

## Appendix A - Timeline

In 1891 Frederik Philips and his son Gerard founded Philips by purchasing a small factory in Eindhoven (figure A1). They wanted to create electric light bulbs that would be accessible to everyone who needed them. They started by manufacturing carbon-filament lamps and were swiftly able to scale their business and starting to export the light bulbs to parts of Europe and Russia. By further improving the light bulbs and technology developments, Philips was able to steadily expand throughout Europe. In 1914 their first research laboratory was built, the 'NatLab'.

In 1918, Philips commercialized their first medical X-ray tube. This symbolizes Philips' expansion of its portfolio to include medical equipment. Furthermore, Philips started protecting its innovations by patenting its discoveries in the fields of X-ray radiation to radio technologies. Philips kept expanding its geographical customer base to customers all over Europe, but also harder to reach countries like Australia, Brazil and China.

Philips started manufacturing radios in 1927 and five years later became the largest producer in that area. Almost simultaneously, in 1933 in the United States, Philips introduced their production and manufacturing of X-ray medical equipment. Furthermore, Philips expanded its business in 1938 and 1939 by respectively introducing their first television and first electric shaver.

Partly because of Philips Research, huge technological breakthroughs and developments happened in the 1940s and 1950s. Philips kept expanding and innovation in audio-visual areas of television, radio, cameras and everything in between. In 1963, Philips successfully created the Compact Audio Cassette to create a new international standard for the recording of audio tapes.

During the 1970s, international focus on energy savings led to Philips' introduction of new ranges of energy-saving lamps. Furthermore, Philips Research kept developing breakthroughs in the area of audio-visual data processing.

In 1982, Philips, in collaboration with Sony, was again successful in introducing a worldwide standard audio format for audio playback without background noise, the Compact Disc (CD). This was only made possible by outsourcing production rights to other companies in order to create the global standard. Furthermore, in 1984, Philips manufactured its hundred millionth TV set and a year later founded Philips China.

During the 1990s Philips decided to reorganize its company structure into a much simpler organization by reducing areas in which they operated. Human centred design became one of the core elements of the medical systems division. Again in collaboration with Sony, in 1997, Philips was able to introduce a global standard for the third time in the form of the Digital Video Disc (DVD) for the distribution of moving images.

During the 21st century, Philips' efforts continued to support innovation with a focus on medical and consumer appliances. In 2006, the company introduced a 3D scanner for enhancing image quality of CT scans. More recently, Philips has sold off Philips Lighting in 2016 and decided to focus more on the total healthcare cycle of customers.

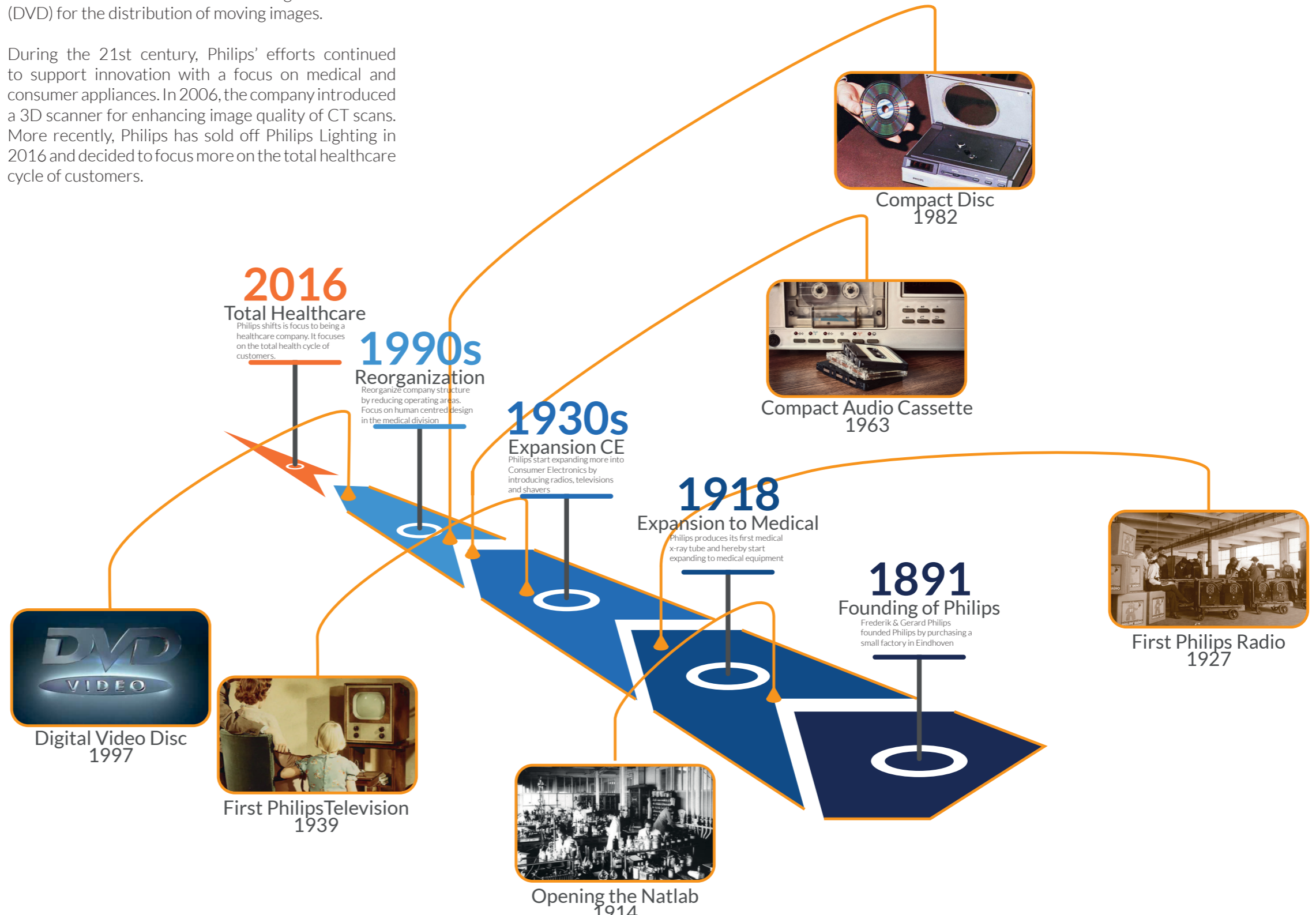


Figure A1 - Philips History Timeline

## Appendix B - Literature Review ICV

Recently, big multinational companies have been overthrown by small companies that were able to disrupt the market. Have a look at how Netflix disrupted Blockbuster (Christensen, Raynor, & McDonald, 2015) or how Uber was able to get a market share of 90% in the U.S. taxi market (Levy, 2016). Both companies were using their relatively small size to their advantage; they used it to move fast and prepare radically different products and business models to accommodate changing customer demands. Smaller companies can adapt to new developments in the industry more easily and are able to change their organization accordingly (Krishna, Agrawal, & Choudhary, 2016; Sarasvathy & Menon, 2002). In contrast, big companies already have efficient and established processes in place that target the mainstream customers with incremental products.

However, portfolio management literature emphasizes the importance of a diverse portfolio with a balanced ratio of incremental, radical, and breakthrough innovations with varying expectations on profitability (Cooper & Edgett, 1997). The portfolio process represents uncertain and unstable information gains, dynamic settings and strategic considerations (Cooper, Edgett, & Kleinschmidt, 2001). Especially multinationals have trouble developing the so important radical and breakthrough innovations because of their established processes focused on cost reduction and improving efficiency.

In order to overcome this issue, multiple companies have started separating their core business (exploitative activities) from their radical- and breakthrough innovation efforts (explorative activities) (Osiyevskyy & Dewald, 2015). The explorative activities are bundled in New Business Creation (NBC) programs and focus on developing innovations that target new markets, new customers or use new technologies. The advantage of NBC programs is that they generally do not have established processes and are able to adapt quickly to new advances in technologies. Entrepreneurial activities within multinationals have the ability to become Internal Corporate Ventures (ICVs) with their own organizational control, team, and dedicated resources (Narayanan, Yang, & Zahra, 2009).

Internal Corporate Venturing is something that has been around for almost half a century already (Narayanan et al., 2009) but case studies and research keep illustrating how hard it can be for ventures to succeed within the environment of a multinational company (Chaganti & Chaganti, 2012; Kakati, 2003; Lee & Lee, 2004; Lerner, 2013). Despite this, today's

fast moving and shifting markets, customer demands, and technology advances make it one of the most important strategic initiatives for multinationals to be able to sustain their positions through internal corporate venturing.

**Literature Findings**

- Big companies are not well organized for new business creation.
- Companies should develop both incremental and radical innovations to stay succesful
- Internal Corporate Venturing helps to protect new businesses in corporate environments

## ICV Environment

The environment in which ICVs thrive is very different from that of huge multinationals. Large, established firms tend to be more competent at exploiting opportunities closer to the core businesses and competencies, but less effective in exploring opportunities and developing breakthrough innovations (Ahuja & Lampert, 2001; Christensen & Overdorf, 2000; Ren & Guo, 2011). The ICV environment is similar to that of start-ups in multiple ways, however, there are also some big differences (Kirsner, 2018). Real entrepreneurship is about taking big, educated risks that can provide enormous potential compensations. These entrepreneurs have so much faith in their solution that they are even willing to take personal loans or home equity loans. Their commitment to the new business is immense and they will do anything to make their idea a reality. Innovators within a company generally do not have this huge personal economic gain when the venture becomes a success. Furthermore, their risks associated with the venture are minimized to being fired from the company, although many times they can be relocated to a different position within the company. Venture teams within big multinationals can therefore be less likely to go the extra mile in order to secure success of the venture. Next to that, the entrepreneurial view focuses on the long-term profit, which can collide with the short-term profit expectations within big companies.

ICVs also need organizational processes that differ from the processes of the core business (Govindarajan & Trimble, 2005). Just like entrepreneurs, ICVs need to be agile, test propositions and readjust their strategy or business model in a quick manner. Of course, the primary task of an ICV is to create a profitable business, but learning as much as possible is also one of the important activities an ICV should perform. An ICV does not necessarily fail, it might not be able to bring its product, service or system to the market, but it did gain a lot of knowledge that is useful to the company. There is a danger that this knowledge becomes lost when an ICV fails to commercialize its product. The ICV team members might be reintroduced into the organization, but the expertise, knowledge and findings from the ICV might slowly fade away.

Although a lot of literature might argue that new business creation within established companies is very hard to execute right (Haanaes, Reeves, & Wurlod, 2018), once it is executed well, ICVs may flourish within established companies. This is because ICVs can use the benefits of relatively easy and (almost) free access to the knowledge within the already established companies, but can still have the freedom to experiment, explore,

and be agile. Corporate Private Incubators (CPIs) provide advantages for ICVs over other incubator forms in that they already intervene and support the ICV early on during the business concept definition phase (Grimaldi & Grandi, 2005). Other incubator models e.g. Business Innovation Centers, University Business Incubators and Independent Private Incubators, either provide much less support during the early stages or the whole project, or demand a lot of equity shares and service fees. ICVs in CPIs have direct and (almost) free access to the company's resources.

**Literature Findings**

- ICVs are different from start-ups in terms of personal risk and gain.
- ICVs are important for generating new knowledge.
- ICVs thrive in a well structured Corporate Private Incubator.

## Core Business Competition

Introducing venturing activities within established companies is a challenging pursuit. One of the many problems that venture programs face is that the programs are sometimes only initiated when the core business' prospects are decreasing or already is taking a loss (Blank, 2014). Declining returns create awareness of the need to create new businesses. However, this puts enormous pressure on the new business ventures to produce quick results. Furthermore, the introduction of a NBC program will create a shift in resources towards said program which will likely be taken away from the core business (Makarevich, 2017). This may cause rivalry between the core business and the new ventures. However, it has been shown that a relative close working relationship between the core business and the new venture benefits both the core business and the ventures. The combination of new information of the venture with existing knowledge in the core business, can lead to the creation of new information that is directly accessible and beneficial for both the core business and the venture (Garrett & Covin, 2013). However, the existing knowledge, that is the foundation of the venture's innovation, has been acquired by the core business over multiple years, while the venture will likely receive credits for commercial successes that it achieves (Makarevich, 2017) and this could lead to jealousy towards the ventures.

Govindarajan & Trimble (2005) illustrate three practices ventures should master in order to overcome the stigma of belonging to an already established business. Firstly, ventures should master the practice of forgetting the traditional process, tools or business models that might not work for the new venture. Only being aware of the differences between the venture and the core business is not sufficient, the ICV should adapt its behavior to its own needs. Furthermore, some established practices might work well in the venture and can therefore be borrowed from the core business.

Borrowing is about using the expertise of the core business to the advantage of the venture. This means selecting the best practices within the core business to increase efficiency in setting up the new venture and decrease the learning timeframe. 'Learning' is about discovering how the new practices that are dissimilar from the core business can be learned and set-up in order to suit the venture.

### Literature Findings

- There is a tendency for established businesses to be unsupportive towards new businesses.
- Ventures and core businesses can leverage collaboration for their own interests.

## ICV Support

The level of top management support does seem to affect ICV performance positively (Kuratko, Covin, & Garrett, 2009). ICVs thrive within an organization where they are highly supported, but not too much guided by the Top Management Team (TMT) (Govindarajan & Trimble, 2005). According to their study, new ventures are performing best when ventures operate closely to the core business in areas with low market familiarity. This creates an interaction effect between the venture and the core business of exchanging cumulative information. Furthermore, they showed that ventures with serendipitously identified opportunities perform better than ventures that are based on planned opportunity identification. Lastly, high planning autonomy of the ventures in terms of setting their own goals, strategy, and timeframes for activities increases venture performance independent of operation dependence.

Middle managers also play an important role during entrepreneurial activities. There are two ways in which middle managers can contribute to the entrepreneurial process, in a (1) top-down approach or in a (2) bottom-up approach (Ren & Guo, 2011). First, middle managers' contribution is through facilitating the flow of information between the top management team and the operational managers (Kuratko, Ireland, Covin, & Hornsby, 2005). This does mean that entrepreneurial activities are persuaded by the strategic decisions of the top management team and will therefore have a shifted focus towards developing innovations based on existing businesses and competences (Fulop, 1991). The bottom-up approach is based on middle managers who act as a filter by evaluating and sponsoring strategic initiatives championed by operational managers and then advertise them to the top management team. This happens through strategic decision making and organizational championing activities (Burgelman, 1983).

### Literature Findings

- Ventures thrive best when they are supported and have freedom to explore.
- Middle managers support ventures by championing and communicating.



## ICV Capabilities

Next to the support the team receives, the team should also make sure it has the right capabilities in place. Generally, product development teams perform best when employees with diversified sets of skills work together. However, ICVs in high-tech firms do have some attention points that can improve ICV success. For example, scientific knowledge has been proven to be a critical ingredient for high-tech firm's successes. A team's prior scientific research in the academic community has been shown to have a positive influence on the team's productivity in a commercial environment (Deeds, DeCarolis, & Coombs, 2000). Furthermore, the team also benefits more from an experienced manager in the position of team manager than a manager with primarily scientific knowledge. Researchers seem to thrive more in the team environment while experience is one of the important determinants of a manager's performance.

Especially when a manager of a venture displays exceptional entrepreneurial ability in the form of outperforming others on desire for success, creativity, ability to evaluate and react to risk well, attention to detail, and relevant track record, the venture is much more likely to succeed (Kakati, 2003). Leadership quality and the ability to evaluate and react to risk are important for the long-term success of the venture. Furthermore, ICVs that showed to be highly successful in gathering resources in terms of managerial capability, technical capability, marketing capability, and input sourcing capability, were also much more likely to be successful (Kakati, 2003). Other antecedents of successful ventures were performing well in strategy development to develop multiple strategies and the choice of the right market. The right market was characterized as a market that enjoys significant growth

or a market where the venture is able to stimulate the existing market to grow or even change.

Training programs have also shown to improve new business creators' prospects in setting up a business and being able to maintain that. A training program based on the owner-management business planning program designed by the UK Small Firms Lead Body (1996) showed to help improve the skills of the participant and self-confidence in his or hers abilities (Henry, Hill, & Leitch, 2004). Next to that, the biggest benefit of such a training program is the contact and communication with other aspiring entrepreneurs. Antecedents of entrepreneurial abilities have also been empirically tested (Arenius & Minniti, 2005) and a positive influence was found for knowing other entrepreneurs, perception of failure and confidence about one's own skills. Illustrating that a training program that improves these aspects will aid to be beneficial for the success of entrepreneurial activities. The most beneficial elements of the mentor-training program by Arenius & Minniti (2005) were the training sessions (40%) and the completion of the business plan (40%) according to the trainees.

### Literature Findings

- ICV teams need both scientific and practical knowledge to succeed.
- Entrepreneurial ability, leadership quality, and capabilities are important factors in improving success chances of ICVs.
- Increasing networks of ICV team members helps to gather more capabilities in the team

## ICV Business Model Innovation

The objective of ICVs is frequently to commercialize breakthrough innovations (Maine, 2008) and thus to establish a business that targets new or existing markets that are adjacent to the core activities of the firm. Commercializing an idea implies to set up a new Business Model (BM) for that idea (Futterer, Schmidt, & Heidenreich, 2017). ICVs primary task is to create new to the firm, or new to the world businesses (Kuratko et al., 2009) to drive long-term revenues and to improve corporate performance (Kim & Min, 2015; Lambert & Davidson, 2013). New to the firm, or new to the world businesses generally require BMs that are different from that of the core business. Thereby highlighting the importance of the Business Model Innovation (BMI) ability for ICV creation within established businesses. Researchers even argue that good performed BMI can be considered key to a firm's performance (Zott, Amit, & Massa, 2011).

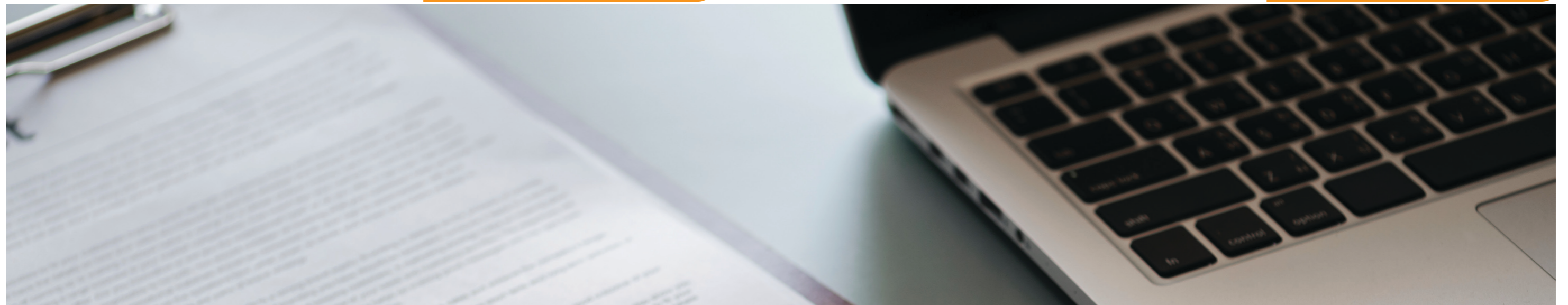
A BM is commonly predefined by multiple core elements that make up the BM (Osterwalder & Pigneur, 2010). The Business Model Canvas (BMC) is one of the methods to provide a clear overview of the different elements that are subject to BMI. Defining the core elements takes effort and is subject to change over time. Furthermore a change in one of the elements can lead to changes in the other elements as well (Siggelkow, 2002). Therefore, companies should act lean and agile and be able to change different aspects of the business quickly to new discoveries or changing customer demands. Especially in the uncertain environment of ICVs such tools like the BMC can help in communicating prospective BMs towards others in order to champion new business ideas (Chesbrough, 2010). Clear communication of the business model towards top management for support is important,

but also within-team-communication should be encouraged in order to get everyone on the same page.

ICVs can require very different BMs than the multinational is used to, the BMs might even be new to the world. Such BMs should be tested early on during the ICV process and then adapted further to ensure fit within the market and the company. New BMs also need different approaches to the core elements of a BM. For example, service-based BMs might not need inventories or big supply chains, but will be more susceptible to more intangible things like quality of employees (Zolnowski, Weiß, & Böhm, 2014).

### Literature Findings

- Business Model Innovation is central to new business development.
- The BM can be used as a communication tool for ICVs.
- Many ICVs require different BMs than traditional businesses.



## ICV Networking

ICV requires multiple sources of knowledge, existing and new knowledge, combining them creates unfamiliar situations for the business (Hargadon, 2002). The more innovative the product or solution, the more diversified the need for knowledge becomes. Projects like these demand very situation-specific knowledge requirements (Eisenhardt & Martin, 2000), illustrating the unlikelihood of one project team to possess all of the demanded knowledge. However, one of the advantages of ICV lies in the close vicinity of other ICVs and the core business to exchange and integrate knowledge.

Multiple studies address the importance of networks for radical or breakthrough projects (Leifer et al., 2002) and entrepreneurial activities (Johannisson, 2017; Maritz, 2010). Networking does seem to be one of the important aspects due to the nature of ICV in developing highly uncertain and risky projects. Networks help to gain access to knowledge that is generally dispersed in the organization. A network provides the ability to influence other participants to support objectives and even gain access to knowledge beyond one's direct network (Kelley, Peters, & O'Connor, 2009; Knoke, 1990). Although the important connectors in networks are the individuals, organizations also play a part in improving networks within the company. Organizational Network Capacity (ONC) which consists of the willingness of members to contribute to projects and the ease of which information flows through the organization from experts with situation-specific knowledge to the ones in need of the information (Kelley et al., 2009). Developing high ONC within an organization is essential for effectively exchanging knowledge between all members of the organization, however, it does take long-term efforts to integrate knowledge exchange behavior within an organization.

Next to that, entrepreneurial activities within firms also seem to benefit from networks that extend beyond internal ties to external ties in the same industry (Soh, 2003). Firms that are able to leverage direct ties by considerate choices of partners that provide access to others have better chances of developing better performing products. These firms have more access to information about competitors and their innovations and can leverage this in order to discover new opportunities. Furthermore, expensive lessons can be learned relatively cheaply by having access to information about misallocated resources of other companies in the same industry.

Next to that, collaborative behavior in NPD team in China showed to influence innovation performance, as well as information exchange seems to positively affect innovation performance (Liu, Chen, & Tao, 2015). Thus, the communication and information exchange between ventures can positively influence venture- and innovation performance through the acquisition of new knowledge. This new knowledge can be obtained from internal or external resources. Access to external resources has also shown to have a more positive effect when there is a big gap between the firm's own expertise and the information it needs to develop the innovation (De Clercq & Dimov, 2008). However, internal information is generally more company-specific and can provide the firm with a competitive advantage.

Informal networks can also positively influence knowledge flow and exchange and therefore lead to greater innovation performance. Socially established informal networks between two people, even though they might not be work-related, do increase the likelihood of knowledge spillovers between them (Breschi & Lissoni, 2003, 2006). Furthermore, simple knowledge seems to spread equally in distant and close networks, however moderate-complex knowledge spreads much better in close networks than in distant networks (Sorenson, Rivkin, & Fleming, 2006). This illustrates the importance of both having formal and informal social networks within an organization to facilitate knowledge flow, distribution and sharing.

### Literature Findings

- ICVs require a lot situation-specific knowledge.
- Especially ICVs benefit from ties that extend to places outside the company network when internal expertise is not sufficient.
- Communication and information exchange between project teams is beneficial for the performance of those teams.
- Informal networks increase the chances of knowledge spillover.

## ICV Vision Communication

Internal and external communication of ventures can improve chances of successful internal corporate venturing. A study on 183 ventures showed that the contents of the venture leader's vision can have a significant effect on the outcome of the venture (Baum, Locke, & Kirkpatrick, 1998). For example, a clear vision focused on growth of the venture (e.g. rapid expansion or building a well-known brand) positively affected the growth that was measured two years later. This reasoning has been backed up by more recent research which illustrates that a vision that is identifiable for team members altogether, positively influences the team to pursue that vision and to make it a reality (Stam, Lord, Knippenberg, & Wisse, 2014).

Sharing a vision within the organization is positively associated with organizational commitment, job satisfaction and follower performance in large organizations (Kohles, Bligh, & Carsten, 2012). In smaller firms, vision communication and sharing showed to improve financial performance and productivity (Jing, Avery, & Bergsteiner, 2014). Both these views on vision sharing are evidently comparable to internal ventures within a big organization. Vision sharing of the venture program might lead to improved organizational commitment and improved performance, while vision sharing within the venture can improve financial performance and productivity of the venture itself. Illustrating the benefits around vision sharing within new ventures. However, venture program leaders and venture leaders do need to have the means in order to be able to share this vision.

Sharing visions can be done in multiple ways. Many companies already share their vision with the world through their corporate website. An example is Philips' vision "to strive to make the world healthier and more sustainable through innovation, with the goal of improving the lives of 3 billion people a year by 2025" (Philips, 2018). Of course, this vision is also communicated through corporate introduction trainings. However, it remains unclear how this vision translates to business group levels or to development teams. The different innovation projects also require different specific visions for the future use of the project. Having a detailed vision of the market has been proven to have positive effects on the outcome of radical innovation projects (O'Connor & Veryzer, 2001; Reid & De Brentani, 2010, 2015; Reid, De Brentani, & Kleinschmidt, 2014). Illustrating the importance of having a vision for internal venture development. Furthermore, this vision has to be communicated both horizontally and vertically to create awareness of the

importance of the ICV.

### Literature Findings

- Vision communication positively influences team performance in terms of motivation and vision execution.
- Communicating a detailed vision positively influences development of radical innovations.

## Community Building

A Community of Practice (CoP) is a group of people that are bound together in an informal way by a shared expertise in- and passion for a specific interest (Wenger, McDermott, & Snyder, 2002). However, members of a CoP are not only just interested in the specific domain, they are also practitioners in that domain or interest. These CoPs range from being very structured to highly unstructured with weekly physical meetings or only by online mail interaction (Wenger & Snyder, 2000). Communities of Practice can exist in hobbyist environments, but also in corporate environments and are of voluntary nature; nobody is expected to join. They are based on the sharing of experience and expertise for collaborative problem solving through informal communication activities.

CoPs can have a huge impact on organizations. They are able to solve longstanding problems, generate new knowledge, develop people's professional skills and drive strategy (Wenger & Snyder, 2000). Although CoPs are generally set-up and act in an informal way, they can benefit from supporting practices like a supporting infrastructure within the organization. Recognizing this potential of CoPs is the first step of companies to set up successful CoPs. However, this can be hard to do. The value of communities is sometimes hard to see. For example, the effects of knowledge sharing are not immediately visible. Furthermore, results of the community emerge in teams, business units and individual practices, and it is not evident those arise from the community or because of other activities.

Building a community is about finding the delicate balance between autonomous, informal activities and company guidance. CoPs should be informal of nature and members should be able to join the meetings voluntarily. Intrinsic motivation should be the determining factor for participation in CoPs. This means that CoPs should not be directed too much by corporate management, instead they should play a more supportive role in providing adequate resources like meeting rooms, accessible databases and dedicated time.

## Appendix C - Interview Guide

### Interview Guide – Stakeholder Interviews

The interview guide was set up selectively ask questions to the different interviewees. A general structure for the interview guide was set up together with two consultants. A part of the interviews was used to target the side-project, the NBX Portal. The general interview guide was designed to be used for venture team members. Stakeholder-specific questions were also set-up and would either be asked as addition or replacement of parts of the interview guide.

*Update: After the first feedback meeting with my supervisors, the interview guide was adapted to focus more on underlying problems. Adaptions are printed in italic an are added to gain a deeper understanding of the situation and challenges that the stakeholders are facing. Furthermore, something that is not necessarily visible from the interview guide, is the use of the 5 whys (Po-jasek, 2000). This is an iterative interviewing technique to uncover underlying causes by repeating the "why?" question. The five refers to the amount of "whys" that are in general sufficient to arrive at the root cause of certain problems or challenges.*

### Introduction

Hi...

Thank you for joining us in this interview. My name is Vincent Baas and I am supporting the NBX Office in assessing user needs regarding information communication and distribution. Are you familiar with the NBX Office? [Answer interviewee].

I will shortly introduce NBX to you. The NBX process is used for the development, launch, delivery, and scaling of new businesses and solutions. The NBX Office has been set-up to accelerate and increase the success rate of new business creation and development within Philips.

In order to improve the support of the NBX Office, we are interested in the different needs of the different users of NBX. By this short interview, we would like to gather insights in the information needs of the different user groups.

In this interview, we would like to know your thoughts and insights on the information you need to run NBX programs. We have divided the interview in questions regarding:

- Your current situation
- Current information gathering
- Improvement of current situation

- NBX portal
- Current best practices

### Venture Team Member

#### Current situation

- How would you describe your current role in relation to the NBX program?
  - What main activities are associated with this role?
  - Which group(s) of people do you work with?
- What kind of information related to New Business Development do you need to execute your role properly?
  - What information regarding ... do you need?
  - In what format would you like to receive this information?
    - Why?
- What means do you use to successfully execute your role?
  - Why do you use those means?
  - How did you locate those means?
    - Why did you locate them in that specific way?
- How do you leverage those means?
- How do you think you are doing compared to other ventures?
  - Are other ventures doing similar stuff?
  - Are other ventures in the same stage?

#### Current information gathering

- Where do you currently find the information you need?
  - E.g. online portal, talking to other people, collaborating with other NBX programs, other...
  - Where would you like to find this information?
    - Why would you like to find this information there?
- How do you find the right NBX information?

- How easy is it for you to find the right NBX information?
- How accessible is the NBX information that you need to you?
  - *Why is it accessible/ not accessible?*

#### Improvement of current situation

- What improvements do you envision to get access to NBX-related information?
  - Where would you like to find this information?
  - What information would you like to be able to access?
    - *Why would you like to access that information?*
      - *Why?*
  - In what format would you like to have the information accessible to you?
    - *Why would you like to have that format?*
      - *Why?*
- How would your ideal workflow in NBX look like?

#### NBX portal

- How do you use the NBX portal?
- What kind of NBX information is missing do you think?
- How do you see the role of an online portal?
- What kind of information do you expect to find in an online portal?
- If it would contain this information, would you use the online portal?

#### Current best practices

- What tools or practices from within Philips help, or would help you during NBX?
- Are you aware of any tools or practices from outside Philips that help, or would help you during NBX program?

#### Horizontal communication

- **How do you communicate with other ventures?**
  - **If directly,**

- **Why do you communicate with other ventures?**
- **How do you reach out to them?/ How do they reach out to you?**
  - **Why is it in this way?**
- **How have you gotten access to them?**
- **How do you know that is the right source of information?**
- **If indirectly,**
  - **Why do you communicate with other ventures?**
  - **Why is it done indirectly?**
- **If not,**
  - **Why are you not communicating to other ventures?**
  - **How could you improve your situation?**
    - **Would communicating with other venture improve the situation?**
- **How would you like to communicate with other ventures?**

#### Venture Lead

##### Current situation

- How would you describe your current role in relation to the NBX program?
  - What main activities are associated with this role?
  - Which group(s) of people do you work with?
- How do you interact with your team?
  - E.g. communication by physical meetings, Skype, portal, Outlook
  - How much do you interact with your team? What frequency?
- How do you interact with your team's sponsor?
  - What information do you show him?
  - What information does he require from you?

- How do you select your team?
  - What criteria?
  - Complementary team members?

#### Senior Management

##### Current situation

- How would you describe your current role in relation to the NBX program?
  - What main activities are associated with this role?
  - Which group(s) of people do you work with?
- How do you evaluate NBX programs?
  - Based on what information?
  - Which metrics or evaluation criteria are most important in your decisions for budget allocation towards the program or decision of terminating the program?
- How do you currently communicate with your NBX team?
  - E.g. Skype, Outlook, SharePoint
  - In what format do you receive information on the progress of the program?
    - In what format would you like to receive this information?
  - (Optional) What kind of information do you need to initiate an NBX program before Pre-Seed?

#### Supporting Function

- How would you describe your current role in relation to the NBX program?
  - What main activities are associated with this role?
  - Which group(s) of people do you work with?
- How do you support NBX programs?
  - E.g. guidance, advice, tools, work collaboration
- How is this different from your main function within Philips?
  - How do you fit this into your main activ-

ities for Philips

#### NBX Office

- How do you describe your role to the ventures
- What do ventures expect of you?
- What do you expect of ventures?
- How do you support ventures?
  - Why?

## Appendix D - Subtracted interview data

Interview data has been redacted for confidentiality purposes, for more information contact the author of this thesis.

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## Appendix E - RCA + Workshop

A creativity workshop of one hour was performed with two members from the NBX Office. The workshop was supported by slides and tools like colored markers, fine liners & post-its and a flipchart were arranged beforehand. The goal of the workshop was to identify problems to why ventures are not performing optimally. RCA+ was chosen as the main method because it helps to structurally uncover causes and conflicts within existing phenomena. During the workshop a short introduction of RCA along with examples was given to the participants.

*"Welcome to this Creativity Workshop. I have invited you because I think you could help me identify the underlying problems that the NBX ventures are facing. During this workshop, I will introduce you to Root Conflict Analysis (RCA), which is a problem identification tool that was created by Valeri Souchkov in collaboration with the University of Twente."*

*During RCA+ you have to think in causes, what is the cause that something happens? Example: When a person goes to the supermarket you might ask, why a person goes to the supermarket? The answer would be to buy food, this the goal. However, if you ask what the cause is that a person goes to the supermarket; the cause is because he does not have food at home. This is an important distinction, because you cannot*

*solve goals, you can only solve causes or problems. You might think of ways on how to solve the cause of not having food at home other than by going to the supermarket.*

I will introduce a short example of RCA, the example of a computer that crashes from overheating.

There are some rules to RCA that should be followed.

- The cause should be a direct answer to the question; What causes the phenomenon?
- Negative causes or actions will be written down on purple post-its
- Positive causes or actions will be written down on blue post-its
- Causes or actions with negative and positive effects will be written down on orange post-its"



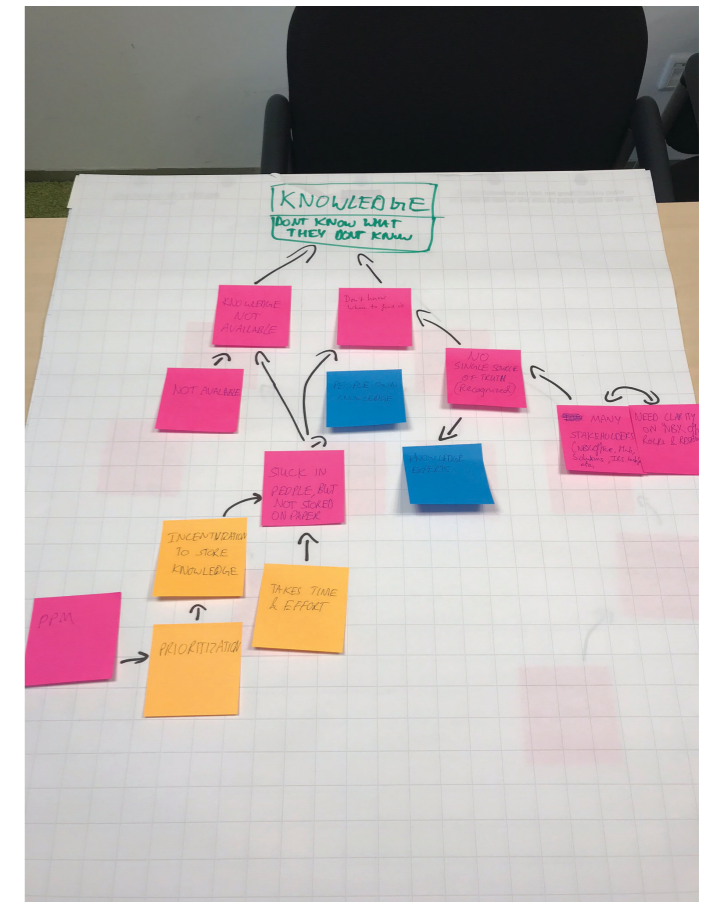
After the introduction, the workshop started with identifying the main causes to why ventures are not performing optimally. Out of the five identified causes, two were chosen to be looked further looked into during the workshop. The two causes of "Lack of Knowledge" and "Lack of Capabilities" analyzed using RCA+.

The main problem was written on a Flipchart and the participants could then write causes on post-its and connect them in a logical manner to the main problem or other causes. During the exercise, the participants had room to discuss and change the order of the causes. Due to my experience from the interviews and with RCA+, the participants could be guided and supported in putting the causes in a logical order. After the first RCA+ was done, the process itself and the findings were discussed.

During the second RCA+, participants were granted more freedom because the process was understood better. The second RCA+ was performed faster than the first one, but resulted in a similar depth of causes. The outcome of the RCA+ workshop gave insights in the causes to why the NBX programs were not optimally performing.

Facilities

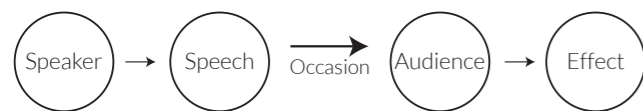
- Room 42A
- Markers – Black/ Blue/ Red/ Green
- Fine liners – Black/ Blue/ Red/ Green
- Post-Its – Orange/ Pink/ Blue
- Flip-over chart



## Appendix F - Literature Review Interaction

Ventures need to communicate in order to learn from each other. The three main types of communication are (1) written communication, (2) oral communication and (3) non-verbal communication. Written communication refers to communicating information through letters, emails, memos, posters or other documents. This type of communication, especially between adolescents, has increased exponentially with the rise of the smartphone (Smith, 2017). Oral communication refers to face-to-face communication and phone or video calling. Despite the rise of the smartphone amongst adolescents, university students still prefer oral communication methods above the other types of communication for work, school and social communication (Robinson & Stubberud, 2012). The last type of communication, non-verbal communication, refers to gestures or simple body movements.

For a long time, researchers have been trying to grasp this phenomenon of communication. Aristotle already described a speaker centered model. This model (figure 6.1) is considered to be the first model of communication and was introduced by Aristotle (384-322 B.C.). The model consists of 5 basic elements, (1) speaker, (2) speech, (3) occasion, (4) audience and (5) effect. Criticism on this model is that there is no room for alteration and it mainly focuses on public speaking.

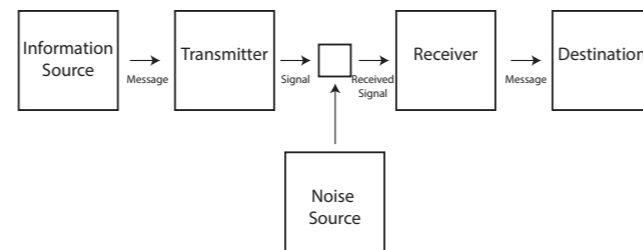


Aristotle's Model of Communication

Figure 6.1 - Aristotle's Model of Communication



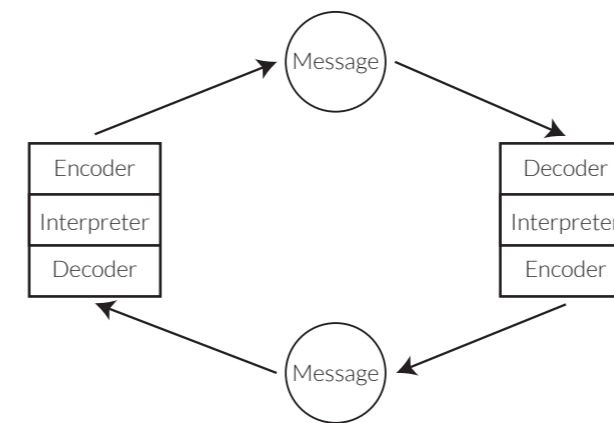
A more generic communication model that portrays communication as a linear process is described in 'The Mathematical Theory of Communication' (Shannon, 1948). The model (figure 6.2) describes how an information source is being coded and then transmitted into a signal. The signal is received by a receiver who decodes the message in order to understand it. During the transmission of the signal, there is room for noise that can alter the signal and therefore change the message, these are unwanted additions that were not intended by the information source. However, this sending-focused model is very generic and fails to grasp the aspect of interaction between two parties.



Shannon's Model of Communication

Figure 6.2 - Shannon's Model of Communication

Interaction is a two-way form of communication where both actors behave as a sender and a receiver. Schramm illustrated this in his interaction model (figure 6.3)(Schramm, 1954). He emphasizes on the role of an actor as both being a receiver and a sender with regard to information exchange.

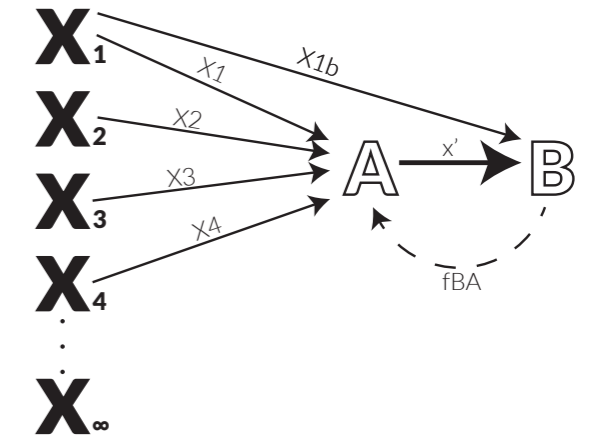


Schramm's Model of Communication

Figure 6.3 - Schramm's Model of Communication

Later, Westley & MacLean (1955) introduced the feedback component in order to be able to improve communication and knowledge transfer between two parties (figure 6.4) (Westley & MacLean JR., 1955). Using feedback, messages can be adapted, shortened or improved in order to suit the message's purpose. Generally, all of these models describe a sender who encodes a message in a certain format to be decoded and interpreted by the intended receiver. Providing this feedback in the model introduces a way to improve, a way to learn from the other.

However, based on Locke's cognitive theory (1968) that states there is a relationship between one's goals and subsequent behavior, Westley & MacLean's model (1955) feedback loop will therefore only work when there is a shared goal of being able to learn from each other. Motivation to interact and communicate arises from the goal of being able to improve oneself or a team in solving future challenges (Locke, 1968).



Westley & MacLean's Model of Communication

Figure 6.4 - Westley & MacLean's Model of Communication

Traditional learning theories see training as one of the fundamentals of learning. Training can be seen as the transmission of knowledge within a focused and controlled environment that excludes the complexities of the natural setting (Brown & Duguid, 1991). However, early training programs by practicing in the real environment have shown to significantly improve participants' capabilities (Baird & White, 1984; Latham & Saari, 1979). Building further on this recognition of the impact of training programs in the real environment, the concept of legitimate peripheral participation (LPP) was introduced (Lave & Wenger, 1991). LPP involves becoming an 'insider' of a practice and focuses on learning to be a practitioner. This essentially implicates close learning from experts in short feedback loops.

The acquisition of knowledge from people that are in similar positions or have similar status is called peer learning (K. J. Topping, 2005). Peer learning is a natural phenomenon that can be witnessed in many contexts from interaction between students to interaction between animals. Traditionally, there was a belief that peer learning should be done through surrogate teachers that were regarded most similar to the professional teachers (K. J. Topping, 2005). However, more recent research has uncovered that peer learning between people with similar capabilities might even provide more benefits through learning by knowledge obtainment for the receiver and learning by teaching for the sender.

This double-edged sword of peer learning can be translated into multiple forms of peer learning. One of the more traditional forms of peer learning, peer

tutoring, is most similar to the way in which professional teachers work, but creates this bidirectional benefit for both actors. Furthermore, roles can easily be switched and it requires less formal settings (K. J. Topping, 2005). Another traditional method of peer learning is cooperative learning. Cooperative learning focuses on having a shared assignment during which information exchange happens in order to solve the assignment (Slavin, 1990). Both forms of peer learning can have significant advantages in knowledge improvement in the targeted area (K. Topping & Ehly, 1998). One extension of the two forms of peer learning that does have significant positive benefits for all involved participants is the activity of peer assessment. This extension of peer learning yields advantages in the form of quick learning for both the assessor and the assessed (K. Topping, 1998).

Looking at peer learning from a social neuroscience perspective, it becomes more apparent why peer learning works. Several studies have indicated that people who are handed responsibilities of working in groups in which they can participate in cooperative learning, perceive feelings of content and excitement. These feelings are strongly associated with the production of dopamine in human bodies which boosts motivation and reward circuits (Clark & Dumas, 2015). The resulting effect is that cooperative learning provides people with intrinsic motivation to continue the activity.

However, there is a general consensus that dopamine only boosts the motivation in order to get to a certain reward (Wise, 2004). Dopamine makes the reward

more attractive on a historical basis, it only works when the reward has historically shown to be beneficial for the participant (Crespi, 1942). More explanatory; tests that blocked dopamine receptors in animals caused them to be non-receptive towards rewards and therefore decrease their willingness to perform to almost zero (C. Spyraki, Fibiger, & Phillips, 1982; Christina Spyraki, Fibiger, & Phillips, 1982; Wise & Schwartz, 1981). This illustrates that some kind of reward or incentive for the participant is necessary to be motivated to do a task while dopamine can significantly boost the motivation to do a certain task.

It then becomes clear that there are two ways of looking into this. In order to motivate people more to continuously learn and come back for more, either the reward should be increased or the dopamine levels should be increased. Increasing the reward each time creates this vicious negative spiral in which the incentive should be bigger every time. The consequences of this is that rewards are being less valued and that the activity itself will also devalue over time (Sinek, 2009). Boosting dopamine on the other hand, can be a long-term solution to improve motivation to learn from others. Increasing dopamine can be done by eating different foods, but also listening to music, being exposed to sunlight, having human contact, exercising, doing creative things or meditating (Santos, 2018).



# Appendix G - Brainstorm Preparation

## Brainstorm session 1

First slides were made using PowerPoint in order to later draw them more easily. The inspiration slides can be found in figure G.1 and the drawn out slides can be found in Appendix H.

### Introduction

Thank you very much for joining this session. In the invitation, I asked you to think about the ideal situation of how the NBX Office and the NBX Programs are organized in 2025. I told you that anything is possible. Now I would like to know how you envision that ideal situation.

Roadblock removal -> anything is possible

Roadblock introduction -> what if you could never speak directly to someone?

### Preparation

- Markers, post-its & flipchart
- Draw the slides needed for the presentation
- Introduction : 7 min
- Planning: 2 min
- Rules: 3 min
  - o Always include a drawing
  - o No bad ideas
  - o No negative feedback
- Ice Breaker: 5 min
- Ideal Situation: 10 min
- Brainstorm on venture interaction: 30 min
  - o Roadblock introduction
  - o Roadblock removal
- Closing remarks: 5 min

## Brainstorm Session 2 & 3

Total : 60 minutes

**Goal: Get as many ideas on how venture members can learn from each other.**

- Introduction: 7 minutes
- Planning : 3 minutes
- Rules : 2 minutes
  - o No bad ideas
  - o Quality through Quantity -> as many

ideas as possible

- o Hitchhiking on other's ideas
- o Impractical ideas are OK
- o TRY to include a drawing
- Ice breaker : 3 minutes
  - o What is your hobby? How did you learn it?
- Idea generation : 40 minutes
  - o Inspiration
    - What is it that we can do well at Philips?
    - Why do ventures not talk to each other?
    - Why do some start-ups fail?
    - What if we would eliminate the meeting room?
    - What would a venture escape room look like?
  - o Teleportation:
    - What if we were in a very small company?
    - What if we were in an American company?
  - o Rolestorming:
    - What would happen if super-man could assist you?
  - o Trigger Method
    - Select the best ideas and use those as 'triggers' for more ideas.
  - o How-to's
    - How to learn from others?
    - How to interact with people?
    - How to share knowledge?
    - How to incorporate the NFC tag?
- Closing remarks : 5 minutes



Figure G.1 - PowerPoint slides Brainstorm Session



## Appendix H - Brainstorm Sessions

Three brainstorm sessions were performed with different interested groups. The goal of the brainstorm sessions was to come up with as many ideas as possible, to diverge in multiple directions. As previously mentioned by Osborn (1953) and later demonstrated by Paulus, Kohn & Arditt (2011), to arrive at a good quantity and quality of ideas, instructions should be based on producing the highest quantity of ideas.

Furthermore, different creative stimuli were used to enhance the quality, originality and quantity of the ideas. First of all, all slides were hand-drawn (figures H.2 & 7.3) to invite participants to also create drawings next to writing down their ideas. Next to that, emphasis was put on some general rules during the brainstorm sessions. The rules evolved after evaluation of each session to improve the quality of the subsequent sessions. The final rules stated (1) there are no bad ideas, (2) quality is achieved through quantity, (3) do hitchhike on each other's ideas, (4) impractical ideas are fine and (5) try to include a drawing. Furthermore, different brainstorming techniques were used to trigger the participants' creativity. Techniques that were used during the sessions were imposing roadblocks (e.g. what if ventures could not physically meet), role play (e.g. how would a hotel manager solve this?), iconic figuring (e.g. how would superman solve this?) and time travel (e.g. how would this be solved 10 years back/ in advance).

During all brainstorm sessions, a flipchart was placed on the table and participants could draw or write their ideas on post-its with different markers and then place them on the flipchart. Participants were free to discuss ideas and to think of new ideas. It was found that many times they had to be reminded to write the ideas down that resulted from the discussions.



Figure H.1 - Brainstorm Session



Figure H.2 - Slides Brainstorm Session 1

## Brainstorming on Learning

The first brainstorm session was conducted with two members of the NBX Office and one member of the NBX Hubs. The session was set up to come up with ideas on ways how to make ventures interact with each other. The session took place in one of the common meeting rooms (figure H.1).

The outcome of the session was a diversity of ideas on how to make ventures interact with each other. Many ideas were focused on physically bringing venture team members together on the basis of their function. Bringing the team members together was done by an event or by creating a common space that is accessible to everyone.

Four people attended the second session in one of the more informal meeting rooms (figures H.4 & H.5). A venture lead, a value proposition champion (supporting function) a business development manager (supporting function) and the facilitator attended the session. This session was focused on brainstorming on how ventures can learn from each other and on testing the participants' responses to earlier ideas.

The session was started with explaining the program of the session. The ice-breaker was somewhat similar to the introduction round during the first session, but now the focus was put on how the participants had learned to practice their hobby. This immediately made them think about ways to learn new things. Furthermore, the rules were explained in an informal way to make everyone feel comfortable. I used the example of batman on an elephant (slide 4) to show that impractical ideas are ok and that everyone should at least try to include a drawing of their idea (slide 5).

The outcome revealed multiple ideas on how ventures can learn from each other but also on how ventures can solve the problems they are facing. Ideas included a big intern room with hundred interns running around acting as quick problem solvers for the ventures, having a database consisting of experts based on their experience with specific venture challenges and internal networking events to make people aware of each other.

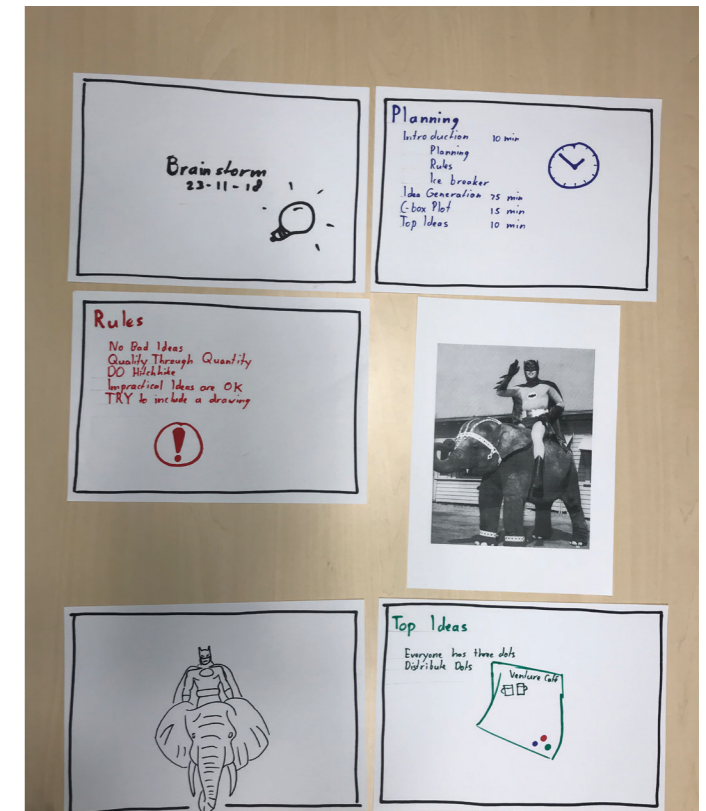


Figure H.3 - Slides Brainstorm Session 2



Figure H.4 - Brainstorm Session 2



Figure H.5 - Brainstorm Session 2

## Brainstorm for Validation

The third brainstorm session was performed with an internal consultant and a business development officer (figure H.6). This session was more informal about validation of ideas and therefore did not require additional slides. Instead, the slides of the second session were re-used.

The main outcome of this session was that the main challenge within the venture environment is the change of mindset. Currently, venture leads believe that venture team members only focusing on tackling challenges and solving problems and this is communicated to their team. However, this provides no time for the venture team members to share learnings and improve their own performance to consequently improve the venture's performance. This change of mindset is required for any innovation to really make an impact within the venture environment.

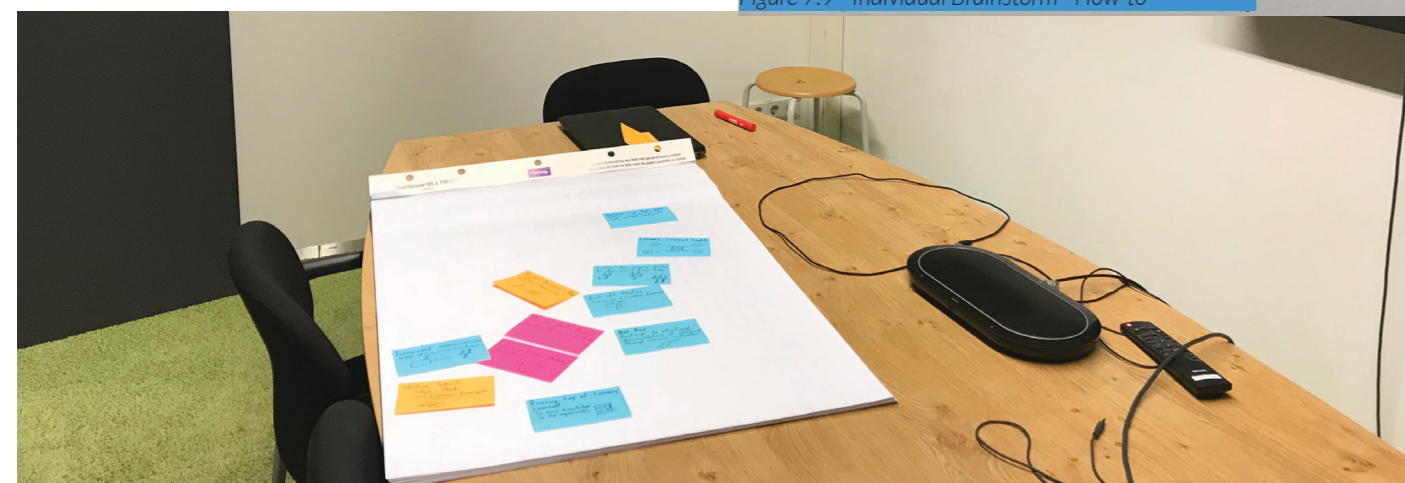


Figure H.6 - Brainstorm Session 3 - Validation of Ideas

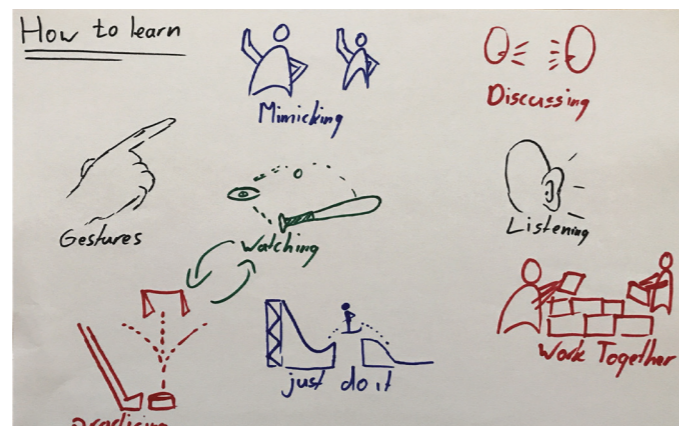


Figure H.7 - Individual Brainstorm - How-to

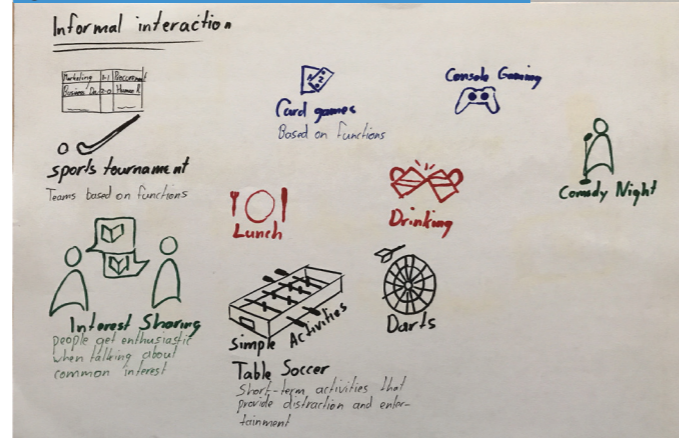


Figure H.8 - Individual Brainstorm - How-to

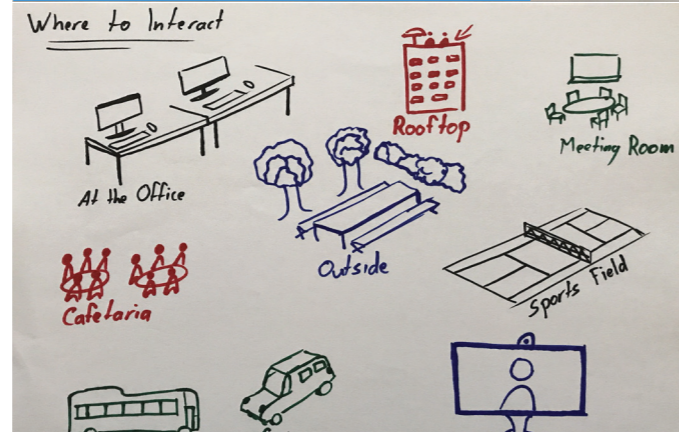


Figure 7.9 - Individual Brainstorm - How-to

## Individual Brainstorming

Next to the group brainstorming sessions, individual brainstorming also happened continuously. Different brainstorming techniques were used to diverge and converge on ideas. These techniques included how-to's (figures H.7, H.8 & H.9), introducing roadblocks, role play (figure H.13), random false rule (figure H.14), random picture (figure H.14), and random word (figures H.10 & H.12) stimuli. For the latter techniques, online tools were used to generate the random stimuli (brainstorm.co.uk, 2018). Free generation of ideas and exploring those ideas (figure H.11) was used to alternate between diverging and converging.

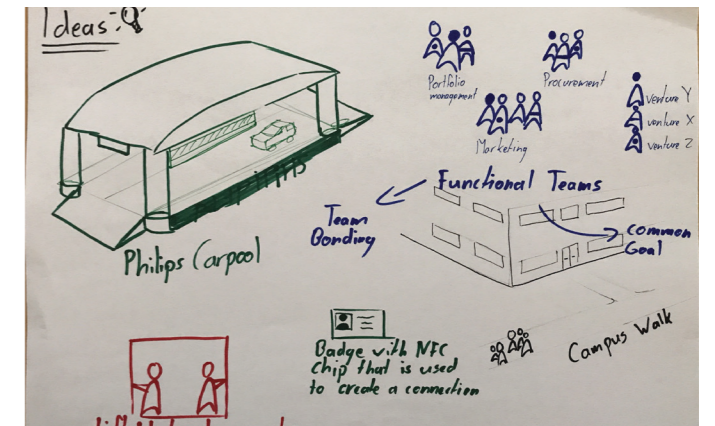


Figure H.11 - Individual Brainstorm - Some Ideas

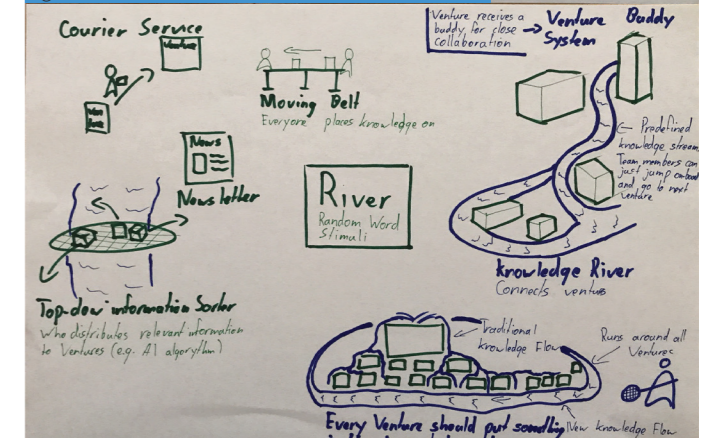


Figure H.12 - Individual Brainstorm - Random Word Stimuli

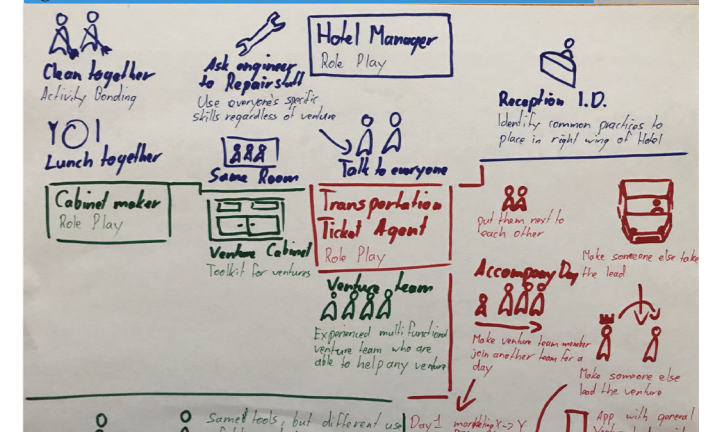


Figure H.13 - Individual Brainstorm - Role Play Stimuli

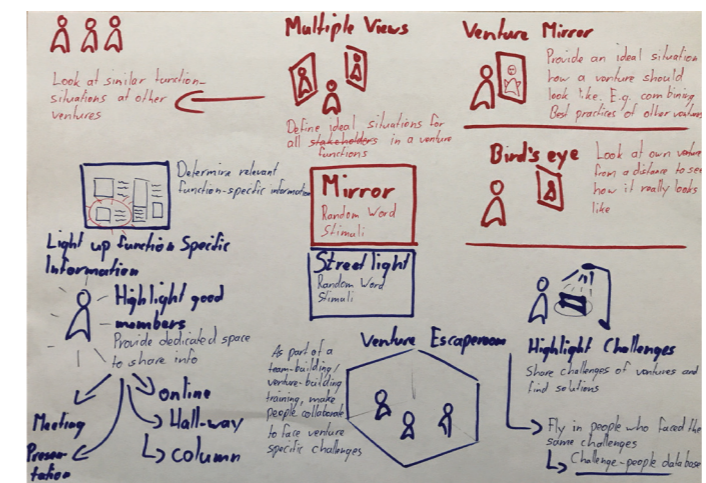


Figure H.10 - Individual Brainstorm - Random Word Stimuli

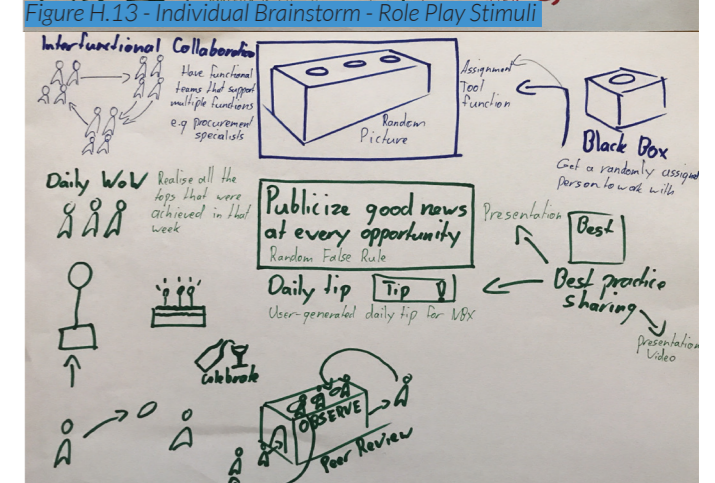


Figure H.14 - Individual Brainstorm - Picture & False Rule Stimuli

# Appendix I - Initial Synergy Platform

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John Doe

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All Tips Daily operations Office Tools Philips Tools Team

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- If you need any help with business model innovation, support is available during walk-in hours between 15:00-17:00 GMT 23 12 Support
- Our new shaving venture will host their new product presentation tomorrow in the auditorium #NewProductLaunch #Event 8 1 Product Dev
- Integrating Microsoft Excel spreadsheets into your meeting notes is easily done using Microsoft OneNote. Go to Insert -> Insert Spreadsheet and select your own spreadsheet. 60 6 Daily Operations Team Office Tools
- Having trouble setting up your team? Contact @Akhil Surapuraman for expert advice 2 3 Expert Team

TOP CONTRIBUTORS

- Jonathan Reese Senior Consultant
- John Doe Procurement Manager
- Kira Berge Marketing Director @PH

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- Akhil Surapuraman Dec 19 • 3 min  
How to set up your team 31 Write a comment Human Resources
- John Doe Dec 18 • 10 min  
How to do NBX day-to-day 45 Write a comment Human Resources

TOP CONTRIBUTORS

- John Doe Procurement Manager
- Akhil Surapuraman Venture Lead Bangalore Shave
- Kira Berge Marketing Director @PH

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### NBX LESSONS LEARNED TO PREVENT YOU FROM REINVENTING THE WHEEL

Lessons that were taught through experience

Benefit from the hard lessons others have experienced so that you do not have to experience the same challenges they faced.

TOP CONTRIBUTORS

- Sen Lee, Business Developer
- Akhil Surapuraman, Venture Lead Bangalore Shave
- Leonard Smith, Marketing Manager

All Lessons Learned Product Dev Software Team Supply Chain Search

**First Attempt In Learning**

Sen Lee, Dec 23 • 12 min

Lessons learned from (un)successful NBX

104 Write a comment

MORE LESSONS LEARNED

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### SEN LEE BUSINESS DEVELOPER

PHILIPS PHILIPS @Ignify NBX EXPERT

TOP POSTS

- Lessons learned from (un)successful NBX
- How to set up a customer research proposal
- Integrating Microsoft Excel spreadsheets into your meeting notes is easily done using...

SEE ALL POSTS

264 USERS REACHED THROUGH POSTS

CONTRIBUTION

- Sen Lee has produced more tips than **65%** of users (#TIPS)
- Sen Lee has produced more guides than **60%** of users (#GUIDES)
- Sen Lee has produced more lessons learned than **70%** of users (#LESSONS LEARNED)
- Sen Lee is more experienced than **90%** of users (EXPERTISE)

STAGES PASSED WITH VENTURES

2 PRE-SEED	2 SEED
1 ALPHA	0 BETA

TRACK RECORD

- BUSINESS DEVELOPER** (Supply Chain, Product Development, Business Development, Process Development, Team Creation, Microsoft Office) - WAKE UP LIGHT, AI SLEEP TRACKING, SMART RESPIRATORY
- BUSINESS ANALYST** (Microsoft Office, Statistical Analysis, Information Analysis, Consultancy, Process Development) - HEALTHWORKS CONSULTING, SETTING UP AI CoP, VALUE PROPOSITION CREATION, HEALTHSUITE
- JR. BUSINESS ANALYST** (Consultancy, Process Improvement, Information Analysis, Networking, Microsoft Office, Statistical Analysis) - HEALTHWORKS CONSULTING, AI BUSINESS ANALYSIS
- INTERN** (Consultancy, Networking, Microsoft Office, Market Analysis) - AI RESEARCH, THESIS, BUSINESS ANALYSIS

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65% PROGRESS 12 LESSONS LEARNED

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Welcome to your profile page, here you can find your own statistics and compare them to those of others.

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- GUIDE: How to set up a Knowledge Management structure within your venture
- QUESTION: What is the best way to attract a first customer? What are your experiences?
- TIP: Generic guides for NBX can be found using hashtags #NBX #manual

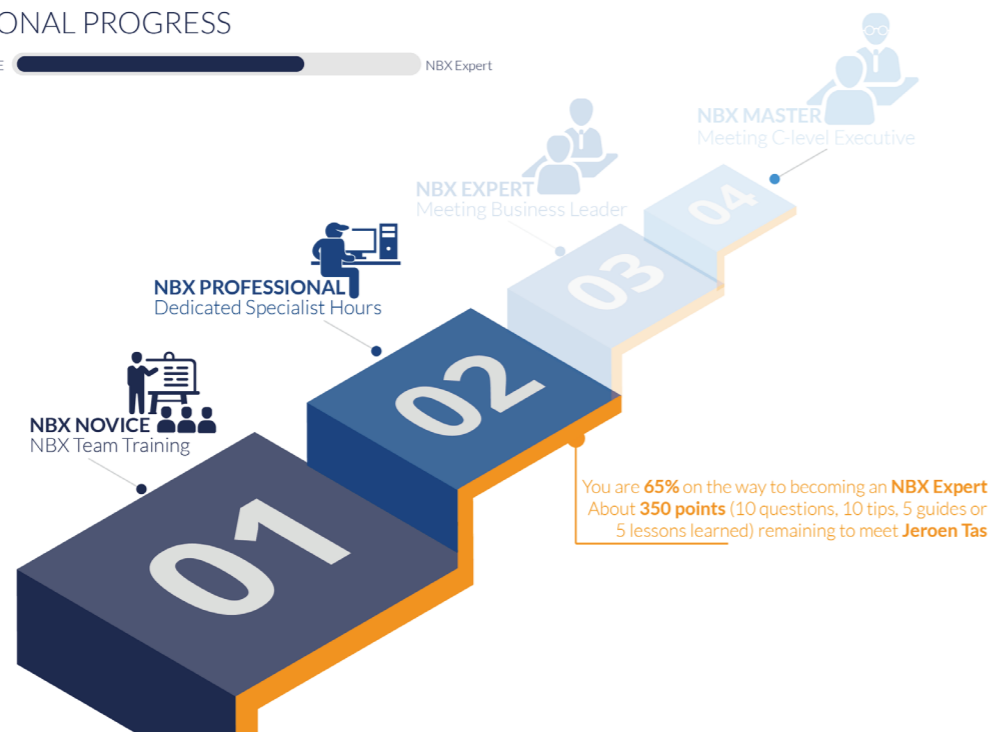
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- You have produced more guides than **40%** of users (#GUIDES)
- You have produced more lessons learned than **55%** of users (#LESSONS LEARNED)
- You are more experienced than **85%** of users (EXPERTISE)

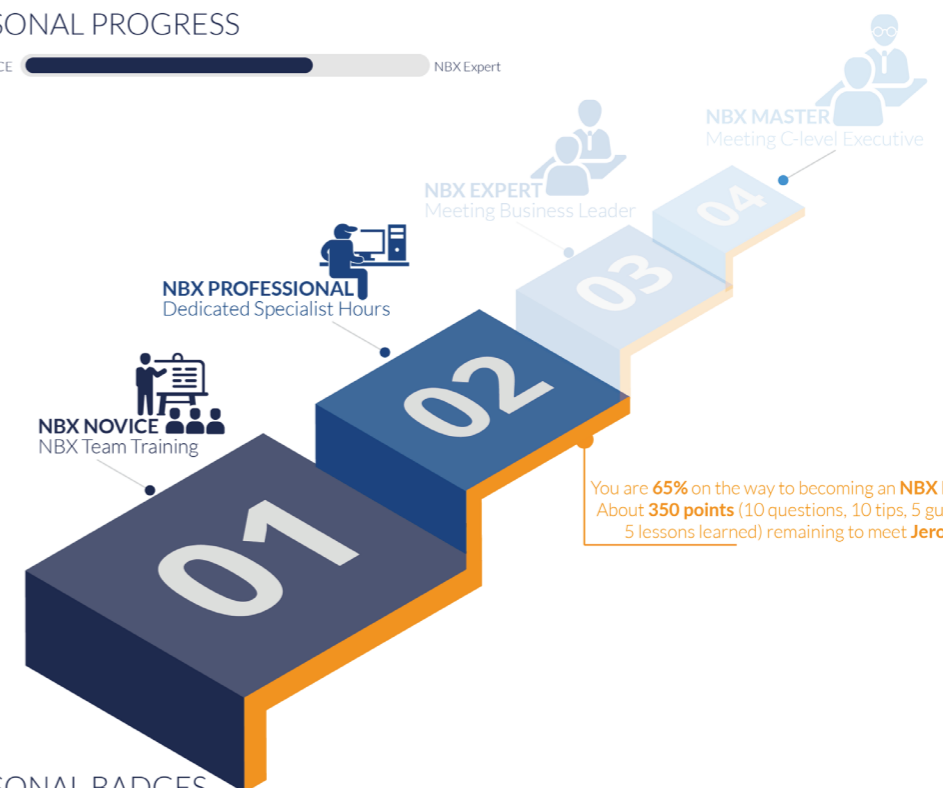
**PERSONAL PROGRESS**

NBX NOVICE NBX Expert



**PERSONAL PROGRESS**

NBX NOVICE NBX Expert



**PERSONAL BADGES**



## Appendix J - Engagement Roadmap

The first horizon (figure 8.11) is all about finding and selecting the right enthusiastic people to drive the knowledge sharing platform. These drivers of knowledge understand the importance and value of knowledge sharing (figure 8.8). They are enthusiastic about the cause of the Knowledge Sharing Platform within Philips and are willing to go the extra mile in order to make it succeed. These are the ones that can help the community attract more people. Identifying the right drivers for the future KSP is critical to its success.

The activities to arrive at the first horizon, a select group of enthusiastic drivers, are divided on who should carry out the activity. The idea is that at first, the NBX Office should initiate and kick off certain activities and later on the drivers can take them over.

The first activity of the NBX Office is to start visiting the different ventures in order to create awareness of the KSP, to identify potential drivers and to scan for more opportunities for the KSP as a tool for collaboration between ventures. Identifying these potential drivers is done through talking about the ways knowledge



Figure 8.11 - Horizon 1

sharing is done currently within ventures and how they think it should be done. The team members who become enthusiastic when talking about the topic of knowledge sharing, collaboration and learning from each other are the potential drivers of the KSP. These are also the ones who will start creating awareness of the KSP voluntarily. Once they start doing that, they can be guaranteed to be well suited to become drivers of the platform. Furthermore, these enthusiasts will be invited to join a short generic webcast on the knowledge sharing platform and its benefits.

The webcast is about the importance of knowledge sharing within Philips with a specific focus on the benefits for ventures. The webcast follows a timeline (figure 8.12) that proved to be very engaging during the different CoP calls that were attended during this project (Chapter 3, observations). It starts with a short introduction followed by one of the venture team members who tells about his experiences and best practices regarding knowledge sharing, then a sneak preview of the KSP and it ends with an invitation to start building an overarching active knowledge sharing community. Especially the lessons learned part of the webcast is important as it illustrates how a 'peer' benefits from knowledge sharing for his venture. Therefore, this is the biggest part during the webcast and attendees are invited to be interactively involved and encouraged to ask questions.

At the end of the webcast, the attendees will be informed how to contact the NBX Office in order to be involved in setting up and growing the KSP. This is on a pro-active basis so that it becomes clear who is intrinsically motivated and committed to support the NBX Office. The aim is to set up a core team of 7-10 drivers for the platform with priority for the people who voluntarily started creating awareness and being involved and then the ones who contacted the NBX Office after the webcast.

Next to creating awareness, inviting drivers and hosting the webcast, there are two more activities the NBX Office should do in order to generate the best possible traction for the KSP. These activities are recommending drivers what future steps would be and hosting weekly walk-in hours. Recommending steps to be undertaken or stuff to develop to the drivers is

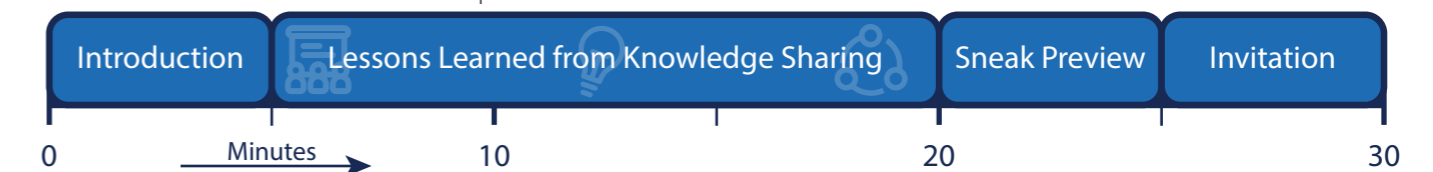


Figure 8.12 - Timeline Webcast

based on the lessons learned from other CoPs. These important lessons and best practices are summarized in a document (appendix X).

The weekly walk-in hours that are hosted by the NBX Office provide moments for the drivers to get feedback or to discuss the next steps to be taken. These walk-in hours are extremely important as they all contribute to lowering the threshold of reaching out and collaborating.

Activities of the drivers next to creating awareness and their active involvement in the KSP are inviting peers to join the webcast, to be on the lookout of KSP opportunities and to initiate documentation of knowledge that could be beneficial to other ventures. Drivers are asked to invite peers to the webcast as they may already know people who are very enthusiastic about knowledge sharing. Next to that, the drivers' input is very valuable to further development of the KSP, therefore they should be on the lookout for opportunities during daily activities that can benefit from using the KSP. Lastly, they should also start documenting their knowledge to develop their knowledge sharing competencies. Furthermore, that first documentation will provide the foundation for the start of the filling of the portal.

Performing all these steps should result in a group of enthusiastic drivers of the KSP that have enough fuel to start contributing to the KSP immediately.

## Horizon 2

The second horizon (figure 8.14) is all about contributing and filling the KSP with interesting and useful content that is generated by the NBX Office and the drivers. The drivers will get access to a simple knowledge sharing platform in which they can create content, collaborate and provide feedback. The simple platform allows to bring them together and to document their knowledge. During this phase, it is important that the community evolves organically in order to achieve self-sustainability of the platform. Therefore, no real tasks or assignments will be given, but rather a small database of specifically selected case studies that suggest best practices for an enhanced experience is the starting point for the simple platform. Next to that, weekly walk-in hours will continue to be organized by the NBX Office during which drivers can ask questions or just come together for collaboration.

A short example of a case study is available (figure 8.13). These case studies are communicated to the drivers to make them understand what happened to make other communities function well. The lesson learned from the example case study is that a community thrives best when the online knowledge sharing is alternated with offline events. Physically meeting other community members lowers the threshold to share knowledge on the platform.

The NBX Office will focus on providing the generic NBX specific information to fill the platform. Furthermore, together with the drivers they will start determining roles of the drivers to efficiently run the platform. These roles can include event organizer, awareness creator, tester and networker. It is preferred that all drivers can act as moderators of the platform to enable them to contribute as much as possible.

Empowering the drivers is also done by delegating the creation of a monthly newsletter to them. The drivers should be the owners of a monthly newsletter that summarizes statistics of the KSP like visits, posts, comments and collaborations as well as feature the most popular knowledge sharings. The NBX Office will initiate this newsletter and will quickly transfer responsibility to the drivers.

The drivers will start using the platform for sharing their knowledge. This goes hand in hand with the creation of driver-generated content. It is important that the KSP will become the main communication- and collaboration tool between drivers in order to fill up the KSP.

Next to filling in the platform, gamification principles will also be extensively tested during horizon two. Horizon two incorporates the shift from a simple knowledge sharing platform to an exciting, gamified collaboration platform, more details about this transformation can be found in horizon two of the gamification roadmap. Although most of this gamified collaboration is already designed, the second horizon will be used to test the operation of the gamification and to validate or adjust the scoring system.

**CASE STUDY: Both online as well as offline**

**Saransh Kataria**

*Saransh has been running the Facebook Developer Circle Delhi community for the past 2.5 years, these are his experiences from the CoP.*

I had been involved in other communities in the past, but Facebook Developer Circle Delhi, NCR was the first truly online as well as offline community. Other communities that I had organized in the past existed either as discussion forums online, or they were ones which had a bunch of offline meetups regularly.

With the inception of developer circle, we wanted to address both of these. We were a Facebook group, hence it was easy to have people discuss online, and we were anyway organizing events offline.

Having technical discussions in a Facebook group was difficult initially. People did not see Facebook as a platform for having those discussions. But eventually, it did start happening because of the ease of using a Facebook group. Here are some insights about the activity in the group for the past 60 days:

**683 Posts**   **3,216 Comments**   **8,448 Reactions**

683 Posts	+7%
3,216 Comments	+16%
8,448 Reactions	+17%

**Active Members**

7,920 Active Members
----------------------

And for the offline piece, we have had around 40 meetups in the past 2.5 years.

Figure 8.13 - Case Study

At the end of horizon two there is an exciting and engaging knowledge sharing platform that has working gamified principles such as point scoring through online collaboration, profile creation, leaderboards and tracking of personal progress. The platform will be ready to scale in order to be extensively used and incorporate bigger amounts of members and data.

## Horizon 2

2019 Q2

Walk-in Hours

List of suggested actions

Newsletter

**Tools and activities**

**NBX Activities**

- Open platform to drivers
- Generation of NBX-content
- Determining roles of driver team
- Communicate suggested actions
- Enabling drivers to contribute
- Overseeing creation of monthly newsletter

**Driver Activities**

- Start using platform
- Determining roles of driver team
- Creation of driver-generated content
- Compiling of newsletter

Figure 8.14 - Horizon 2



## Horizon 3

Horizon three of the engagement roadmap (figure 8.16) revolves around scaling the gamified knowledge sharing platform to all ventures. A first step is to open up the platform to be used by all ventures and communicating this. Multiple small scale launch trainings will be set-up to start involving venture teams in the KSP. Gradually and semi-organically growing the KSP is essential to its success. Therefore, the goal is to make drivers mostly support, moderate and educate others on the KSP

A smooth introduction will be one of the determining factors for new users to be convinced by the KSP and to continue using it after the introduction. Therefore, biweekly launch workshops are set-up by the NBX Office in close collaboration with the drivers. These launch trainings will consist of an introduction to the KSP and interactive workshops focused on mastering the different functions of the KSP like creating profiles, searching for information and creating posts. An example of a timeline for a workshop that introduces the KSP is shown in figure 8.15.

The launch trainings will provide the opportunity for new users to create a new profile picture using the photobooth and then to personalize their profiles. It is important to personalize their profiles in order to make the new users more connected to the KSP. If creating the profile took some effort, people value their profiles more and will be more willing to improve them by acquiring more points.

It was decided to host small scale launch trainings in order to gradually grow the amount of users in the KSP. This has advantages over a global launching event because it helps to lower the threshold for new members to start contributing to the platform. A global launching event can even scare of contributors because they are placed in such a big group where only a very small part of the group is interacting. Psychology literature dictates that people are uncomfortable in such big groups where a lot of people are unknown. Therefore, it was chosen to host small scale launching events with one venture team at a time.

Although the gamification of the KSP will help to incentivize contribution of enthusiasts, some will still need to be pushed into the right direction a little bit. This is done in two ways, (1) by a welcoming message in the KSP and (2) by relying on personal favors of the core team. During each launch training, a welcoming message will be displayed to encourage the new members of the KSP to start sharing knowledge. This welcoming message is posted publicly in order to put a little bit of social pressure on the new members. At the end of the launch training, all members should have created a new post and be interactively involved with posts of peers. The second method to encourage them more is that the core team members reach out to their warm contacts to ask them to share some information that might be relevant to others. These requests should be about specific information the contributor possesses and is enthusiastic about. Personal favors help a lot in making people document those interactions which they otherwise would not do voluntarily on their own.

The last tool that is being used in engaging users is the adoption of monthly community calls. These are complementary to the monthly newsletters and discuss frequently asked questions, popular posts and most importantly, discuss a case where people have used the help of the KSP in practice. The NBX Office will initiate these calls, but slowly the drivers should take them over.

The third horizon oversees a huge community of venture team members, interested and affiliates that are collaborating, contributing, sharing and discussing their daily struggles, challenges and lessons learned regarding NBX.



Figure 8.15 - KSP Launch Workshop

### Tools and activities



Photobooth



Newsletter



Community Calls

## Horizon 3

2019 Q3 & Q4



### NBX Office Activities

- Opening platform to all users
- Launch workshops
- Personal favors
- Moderation
- Hosting community calls

### Driver Activities

- Creating awareness of KSP
- Supporting workshops
- Contributions to KSP
- Training peers
- Moderation

Figure 8.16 - Horizon 3

## Appendix K - Gamification Roadmap

The first horizon of this roadmap (figure 8.18) focuses on creating a platform with basic functionalities to empower users to collaborate and share knowledge. This starts with determining the categories and functionalities parallel with initiating the creation of the platform with basic functionalities. Everything in this phase is done in short feedback loops with the initial core team of the KSP.

Determining categories should be done as quickly as possible in order to create the wireframe for the platform. The drivers' input will be used to create an

initial wireframe to map the different categories on. Furthermore, a well-structured taxonomy is essential to a knowledge sharing platform, therefore, this is also done in collaboration with the core team.

Next to that, the basic functionalities of the platform should be developed. These functionalities include a search function, post function, comment and like functions, categorization and moderating functions together with different access levels. These basic functionalities are required to enable the creation of content by different members. A more advanced

functionality is that of the creation of profiles. However, this is an important part of the KSP due to the identified value of recognition. Using profiles, members can see who provided content, feedback and likes to enable recognition. Furthermore, when the KSP becomes more advanced, these profiles will be used to track scores and progress of the users.

Lastly, templates should be developed in order to make the sharing of knowledge as accessible as possible. Some templates are proposed (figure x), but short feedback loops with the core team will allow for optimization of the templates.

When all of these activities are accomplished, a basic knowledge sharing platform should be in place that facilitates improved and easy knowledge sharing to others. However, the basic platform will still rely on intrinsic motivation. That will work for the enthusiastic drivers of the KSP, the core team. However, the big mass will require a different approach that builds on the basic KSP.

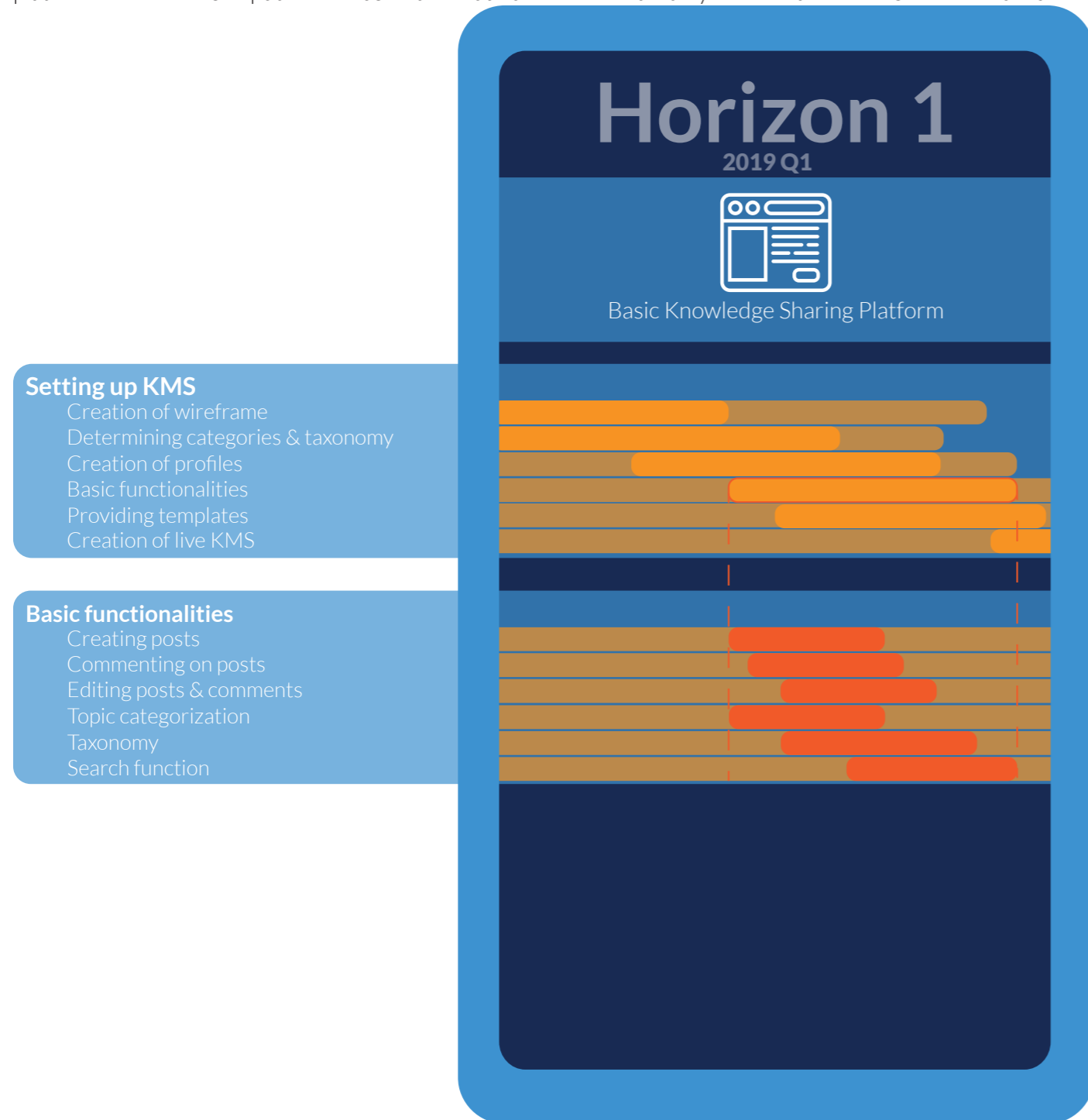


Figure 8.18 - Horizon 1

## Horizon 2

Horizon two (figure 8.19) is targeted at transforming the basic KSP into an exciting and engaging gamified solution. Advanced functionalities of the KSP will be developed to provide the foundation for a self-sustaining platform. Gamifying knowledge sharing means keeping track of quality posts and feedback and their respective reach. This includes distributing points for quality and reach of posts, tracking progress of users' own development and enabling recognition creation through monthly leaderboards, badges and rewards. Horizon two should end with an (almost) self-sustaining knowledge sharing platform.

One of the first functions that will be introduced is the up voting of post and comments to determine which are regarded as the most useful by other users. It was decided to incorporate up voting functions only in order to prevent negative impact due to down voting. Furthermore, this function will result in the possibility to track points based on up votes.

Next to the points that can be acquired through votes, the points system also provides a pre-determined amount of points for every post, comment or like that is produced. In this way, users can acquire points that represent one's activity on the platform. Detailed information on the scoring system can be found in Chapter X.

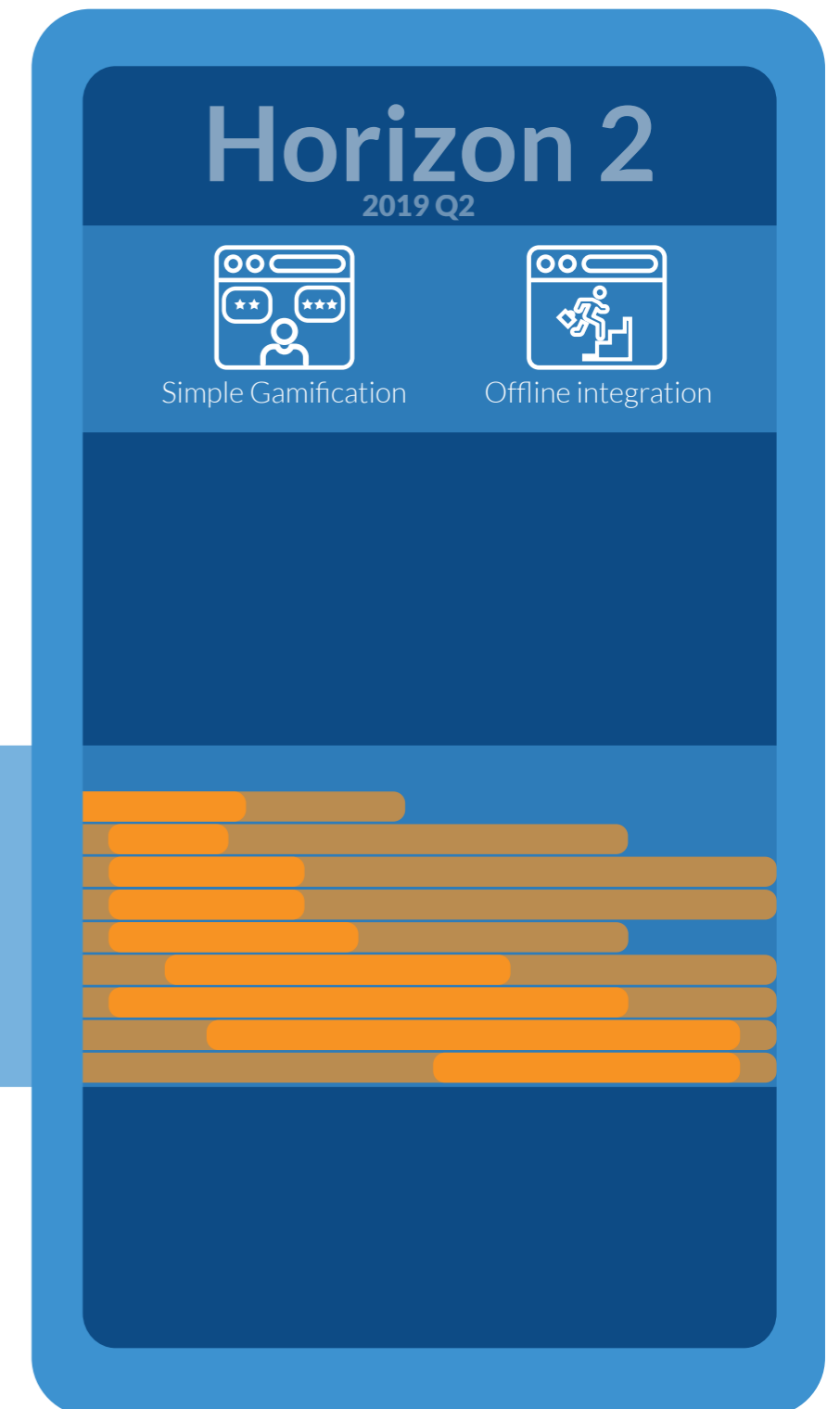
Another advanced functionality of the KSP will be that of leaderboards that track the amount of acquired points by users. The leaderboards display several key metrics such as average sharings & learnings, monthly sharings, learnings & reach and all-time sharings, learnings & reach. These leaderboards grant recognition to the people on there and they will also be the foundation for the distribution of rewards as part of the gamification of the KSP.

Another functionality based on gamifying the KSP is the tracking of users' personal progress. Users can reach certain milestones in different categories. These milestones can mean that they unlock a different color for the font on their profile or that they receive title. More information on the milestones and how to earn them can be found in Chapter X.

Lastly, the homepage also needs an update to become more interactive. It should not require manual monitoring but should link to the most popular posts, most active profiles or coming events. The front-end will remain the same, however the back-end will change to feature automatization of allocating space to different

posts, comments, events, people or leaderboards.

Including all of these functions in the knowledge sharing platform will create an interactive platform that incentivizes its users to contribute. Basic gamification techniques allow for tracking of user activity and engagement. However, although this provides basic functionalities for gamification, advanced techniques can still improve the UX of the platform.



### Gamifying KMS

- Up voting functions
- Profile creation
- Point accumulation for posts
- Point accumulation for profiles
- Leaderboards
- Personal progress tracking
- Interactive homepage
- Introduction of badges
- Introduction of rewards

Figure 8.19 - Horizon 2

## Horizon 3

Horizon three of the gamification roadmap (figure 8.20) is all about providing easy and exciting access to the platform. One of the ways to do this is by the creation of KSP adventure quests, introduction quests with multiple tasks to get users immediately affiliated with the platform and to have them experience the feeling of recognition through the sharing of knowledge. Tasks in these quests range from posting a new best practice to progressing to new levels on the personal profile. They are designed to make new and existing users intuitively use the platform.

Furthermore, other gamification techniques like

daily log-in mechanisms and special events will be introduced. The daily log-in mechanism will reward users that come back daily to share more knowledge or to collaborate using the platform. The events will be designed around real-world events and will include tasks and rewards related to those events. For example, a special event can be to start updating the existing Philips glossary by working together in a live document. Everyone is encouraged to work on it and is rewarded by points. Furthermore, the top five contributors to the live document are invited to join an upcoming Philips conference.

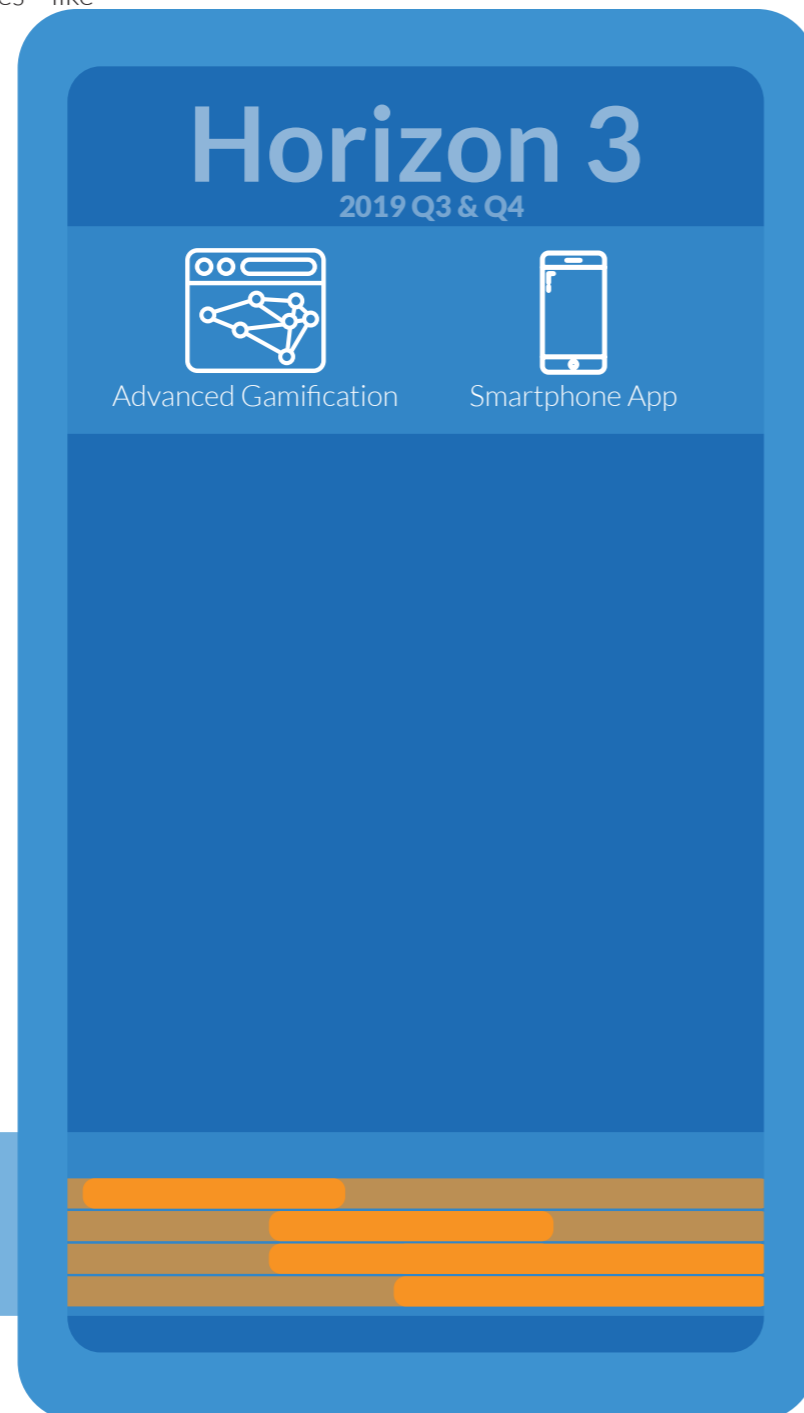


Figure 8.20 - Horizon 3

Other functionalities to be added include offline interaction tracking to stimulate personal and offline collaboration. Tracking of these collaboration can be done by integrating the KSP with existing software that is currently used to set-up meetings. Based on the amount of time of the meeting, the attendees and the roles during the meeting, users will also receive rewards.

Lastly, in order to boost usage of the KSP it is important to make access to it as easy as possible. Therefore, the introduction of a mobile application for the KSP is very important. This makes it possible for users to access the right information anytime and anywhere whilst also uploading important tips quickly. The input for the mobile application will be focused towards quick, short and useful tips that can easily be typed out on a mobile device (figure 8.21).



Figure 8.21 - Synergy application

## Appendix L - Point Scoring System

There are multiple ways to acquire points that can be used to progress in levels. *Figure L.2* serves as a proposal on how to score points. However, it should be taken account that the point scoring system needs some iterations once the platform goes live. Only with real user input and feedback, the right balance between acquiring points and receiving rewards can be reached.

There are different ways to acquire the points. The first and most obvious way is through contributing to the platform in the form of sharing knowledge. Posting a question to the community awards you with 20 points while posting a guide or a lessons are both worth 100 points. It was decided to create this division in points so that asking questions is encouraged in order to keep the platform lively. When users are posting a lot of questions, the supporting functions or drivers of the platform can use that to either respond to the question on the platform, contact the person, or start writing a guide or lessons learned that addresses the question. The question function is very important to bring the information needs of venture team members and venture leads to the surface. Especially supporting function can then decide on what functional support they should focus. Furthermore, posting guides and lessons learned award the contributor with 100 points. This is because these contributions require much more effort than posting a question and can also support other venture members and venture leads much better.

Next to that, it is important to distinguish useful contributions and less useful contributions. This is done by introducing a commenting and up voting system attached to the point scoring system. When a user up votes a contribution, they are awarded 1 point, when they comment on a contribution, they are awarded 5 points. It was chosen to award points in this way to show that providing feedback is very much appreciated. Next to that, when users comment or like a contributor's post, the contributor is awarded with double points; 2 for each like, 10 for each comment. In this way, lively and active discussion on contributions is encouraged. Firstly, the people who are able to start the discussion are rewarded, and secondly, the users who are contributing to the discussion are rewarded.

In order to instill daily habits on collaborating with others, a daily login system is introduced. If a user logs in during all days of his working weeks, he or she will receive a bonus. This daily login provides the possibility to receive 50 points a week by just checking the Synergy platform everyday and therefore stimulating usage of the platform.

Lastly, contributors receive points when they unlock a badge by performing certain tasks. Awarding points for unlocking a badge encourages users to perform a wide array of activities on the platform instead of only focusing on one single activity. Furthermore, it also demonstrates their status towards other users.

Once the platform will go live, it will also be possible to unlock additional badges that are awarded through to the months' top contributors. These are very rare badges as they are only awarded for one month and demonstrate the user was the top contributor during that month.

As said before, the goal of acquiring the points is to progress your knowledge level to the next level. Different levels require different amounts of points. Points are counted cumulatively and achieving a contribution level on venture level, awards the venture with a luxury bonus that they receive (*Figure L.1*). Furthermore, the venture contribution status as well as the personal contribution status are displayed on the personal profile.

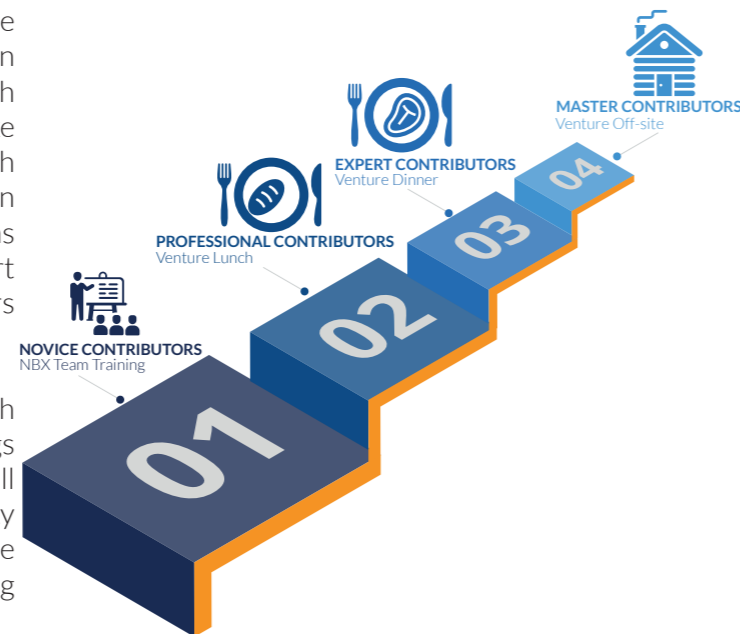







Figure L.1 - Reward Scheme





### Points for contribution

			<b>Giving</b> ⊕	
<b>20 points</b>	<b>100 points</b>	<b>100 points</b>	<b>1 point</b>	<b>5 points</b>
			<b>Receiving</b> ⊕	
			<b>2 points</b>	<b>10 points</b>




### Daily login consecutive bonus - maximum of 50 points per week

				
<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
<b>5 points</b>	<b>5 points</b>	<b>5 points</b>	<b>5 points</b>	<b>30 points</b>

### Team contribution levels to unlock rewards

			
<b>Novice contributors</b>	<b>Professional contributors</b>	<b>Expert contributors</b>	<b>Master contributors</b>
<b>Team size (members)</b>	<b>Needed points</b>	<b>Needed points</b>	<b>Needed points</b>
Small (<5)	1.000	5.000	20.000
Medium (5-19)	3.000	15.000	60.000
Large (>20)	5.000	25.000	100.000

### Personal contribution levels

		
<b>NBX Novice</b>	<b>NBX Professional</b>	<b>NBX Expert</b>
	<b>500 points</b>	<b>2.500 points</b>
		<b>10.000 points</b>

### Personal recognition

							
Founder	Super Early Adopter	Early adopter	Contributor	Launch Attendee	Liker	7 days in a row	Monthly Award
<b>200 points</b>	<b>100 points</b>	<b>50 points</b>	<b>50 points</b>	<b>50 points</b>	<b>20 points</b>	<b>50 points</b>	<b>500 points</b>
							
Yearly Award	First post	Commenter	1st Topic Expert	2nd Topic Expert	3rd Topic Expert	Additional Topic Expert	
<b>5000 points</b>	<b>50 points</b>	<b>50 points</b>	<b>500 points</b>	<b>750 points</b>	<b>1500 points</b>	<b>1000 points</b>	

Figure L.1 - Point Scoring System

## Appendix M - User Experience

The user experience of the platform is designed to provide a smooth accessible way to knowledge sharing. The platform is divided into four knowledge clusters that are grouped on the complexity of the information. These clusters are used to create easy entrance points for users to specific kinds of information

An example of the cluster pagea 'tips' with explanation of the different functionalities can be found in *figure 8.8*. All of the cluster pages have similar functionalities that are adapted to the needs of the clusters. For example, in the questions cluster, asking questions and answering them are both very important activities that should be fulfilled. Therefore, both groups, top askers and top answerers, are displayed at an important location of the page.

Furthermore, domains are always tagged to the question, tip, guide or lessons learned. The taxonomy is designed to make sure that information relevant to the domain can easily be found and that only relevant knowledge is displayed to the user. Users can also choose to filter their view on certain domains or topics on every cluster page.

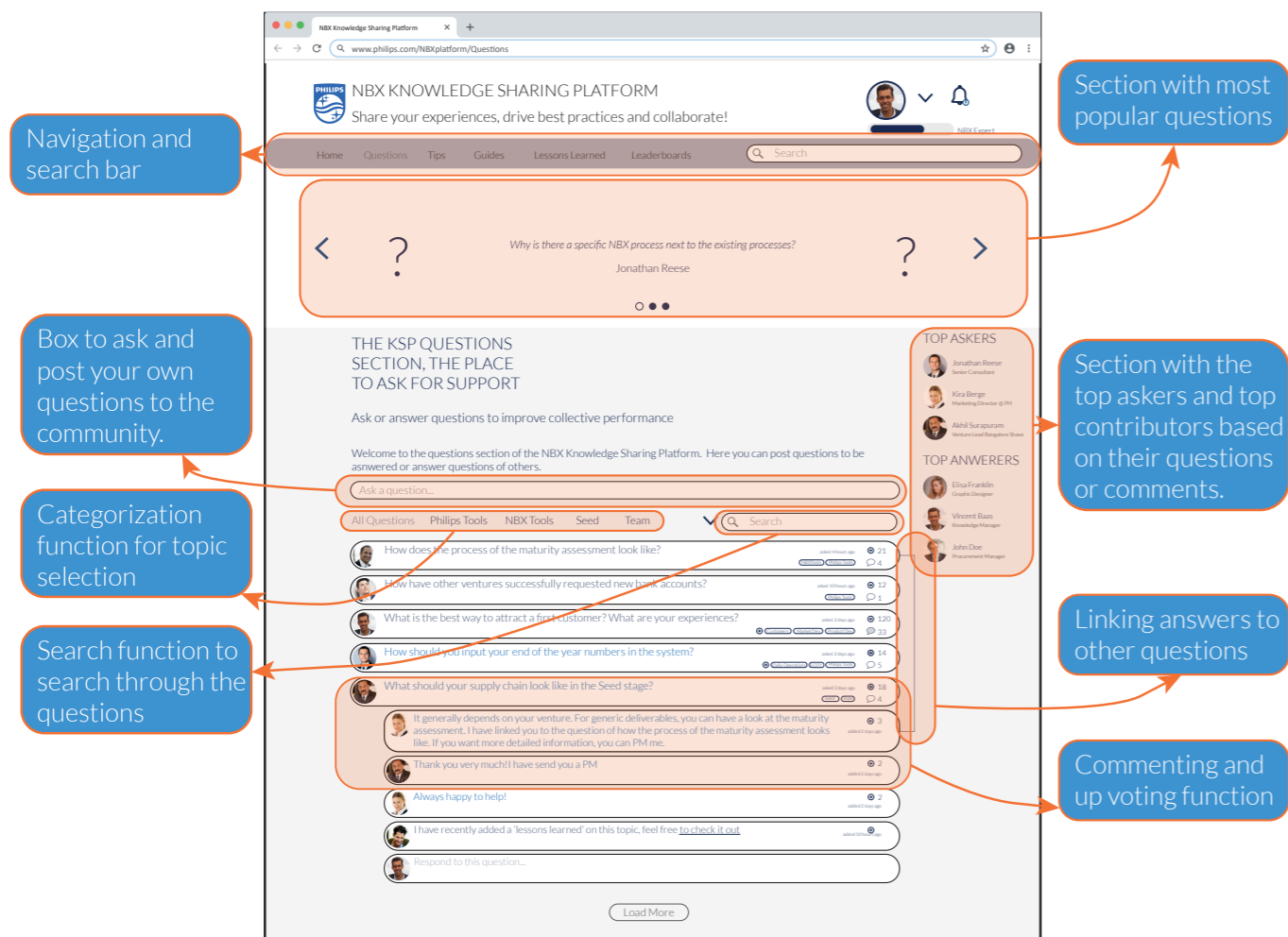


Figure 8.8 - UI of the Tips section

## Appendix N - Gamification

The Synergy platform is based on multiple gamification principles that together should provide an enjoyable experience. For the platform it is important that there is a healthy balance between positive intrinsic and extrinsic motivators. The octalysis framework (Chou, 2015) provides a way to map the different gamification elements in order to determine the balance between intrinsic, extrinsic, positive and negative motivators. The framework is based on eight core drives in gamification; (1) meaning, (2) accomplishment, (3) empowerment, (4) ownership, (5) social pressure, (6) scarcity, (7) unpredictability and (8) avoidance. Within the framework, the top core drives are positive motivators while the bottom core drives are negative motivators. The core drives on the left side are left brain core drives (logic & ownership) while the core drives on the right side are right brain core drives (creativity and social).

and ownership elements. These drivers make users feel proud of their progress and motivate them to further build up their knowledge. Furthermore, some right brain gamification techniques like empowerment and social influence are also well represented in the proposed platform. These drivers motivate users by providing them room to be creative and to generate a certain social status for themselves. This shows that both the left and right brain are highly activated through usage of the platform. Lastly, the center of gravity of the KSP is positioned towards the positive top half of the framework. This means that the total experience of the gamification elements provides positive motivation to continue using the KSP. Although there is room to improve on the drive of scarcity, unpredictability and avoidance, it was decided to not do that too much because it creates a 'forced' playing experience.

Mapping the Synergy platform to the octalysis framework provides an overview of what kind of gamification elements are represented in the platform (*figure 8.9*). It can be seen that left brain gamification elements are dominating through accomplishment

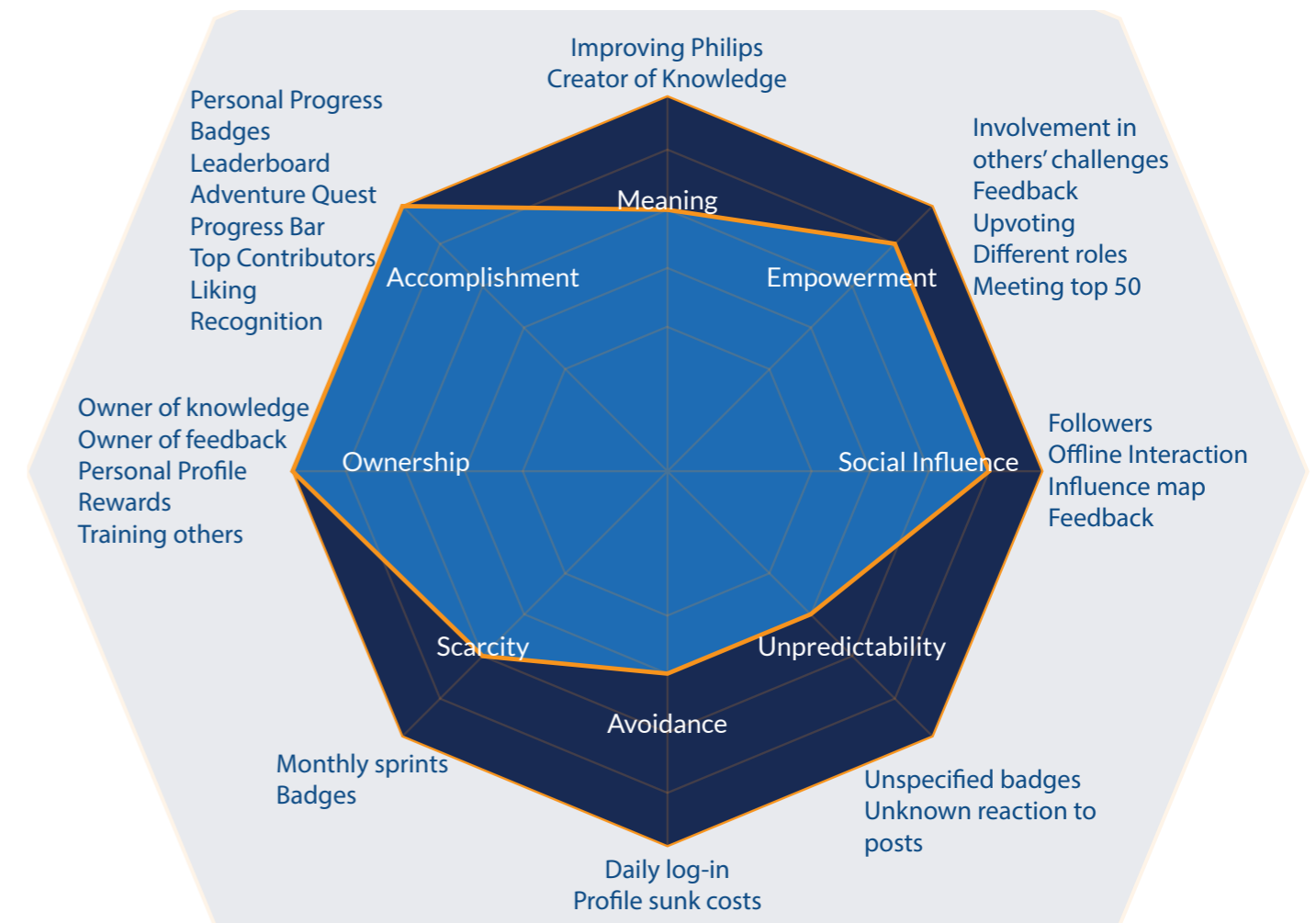


Figure 8.9 - Octalysis Framework

# Appendix O - Test Formats

Validation of the Synergy platform is all about whether people would really start using the platform. As discussed earlier, this correlates with high accessibility and high motivation. A first test format was proposed and discussed with an IT expert on how to most realistically simulate the platform. From that discussion it was concluded that the most realistic, interactive display of the platform would be an embedded SocialCast group in an existing webpage (figure O.1). However, using this MVP it would neither be possible to test the gamification and to test willingness to contribute. Therefore it was decided to look into other test formats.

Another kind of test would be to first make potential users experience the Synergy platform by providing them with a mock-up. The mock-up could be just pages that are printed. The user is asked to navigate the system based on the mock-ups. This would be usability testing. After the usability testing, more detailed questions on the reward system & scheme would be introduced. When this test format (figure O.2) was discussed, it was decided to rethink the validation testing because usability testing was expected to bias the potential user too much.

Three new test formats then emerged that provided a lot of potential. All of them had some elements of 'the mom test' (Fitzpatrick, 2014) in them to get 'real'

answers.

The first format focused on subtracting the real motivation and commitment of potential users to contribute to a knowledge-sharing platform. The test would be set-up as an unstructured interview with a more explorative nature. Indicating that the interviewee should not know that it is a real user test, but rather just an interview. Interviews would be done with people from the previously identified stakeholder groups, except for senior management, as they are unlikely to contribute. The interview would start by asking the three most important activities of the interviewee and then following up with the question of how those activities benefit other people. During the interview multiple follow up questions would be used to converge to knowledge about the interviewee's area of expertise that could be shared. Once arrived at that certain knowledge domain, the interviewee would be asked if he or she would be willing to share useful knowledge with other people in the future. If answered yes, the follow up question would be, when I provided the interviewee with a template, if he or she could then document that knowledge for me and send it back to me within a week. By doing this, the interview would both test willingness and real commitment to contribute to such a knowledge platform.

The second format focused more on the ability

dimension of the FBM. It is about validating whether the Synergy platform actually increases the interviewee's ability to share knowledge. During this test, the current ability of the interviewee to share knowledge is subtracted and how this would change due to the use of the Synergy platform. Therefore, this test would consist of three parts (1) identifying current knowledge sharing ability, (2) demo of the synergy platform, and (3) identifying knowledge sharing ability with the platform in place. Identifying the current knowledge sharing ability is done through a small questionnaire. Because of the insights from the first set of conducted interviews, it is expected that the current knowledge sharing ability is quite low. Meaning that current platforms or services do not provide easy access to sharing of knowledge. The second part consists of an interactive demo using the knowledge sharing platform to show its functionalities and capabilities. The third part is about identifying how the synergy platform improves or decreases the ability to share knowledge. This format incorporates the influence of my innovation on the willingness of venture members to share knowledge. However, it is very susceptible to a positive bias towards my innovation.

The third test focuses more on identifying how much the main functionalities of the platform solve the needs of the potential users. During the internal analysis, the interviews revealed certain needs of users. Based on those needs, the Synergy platform was designed. This test is about validating the motivation of the respondents to use one of the main functions to solve their needs and then to see how well the Synergy platform suits their needs. The first part of the test is about the four main functionalities of (1) finding SMEs, (2) communicating with others, (3) sharing and finding personal experiences, and (4) sharing and finding how-tos. It is about exploring to what extent people are going out of their way to access those functionalities. The second part focuses on how the platform suits those functionalities using a MVP (Appendix P).

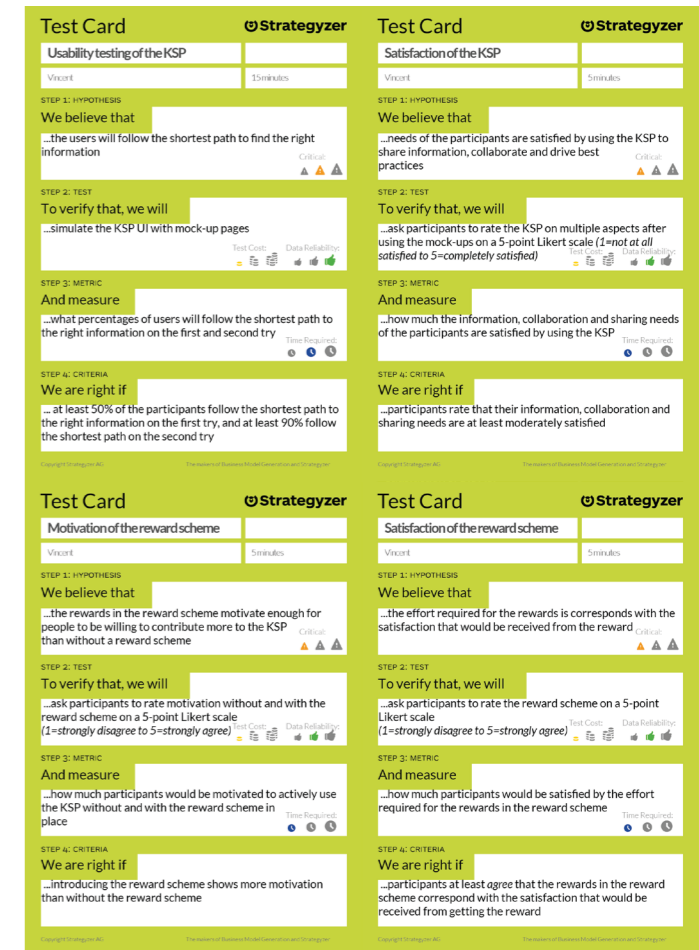
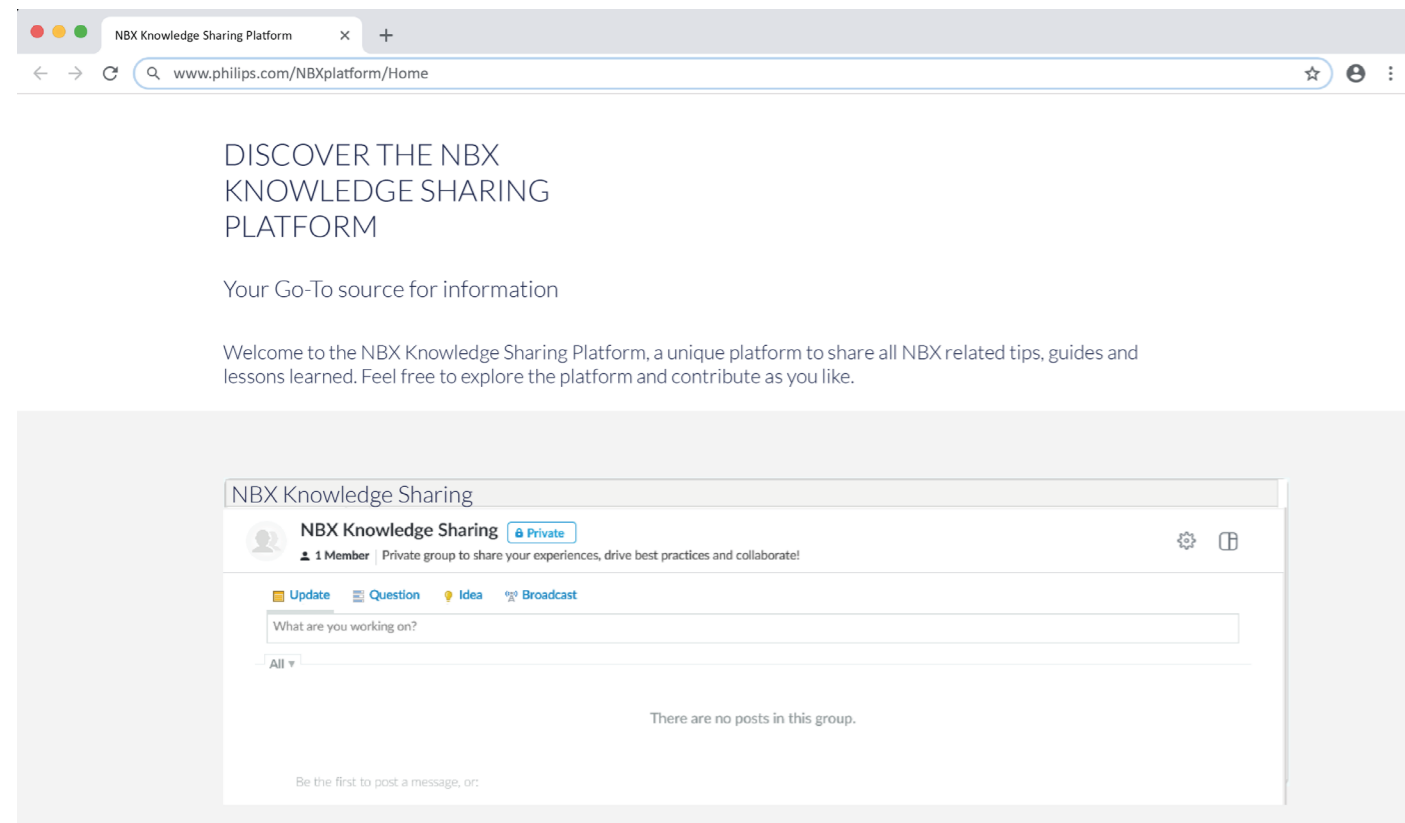
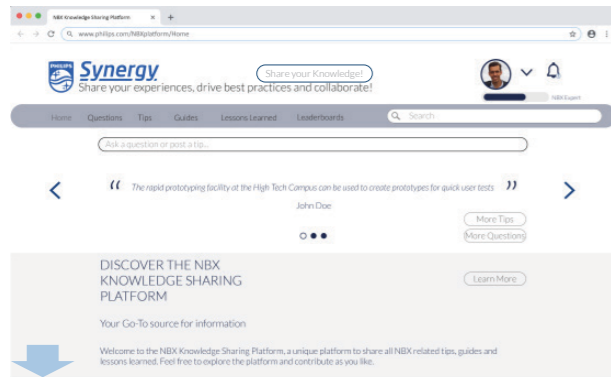


Figure O.2 - Proposed usability testing

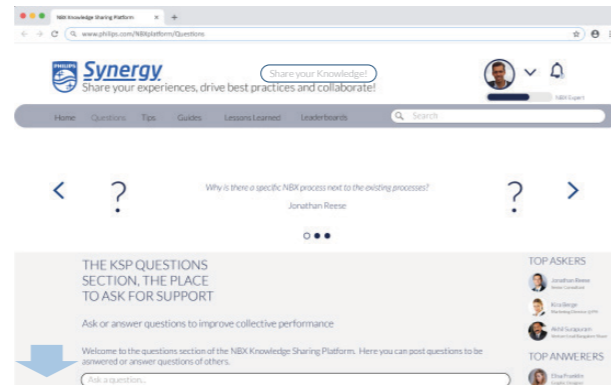


# Appendix P - Minimum Viable Product

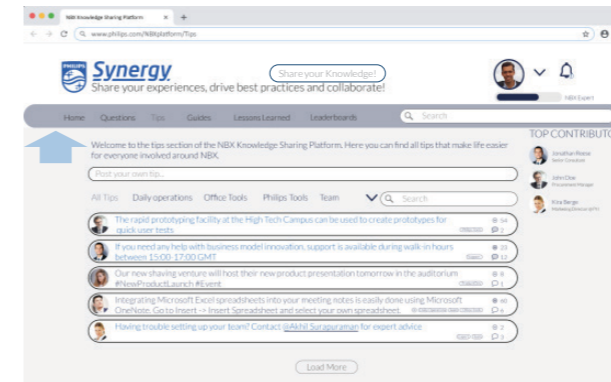
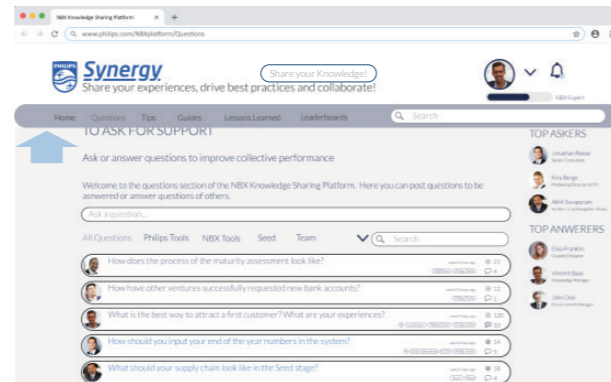
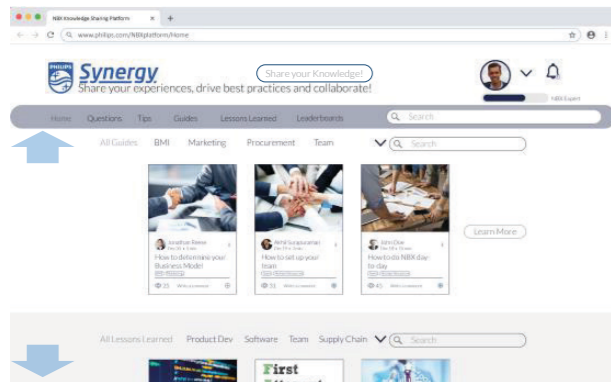
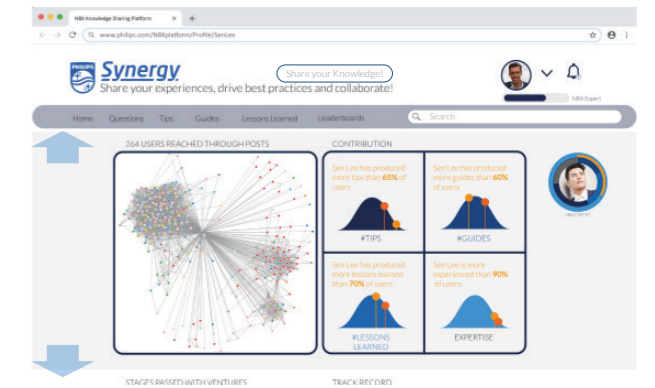
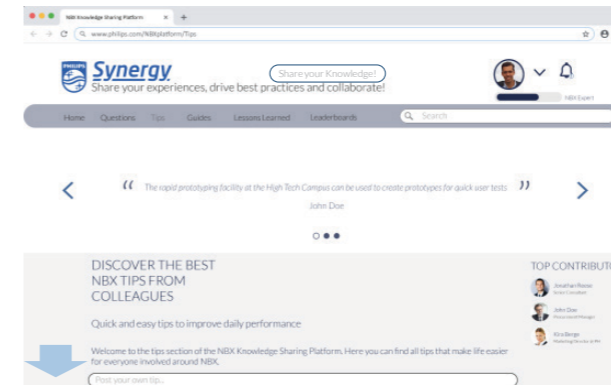
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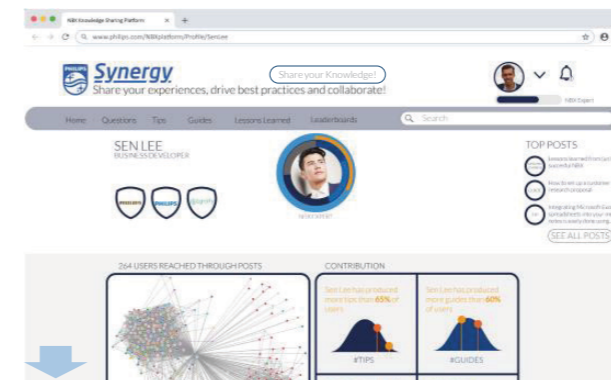
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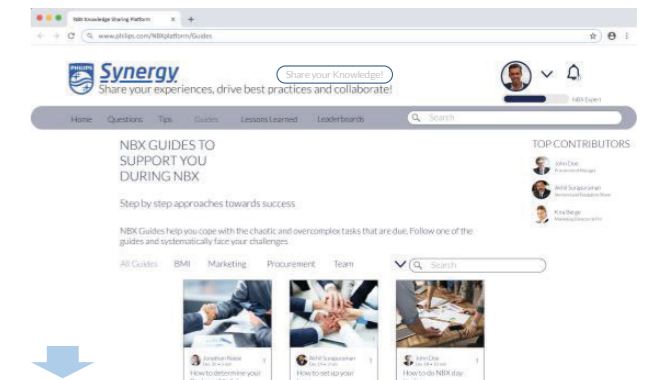
## Tips Section



## Profile Section

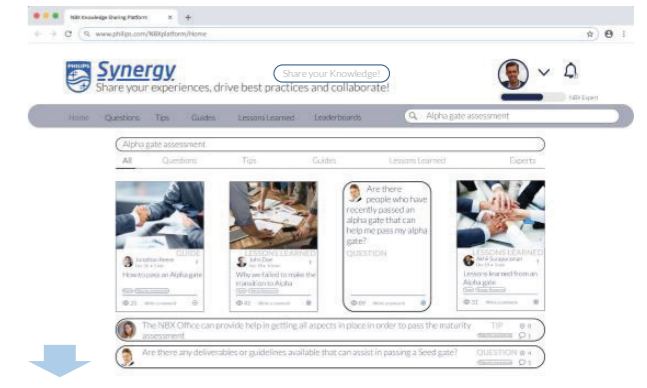
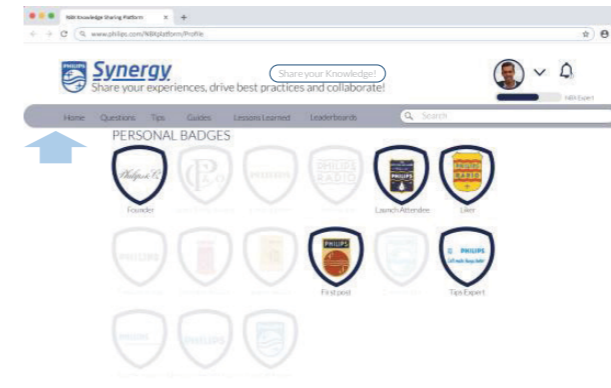
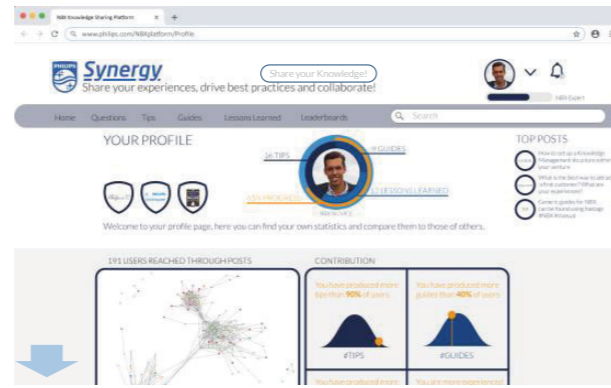
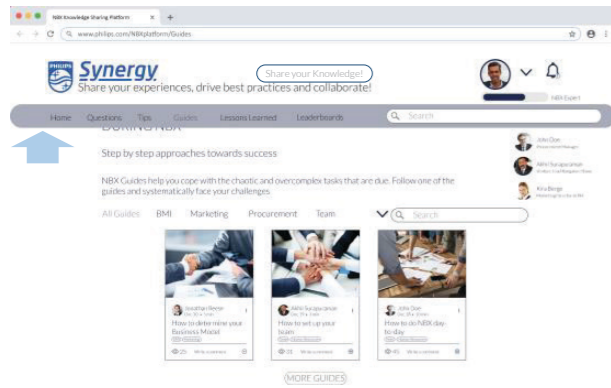


## Guides Section

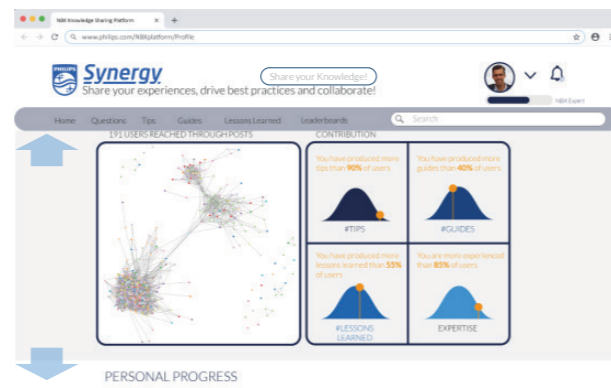
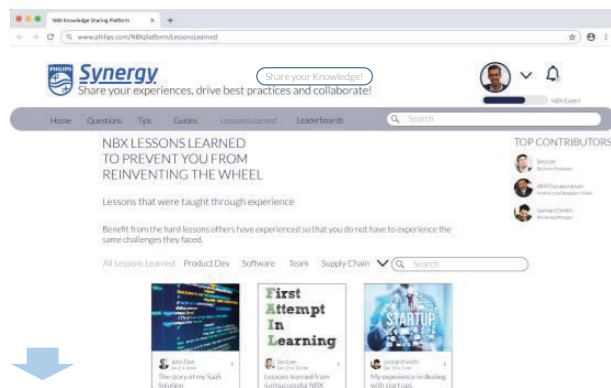




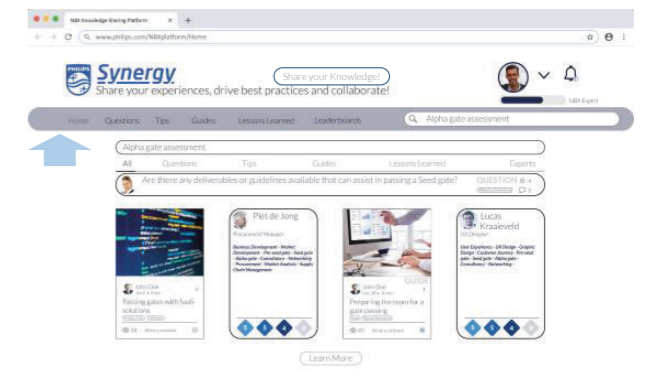
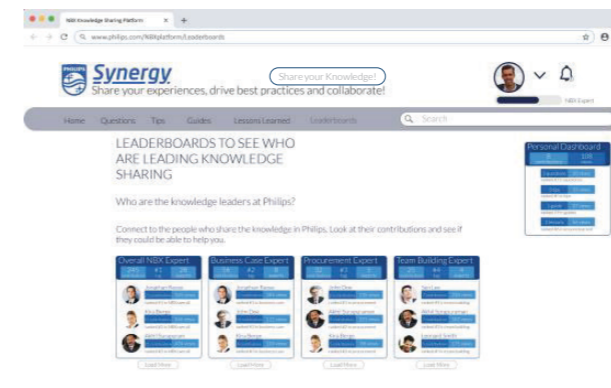
## Personal Profile Section



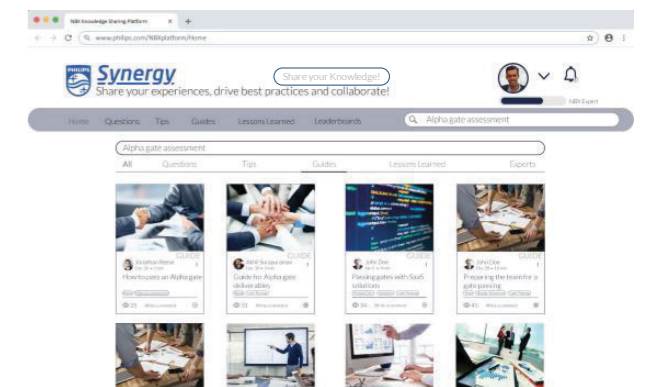
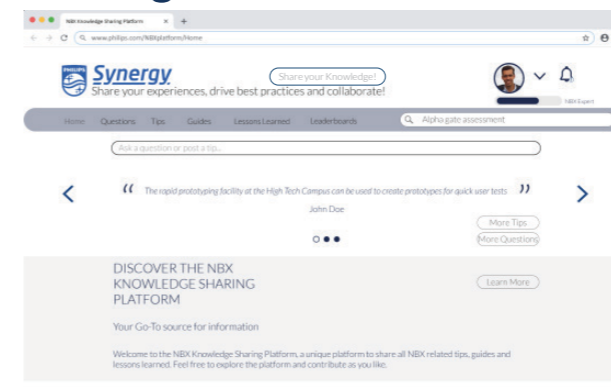
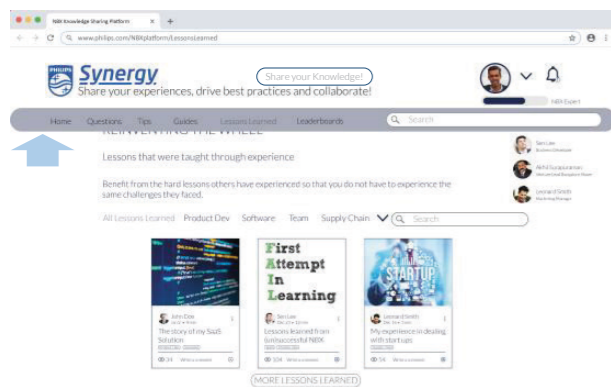
## Lessons Learned Section

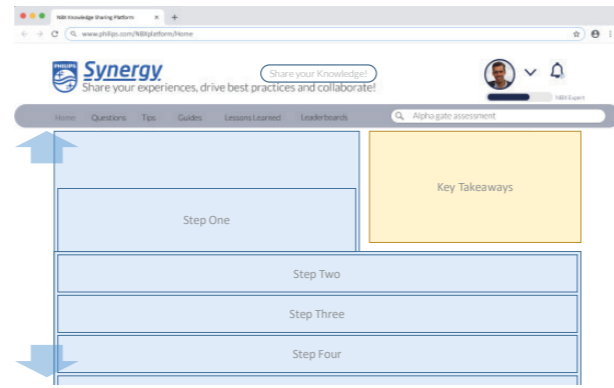
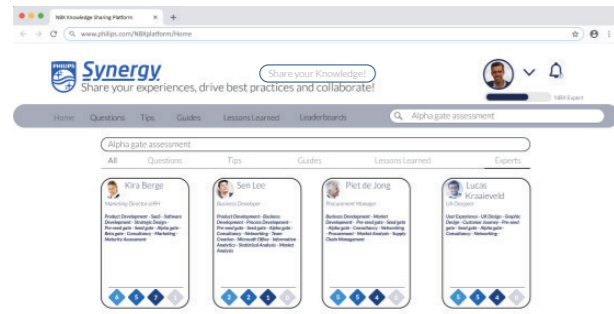


## Leaderboard Section

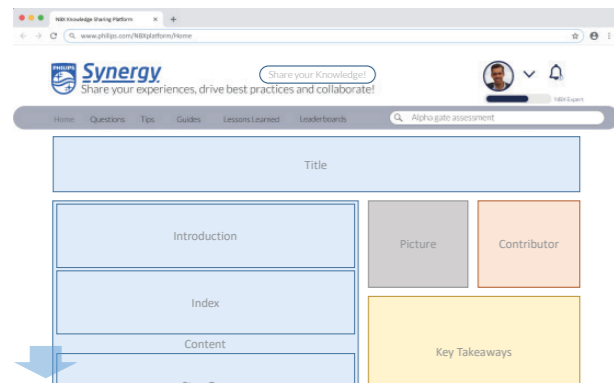
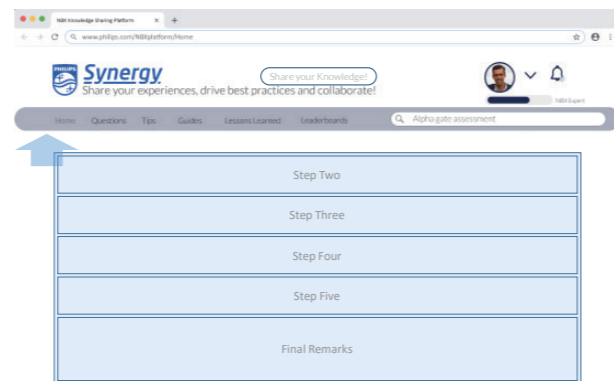
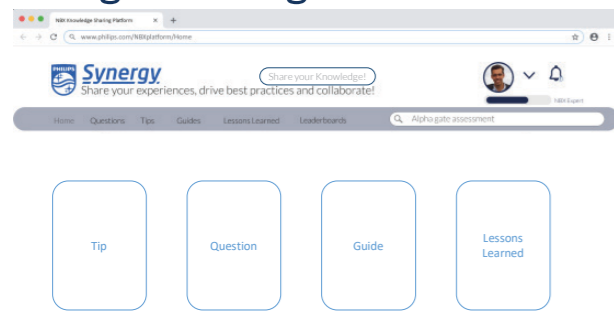


## Searching Workflow





## Sharing Knowledge Workflow



## Appendix Q - Validation Interviews

Interview data has been redacted for confidentiality purposes, for more information contact the author of this thesis.

[Redacted interview data]

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# Appendix R - Final Platform Design



Share your experiences, drive best practices and collaborate!

[Home](#) [Questions](#) [Guides](#) [Lessons Learned](#) [Leaderboards](#)

“ *Where can I find guidelines on what to prepare for a maturity assessment?* ”

John Doe

Welcome to the questions section of the NBX Knowledge Sharing Platform. Here you can post questions to be answered or answer questions of others.

[All Questions](#) [Philips Tools](#) [NBX Tools](#) [Seed](#) [Team](#)

- How does the process of the maturity assessment look like? asked 4 hours ago 21 answers 4 comments
- How have other ventures successfully requested new bank accounts? asked 10 hours ago 12 answers 1 comment
- What is the best way to attract a first customer? What are your experiences? asked 2 days ago 120 answers 33 comments
- How should you input your end of the year numbers in the system? asked 2 days ago 14 answers 5 comments
- What should your supply chain look like in the Seed stage? asked 3 days ago 18 answers 4 comments

added 2 days ago 3 answers

added 2 days ago 2 answers

added 2 days ago 2 answers

added 10 hours ago 0 answers

[Load More](#)

**TOP ASKERS**  
 Jonathan Reese, Senior Consultant  
 Kira Berge, Marketing Director @ PH  
 Akhil Surapuram, Venture Lead Bangalore Shave

**TOP ANSWERERS**  
 Elisa Franklin, Graphic Designer  
 Vincent Baas, Knowledge Manager  
 John Doe, Procurement Manager

Share your experiences, drive best practices and collaborate!

[Home](#) [Questions](#) [Guides](#) [Lessons Learned](#) [Leaderboards](#)

**NBX GUIDES TO SUPPORT YOU DURING NBX**

Step by step approaches towards success

NBX Guides help you cope with the chaotic and overcomplex tasks that are due. Follow one of the guides and systematically face your challenges

[Popular Topics](#) [Maturity Assessment](#) [Team](#) [Business Case](#)

- Jonathan Reese, Dec 30 • 5 min • Guide  
 How to determine your business model  
 136 views • Write a comment • 56 comments
- Akhil Surapuram, Jan 23 • 7 min • Guide  
 How to grow your venture team  
 66 views • Write a comment • 32 comments
- John Doe, Dec 18 • 10 min  
 How to do NBX day-to-day  
 45 views • Write a comment
- Akhil Surapuram, Jan 7 • 12 min • Guide  
 How to set up and define your new venture team  
 120 views • Write a comment • 54 comments

[MORE GUIDES](#)

**TOP CONTRIBUTORS**  
 John Doe, Procurement Manager  
 Akhil Surapuram, Venture Lead Bangalore Shave  
 Kira Berge, Marketing Director @ PH



## NBX LESSONS LEARNED TO PREVENT YOU FROM REINVENTING THE WHEEL

Lessons that were taught through experience

Benefit from the hard lessons others have experienced so that you do not have to experience the same challenges they faced.

Popular Topics Maturity Assessment Team Business Case Search per topic

Jonathan Reese  
Dec 30 • 05 min • Lessons Learned

Our experience with the maturity assessment

125 Write a comment 56

Leonard Smith  
Feb 2 • 10 min • Lessons Learned

Influence of team composition on venture performance

110 Write a comment 48

Sen Lee  
Dec 29 • 12 min

Lessons learned from (un)successful NBX

104 Write a comment

Leonard Smith  
Dec 16 • 3 min

My experience in dealing with start ups

54 Write a comment

MORE LESSONS LEARNED

## TOP CONTRIBUTORS

- Sen Lee  
Business Developer
- Akhil Surapuraman  
Venture Lead Bangalore Shave
- Leonard Smith  
Marketing Manager

## YOUR PROFILE

16 TIPS 9 GUIDES 12 LESSONS LEARNED

65% PROGRESS

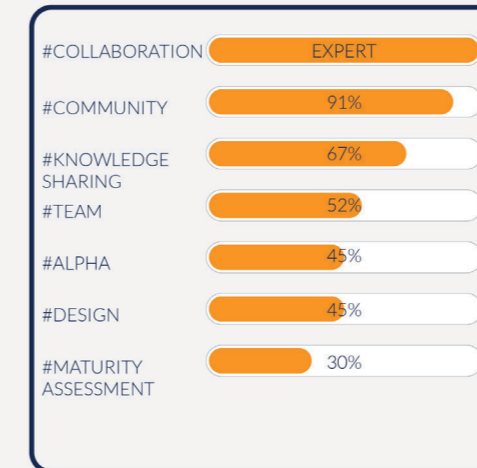
NBX NOVICE

Welcome to your profile page, here you can find your own statistics and compare them to those of others.

## TOP POSTS

- GUIDE: How to set up a Knowledge Management structure within your venture
- QUESTION: What is the best way to attract a first customer? What are your experiences?
- TIP: Generic guides for NBX can be found using hashtags #NBX #manual

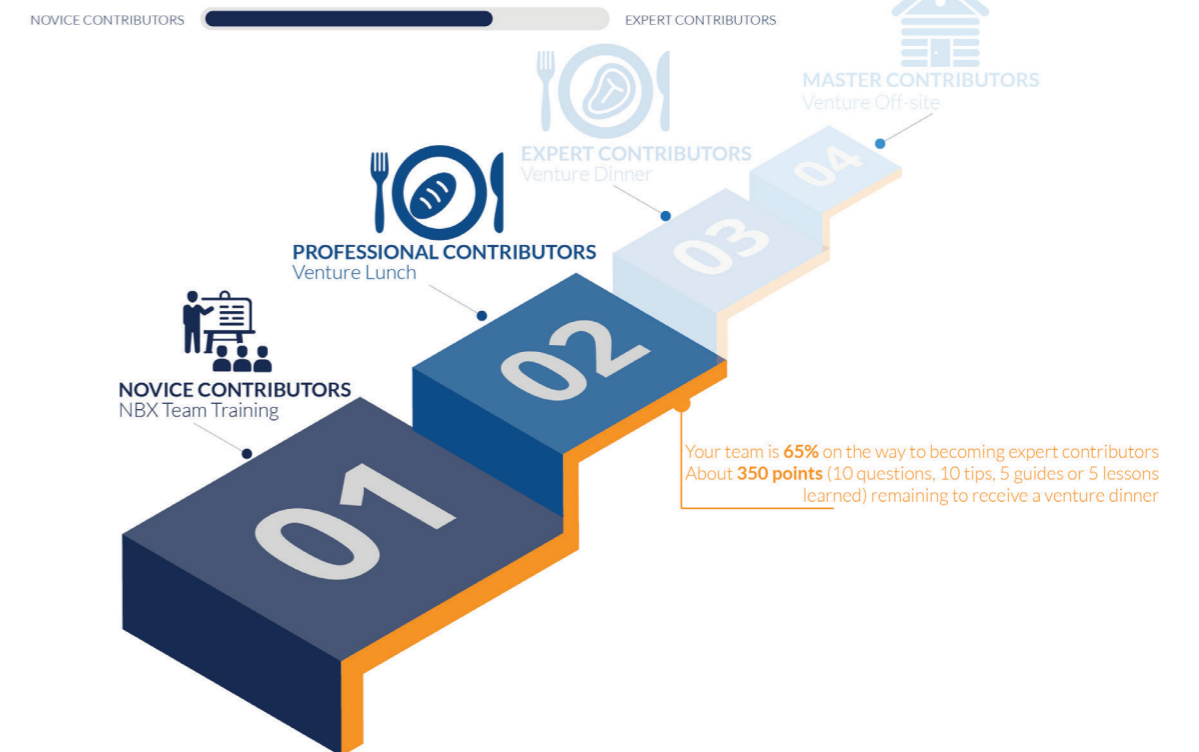
## TOPIC EXPERTISE



## TOP CONTRIBUTIONS



## VENTURE PROGRESS



## PERSONAL BADGES

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**Synergy** Share your experiences, drive best practices and collaborate!

Home Questions Guides Lessons Learned Leaderboards

**SEN LEE**  
BUSINESS DEVELOPER



NBX EXPERT

**EXPERTISE**

BUSINESS DEVELOPMENT EXPERT  
PROCESS DEVELOPMENT EXPERT

**TOP POSTS**

- LESSONS LEARNED: Lessons learned from (un) successful NBX
- GUIDE: How to set up a customer research proposal
- CUSTOMER: Integrating Microsoft Excel spreadsheets into your meeting notes is easily done using...

[\(SEE ALL POSTS\)](#)

**TOPIC EXPERIENCE**

#BUSINESS DEVELOPMENT	EXPERT
#PROCESS DEVELOPMENT	EXPERT
#NETWORKING	67%
#PRODUCT DEVELOPMENT	52%
#PRE-SEED	45%
#SEED	45%
#MARKET DEVELOPMENT	30%

**CONTRIBUTION**

#BUSINESS DEVELOPMENT Sen Lee has produced more than <b>91%</b> of users	#PROCESS DEVELOPMENT Sen Lee has produced more than <b>90%</b> of users
#NETWORKING Sen Lee has produced more than <b>70%</b> of users	#PRODUCT DEVELOPMENT Sen Lee has produced more than <b>64%</b> of users

**STAGES PASSED WITH VENTURES**

2 PRE-SEED	2 SEED
1 ALPHA	0 BETA

**TRACK RECORD**

- BUSINESS DEVELOPER** (Supply Chain, Product Development, Business Development, Networking, Process Development, Team Creation, Microsoft Office) - WAKE UP LIGHT, AI SLEEP TRACKING, SMART RESPIRATORY
- BUSINESS ANALYST** (Microsoft Office, Statistical Analysis, Information Analysis, Consultancy, Process Development) - HEALTHWORKS CONSULTING, SETTING UP AI CoP, VALUE PROPOSITION CREATION, HEALTHSUITE
- JR. BUSINESS ANALYST** (Consultancy, Process Improvement, Information Analysis, Networking, Microsoft Office, Statistical Analysis) - HEALTHWORKS CONSULTING, AI BUSINESS ANALYSIS
- INTERN** (Consultancy, Networking, Microsoft Office, Market Analysis) - AI RESEARCH THESIS, BUSINESS ANALYSIS

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**LEADERBOARDS TO SEE WHO ARE LEADING KNOWLEDGE SHARING**

Who are the knowledge leaders at Philips?

Connect to the people who share the knowledge in Philips. Look at their contributions and see if they could be able to help you.

**Overall NBX Expert**

245 contributions	#1 tag	28 experts
Jonathan Reese	23 contributions	565 views
Kira Berge	22 contributions	546 views
Akhil Surapuram	21 contributions	474 views

**Business Case Expert**

56 contributions	#2 tag	8 experts
Jonathan Reese	15 contributions	265 views
John Doe	10 contributions	112 views
Kira Berge	9 contributions	109 views

**Procurement Expert**

32 contributions	#3 tag	5 experts
John Doe	10 contributions	135 views
Akhil Surapuram	8 contributions	131 views
Kira Berge	8 contributions	88 views

**Team Building Expert**

25 contributions	#4 tag	4 experts
Sen Lee	7 contributions	250 views
Akhil Surapuram	7 contributions	182 views
Leonard Smith	3 contributions	175 views

**Personal Dashboard**

8 contributions	108 views
2 tips	30 views
3 tips	15 views
1 guide	37 views
2 lessons	56 views
ranked #7 in questions	
ranked #2 in tips	
ranked #9 in guides	
ranked #6 in lessons learned	

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**Synergy** Share your experiences, drive best practices and collaborate!

Home Questions Guides Lessons Learned Leaderboards

**Alpha gate assessment**

All Questions Tips Guides Lessons Learned Experts

**GUIDE**

How to pass an Alpha gate

25 Write a comment

**LESSONS LEARNED**

Why we failed to make the transition to Alpha

45 Write a comment

**QUESTION**

Are there people who have recently passed an alpha gate that can help me pass my alpha gate?

89 Write a comment

**LESSONS LEARNED**

Lessons learned from an Alpha gate

31 Write a comment

**TIP** The NBX Office can provide help in getting all aspects in place in order to pass the maturity assessment. 8 Write a comment

**QUESTION** Are there any deliverables or guidelines available that can assist in passing a Seed gate? 4 Write a comment

**GUIDE**

Passing gates with SaaS solutions

34 Write a comment

**Piet de Jong**  
Procurement Manager

Business Development - Market Development - Pre-seed gate - Seed gate - Alpha gate - Consultancy - Networking - Procurement - Market Analysis - Supply Chain Management

5 5 4 0

**GUIDE**

Preparing the team for a gate passing

45 Write a comment

**Lucas Kraaieveld**  
UX Designer

User Experience - UX Design - Graphic Design - Customer Journey - Pre-seed gate - Seed gate - Alpha gate - Consultancy - Networking

5 5 4 0

[Learn More](#)

## Appendix S - User Journey

There are different user journeys that the user can follow based on the three motivations of the user (figure S.1); (1) sharing knowledge, (2) finding knowledge and (3) finding experts.

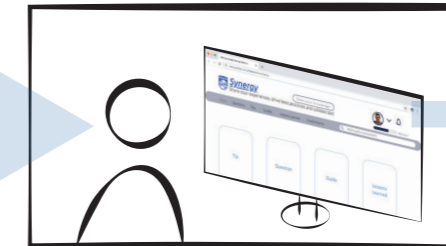
The user journey for sharing knowledge is deliberately kept as short as possible in order to ensure an easy and smooth user experience. It starts with the user going to the Synergy platform and clicking on the 'Share Knowledge' button. The user then decides what kind of knowledge he or she wants to share. In this case, the user wants to create a guide and therefore selects the guide template. The template is then filled in by the user and will then be uploaded to be visible for the community.

In order to find specific knowledge on a specific topic, users should use the search function. Finding knowledge or finding an expert have the same starting point. For example, a user uses the search bar on the top of the page to search for knowledge about an 'Alpha Gate Assessment'. A window then opens where the user can view all relevant knowledge contribution on the specific topic. If the needed knowledge is easily identified by the user, he or she does not have to filter further. If this is not the case, the user can decide to filter on the kind of knowledge he or she is looking for. If the knowledge then still can't be found, the user can decide to contact a topic expert. He or she filters on 'experts' and then looks for the expert he or she wants to get in contact with. Through opening the profile of the expert, the user can see its relevant experience and decide to contact the expert using existing communication tools. This makes sure that any user is able to access relevant knowledge and experts.

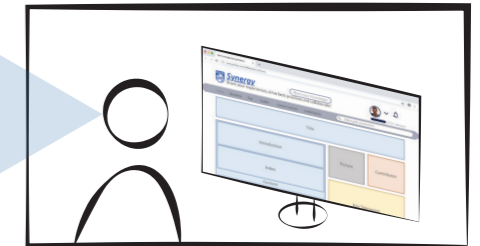
The user is looking for ways to share knowledge



The user goes to the Synergy platform and clicks the 'Share Knowledge!' button.



The user chooses the kind of information he or she wants to share.



The user starts filling in the 'guide' template and then uploads his or her knowledge.

The user is looking for knowledge on an Alpha gate assessment



The user searches for 'alpha gate assessment'.



The user cannot find the relevant knowledge in the search results.



The user decides to look for an expert to help him. He filters on 'experts'.



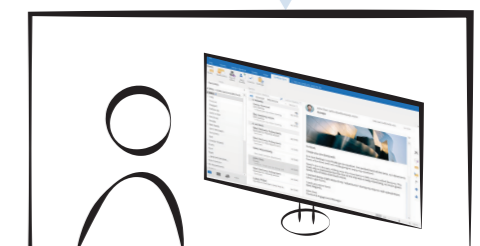
The user finds relevant knowledge in the search results.



The user finds an expert with expertise of alpha gate assessments.



The user uses the lessons learned of someone else to solve his own obstacles.



The user contacts the user through existing contact methods and solves his obstacle.

Figure S.1 - User Journeys