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Development of the innovation process in GN Netcom

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Abstract

This Work Project is based on a Business Project that was conducted with Jabra, studying its project development delays. Currently, unstructured management practices in initial stages of new product development processes lead to excessive time spent in subsequent stages. Thus, the project focuses on studying those stages in-depth, and found that main drivers of project delays are Uncertainty and Accountability. This is in line with conclusions from academic literature, that also provides a link to the subject of Finance, describing how these issues lead to higher costs and reduced revenues. Finally, recommendations to tackle the causes of delays were drawn.

Key words: *delays; initial-stages; uncertainty; accountability*

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I: Brief context

In this Work Project, I will elaborate on the Business Project I participated in at Copenhagen Business School, on behalf of the CEMS Program. The Business Project was conducted with the Danish brand Jabra. I will present the company in this section (I), on section II I will address findings and recommendations, on section III present theories that link the Business Project with the field of Finance, and on section IV self-evaluate my performance. In the end of the report, a reference list and appendix – containing codes with quotes from interviews - will be accessible.

A: Client

The business project was conducted in cooperation with GN Netcom, a leading Danish specialist in hands-free audio solutions. GN Netcom is a subsidiary of GN Store Nord, founded as *The Great Northern Telegraph Company* ('Det Store Nordiske Telegrafselskab A/S') in 1869, being one of the oldest electronics companies in Denmark. The other subsidiary of GN Store Nord is GN Resound, a provider of hearing aids and audiological diagnostic instrumentation. With approximately 1000 employees and through the Jabra brand, GN Netcom has attained a leading position in the B2B office market – Contact Center & Office division - and a strong presence in the B2C mobile audio and headset market –Mobile division-, serving more than 70 countries. By offering innovative solutions combined with excellent sound quality, comfort, durability, and state-of-the-art-design, the company's two divisions have developed and marketed a number of successful product series. Among the most recent successes are the Jabra Evolve series with unique noise cancellation features for the CC&O market and the Jabra Sport Pulse Wireless headset with an integrated heart rate monitor for the Mobile consumer market.

B: Market overview

Jabra operates in two main markets: hands-free headsets via its mobile division, and office headsets and audio systems, via its CC&O division. Its mobile division has had total revenues of roughly 144 million euros, while its CC&O counterpart had revenues of roughly 292.4 million euros.

It is not straightforward to define the markets wherein Jabra operates, because it does not operate in the overall headset market or the unified communications market. Instead, it operates in hands-free headset market and does not produce all kinds of goods that may be found in unified communications. Unified communications comprises any kind of product, either software or hardware, that facilitates communication within a company, by unifying different communication channels such as voice, videoconferencing, phone and text into one product. Currently, in its CC&O division, Jabra mostly produces headsets for companies and conference speakers.

Nevertheless, in an internal study conducted in 2013, Jabra found that its mobile division had a 20% market share, while CC&O has got 30% market share. In mobile, Jabra faces competition from every kind of wireless headset producer, including successful companies such as Sony or Sennheiser, while in CC&O it faces competition from less companies.

Its biggest competitor is the US company Plantronics. It operates in similar markets as Jabra and has got bigger market shares than the Danish brand. Its Core Enterprise division is comparable to Jabra's CC&O and had revenues of 423 million dollars in 2015 (380 million euros), while the Consumer division – comparable to Jabra's Mobile – had revenues of 246 million dollars (221 million euros) (Plantronics, 2016). Although the companies operate in the same markets, they follow different business models. Plantronics introduces considerably less products to the market, on average. However, these commonly receive a higher acceptance from customers due to a more customer-centric approach taken by the U.S.-based competitor.

Finally, it is estimated that the size of headset sales for unified communications products (in which CC&O operates) will exceed 1 thousand million dollars globally by 2020 and the size of the global headset market currently amounts to 1.06 thousand million dollars. Both markets are expected to grow over the next years. (Jabra, 2015).

C: Current client situation

Currently, the parent company and both subsidiaries are in good financial health with total revenues and EBITDA of 8.4 and 1.5 billion DKK in 2015, respectively. This is approximately equal to 1.13 billion Euros of total revenues and 200 million Euros of EBITDA. GN Store Nord's stock price has had a positive performance over the last five years. Its price on the 6th of March 2011was 50.55 DKK, while on the 30th of May 2016 it was equal to 136.60 DKK.

GN Netcom accounts for about 38% per cent of total group revenues. The divisions CC&O and Mobile make up about 67% and 33% of revenues within GN Netcom, respectively. The Jabra brand itself was established in 2010, following an acquisition of an originally U.S.-based firm in 2000. (GN Store Nord, 2016).

One of the strengths of Jabra lies in its technological expertise and ability to develop products that incorporate novel technologies. This is further supported by an inherent R&D and engineering culture where the question of how to build a product often precedes one of whether to build it in the first place. Following this technology leadership strategy, Jabra aims to differentiate itself against competitors by introducing new technologies to the market first, rather than persuading consumers with a well-known brand. This strategy is quite different than the one followed by Plantronics, as mentioned before.

D: Business project challenge

Jabra is confident about its technological capabilities – rightfully so, since it enjoys a reputation for innovative, high quality and durable products. Its CC&O line, for instance, is widely used by well-known multinational firms. However, the firm's technology-push approach does not always pay off and Jabra has acknowledged the need to become more customer oriented in the future.

Therefore, senior management has attempted to pinpoint the biggest weaknesses of its innovation process – also known as new product development process -, in order to overcome those issues. One of them is Project Delays, and my project team was asked to focus on that topic.

II: Reflection of the work done and individual contribution

A: Problem definition

The market for CC&O and Mobile hands-free audio solutions is growing, and while Jabra is devoted to partake in this growth-streak on the business side and has the capabilities to do so, the company is also faced with a number of internal challenges. As a brand, Jabra is stricken by recurring project delays throughout its product development process. A delay means that the actual time needed to develop and market a product exceeds initial projections.

Based on the challenge described above, the business project group derived the following management question:

'Identify the main drivers of project delays within Jabra and propose recommendations - based on best practices and other management theory – to reduce them.'

In detail, the objective of the business report was to: (1) understand and evaluate current product development practices at Jabra; (2) identify key drivers for project delays while drawing on internal as well as external information; (3) and develop recommendations based on subsequent analysis of findings.

B: Methodology

      i: Methodology

The research philosophy that was used for the business project is based on interpretivism. It was deemed appropriate as the research within the limits of this report was mainly based on qualitative, in-depth interviews with Jabra employees. Furthermore, the interview structure aimed to obtain the interviewees' personal assessment regarding causes of project delays. Acknowledging subjectivity of the findings, the responses of the interviewees were synthesised and analysed considering their role in the organisation.

Since the project group started by gathering empirical data to understand the context first and moved afterwards to develop a suiting framework, an inductive approach was taken. It enabled a detailed understanding of the problem Jabra faced and provided a more flexible structure, allowing for changes in focus throughout the process. Furthermore, an inductive approach acknowledges that findings are very company specific and does not aim for generalisation.

For the business project, the group utilised a combination of exploratory and explanatory studies. The business project was partly explorative since the main goal was to acquire new insights about delays at Jabra. In order to do this, the initial focus was rather broad and was narrowed down throughout the process. The business project incorporated explanatory aspects as well since the research question aimed to identify variables that have a relationship with project delays. The research data was primarily derived from cross-sectional qualitative interviews with Jabra employees, but also included company presentations. Based on internal findings, desk research as well as interviews with external professionals were conducted in order to detect best practices to address challenges faced by Jabra.

As mentioned before, the primary source to identify the causes of project delays are qualitative interviews with Jabra employees from different departments. The interviews were conducted individually and followed a qualitative and semi-structured nature. The first five interviews were loosely structured with the objective to obtain diverse potential causes of delays from the interviewees. After the first five interviews the project group did a preliminary evaluation of the interview findings, designing the first hypothesis. Subsequently, four more interviews were conducted during which initial findings were probed to obtain more detailed insights about the areas of interest. Additionally, meetings with the academic supervisor have taken place in order to assess the fit of our hypothesis and how they could be improved.

The selection of interviewees was mainly organized in collaboration with the main company contact. The group put emphasis on conducting interviews with Jabra employees from different departments to ensure a more holistic view on the problem at hand.

In order to validate findings from the internal interviews further and identify best practices, four semi-structured interviews were conducted with external professionals. Those included former managers, consultants and agile coaches who have experience from firms and industries close to GN Netcom. These interviews assisted us in understanding the challenges Jabra faces from an external point of view, which also supported us in designing recommendations. The interviewees currently work in the companies PA Consulting Group, Ideon Open, Visma, and Agile 42.

ii: Hypothesis

As has already been mentioned, the aim of the first five interviews was to understand how the new product development process works and what different employees consider are the causes of delays.

Our findings regarding the new product development process are summarized in the following figure:
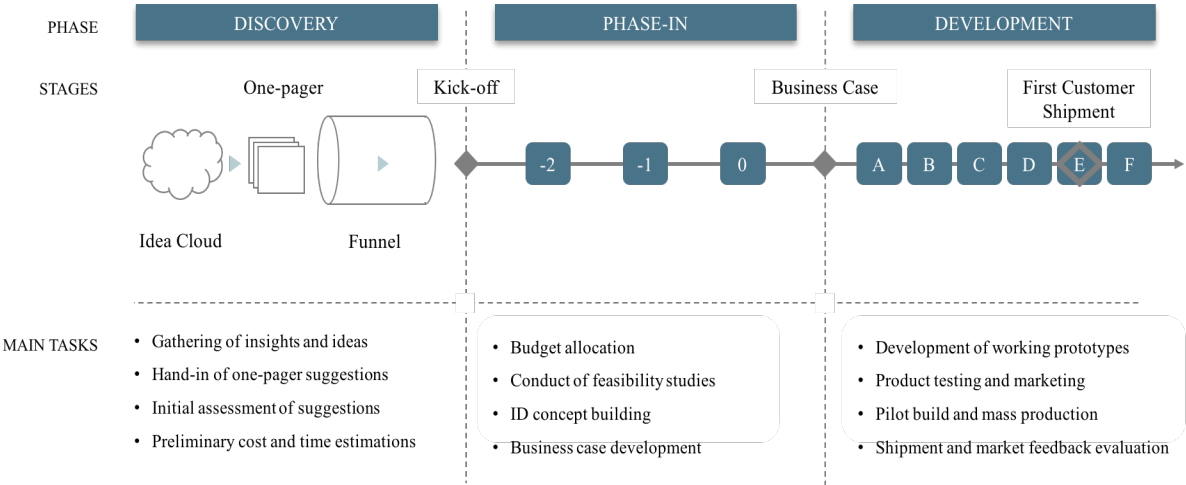

Figure 1: The Product Development Process at Jabra

Jabra's new product development process follows a traditional stage-gate model, in which cross-departmental teams are asked to work on a deliverable in each stage. After all stages there is a gate review, whereby it is assessed whether the project can continue to the next stage. The stages are grouped into three main phases: Discovery, Phase-In, and Development.

The project group found that issues and root causes for delays primarily pertain to the two first stages of the process. These stages entail activities such as idea generation, screening, preliminary assessment and business case development. Within Jabra, the stages of idea generation and screening are referred to as Discovery while following stages of assessment and business case development are called Phase-in. They precede formal development stages that mainly aim for execution of priory defined specifications. Thus, the group focused on studying the Discovery and Phase-in stages. This finding was not only referred to during interviews, but also backed up with internal data that was given to the group.

Several topics were pointed out as causes of delays. These were: quality of one-pager (the document that can be filled out by anyone within the organization to present a new idea), budget, isolation, competition, funnel, priority, urgency, budget, transparency, estimation, language, insights, communication, and predictability.

After the first five interviews, the project team grouped those causes into three main blocks of causes of delays. The first was market insights, since most interviewees mentioned lack of customer and market insights. The second was communication, including the fact that there is no common language and that Marketing and R&D departments work in silos. The third block was accountability. It encompasses the fact that Phase-In is unstructured, there is lack of priorities that are in Phase-in stage, and that initial project assumptions are not challenged.

iii: Analysis

During the four last internal interviews the group asked questions regarding the aforementioned hypothesis, in order to test them and form an in-depth knowledge about them.

Our hypotheses were largely confirmed, including the fact that delays are caused by poor management practices in Discovery and Phase-In. However, the group decided to redesign the main drivers of project delays, after better understanding how the previous ones interact with one another and how they relate with different stages of the product development process.

Therefore, the group concluded that the final main drivers of delays are Uncertainty and Accountability. Uncertainty is directly related with the Discovery stage and includes the market insights block that was previously mentioned. Accountability is related with the Phase-In stage, and comprises the communication block that was previously mentioned, since the team found that communication issues mostly arise during Phase-In and cause lack of accountability.

With regards to Uncertainty, the group found the absence of practices that inhibit effective uncertainty reduction in early activities of Discovery, namely ideation and idea screening. Later, during Phase-in, they lead to unexpected changes in product requirements due to immaturity of projects, necessitating time-consuming adaption and delay. The practices are (1) variable one pager quality, (2) insufficient funnel structures, and (3) limited availability of budget.

In essence, Jabra is mainly dependent on the creation of ideas by its own employees. However, little attention is currently paid towards ideation as employees have limited time and insights available to create new ideas. Moreover, there are no mechanisms in place to effectively early-test crucial assumptions, thereby reducing uncertainty regarding customer

needs. Indeed, the funnel should serve that purpose. However, Jabra's funnel is simply a mechanism wherein One-pagers are simply stacked on, until a team of Project Managers considers there are enough employees available to kick-off that project. That decision is taken in a Funnel-meeting. Finally, budgeting in Jabra follows a capitalization model, in which every expense has got to be directly linked with a project budget that is only allocated after a project is kicked-off. Those expenses are expected to be offset by revenues of the product that will be sold in the market, and therefore have got to be clearly linked with a project. This means that there is no budget for discovery phase, leading to the already mentioned lack of insights and resources to test ideas.

With regards to accountability, the issues that were found were (1) unclear project scope, exacerbated by unresolved uncertainties, (2) silo-ism among departments and, consequently, (3) unclear roles and responsibilities, and finally, (4), external market pressure. These factors lead to low levels of accountability and a generally low sense of urgency throughout activities during Phase-in.

Findings regarding accountability mainly relate to phases of the product development process that follow ideation and screening, specifically feasibility studies and business case development. Due to difficulties defining the appropriate scope for projects, that have not been matured sufficiently during earlier stages, prolonged periods of experimentation will have to follow. Misalignment among departments further complicates this.

These issues are in some cases extremely problematic. Some interviewees stated that during development everyone knows what their responsibilities are, but that during Phase-In responsibilities are blurry. The already described difficulties that are created during Discovery lead to the fact that the project starts from scratch. Then, the fact that R&D and Marketing departments struggle to communicate with one another is evident and has been the cause of significant delays. An interviewee described a project during which the marketing department

suggested to include a novel feature enabling headphones to integrate outside noise. This was particularly aimed to increase safety for cyclists in traffic, keeping them aware of their surroundings. During feasibility tests, the R&D department concluded that it was not possible to develop this feature. However, due to miscommunication, the marketing department assumed the feature was in development while R&D was waiting for an alternative proposal. Consequently, the project did not progress for several months. All these issues lead to unclear roles and lack of a sense of urgency. Finally, it is important to understand that delays mainly occur during projects within the B2B Contact Centre & Office (CC&O) division and are seldom an issue for the B2C Mobile division. While employees of Jabra attributed this to higher levels of technical complexity of the enterprise solutions, the project team found another factor, external market pressure, which accounts for the challenges faced by Jabra. The Mobile division has to adhere to market cycles and occasions such as Christmas for the introduction of new products. Contrarily, enterprise customers do not purchase products based on market cycles and trends, meaning that the CC&O division generally faces less market pressure to introduce products on a continuous basis – especially so since its products have longer life cycles. Thus, a lack of market pressure in addition to factors identified above leads to lower levels of accountability within CC&O and higher project delays.

C: Recommendations to the company

Flexible Ideation Time

The first recommendation is based on the fact that employees have little time available to generate ideas. In fact, no time is officially allocated to ideation although Jabra heavily relies on its employees for input. Thus, the group recommends that employees should be allowed to schedule a percentage of their time to work on and develop their ideas. These are then submitted by means of a One-pager. In the past, these One-pagers have been criticised for

lacking substance and quality, leaving decision makers unable to judge the progression of a project appropriately. However, there have already been good projects in the company, meaning that the One-pager format itself is not an issue.

By allocating more time to ideation, employees will be able to develop their ideas more and integrate relevant information, which was previously unavailable. In turn, this will lead to better definition of project specifications, enabling more effective decision-making and assessment early on. Therefore, uncertainty will be reduced and there will be less project delays. This policy must be supported by senior management, so that employees will be more empowered and incentivised to actually take time and allow themselves to elaborate.

This recommendation is further in line with future plans of Jabra to implement a so-called Idea Cloud that should serve as a collection of market insights that can be used to generate and develop ideas. This Idea Cloud will be managed continuously by an insights team, making sure up-to-date information is available throughout the organisation. However, more information by its own may not be leveraged effectively when employees have limited time available to work with them in the first place. Consequently, allocation of time to ideation will further enhance the utilisation of more insights that the company is already planning to gather.

Test Track in Funnel

This recommendation focuses on improving current practices that follow the initial submissions of ideas. Specifically, during the Funnel stage within Discovery, managers briefly assess new One-pagers and estimate complexity as well as resource requirements. However, while a funnel traditionally serves to screen, mature and filter ideas, few of these activities are currently in place at Jabra. Often, submitted projects receive no further considerations apart from initial estimations and thus enter subsequent development phases containing high levels of immaturity and uncertainty.

The second recommendation includes the implementation of a Test Track, which allows certain project ideas to be tested before they enter into Funnel. Supported by more elaborate One-pagers, Jabra will be able to better assess requirements and market uncertainty of project ideas. Therefore, more complex or unfamiliar projects should be channelled into Test Track first. There, the most critical assumption will be tested through quick and cost-effective methods such as Pretotyping. Since Jabra is especially struggling with identifying customer needs, Pretotyping aims to assess marketability of projects first. The objective of Pretotyping is to "validate market appeal and actual usage of a potential new product by simulating its core experience with the smallest possible investment of time and money" (Savoia, 2011, p. 21), answering the question "Do they want it?" before the question "Can we build it?", which is the question answered in Prototyping. Once assumptions are validated, these projects can enter Funnel and receive usual time and budget estimations. Knowing that a certain unfamiliar idea is accepted by customers will enable Jabra to avoid time-consuming iterations later on, and effectively scope projects, thereby reducing project delays. Moreover, the recommendation supports future plans of Jabra to become more customer-driven, and was backed up during our external interviews.

Sprints and Weekly meetings

While problems concerning unclear project scope will be tackled by the first two recommendations, this final consideration is meant primarily to address remaining challenges of accountability.

Currently, within Jabra, few processes are in place to ensure continuous progression of projects. While gate reviews between individual stages of the product development process are in place, these might be several months apart from each other. This often leads to low visibility of tasks in and between departments and a low sense of urgency for early projects. Thus, important tasks are frequently conducted towards the end of deadlines where

unexpected changes commonly defer them. However, Jabra is currently implementing monthly meetings to enhance the process.

Thus, the group recommends that Jabra introduces short weekly update meetings for each project. The meetings will only last for up to 15 minutes, and current and future progress will be discussed. However, the main purpose of these meetings is to give employees the chance to state what is going wrong and ask for help, thus resolving potential challenges in due time. Moreover, the group also recommends that intervals between each monthly meeting should be structured in sprints, whereby important deliverables for a project are defined at the beginning and presented at the end of each sprint. Particularly, a product backlog is defined, incorporating a flexible list of deliverables for each project. A subset of tasks, the sprint backlog, is then chosen and processed during each sprint. The list of deliverables in the product backlog should be prioritized considering the most critical research and activities that have to be conducted. The recommendation of flexible ideation time and test track support this methodology as they support a clear definition of project requirements from the beginning of a project onwards.

This method introduces more pace and accountability into the process. Thus, tasks will be conducted on a more continuous basis, introducing a higher sense of urgency, and potential challenges will be discovered earlier. Moreover, due to higher visibility and clear distribution of tasks, issues of silo-ism and unclear roles and responsibilities will be mitigated.

D: Concerns

The trade-offs of the implementation of the first recommendation – Flexible Ideation time – are the risk of exploitation of ideation time for other purposes. However, exploitation is something that can always occur, regardless of policy. The ideation time initiative mainly addresses employees who already had the motivation to submit One-pagers before and

provides them with more incentives to do so now. A second trade-off is the reduction of time to work on ongoing projects that were already kicked-off. Still, this should not pose a significant threat to the firm, since the reduced uncertainty in Discovery will in fact lead to less time consumption for development.

In what concerns with the test track in funnel, one has to be aware of the fact that implementing Pretotyping into the Test Track would require the existence of an over-head budget, to cover for expenses in Discovery Phase. However, the group only proposes to conduct light testing in Funnel to support and provide focus during more comprehensive desirability tests later on during Phase-in. Furthermore, there is also an ethical dilemma to the method. Moreover, desirability tests and focus groups are still needed in Phase-in. Pretotyping will not answer all the questions, since it is just a method that will allow Jabra to know whether more uncertain ideas are deemed attractive by customers before starting the whole process of the product development process.

Regarding the implementation of the weekly meetings and sprints, a particular concern mentioned frequently during the interviews is that a more structured Phase-in could diminish innovation. However, since employees agree on What to deliver during sprint meetings rather than How to do it, there is still sufficient room for creativity and flexibility. Thus, sprints provide a balanced way of including structure into Phase-in without killing innovation – finding the balance between "agility and discipline" (Cooper and Sommer, 2016, p. 3). Another drawback is that increasing the frequency of meetings will consume time. However, considering that the weekly meetings take up a maximum of 15 min per week and that the pre- and post-sprint meetings consume 3-4 hours per month, the amount of time needed is not particularly high. Furthermore, the invested time will be offset in multiples due to the improved efficiency and more committed work in Phase-in. Likewise, these recommendations increase the pressure on Jabra employees. Although this is a desired outcome, it has to be

ensured that pressure is not exaggerated. Particularly not at the beginning, where employees have to learn and get a feeling for how much work they can handle within a sprint. Hence, a learning curve is involved, helping the employees to set realistic deliverables for the sprint. Another potential consequence is the trade-off between quality and meeting sprint deadlines. Jabra has to be aware of this possibility and first of all encourage the project team to not accept this trade-off.

E: Individual Contribution

My biggest individual contributions in the Business Project were to describe and analyse the finding that Uncertainty is one of the main drivers of project delays in Jabra, and to propose a recommendation that solves that issue. Thus, I prepared the recommendation of flexible ideation time, which I will develop further in this section.

The issue of uncertainty poses significant threats to the future of the company, and since it is in good financial health Jabra should allocate resources to solve it. As was already mentioned, this is a cultural issue of the company, because by uncertainty the group means market uncertainty, while the firm is quite capable to cope with technological uncertainty. This not only leads to unsuccessful product launches, but also to considerable project delays. Indeed, even successful projects suffer from this issue, because during Phase-In many change-requests occur. Change requests are a formal procedure whereby a Project Manager states that a product should include a specific feature, or that a feature that was planned to be included in the product should be different. These requests happen because market studies are conducted very late during Phase-In, after some specifications have been decided. During those studies, employees learn that customers prefer certain features in a product that are different than previously thought, e.g. product size; design; number of microphones, etc. Since this information comes very late – when design is already decided -, there is a step-back in the development process, causing significant delays. These issues would easily be solved if

during Discovery market studies were conducted and an idea cloud – where market insights are constantly gathered and stacked – existed.

Since Jabra already plans to build the idea cloud, the group considered that the company is already acknowledging the need to allocate resources in the early-phases. Still, this will not be enough to solve all issues, because market insights per se will not trigger new ideas, and employees need time to use that tool. In fact, since there is no time allocated to the development of new ideas, only ambitious employees who work extra-time will create good One-pagers. This issue clearly compromises the future of a company that is dependent on the success of the new ideas that will be sold in the market place. Therefore, I concluded that allocating flexible ideation time would be essential. It would allow for the development of better ideas, and by better ideas I mean not only more successful products, but also more detailed and thought-through one-pagers. Employees will be able to use whatever resources they deem suitable to work on one-pagers, either working individually or in groups. They will gather more information and be able to clearly communicate the idea. Consequently, there will be a reduction of uncertainty and a clearer project scope during phase-in, thus reducing project delays.

Furthermore, an interesting feature of this recommendation is that it is completely aligned with the idea cloud that will be implemented in the future. The idea cloud will be even more useful if employees have got time to use it, while the ideation time will be a more successful policy because employees will have market insights available to work with.

This recommendation was backed-up in some of the external interviews the group conducted, and also by best practices from successful companies that consider ideation time as key to success. 3M pioneered this approach by implementing a '15% Policy' in 1948 that allows employees to spent time developing ideas during their working hours. This initiative was responsible for the creation of the 'Post-it' note, one of the most famous and successful

products launched by the company (Goetz, 2011). Another firm that has successfully implemented this practice is Google, giving employees 20% of their time to spend on their own projects. This has boosted employee motivation and led to the development of 'Gmail', for instance (Tate, 2013). However, Jabra should not allocate 15 or 20% of working time to ideation, because it relies less on disruptive innovation than the aforementioned companies. Therefore, the percentage of working time allocated to ideation has to be determined by the firm, since it is highly context specific. A good approach might be to investigate how much time is needed to create a high quality One-pager with sufficient depth.

Since innovation may come from unexpected sources, all employees should be included. This prevents discrimination and demotivation. Moreover, taking ideation time should be optional, since innovation is not a linear process that can be enforced. Further, I recommend integrating the ideation time in official job descriptions to institutionalise this initiative and empower employees to actually make use of it. This is only possible if top management is aligned and supports the implementation.

Finally, the most appropriate way to implement flexible ideation time is to align relating policies with intrinsic motivators, instead of extrinsic ones. According to Thomas (2008), the best way to engage employees in meeting a company's objective is to use intrinsic rewards. This source defines four sources of intrinsic rewards: sense of meaningfulness, choice, competence and progress. The allocation of ideation time to develop better ideas is aligned with all these items. Meaningfulness: employees who develop new ideas feel a sense of accomplishment; choice: employees can engage in ideation using the means they deem most suitable; competence: employees can utilise their skills during the development of ideas; progress: the recommended practise leads to reduced delays.

III: Academic Discussion

A: Possible links with Finance

The main topic of the Business Project was 'Project Delays'. Although it is mostly related with the field of management, because it depends on internal organizational practices, it can also be assessed from a finance standpoint. In fact, project delays have got the consequence of decreased revenues and increased costs. Decreased revenues due to the sales that are forgone in the period of time when it was estimated that a product would already be available to customers but is not, and due to the possible loss of first-mover advantage. Increased costs due to excessive time that is spent on a project, including the inflated number of studies and processes that are taken back-and-forth. Therefore, project delays affect a project's profitability which in turn affect a company's profitability. Hence, they are a financial issue.

In my point of view, this can be related with the financial discipline of Capital Budgeting – "the process in which a business determines and evaluates potential expenses or investments that are large in nature". (Investopedia, 2016) Additionally, the risks imposed by frequent project delays can be reflected in a higher discount rate for a company's future expected profits, further aligning this issue with Capital Budgeting.

B: Relevant theories and empirical studies

In an effort to find academic proof that project delays lead to deteriorating financial health of companies, I found numerous articles that call attention to to the increased costs caused by project delays. In fact, Bacon et. Al (1994) consider that the same root causes of project delays lead to higher costs, not differentiating the two issues: "In several projects, hasty or poorly managed changes in product definition (e.g., abandonment of critical product features or disagreement within a team over the appropriate response to new customer demands or competitive products) led to delays in product release dates, higher costs, and ultimately to

product failure." (P. 16). Moreover, the same source also considers that "late recognition of the competitor's developments, and thus late reaction to them, cost them considerable sales." (P. 17). This is not only in line with the aforementioned hypothesis of increased costs and reduced sales, but also with some of the causes of project delays that were found in Jabra, namely poor product definition. In order to estimate the financial impact of project delays, "a model developed by the McKinsey & Co. shows that high-tech products that come to market six months late but on budget earn 33% less profit over five years. In contrast, coming out on time and 50% over budget cuts profits only 4%." (Cooper, 2001, P.4). This study shows the significant cost-savings that can be provided by project timeliness, since it even covers the costs incurred by budget overrun. So far, this is the only study that directly quantifies the relationship between the two variables, but is aligned with qualitative theory.

Moreover, several articles describe the nature of costs triggered by project delays. There is extensive research pointing out to the fact that the most expensive costs are incurred after initial phases of product development process – defined as Phase-In and Development in Jabra. The rationale revolves around the circumstance that during those development phases a delay dictates the production of, for instance, new prototypes, or conducting deep market and feasibility studies. On the other hand, in Discovery a delay solely implies postponing project meetings or conducting more in-depth research when valuable information is not yet available. For instance, Cooper (1988) considers that "the first stage involves generating new product ideas and undertaking a first and tentative evaluation or screening of these ideas. These activities are critical; they initiate the new product project. Deficiencies here - poor ideas, too few ideas, and poor screening-result in costly problems in later stages of the process." (P.5), while Bacon et al (1994) portray how costs depend on the stage wherein they are incurred: "The early stages of new product development cycles are characterized by relatively low rates of expenditure and, accordingly, changes in product features or target

markets incur lower cost penalties. Moreover, these early-stage decisions have significant implications for the costly "downstream" investments in the development, manufacturing, and marketing activities associated with a new product." (P.1)

Furthermore, the differentiating characteristics of the Discovery stage are labelled "Fuzzy-Front End" by some authors. It is considered fuzzy due to the lack of information and unstructured processes that are put in place in that stage, as compared with later stages. Nevertheless, the same authors who consider it is fuzzy, are the ones who claim it plays a key role in a project's success and in cost reduction. Thus, it should not be overlooked by companies. Khurana and Rosenthal (1998), identify a number of factors that are critical to success within FFE. Among the most pivotal are the need for an "early, sharp definition" of the product, "detailed customer needs analysis", "preliminary market and technology assessment", "project prioritisation", and "organisational communication" (p. 61). Yet, they also find that companies struggle with perfecting the very same factors.

The characteristics of the FFE can be summarized in the following figure, which shows that initial stages are fuzzy due to lack of information, but that costs there are cheaper and the influence in the Project Development Process is bigger.
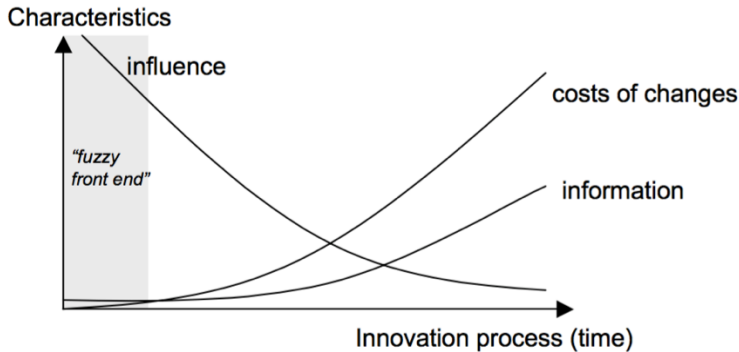
Figure 2: Influence, Information, and costs of changes (Herstatt et al. 2001)

Finally, it is also stated in academic literature that appropriate communication is critical in Project Development Process. Communication issues in the early-stages lead to expensive

project delays, as concluded by Moenaert et a. (1995): "Communication during the planning stage is especially crucial, since this is the stage during which modifications, reorientations or drastic changes in new product plans are the least expensive." (P.4)

C: Implications for theory and future research

The summary of research I collected in the previous section supports the findings of the business project. This means that current issues Jabra is faced with are not unique to the company, being commonly referred to in the literature. Specifically, literature supports our findings that practices in initial stages are usually problematic, and that have a huge impact in the later stages, thus leading to delays. Even the issue of silo-ism is referred to as a common concern. Additionally, the academic articles I found confirm the hypothesis I portrayed that project delays have financial consequences – increased costs and reduced revenues – and they also determine that those consequences are greater when poor management practices occur in initial phases, because not spending time improving those phases means more time will be spent in the subsequent ones, where costs are more expensive.

However, although there is a link between literature and the subject of Finance, it would be interesting to see more quantitative studies illustrating the same conclusions. There is only one study that estimates a numerical impact on profit of delays, while several qualitative studies have been undertaken. Finally, I did not find research relating the topic with the discount rate of a project, or the risk-premium that is required by investors to invest in companies with recurrent project delays, which would also be a fascinating topic to study.

IV: Personal Reflection

A: Personal Reflection

      i: Key strengths and weaknesses observable during the project

The main strengths I revealed during the project were team-working skills and ability to plan. Team-working skills were particularly important since the group was quite diverse. The group was composed of 4 persons with different nationalities, which had a different 'working style'. Some members preferred to discuss issues in advance so that an overall group agreement was reached, while others preferred to deeply study a topic even before all members considered it would be useful. Therefore, it was quite difficult to reach an agreement in the group meetings and to understand which were the next-steps. Consequently, I felt the need to mediate those issues: I always asked all members if they agreed on a premise another member was making, so that we could all be on the same page. Moreover, in the end of a meeting, I stated what were the conclusions we had reached unanimously, so that we could be clear about them. Furthermore, I also asked what would be the deliverables for the next group meeting, so we could be efficient, and was always considering which activities should be conducted in the future, planning the project in advance.

Regarding weaknesses, I was too much focused on the company's language, and took an operational approach instead of a more academic one as required by CBS. Concerning the first weakness, I was too embedded in what was revealed by internal interviews, not checking if the explanations that were given made real sense or if they were a simple excuse of company's employees. E.g. CC&O workers considered that there are more delays in that department because products are more complex. It is true that they are more complex than mobile's, but nowadays producing a conference speaker is fairly straightforward. I became aware of this due to the analysis made by the other members of the group. Afterwards, we discovered that the cause of those delays relies on lack of market pressure in CC&O.

Concerning the second weakness, I took a more operational and business consultant approach to the business project, attempting to solve causes of delays by looking at other companies' best practices. Although this is a useful approach, CBS also requires theoretical and academic sources to support findings. While some of my colleagues backed-up their ideas by means of academic papers early on the project, I struggled with that in the beginning.

ii: Plan to develop of areas of improvement

In the future, whenever I have to solve a company's issue or be in contact with a company, I will always double-check the reasonings and explanations provided. In fact, employees who spend most of their life in a company have its corporate language and culture quite embedded in themselves, and one has to check if their working process is logical and could be improved. Moreover, whenever I conduct a project in a foreign university or company, I will strive to (1) understand how people are used to work, what kind of sources are required, and (2) adapt myself as fast as possible to those working practices, so that my work suits best the environment wherein it is developed.

B: Benefit of hindsight

The project team was particularly skilled in analyzing current practices in Jabra, deeply studying them and testing all hypotheses with interviewees. Then, during external interviews and analysis of other companies' best practices, the group got further proof of what should be improved in the company, creating a solid perspective.

However, there was no need to spend so much time in analysis, and in retrospect we could have balanced time better in order to spend more time developing recommendations. Still, one can only create good recommendations if they address a company's issues.

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Appendix

A: Interviews conducted with Jabra

B: Interviews conducted with external professionals

A: Interviews conducted with Jabra[1]

Respondent A

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Insights	00:20:00	More customer insights between -2 and -1. The more insights you get before making a product story is important. So it is front loading of information, customer information.	1
		00:07:40	We run focus groups. Several focus group. We had a high score. Everyone was happy. Then some customers questioned it. I think it's a little bit too big. And then everyone started to see it 'yeah maybe it is too big'. That was CC&O.	2
	One-pager	00:13:30	The more sharp or clear these One-pagers are, the lower risk it is.	3
		00:13:50	If they can do some clearer One-pagers than it is more clear in the Funnel that this is good.	4
	Funnel			
	Uncertainty	00:10:30	Product Manager needs to know what he wants. What are the top 5 points which are crucial to bring this product into market?	5

[1] The coding of interviews conducted with Jabra is a collection of quotes relevant to the study and does not represent a full transcription. Recordings of all interviews are with the project team.

		00:11:08	There needs to be a very clear strategy from Product Marketing Managers and the organization behind it.	6
	Other problems in Discovery			
PHASE-IN	Unclear Scope	00:14:03	Once here [Stage -2], then the product story becomes most important. It's everything for R&D. It is easier for us to understand what to develop and what to investigate into.	7
		00:21:05	We need to have a template for this product story. It should be a product marketing document explaining about this product. More detailed about features.	8
		00:26:18	This [product story] is not good enough as it is today. This is where we could improve our Phase-in – by having a clear product story.	9
	Silo-ism			
	Accountability	00:31:00	Earlier we were having status meetings every week, where we were having R&D and Project Marketing Management sitting and each program was asked: 'What's the status for you?'. But it's time consuming. We are running around 40 programmes.	10
		00:32:00	Now we are only updating the sheets and people can look into it. Definitely not [an improvement].	11
		00:33:30	Now only monthly meetings within R&D. I am really missing these meetings.	12
		00:36:15	I could see a bi-weekly status meeting with R&D Management and Product Marketing management where they are challenging us.	13
		00:33:40	Stakeholder management - really forcing that everybody knows what is going on.	14
	Lack of Urgency	00:38:15	To have people here [Phase-in], committed people, is sometimes very difficult. Because if something happens in here in some of the other programmes [close to FCS], not having a team member who is only assigned to me. Some have 6 projects. If one of them is burning, the	15

			closest to FCS, is definitely the most important. There is definitely some prioritization here. And prioritization is always hitting Phase-in.	
	Other problems in Phase-in	00:51:25	Most slip-rates for CC&O. Mobile knows their customers better. Build up over years.	16
		00:51:50	In CC&O they need to focus on decision-makers, only them.	17
		00:04:40	In the execution we are fair, but we are not good at Phase-in.	18
		00:50:10	(Q: Where did you see most of the delays happening?) Definitely in Phase-in.	19

Respondent B

Stage	*Item*	*Time*	*Supporting Quote*	Quote #
DISCOVERY	Insights	00:04:10	One of the things that we are constantly being challenged on [..] we need make sure to specify the product correctly, and the specification definition are backed up by insights. We haven't been defined exactly what we needed	20
		00:34:00	We now have an insight team with full time resources. […] Responsible for gathering these insights, and also having this overview.	21
		00:35:15	Budget comes from the development budget because that's the only budget have. We don't have sandbox budgets; we also don't have insights budgets. The insights budget has to come out of the product development budget […].	22
		00:35:30	They have to come from development budget […] and it's also something she cannot start before budget has been allocated to her.	23
		00:38:40	We are a technology way and in my view we are on our way to become more insight driven.. But we are definitely not there yet.	24

		00:40:10	Not everybody is interested [in insights]. Product Management are hugely interested in these insights.	25
		00:40:50	But the R&D person basically does not care. If they can be allowed to develop their own cool technology […] So it depends where in the company are you.	26
		00:41:10	So, from a product management perspective they [insights] are used as a bible.	27
		01:07:00	[When asked about the relevance of MRS]. Put less emphasis on MRS and put more emphasis on marketing insights.	28
	One-pager			
	Funnel	00:12:30	Truly innovative companies they, have those sandbox budgets, where you can mature different technologies to a certain level and you continuously mature projects in the funnel.	29
		00:13:50	We have a R&D department, which due to the capitalisation model have to assign 99% of their time has to be assigned to a project […]. And project is not a sandbox, it's something that becomes a product..	30
		00:14:50	A person in R&D in Netcom cannot spend one hour on trying to mature a certain technology or working on a certain idea unless this project is already started. So nine out of ten hours have to be assigned to a project that is directly leading to a product. And that doesn't exactly fuel an innovation culture.	31
		00:23:38	We have a technology funnel […] We write roughly what we would like to sell […] That is presented to the funnel board. When we have the estimate, we have to wait until the resources are available […] So I have to maybe wait six months.	32
		00:29:15	Guessing what it takes to drive radical innovation in some cases within a project is extremely difficult.	33
		00:28:25	If they [development personnel] end up on […] three key features that we would like to have, then all of a sudden	34

			one of them drops out and they were not able to execute it. Well, we are not going to know that until we are way down with the developemnt that has run a significant amount of development budget. And [...] we are often forced to put the product to the market, because we have to have a product to capitalise the sunk R&D cost against.	
		00:31:10	If we as a company continue being serious about radical innovation we have to start thinking about how to change that [having a sandbox budget].	35
		00:25:03	I basically – without killing another project – can't start a new one […] And in those six months nothing is going to happen, nobody is going to work on the new and innovative ideas. Not until the project officially starts [...].	36
	Uncertainty	00:07:40	The more new and unique features you do the higher the risk.	37
		00:17:50	We have simpler products in Mobile. Complexity in CC&O is much higher. The technical complexity is in my view is quite higher.	38
		00:18:00	Mobile still technology differentiation. Mobile consumer business is a bit simpler. Usually we have a pretty good understanding on what we like. Nobody is going to work on it until then. Then they start maturing.	39
		01:18:45	I feel more confident with that part [Technology].	40
		01:20:05	The technology we can control. The current CEO is currently questioning the Market […] Management feels more comfortable about us as a technology company than as a market driven company.	41
	Other problems in Discovery	00:05:20	It's hard for me to put a finger on one thing that we are consistently bad at […] Part of our strategy is a technology leader.	42
		00:05:40	We differentiate through technology. […] We have the ability to differentiate from the competition.	43

		00:09:30	We have a model in which we capitalise all our development costs (capitalisation model).	44
		00:10:25	Any development cost has to be tied to a specific project.	45
		00:11:00	If you want to be a tech market leader than it is difficult when you're using the capitalisation model.	46
		00:11:20	I have to start my project with a FCS date before I start my technology development.	47
PHASE-IN	Unclear Scope	01:05:30	Product management should be focused on describing the user experience […] What is it that this product wants to solve.	48
		01:05:30	[…] MRS is a document that we [Product Management] should forget about it […] We need to think about what is it that this product has to solve.	49
	Silo-ism	00:53:00	People on their bicycle who wanted to use a headset […] we did an insight study […] Hear-through, they would like to have to pick-up the sound around you to hear the traffic around you [...] Customers were interested. The acoustics guy said that was not going to work.	50
		00:54:40	Project management had stated you need to solve it […] Acoustics said this is not something I can solve […].	51
		00:54:50	[…] Product management had missed this point […] Started talking with customers.	52
		00:58:30	There are silos. […] R&D are silos. They don't necessarily see that.	53
	Accountability			
	Lack of Urgency	00:42:20	We are usually struggling to make the numbers […] The projects that are closest to the money have the priority.	54
		00:44:00	[…] Makes us very short sighted in how we develop.	55
		00:44:30	It has been announced one month ago that now R&D will get a bonus system. Otherwise R&D has not had a bonus system.	56
		00:47:20	Line management can decide on resources.	57

Stage	Item	Time	Supporting Quote	Quote #
	Other problems in Phase-in	00:13:30	We implicitly become conservative. But explicitly it results in having more slips in the early phases, […] making it almost impossible to control the Phase-in.	58

Respondent C

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Insights	00:23:30	You need to evaluate many information in the beginning.	59
		00:05:19	ID itself is not developed well enough. We may think it is ok, but at a later stage there may be a problem.	60
		00:11:00	We may fail a key factor, and the switch doesn't pass the test. And we have to develop a new switch.	61
	One-pager			
	Funnel	00:22:30	The funnel estimate is not quite accurate. It is very early.	62
	Uncertainty	00:08:20	There may be marketing and function requests. We have to keep it stable, we can't change it so many times.	63
		00:21:10	If we can put more resources and more time on feasibility studies, we can make it better. But it won't be perfect.	64
	Other problems in Discovery			
PHASE-IN	Unclear Scope	00:09:50	At the beginning stage we have to make it clear - what we need.	65
	Silo-ism	00:17:20	In most projects, we can understand each other [Marketing and R&D]. But in some, we don't understand each other very well.	66
	Accountability	00:36:30	People are only accountable for delays since business case until FCS. There may be some accountability measures against alpha and beta, but the most important one is against FCS.	67
		00:37:10	There is only and rough schedule since BC. There is also accountability before it, but it is harder to measure and have better estimates.	68
		00:37:50	The employees who are usually accountable are PM and PMM.	69

		00:34:30	Employees know what is the order of priority of the projects.	70
	Lack of Urgency	00:06:20	Time is one factor [to cause slip rates].	71
		00:18:45	In CC&O the development time is quite long compared to mobile.	72
		00:19:30	In mobile we have more pressure to serve the clients.	73
	Other problems in Phase-in			

Respondent D

Stage	*Item*	*Time*	*Supporting Quote*	Quote #
DISCOVERY	Insights	00:27:15	I think for the vast majority of projects that we do - I think there is very little [insight].	74
	One-pager			
	Funnel	00:50:52	I think we need a better understanding of the maturity. So, one thing is that we have our gate shifts, which is fine. But it doesn't necessarily say a whole lot about the actual maturity of the product. So I think we should be better at measuring the maturity.	75
		00:12:15	(Q: committing more resources upfront?) We also do that but I think we should do it more. So we have these investigation projects if you like - sometimes it's at a level where we say 'ok we are basically not able to estimate this, because we have no clue what it is that you want. And to be honest I don't think you know what you want'. So we need to have some discussion and investigation to see what it is that you actually want. I mean an example of a One-pager could be 'I want to replace piece BIS 2400'.	76
		00:41:11	(Q: estimations done at Kick-off compared to those done at Funnel?) And then basically you start the evaluation or the estimation process again, because now you get more information, you have a clearer picture so you	77

			need to re-estimate anyways. So you could then also argue what is the value of the Funnel process then. Because what is the level of accuracy that we can deliver on something that is quite unclear.	
		00:11:52	So basically we have allowed very limited information to be enough to make an estimate to go into a project.	78
		00:13:44	Right now, there is no filter in the Funnel. Funnel doesn't mean that we actually kill anything. Funnel means that we are going to look at the One-pagers, maybe do a brief pre-analysis of what it is and based on that we make some estimates. So you could also argue what is the quality of the estimates at that point in time?. [...] I think we could be better at defining these One-pagers. I mean, just the word one-pager - doesn't it ring bad in your ear. We are going to invest, let's say, 70 million based on [an estimation] at this point in time - and its okay to just come with a one-pager? There is some sort of disconnect here that we don't demand there to be more information and insight.	79
		00:28:20	This [Funnel] is not a decision forum. This is 'we will take whatever you present, we will make some estimates so we can stack everything up'.	80
		00:39:50	What happens in the Funnel process is we don't make any decisions. So this is not where you do the filtering process as such. That, in my mind, takes place before, because otherwise you waste a lot of resources doing estimates on something that has no relevance.	81
	Uncertainty	00:03:20	This is sort of a new thing. And also - could be an opportunity for a priority - to actually play a bigger role in how we sort of grasp insights and deliver on things. I mean, knowing what is the right product and knowing which projects to kill and at the right time [...].	82
		00:09:35	Do you want to create a need or is there a need for a given product? And I think that's sometimes what we	83

			see in CC&O when we know that can be slightly fluffy.	
		00:15:28	So what we often talk about in R&D is that we want to shift things left. We want to do things earlier, because then we can increase our predictability. Maybe we should have something here [Phase-in], a process, where we have a process basically for product definition in PMM.	84
		00:16:26	I don't know what's done in PMM world. I don't know how they filter out whatever is presented to us. My feeling, is is that if there is enough money it's sort of 'okay lets put it through there and lets see how much it is going to cost. And then we decide whether or not we want it'. And that for me is sort of the wrong approach. We should say 'what would make the biggest possible difference. What can sell? How can we be successful?'.	85
PHASE-IN	Unclear Scope	00:10:40	I think one of the things that we have traditionally been struggling with is definitely a clear scope of what the overall product is going to be and especially if its sort of the unique projects - this is where we often struggle. [...] so the definition of what the product is going to be needs to be more clear in my opinion.	86
		00:19:57	I'm just saying that for me - looking from the other side [Development] it looks as if a lot of the input that we get is why we mess up quite often here.	87
		00:21:12	I think especially sort of above a certain point in time it becomes a little embarrassing. We have worked in this project a year, we still have no clue what we are going to do. When we go do focus groups and it's all over the place. Should we have more balls and say 'Ok lets just stop it now and not one and a half years down the road'. I think there is sort of a reluctance. It has been difficult to make that decision. So what we do is that we throw good money after bad money, basically. But we are in a transition stage where this has to change, because	88

		previously we would do a lot of launches every year. Lets say Mobile would be 10 to 15 every year - could be colour variants, could be slight variations over the same theme. But we would do a load of launches and then hopefully one or two are going to be a success and the rest doesn't matter. CC&O not so much but still a higher degree of launches. Now it has been decided that we shouldn't do it like that, that we need the right products but then maybe fewer products. So the decisions become more and more important somehow because you are putting all your eggs in one basket, or three baskets. And then its going to be really really difficult to say 'Let me kill this one' or 'Yes I think this is the right direction', because everyone is looking to you to be the next success.	
		00:07:56	What we often see coming out of Funnel is that we didn't have the system engineering perspective. So it was basically okay to go out of Funnel very unclear of what it is that was going to be made. And for some project it was such a high level description that basically it wouldn't make any sense to go into a project set-up. So sometimes we have these pre-pre activities to figure out so "What is it that you actually want?". And especially for CC&O - they are quite often not really sure what they want. And then of course, as a direct result of that, you get an extremely messy Phase-in which is going to be all over the place. So you could say that we from R&D should be more clear on what we would accept going into any kind of project set-up.	89
		00:53:46	One thing that has been an issue, and that's sort of the output of the Phase-in, is a set of requirements that we can control. Previously, we have not been very good at controlling the requirements. And because it wasn't maybe set in stone then there is also room for interpretation and there is room for changes. And when	90

			we don't have a baseline to say 'Okay this is what we are working from' then, of course, it's easier to make changes later in the game, because it wasn't clear to begin with.	
		00:15:28	So what we often talk about in R&D is that we want to shift things left. We want to do things earlier, because then we can increase our predictability. Maybe we should have something here [Phase-in], a process, where we have a process basically for product definition in PMM.	91
		00:16:04	(Q: what is lacking to improve current processes?) Definitely a process. I think we need a process for sure. And also knowing what's the right thing to do.	92
	Silo-ism	00:36:44	We also often see misalignment between how we have the development model of the product and how you have the marketing development model - whatever that might be. So there is quite a lot of misalignment and at least previously what I could see when I was a quality person looking into marketing wise that there was very little processes and conformity and by that the sort of uniform understanding and competence level is also affected, because processes become knowledge over time and competences.	93
		00:37:30	And I think its logical if we don't have a common understanding and method then we are going to come up with whatever - what I believe is the right way to do it. And then what we have here [in Phase-in] is going to be a mix of everything. So the level of trust in the information you have is going to fluctuate a lot.	94
		00:57:51	[Q: slip-rates occurring less during Development?) Ja, I do agree. But this is also where we have the biggest disconnect towards marketing. So you could see this as an isolated thing where we can just execute in the machine.	95

		00:44:37	Maybe it could be more fluffy [in Phase-in]. Maybe it should be sort of a continuous iteration of ideation and innovation where it is a collaboration between technology, R&D and product management. Today, its quite isolated, as I said before. Its just product management that comes up with the idea. Why isn't it a combination? Because then we can utilise the technology know-how, trends or [...].	96
		01:08:48	(Q: project filters?) Maybe there is a filter, I don't know. But that is in itself a problem. Probably the rest of the guys that you are going to talk to is also going to say this that we work in silos. We really really do. Both within R&D but especially between R&D and the divisions [CC&O and Mobile].	97
	Accountability			
	Lack of Urgency	01:03:15	(Q: accountability measures in Phase-in) No and maturity is also what I mean with progress. But one of the reasons could also be that if we are all measured against FCS and not so much towards whatever happens in between. Do we have the right sense of urgency when we are sitting here and three years down the line we have the FCS. But I mean, maybe we are not taking it seriously enough, maybe we are not focused enough and have the right sense of urgency in early stages.	98
	Other problems in Phase-in	00:29:15	What it seems to be like is that prioritisation in and between projects [in Funnel] is not clearly communicated. We usually know priority one and two, but across the entire portfolio we don't know.	99
		00:42:08	Then you just sort of massage it into what you want it to be [instead of eliminating a project]. That is also what I am saying that then, naturally, this phase [Phase-in] is going to be longer than what you have estimated. So maybe its not so much 'We have sort of a fixed idea and this is how long its going to take' but if we need to re-	100

				Quote #
			evaluate something maybe we should just change the purpose of this stage. Maybe its ok if things take a year - maybe that's actually not a problem slip-rate wise, because we were not doing the right thing.	
		00:01:50	I was thinking - some other aspects that could be interesting instead of just slip-rates in general. I think we have some very specific challenges when we have sort of the cost-down variant or the second variant of something where we often see that we actually take a lot longer delivering what should be relatively easy. So its semi linked to slip-rates in general but more specific to these kinds of projects which were deemed to be relatively simple. Why is it that we have sort of surprises - that it takes longer, its costing more than we thought? Is it just because we are underestimating - I don't think so. I think we are more clever than that.	101
		00:46:58	The premise is different for Mobile. You have a window of opportunity that you need to meet and that's usually, let's say, for Mobile Christmas sales. So we need to be ready in August in order to be ready for Christmas sales […]. You have to hit - if you miss it then you might as well postpone your launch. And, of course, we don't want to do that, because then we can't capitalise the investment. In CC&O you are not driven by the same kind of things. You […] usually have longer time to develop whatever it is. The products live for a longer time as well. That's also why we have longer time in Phase-in [for CC&O] potentially.	102

Respondent E

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Insights	01:02:05	We just hired a new Head of Insights. We will have insights covering the foundation for everything we do.	102

			So we are trying to make sort of an, so the business case, numbers are from the market sides from the insights. Wherever you are in the process you can ... (End of Interview)	
One-pager		00:47:36	How good are these [One-pagers]? They are not good. How could the PM know without getting help from R&D, he can't know everything. This is a chicken and egg thing.	103
		01:00:45	Yes, we can do much here [Discovery], but we cannot make another funnel for pre pre pre-work to get to the pre-stuff […] before we get started.	104
Funnel		01:00:35	You cannot kill anything here because you don't have a language what good is. Don't know then it's hard to judge.	105
		00:18:45	One thing we can do when we start here, do a proper focus group analysis or whatever to verify the assumptions. Let's just show the assumptions here. What's the assumptions? (Q: And this didn't happen before?) No, it has been more political.	106
		00:30:40	It is a matter of asking those people who will be involved anyways: 'What's your assumptions?'.	107
		00:31:05	Call out the assumptions and make a sanity check. I'm not expecting a huge effort here, that comes in the project. Verifying that the customers actually like this better than etc.	108
		00:03:39	The Funnel is not a time duration. You just stuck them [One-pagers].	109
		00:15:04	Funnel is the mechanism of prioritization of ideas within the constraints of the R&D budget. Right now it's a costs [...], we are allocating costs rather than looking at where we can gain money. So we are only half way there in my mind.	110
Uncertainty		00:16:30	It takes for business project forever to get here [at BC]. This idea will mushroom and expand, then the CFO	111

			will say [at BC] 'I don't like the margin'. the CEO 'I don't like the growth'. It is evident that all the question they were asking here [Gate -2], half of them could be answered at the Kick-off.	
		00:17:41	Why don't we take the discussion here [Kick-off] rather than spending 5 million to get to here [BC]. 'Looks nice, poor margin - don't like it'.	112
		00:19:15	(Q: Relevant questions didn't come in until BC?) Exactly! This is now what we are trying to say, those basics: Maybe we can say we assume to sell this much but can we know it yet, but based on our current knowledge we do know something at least. And here we are just comparing stuff. So at least I can say let's compete here.	113
	Other problems in Discovery			
PHASE-IN	Unclear Scope	00:52:20	Here [before BC] you try to do something for the first time. You don't know exactly what the specs are, you don't know what the customers ask, you don't know if it is easy or not you don't know what the lead times are. The beauty of this. Element of newness.	114
	Silo-ism	00:45:25	We don't have a language here [Phase-in], we don't really have a language for concepting either.	115
		00:48:25	The big problem is we don't have a language here [before BC]. Here [after BC] there is a clear language.	116
		00:21:05	R&D works in a linear project, when this project is done the next one starts. It's very functional and isolated events. Whereas marketing is more like a looking out the window and saying question 1: We will address sports segment - looking both at old products and new products. So the coordination between marketing, marketing communication, the roadmap and R&D launches are very poor.	117

		00:22:20	So we had projects coming out of our R&D, called escape from lab, that means we develop it and give it to the supply chain and then if you know it is there you can buy it. But we won't tell you. So the whole coordination, we should have least make an announcement.	118
	Accountability	00:57:50	You spent 8 months. Were are you [now]? Ah, half way maybe. Yeah, but you still need to spend 5 million then. Is that money well spend? At least do you have an opinion whether you are making something good?	119
		00:58:10	15 months is a long time not knowing anything [time until BC].	120
		00:34:20	So here is your 5 million and you get resources covering this. And the first think they do is: Oh, we have money and time! We should save the world. Instead of making what was the original idea, and this idea might be 2 months old, it is ancient history, let's have some fun. Then they go on this concept phase ideation tour, without recognizing that there is an expectation that they are done in 7 months. How good are we in honouring this [R&D] estimate here?	121
		00:57:01	Why don't we say 15 [months in the beginning. This is because we don't have a language here. We don't have responses, responsibility. Here, after you have the spec, it is clear you do the software, I do the hardware […].	122
		00:45:00	Once we get to here [BC] we commit to each other saying we will book this revenue in our budget. From here [Gate 0] to here [FCS] is a critical commitment, has painfully be aware, this is what saved us.	123
		00:45:20	Nobody asks the engineer, now you are at -2, when are you planning to get to BC.	124
		00:58:49	Maybe long is ok [before BC] but then maybe we should find some intermediary steps. Jumping to the solution now. We cannot use the R&D centric gating	125

			structure to solve this because lot of the issues are not R&D specific. It's scoping specific.	
		00:49:00	We will record what you say here and keep you accountable. Response from R&D is: Oh, we should then lock the specs.	126
		00:52:10	It's clear what the roles are here [after BC].	127
	Lack of Urgency			
	Other problems in Phase-in	00:46:10	We have a pretty R&D centric process, but we get constantly surprised by interference from the commercial side and customer […] That we haven't really embraced, we don't have a language for iterative.	128
		00:36:13	Mobile is apparently a simpler landscape. So, forming the idea, setting the direction, apparently is easier. Their slip rate here is ok. The real focus we had for many years is that we never hit this one here [CC&O before BC]. So it was a pain since delays were lost revenues. So here it's super good, has never been better. So from 1 that was good and 10 that was delayed we have 10 that's good and one was delayed. So the general perception is, this is fantastic, maybe quality has started to suffer since we are know forcing to deliver. So you can say the panels could be quality.	129
		00:37:12	Here [CC&C before BC] it is really really poor. We consistently use twice as much time as we estimated.	130
		00:37:23	And we don't have rules saying: you should be able to do this in 7 months, we ask openly: Looking at the idea, estimating it bottom up, what is your best assessment? And then we are almost double. It is not only one, it is across 15-20 projects.	131
		00:41:20	So basically it's a coordination problem where mobile ideas are much more, it's is a consumer market, is a little faster, it's a lot simpler... New design same technology. Maybe it's more increment.	132

		Time	Supporting Quote	Quote #
		00:44:30	Is it [slip-rates] a problem? What kind of issue is it? Or is the issue that we are wasting time .. This is 6 months later to the market.	133
		00:52:40	If we mimicked this over here [after BC to before BC] we would only get coverings. If you push too much on gating ideas only the incremental stuff survives, radical stuff dies.	134
			They [competition] is twice as big and we are spending the same share on R&D. We used to crank out more products. In absolute numbers we had more launches then they did. Perhaps picking winners that can last longer. Spending money more wisely. So we are slowing down a little bit […] the newness is not the best business case […] maybe we can make better business case by positioning us better […].	135

Respondent F

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Insights	00:14:52	According to my understanding from some cases, it actually is kind of that marketing is unconfirmed or do not exactly know what kind of product they want in the future.	136
		00:15:45	They [Marketing] could have better studied beforehand and then firmly confirmed an ID concept. That can [avoid] that kind of slip a lot.	137
		00:37:30	I think there is really not enough [information] from a marketing point of view.	138
	One-pager	00:26:20	So normally for the One-pager in the beginning it is quite high level. And from execution - from a technical and development point of view - it hasn't been started yet. So everything is just based on assumptions [...] And we have to take time to study if all features and requirements [of a project] can be met.	139

	Funnel			
	Uncertainty	00:07:00	So with the requirements and the ID concept we then assemble a project team to evaluate feasibility. That is done in Phase -1. All things that need to be done in Phase -1 are to study feasibility	140
	Other problems in Discovery			
PHASE-IN	Unclear Scope	01:01:57	(Q: solution to delays?) First, we have to have one [overarching] kind of system to manage all these requirement things. Just so that these requirements will be reviewed and agreed from the beginning so they will be not changed too frequently by PMM alone.	141
		00:33:50	From my observation, if we want to improve to avoid these slip rates, one thing we could try is to improve from a marketing requirement point of view. So we need to get firm requirements locked and confirmed by PMM. Of course, we allow the PMM to do changes but this has to be accounted for in the schedule and cost.	142
		00:05:00	Generally, we don't have a specific deadline how long it [Phase-in] should take at this moment - we don't have this yet. So, every schedule is dependent on new estimations. So fist of all, we get requirements from marketing - for example that they want some kind of product in the market. And then marketing comes to us with a document called Marketing Requirement Specifications. That's the first thing we get from PMM, the marketing guys. With these requirements we will contact ID designers to come up with an ID concept - what the product will look like in the future and what features need to be implemented in this concept.	143
		00:30:45	Another thing I wanted to mention that causes slip is the requirement changes. So as you know the PMM makes the feature requirements, we call this feature list and after we have spent time to study each feature we come	144

			to talk to the PMM and say 'Hey guys this feature can not be implemented, I suggest to remove it' [...] 'Can we do something alternatively?'. But we need time to do another feasibility study, because this is not what you expected in the beginning.	
		00:12:33	According to my experience, there are several reasons that cause the schedule slips. The first one is the requirement changes, or we can call it uncertain requirement changes. So as you know in Phase-in everything is not locked yet. So everything has causability to be changed - for example the ID concept.	145
	Silo-ism	00:13:20	For example, at one time we got a concept design from a designer and also agreed with the PMM 'This is the concept we want to proceed with'. And we spent, for example, one month to study this concept and evaluate its feasibility from mechanical, hardware - from all different perspectives. And one month later we delivered the results to PMM and the PMM said 'No this is not the idea I want' [...] With new ideas coming from PMM the ID needs to be changed [...] and then we spent another one or two month evaluating this new ID.	146
		00:18:22	The communication between an ID designer and the mechanical guys is poor. An ID designer told me that sometimes he talks to a wall - he doesn't understand what the mechanical guy said. The mechanical guy also does not understand what the ID designer wants. So that makes the whole design task more complicated and takes even longer time.	147
		00:19:00	I think from a communication point of view there is not a common language. Mechanical guys don't understand ID guys from the ID design point of view.	148
		01:03:00	I still believe that some slip comes from communication.	149

		00:19:55	In my opinion we can improve this situation [with communication among departments] with several options. For example, firstly, we bring these guys all sitting together so it's easy for them to communicate with each other and understand each other. And then a second thing: if I am able to bring these guys together - and, of course, we can invite other guys who are more senior or have a common language with the ID designers and can help smooth communication between ID design and the mechanical guys.	150
	Accountability			
	Lack of Urgency	00:46:25	I can feel that some engineers have this mind-set. Especially if they are assigned to different projects. For example, if one is in development that means that the project scope is locked. Then they know what they have to deliver and what needs to be done. So everything is clear. But in Phase-in not everything is locked, everything is open and might be changed [...]. From that point of view they might prefer to work more on projects that are in Development.	151
		00:54:29	For Mobile we need to be fast and most of the time we take a risk to proceed to the next phase [...] If there are issues from a CC&O product point of view they will definitely need to be verified and approved first before proceeding to the next phase.	152
		00:56:54	CC&O also has that FCS pressure but compared to Mobile, as you know, Mobile trends are more competitive at this moment and [...] so they have more pressure from a commercial point of view that's why every trends have to be taken into account and we have to take actions fast.	153
	Other problems in Phase-in	00:09:15	For CC&O we can say normally there are delays. So it is quite normal.	154

				Quote #
		00:52:10	I fully agree. From a complexity point of view [CC&O] is way more complex than Mobile products. The reliability requirement standards are more complex than in Mobile products	155
		00:11:20	So for the slip rates I have seen [in Phase-in] compared to the development schedule are more severe.	156
		01:00:25	Underestimating a project's complexity from the beginning will also cause schedule slip	157

Respondent G

Stage	*Item*	*Time*	*Supporting Quote*	Quote #
DISCOVERY	Insights	00:17:30	Usually what happens is first the idea, then the insights. And most times only after funnel.	158
		00:21:00	Insights are still collected during the development process.	159
		00:34:40	Lack of insights may be one of the issues of slip-rates.	160
		00:08:40	Insights are not broadly shared.	161
		00:03:10	To create insights you need solid and valid data and know how to use and analyse it.	162
		00:12:20	Before funnel, there is the cloud part. Its aim is to describe the idea.	163
		00:23:00	From R&D point of view, in development phase, the kind of insights that are collected are validation of functionality, for example if it fits the sound.	164
		01:10:00	Jabra recognizes we have to take insights to the next level.	165
	One-pager	00:14:15	One-pagers don't necessarily come from the cloud. For example: The CEO has an idea, or a customer has an idea.	166
	Funnel			
	Uncertainty	00:33:30	Marketing usually just comes up at business case. They should come up earlier.	167
	Other problems			

Stage	Item	Time	Supporting Quote	Quote #
	in Discovery			
	Unclear Scope			
PHASE-IN	Silo-ism	00:06:35	Traditionally we are very silo-ed. […]The next step is actually to create a specific library [of insights] that is accessible for everyone.	168
		00:31:00	If they have been here for 10 years, they have a specific way of working […] And now I come and ask them to incorporate customer insights into these proposals.	169
	Accountability	00:08:15	There is no system in place That's why we need to take it to the next level.	170
	Lack of Urgency			
	Other problems in Phase-in	00:09:34	There are two important gates: the funnel decision and BC decision. In marketing there are two more gates: marketing gates 1 and 2. In total, 4 decision meetings.	171

Respondent H

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Insights	00:25:20	Customer insights are lacking. They give you 80%, the other 20% you have to invent.	172
		00:41:50	You build a new product because sales people need a new product.	173
		00:35:20	Having a more formalized sharing process would be better.	174
		00:35:30	Maybe we have some insights internally in the company that are not correctly shared. [R&D and Marketing]	175
	One-pager	00:48:20	There is already a mental filter before the one pager, they kill projects from the beginning.	176
		00:52:50	It's extremely important to get the right thing done. We should have more ideas in the beginning, and that we could kill.	177
		00:46:00	Some products are invented in the board room […] Cupertino project was invented in the board room. […] This is mandated by someone in the company, it was	178

			obvious you had to do it. Cupertino project was like this. But we usually don't work like this.	
	Funnel	00:10:30	One cause of delays is that we are naive. We should have tested things before.	179
		00:47:28	There is inertia to kill a project.	180
	Uncertainty	00:08:49	One cause of delays could be immature technology. We may have an idea, but when we develop the technology it may have an inconsistent performance and we will have some problems. You develop something you believe is mature, but probably wasn't.	181
		00:18:50	If the project and the markets are well-defined, then it is easier to develop the market. Sometimes, projects are ill-defined, and then issues will arise.	182
		00:20:50	It is easier if we spend more time and money in the initial phases, doing more research. People usually underestimate how much time things usually take.	183
PHASE-IN	Unclear Scope	00:19:50	In the Cupertino project, there was a huge misunderstanding of the technologies needed to develop in that project.	184
		00:39:50	There is some artistic freedom in the beginning of the process.	185
		00:34:11	Marketing workers must know the specifications the product will have.	186
		00:52:30	The company isn't particularly open to adopting processes. For some reason, it is an anarchistic way of processes [in the beginning].	187
		00:54:25	The processes are too unstructured.	188
	Silo-ism	00:54:28	50 slides of PowerPoint. Somehow I can grasp what the guy is talking about, but shouldn't there be a better way of structuring this? […] want less talk, more facts […] It is their [Marketing] nature to be more talkative.	189
		00:22:50	The marketing people don't know the right technological insights. They tell us we only see the problems, but that's because we are the ones who have to develop	190

			technologies. It's possible to mash things up in software, but not in hardware.	
		00:23:48	The beginning is marketing-heavy, then the feasibility studies are developed by technology teams.	191
		00:35:05	Sometimes, product marketing managers don't know the technologies that are needed, mostly new marketing managers. We don't have a handbook, and maybe that's a limitation.	192
	Accountability	00:56:10	People sometimes are accountable for delays. But seldom only one person is accountable.	193
	Lack of Urgency	00:26:50	Mobile projects tend to be simpler, but actually not always. In CC&O products are more complex. In mobile, we're using more well known solutions. There's also a cultural thing. In CC&O, we prefer doing the right product instead of ahead of time. The customers won't leave. In mobile we focus on preparing several products and launch them in the deadline, but it may not be right. Our reputation is better in CC&O.	194
	Other problems in Phase-in	00:11:50	Lack of modules. We have no technologies that are ready to use.	195
		00:07:15	We are extremely optimistic about what we can develop in short time.	196
		00:05:45	Technologies need some time to mature.	197

Respondent I

Stage	*Item*	*Time*	*Supporting Quote*	Quote #
DISCOVERY	Insights	00:51:13	Users in CC&O are better defined and thus easier to map-out their needs […] Mobile customers are based on emotions	198
	One-pager	00:31:00	If PPM knows the market well, and one-pagers are good, processes later on are better.	199
	Funnel			
	Uncertainty			

	Other problems in Discovery	00:33:40	More budget earlier on wouldn't necessarily be better.	200
			Front loading is not necessarily good […] Need to find a balance.	201
		00:44:45	"Many projects fighting for the same resources"	202
PHASE-IN	Unclear Scope	00:29:30	We have an idea of what they (R&D) want [at BC] […] after phase 0 still testing and getting input.	203
	Silo-ism			
	Accountability	00:38:15	(Q: priorities between projects?) Two-three different programs at the same time […] sometimes it's up to the developer to judge himself on his priorities, which makes it difficult to make exact estimates.	204
		00:35:40	Different people that you rely on and are accountable in different phases	205
		00:36:05	[Processes]. In the phase-in and very early phases it's the PMM and the Marketing, and the you move to R&D and then Production.	206
	Lack of Urgency			
	Other problems in Phase-in			

B: Interviews conducted with external professionals[2]

Respondent A

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Ideation Time & Idea Cloud	00:13:10	If you knew more here [Discovery] there wouldn't be a problem there [Phase-in].	1
		00:16:45	You have more on the ideation level, not so much on the prototype level.	2
		00:18:45	They [Danfoss] have an idea generation process, also coming from internal.	3
		00:19:20	They [RWE] have contact points for the ideas coming from the outside	4
		00:19:35	The amount of ideas and the kind of ideas you get in is already decided here in the cloud.	5
		00:23:00	I would say using them as business intelligence, not business insights.	6
		00:28:40	I don't think you can improve based on your information here [Kick-off]. You need to know more.	7
		00:28:55	(Q: How to collect more insights?) Creating something which is agile here [Discovery]	8
		00:47:30	What Danfoss is doing and what is great, already when they are hiring, they put product managers are leaders in the contract, ok 50% of this person's time should be in the stage gate model and they also do it for the innovation part.	9
		00:50:15	Reward and recognition is important. The reward would be. I like to work with new ideas, if I could put 40% of my work here, I felt more happy.	10
	Test Track	00:20:05	The tough thing is to proving whether it is marketable.	11
		00:27:30	What needs to be shifted is from here [Phase-in] to here [Discovery].	12
		00:27:40	It's also about the ability of getting funding here [Discovery].	13

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[2] The coding of interviews conducted with external professionals is a collection of quotes relevant to the study and does not represent a full transcription. Recordings of all interviews are with the project team.

		00:28:00	And what are the consequences if you don't put money here [Discovery]?	14
		00:28:20	It mean, you will keep on having insufficient product development and making the way for competitors.	15
		00:29:35	Calculate the loss in efficiency. And take 50% of that and put it up here [Discovery].	16
		00:30:10	And show that just by knowing more here you can reduce delays up till maybe 80%.	17
		00:30:50	They don't have to decide this is for the next 10 years on. We gonna choose 4-5 ideas and try the other way.	18
		00:31:40	(Q: What to do better at discovery?) They are not proving assumptions.	19
		00:32:00	I'm thinking how a start-up would do it. Lean start-up model. Very agile, very outwards.	20
		00:32:15	If you want to have rapid feedback and work agile you need to go out.	21
		00:35:10	They often want to see how to develop it before you start testing it.	22
		00:36:35	You can reach out and get answers [from B2B clients].	23
		00:37:10	In the validation phase, if you can, go out.	24
		00:37:30	Making a structure around it which is not too long and too costly.	25
		00:38:30	It's called validation board.	26
		00:38:40	You always make assumptions when you have ideas. So you start with the most risky assumption.	27
		00:40:00	The typical R&D question is 'Can we produce it?'. However, the most valuable stuff for us is whether there is a market for it or not.	28
		00:40:30	If there is no market we might just not develop it.	29
			(Example: company that wanted to develop a fluid with chocolate taste and include nutrition there. Tested in 45min with 5 teams in elderly homes whether old people would drink it.)	30
			(Example continued: Figured out that old people also have problems with drinking. Most risky assumption. Now, chocolate	31

Stage	Item	Time	Supporting Quote	Quote #
			which melts in the mouth.)	
		00:41:50	I know that companies who have these iteration phase would also make the decision making phase a lot easier.	32
		00:44:50	If you prove the concept a bit earlier you can also feel safer here [for projects which are not so well known, more radical].	33
PHASE-IN	Sprint & Weekly meetings	00:33:40	Of course they have different languages because the time frame is so different.	34
		00:38:00	I would definitely make them working in sprints.	35
		00:38:10	If you call it weekly meetings or whatever you want to call it	36
OTHERS		00:17:00	The stage gate model is correct when you start here [Kick-off]. Then you have a business owner.	37

Respondent B

Stage	Item	Time	Supporting Quote	Quote #
DISCOVERY	Ideation Time & Idea Cloud	00:07:40	3M has the 15% time. […] It is really embedded in their culture.	1
		00:08:20	People talk about innovation, but they don't know what it means. You need to have an innovation strategy.	2
		00:10:00	There's no bad ideas? That's completely ridiculous! Bad ideas are those that don't support your strategy.	3
		00:22:22	In 3M, if your manager doesn't want to fund your idea, maybe another one will do it. If you can't find anyone, maybe the idea isn't that good.	4
		00:51:25	Insights are typically expensive.	5
		00:53:56	It's not only about having a budget, but also of how you use it.	6
	Test Track	00:31:25	You can't improve success rate of ideas, [but] you can increase the speed in which you assess it	7
		00:32:20	Before you build it right, make sure you build the right it.	8
		00:33:30	When an assumption is approved, if uncertainty is reduced, we give more money to reduce it even further.	9
		00:39:30	[Pretotyping] You are advertising a problem you haven't developed yet.	10
		00:42:40	When you have an idea, you can also come up with how the	11

Stage	Item	Time	Supporting Quote	Quote #
PHASE-IN	Sprints & Weekly meetings		idea will have to be tested.	
		00:14:04	Silo kind of situation is quite common in a lot of companies.	12
		00:18:44	You can strongly incentivize people to speak the same language.	13
		00:35:00	[Agile] First we shape experiments, then build experiments, then expose and finally evaluate. The business highlight was success or fail. Basically we have a backlog of ideas, every 4 months. [...] We have a sprint, look at which ideas are there take the highest prioritized idea, then shift experiments to the backlog.	14
		00:36:36	[Sprints] Very fast way of testing ideas.	15
OTHERS		00:46:26	Incremental innovation has the tendency to steal all resources. This is because radical innovation is more fuzzy.	16
		00:48:00	Nobody understands what radical innovation is.	17

Respondent C

Stage	*Item*	*Time*	*Supporting Quote*	*Quote #*
DISCOVERY	Ideation Time & Idea Cloud			
	Test Track			
PHASE-IN	Sprints & Weekly meetings	00:11:50	In scrum, we prioritize and do the most important things first.	1
		00:12:10	If you run out of budget, at least you have the minimum.	2
		00:12:20	You have to know what is the minimum viable project [for software] but for hardware you need to have a product.	3
		00:15:00	It is very important that the product owner decides what has to be done, but not the how.	4
		00:15:50	If you put something in, there has to come something out. Otherwise you will be late.	5
		00:18:05	The moment you know what is the most important thing you have to do, that is a crucial point.	6

		00:20:10	If there are several persons working on different projects, implementing iteration of sprints is a good idea. What happens is that they have to look at each other in the eyes, showing what they will do and have done.	7
		00:22:12	You can get something even if teams are not fully dedicated to a project, but not most of it - because you want to eliminate the waiting time of a task and the bottlenecks.	8
		00:23:45	Scrum daily meetings only take 15 min. You let others know what you did last day. But the most important thing is that you can ask for help if you're stuck somewhere. That is the important thing about it. Otherwise it would just be a status meeting.	9
		00:32:14	You don't want the team size to be too big. It's very hard to have a trustful, open conversation with 6 to 9 people in a team.	10
		00:34:00	Pragmatically, when a company is not working well, you have to introduce something. If those somethings make sense, then we should apply them. It's better than doing nothing. They get more transparency [with scrum-like processes].	11
OTHERS				

Respondent D

Stage	*Item*	*Time*	*Supporting Quote*	*Quote #*
DISCOVERY	Ideation Time & Idea Cloud			
	Test Track			
PHASE-IN	Sprint &Weekly Meetings	00:05:20	If you want to have an agile approach like scrum that is based on self-organising high-performing teams then they should first of all invest in stable high-performance teams	1
		00:07:15	They need to understand that self-organising teams is the basis for an agile approach and a team takes quite a while to develop, to become a high-performing team. It takes time to build up	2

			trust in a team and it takes time to reach the level where a team will have synergy so that the outcome is more than the sum of the individual contributions	
		00:07:50	One of the challenges when working with companies like that is that if they don't understand they need to invest, they don't understand that the smallest entity is now a team and not an individual. Then it will be really hard to make scrum or any of the other agile approaches work.	3
		00:10:25	The thing is there in no blue print on how to do this [implement Scrum]. There are some good practices and you need to take the starting point in each organisation to figure out what is the good practice in this organisation here.	4
		00:11:28	And then we form teams and make pilot tests, pilot projects with safe-to-fail experiments. And we learn from that. And in order to steer all this transition we have what we call a transition team. That means that we have taken some people in the organisation that have influences - formal influence and informal influence - and thy are being part of this transition team which works as a Kanban team and is handling all the organisation and impediments [...].	5
		00:13:05	A team can live with one or two people that are kind of loosely connected to the team and can work for several teams.	6
		00:13:25	As long as there is a stable kernel within the team, the team can life with that (having a few members loosely connected). But I cannot recommend that you try to customise Scrum in that way.	7
		00:14:58	I have done Scrum with hardware and that worked pretty well	8
		00:16:20	If you have to go to several stand-ups a day than you spend the entire morning in stand-ups which is not productive	9
		00:22:40	It's about having an iterative and incremental approach that we can as early as possible verify our assumptions. That we as early as possible can get feedback from customers and users to understand how a product works in the environment it is intended to work in. And eventually also that we can get early than before a cash-flow into the company.	10

		00:24:00	Well to avoid delays is built into Scrum that we on a daily basis address if we are on our plan or not. If we see we are not on our plan then we start acting on that as soon as possible - and that is also on a daily basis	11
		00:25:30	When you are working with hardware it can be difficult to have a releasable product by the end of the sprint. The important thing is that you deliver on an agreed result. And that result can sometimes be a mock-up, can sometimes be a prototype, sometimes it can just be a schematic that you have finalised.	12
OTHERS				