a platform? (e.g. assigning new trends or products by search fields).	**5,6**	**3,0**
4	How useful would be a quick response time, by displaying new information quickly? (e.g. new patents or new trend signals reported by the Innovation Software)	**5,0**	**5,0**
5	What added value does your company see in the fact that technology know-how would be stored automatically and in a structured way in defined search fields?	**5,3**	**5,0**
6	How useful is it for the company to collect innovation metrics (KPI), which are particularly relevant in innovation software? (e.g. number of ideas, number of evaluated ideas, quality of...	**4,8**	**5,0**
7	How relevant would it be to break down the objectives into search fields and persons? (x ideas for search field y, x profit of new products for brand y)	**5,4**	**4,0**
8	How well does the company today implement the prioritization of the innovation search fields?	**4,2**	**3,0**
9	How well does the company today carry out the evaluation of ideas?	**4,0**	**4,0**
10	How transparent and clear is the tracking of ideas today?	**4,0**	**5,0**
11	How useful would a transparent evaluation of ideas be? (you can see how others evaluate and contrary opinions offer the greatest chance for new insights.)	**5,6**	**3,0**
12	What added value would it be if employees could comment on the ideas on the platform? (Foreign subsidiaries could comment in their own language and the platform takes care of the translation)	**5,8**	**3,0**
13	How much added value do they appreciate when digital workflows drive ideas transparently and in a more controlled manner? (Deadlines for evaluation, commenting, management feedback and completion of the project)	**5,6**	**4,0**
14	How do you rate the benefit of notifications? (e.g. if all have completed the evaluation or comments have been made)	**4,7**	**5,0**
15	What added value does the company see in bringing together external sources (food technologist, Mintel expert) on one platform to work together on ideas?	**5,2**	**6,0**
16	How appropriate would it be to involve production partners on the platform to assess very early on whether feasibility and capacity are available in manufacturing?	**4,2**	**6,0**

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17	What would be the added value of having all the documents of an idea on one platform? (e.g. posting of ideas / evaluation of ideas / elaborations (mintel reports, patents, research results...)	**5,8**	**5,0**
18	What added value would it have if the holding company could have an overview of all ideas from all companies on one platform? (across all Vivatis companies)	**4,9**	**6,0**
19	How relevant would it be to allocate budgets to ideas on the platform?	**4,7**	**6,0**
20	How well would the company manage to mobilize activity on the Innovation Management Platform?	**5,1**	**3,0**

4.1 Comments of the questionnaire participants

The participants of the survey also had the opportunity to give free comments on an innovation software. These are reproduced verbatim below and supplemented with the interpretation of the author of this thesis.

Comment 1 by Christian Guttmann (Innovation manager) of Frisch-frost GmbH :

"Such a platform should be extended to the whole strategy follow-up, speaks not only innovation but also normal projects. From the environmental analysis (incl. technology & market early education) to the formulation of objectives and tracking (e.g. via X-Matrix)."

***Interpretation 1**: This participant points out that there is no universal tool for strategy, innovation and project management that all subsidiaries use. The participant would even like to integrate the X-Matrix strategy tool into it. This project would go far beyond the innovation software. The author agrees that this would make sense, but at the same time sees a high degree of complexity and diverging requirements among the companies.*

Comment 2 by Robert Spindler (Innovation Manager) of Daily GmbH:

"Daily company: judging by the questions, the focus is as always on companies that offer products develop, distribute or produce them themselves. As a service provider in the VIVATIS Group, I fear here again the implementation of a tool from which not all companies will benefit. This means a lot of effort in data maintenance for relatively little output.

***Interpretation 2**: This participant represents other requirements. His company is service-oriented and there are no product development projects. Nevertheless, idea challenges could be used and ideas could be evaluated. If these become projects, they could be managed in the project management tool. Parts of an innovation software can also have a value for this company.*

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Comment 3 by Andreas Pichler (Key Account Manager) of Maresi GmbH:

"Good approaches and ideas. A stringent implementation would be desirable."

Comment 4 by Arno Szauter (Brand Manager) of Marsi GmbH:

"In my opinion the biggest contribution of this platform would be to create transparency and structure. Who can do what? What already exists? Where could we dock with our brands. In my opinion, active project management does little for this platform. Even the involvement of producers is tricky, because we as Maresi should keep all options open, especially at the beginning, with whom we produce."

Interpretation 4*: Mr. Szauter sees the topic of Open Innovation critically through some arguments. It is not only about suppliers but also about involving co-creators on the platform.*

Comment 5 by Anna Weihmann (Brand Manager) of Maresi GmbH:

"Especially for artwork creation (including the daughter languages) very helpful (deadlines, simplicity, clarity)"

Comment 6 by Johanna Brunner (Brand Manager) of Maresi GmbH:

"It is difficult to evaluate some of the points in a questionnaire, because for some points, e.g. budget or production partners, the question is not so easy to ask (if you involve production partners too early, the flow of ideas is inhibited, as is the budget). For a first evaluation, however, it is certainly a good tool to use the evaluation of this questionnaire."

Interpretation 6*: Mrs. Brunner confirms that an innovation software would make sense especially in the early phase.*

Comment 7 by Maria Laubreiter (Brand Manager) of Maresi GmbH:

"Currently, the documentation/recording/post-processing is very person-dependent and individually designed. Standardisation and transparent documentation would be very helpful."

Interpretation 7*: Mrs. laubreiter emphasizes the aspect of standardization which she considers valuable.*

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5 Conclusion and discussion

5.1 Summary

Important parts of the innovation process can be effectively digitized as this thesis has shown. An understanding of how such software effectively supports the recommended innovation practices has been developed. The thesis shows how functions of such software drive the idea process. Many things are possible but not every possible function is also useful for Maresi GmbH or Vivatis Holding. For example a business model canvas as a digital tool to further refine ideas is not relevant for Maresi GmbH.

The implementation concept in chapter 3 answers the research question 1 on the "How". How the early phase of the innovation cycle at Maresi GmbH should be digitally represented was described in the implementation concept. The concept defines which KPIs should be measured and which trend radars should be set up. It also defines how such a trend radar should be designed.

The concept defines when and which evaluation of the idea should be carried out and for what purpose. In addition, a communication approach is defined in order to attract the attention of the employees during the introduction. Furthermore, the design of the game rewards and recognizable behaviors for the CEO support are defined. The thesis thus answers with specific parameters how Maresi GmbH would digitally implement the individual steps in the idea process in the software.

To answer research question 2, new types of trend research were presented. It was shown that there are new approaches with artificial intelligence. Artifical intelligence could be a great chance to find related idea content in future.

These are theoretical possibilities which were not examined by Maresi for their concrete applicability and practicability. Maresi GmbH is not alone in being able to digitize the end-to-end process, since large parts of the process are dependent on Vivatis Holding. Vivatis Holding is certainly aware of this situation and is considering steps in this context. Integrative progress depends on this decision by Vivatis Holding.

The Innovation Software offers data interfaces via APIs (Application Programming Interface) which can be used to import market and technology data. The exact definition of which data to import and how to import it was not made in this thesis. All in all, the surveyed employees see an above-average degree of relevance for the introduction of such software and the innovation manager at Maresi GmbH is thinking about implementing such an introduction project.

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5.2 Outlook for Future Research

It should be clarified which data and interfaces are conceivable with Mintel, Nielsen and GfK and which of these would be usefull. It is necessary to analyze which metadata are available and can therefore be used for structuring on the innovation platform.

Maresi GmbH can talk to Nielsen Marktforschung about which leading indicators are possible in the market data.

5.3 Conclusio

The project to introduce an innovation software should be applied for. The implementation plan can be used to a large extent but is certainly still under discussion.

The Maresi GmbH should realize the business value through engagement and game design in the idea software. The value lies in the clearer structure, the common evaluation and higher transparency and process loyalty. Vivatis Holding AG can create an integrated system that connects the early phase with the late phases of the innovation cycle.

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