

## **Abstract**

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## **Describing the strategy formulation process: Case “Shoulders of Giants”**

Elja-Ilari Suhonen

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Bachelor's Thesis  
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<b>Report/thesis title</b> Describing the strategy formulation process: Case "Shoulders of Giants"	<b>Number of pages and appendix pages</b> <b>71+8</b>
<p>This product-oriented Bachelor's Thesis is based on a real-life startup development case of Shoulders of Giants Oy Ltd (SoG) which describes the strategy formulation process between Q1/2016-Q2/2017. The objective of this Thesis is to demonstrate the roadmap of an early stage startup entrepreneur by providing an example of EdTech startup's strategy formulation process where the approach on strategy shifts from the CEO's centralized strategic planning towards collective problem-solving where small changes and actions will produce a major shift in strategic direction over time. The study also demonstrates how clarifying startup's vision and product mission is related to strategic planning for the future of development.</p> <p>Founding Shoulders of Giants Oy Ltd. in 2016 emerged from understanding the core economic problems that higher educational institutions are dealing with both in Finland and globally. During the recent years in Finland, there has been a growing pressure towards educational institutions to provide more cost-effective and personalized learning solutions but at the same time, governments are narrowing down their financing constantly. Due to this dilemma, resources of schools remains limited, while the number of students keeps on growing constantly. The situation does not occur only in Finland; All schools prefer to take in more students if they would have capabilities to do that, meaning enough teachers and the right learning management solutions.</p> <p>The last two chapters of the development project discuss the latest considerations made in SoG's strategic planning during Q1-Q2/2017 and suggests changes to the process and taken actions through retrospective reflection. Primary data collection method for conducting the study consists of work diary which is qualitatively analyzed in self-reflective cycles where planned and implemented actions are followed with reflections on the processes of change and re-planning. The chosen approach is qualitative action research because findings and insights of the study are reflected on actions executed by the author (CEO) and SoG's development team. The discussed theories aim to provide new strategic insights and perspectives in reflection to taken actions and planning procedures in SoG's business development.</p> <p>The research chapters describe the whole process of SoG's startup development between</p>	

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Q1-Q4/2016 in order to formulate the startup's initial strategy. The author also refers to the current state of development (Q1-Q2/2017) in some of the research chapters to clarify further strategic considerations in product development. Ultimately the study provides a retrospective roadmap of how strategies emerge in startup organizations and suggests possible changes and re-plannings for the formulation process. The end result of this development project demonstrates the latest considerations in SoG's strategic planning that were made between Q1-Q2/2017 and demonstrates re-defined strategic framework for further business planning.

### Keywords

Strategy formulation, strategic planning, startup development, development project

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### Thesis introduction and objective

The following thesis consists of startup's case introduction, project plan, theoretical framework and qualitative action research that is divided into two main chapters: "Overview of operational environment" and "Describing the strategy formulation process". Theory chapter discusses strategy theories in chronological order starting from Mintzberg's 10 Schools of Thought and ending to modern strategic IT planning theories. The commissioning party of this study is EdTech startup Shoulders of Giants Oy Ltd. which development started in January 2016 and the company was officially established on Q4/2016. This Thesis was not made as commission but rather due to CEO's personal choice to understand the development process and to acquire new insights from it. As an end result the author constructs re-defined strategic framework for further business development.

The author is the CEO of the company Elja-Ilari Suhonen who describes the strategy formulation process during the first year of Shoulders of Giants Oy's development. The contribution for the company is to provide new strategic insights and perspectives in reflection to taken actions and planning procedures in SoG's development. This study demonstrates a retrospective roadmap of how strategies emerge in startup organizations and suggests possible changes and re-plannings for the formulation process when needed. Its objective is to provide an example of EdTech startup's strategy

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formulation process where the approach on strategy shifts from the CEO's centralized strategic planning towards collective problem-solving where small changes and actions will produce a major shift in strategic direction over time. The end result of this research demonstrates the latest considerations in SoG's strategic planning and demonstrates the re-defined strategic framework for further business development.

The author set the following three (3) research questions to support the objectives of this development project;

- a. How initial strategies evolve in IT startup organization?*
- b. Why clarifying startup's vision and product mission is essential to strategy formulation?*
- c. How the development team, stakeholders and partners are related to strategy formulation process?*

Author will reflect these questions on the end result of this development project.

## Case introduction: SoG

### 1.1 Background factors and starting point

The discussed thesis report is based on a real-life case, which is a startup project that was officially launched in January 2016 by me and Pete Stockley, who worked as Mobile Learning Systems Specialist at InnoOmnia in Espoo. Haaga-Helia's principal lecturer Aarni Moisala proposed me to get in contact with Pete at the end of year 2015 after realizing that we have been ideating on similar learning management solutions. At that time Pete was working on his own product idea called "Shoulders of Giants" which demonstrated unique visualization model for managing courses and learning communities. After getting in touch with Pete, I found out soon that our common vision on how to develop SoG further encouraged us to start co-developing his concept together. We both shared the common vision of creating a new visual learning platform that can provide more transparent and holistic solution for course management as well as encourage students for content creation. Since the beginning of development, I have been responsible of project's business

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development and Pete on his behalf kick-started SoG's IT development. The original ideas for both visualization model and the name were invented by Pete, but unfortunately he decided to leave the team in August 2016 due to other responsibilities. The name "Shoulders of Giants" comes from Isaac Newton's famous quote: "*If I have seen further than others, it is by standing upon the shoulders of giants*" and according to Pete, it refers to a vision where studying and learning processes are holistically visualized so that they can be observed more insightfully by both students and educators. In other words, offer the "Giant's View" of learning to ease the management of learning communities. The first solution that is currently under development is called SoG Co-Teacher, which is a web-based software solution that aims to decrease the drop-out rate of students and workload of educators with the help of AI. Co-Teacher functions as an administrative tool for teachers and it is supposed to be the "middle man" between students and educators to meet the needs of both parties.

The origins of SoG lead all the way to Summer 2014 when I met Haaga-Helia's Principal lecturer Aarni Moisala during "Creative Sales" summer course which he was holding. This encounter led us to brainstorm together about new visual learning solutions and 1,5 years later I ended up meeting Pete through Aarni's recommendation. Aarni also joined the team in March 2016 as my startup mentor. His motivation for SoG got sparked after discussing with Nobel Prize Laureate in Economics, Mr. Alvin E Roth about autopoiesis, which describes a system dealing with the dilemma of combining economically cost-effective mass-learning with a less economically viable but a more tailor-made individual tutoring. Aarni's views on development and business logic have greatly affected the direction of SoG's strategic intentions. In addition, Aarni gave his unused company at our disposal but did not have any claims for the ownership.

At the beginning of Spring 2016, the project started taking its first concrete steps forward after having SoG as a project commissioner for two IT courses that were held in Haaga-Helia Pasila campus. Also very promising research feedback we acquired from Helsinki area universities and Finland's Ministry of Education encouraged us to move forward with the development. Coming to this day, our vision in a nutshell is to take "Giant's view" on learning management, which enables the mass management and virtual tutoring simultaneously: SoG's Circular Model for managing mass learning communities, while our Virtual Co-Teacher assists the growing amount of students to achieve set learning



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objectives. The aim of SoG's solutions is to free time and financial resources of both schools and educators.

### 1.2 Project plan and suggestions for further research

Case startup's strategy formulation process is observed through work diary that was written by the CEO between Q1-Q4/2016. In this product-oriented thesis, the project plan and actual actions were intertwined during the action research process. The author is the member and key decision-maker of the development team and the research chapters discuss CEO's strategic planning work between Q1/2016-Q4/2016. This process is described retrospectively in order to find new insights for strategy formulation process and to learn from mistakes made during the the business development. This product-oriented thesis primarily shows how both emergent and unexpected the process can be for early stage startups but it also suggests how made mistakes can be avoided. The reason why this study is qualitative in its nature is to demonstrate how strategic thinking evolves through gained experience from subjective thinking to collective problem-solving where the actions of the development team, stakeholders and partners all contribute to head strategist's (CEO's) strategy formulation process. Chosen theories help the author to reflect on occurred events and taken actions in order to do re-planning accordingly when needed.

The period when this Thesis was written (Q1-Q2/2017) was at the time when CEO was unable to see the "big picture" of strategic planning and how startup's vision is related to it. This thesis provides more clarity in the process by understanding the past and as an end result it offers the new strategic framework for future business development.

The main steps of the project plan are summarized as follows;

1. *Writing of work diary (Q1-Q4/2016) during the business development*
2. *Evaluation of the diary in order to construct theoretical framework (Q1/2017)*
3. *Qualitative analysis of the process through self-reflection (Q1/2017)*
4. *Reflection of the analysis on the current situation in SoG's business development (Q1-Q2/2017)*

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### *5. Creation of the re-defined strategic framework for SoG (Q1-Q2/2017)*

Because this development project was implemented during the pre-seed stage of startup's development it is primarily about the initial strategy formulation process. This is also the reason why chosen approach is qualitative because at the time when this thesis was written there were no quantitative measures (such as cash flow or data from customers) to discuss. Further studies could take a more tactical perspective on how created strategy framework is implemented and what quantitative measures should be taken into account to make relevant strategic decisions for the future. Therefore it could pay more attention on collecting quantitative data from the target market (educational sector), SoG's business activities and industry analyzes to demonstrate how quantitative measures support strategic decision-making.

#### **1.3 The team and delegation of responsibilities**

Coming to this day, we have a development team of almost 10 members in which I am the main responsible of business development and Haaga-Helia graduate Marius Cojoc coordinates our IT activities. Me and Marius make the decisions about the development together in order to integrate our business and IT objectives together. Marius' main responsibility is to manage the work of our developers. Since March 2016, Aarni Moisala has been both my mentor and strategic advisor by assisting with our business plan creation and helping us to clarify the direction of SoG's development. He has also provided valuable insights from Finnish educational sector due to his vast pedagogical expertise. Through my own network, we also have Kevin and Robert Guzman in the team who are doing research in USA about possible partnerships and customers for SoG. Robert, as a Professor of English in University of Puerto Rico, also share his pedagogical knowledge and insights with the rest of the team to assist our development. Our current ownership agreement states the appointments of SoG's development team as following;

- Elja-Ilari Suhonen, CEO
- Marius Cojoc, Head of IT development
- Kevin Guzman, International Relations Manager, USA

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- Aarni Moisala, Mentor (not officially in the team)
- Pete Stockley, IT advisor, Member in the Board of Directors
- Robert Guzman, Pedagogic advisor, Member in the Board of Directors, USA
- 3-4 additional voluntary coders

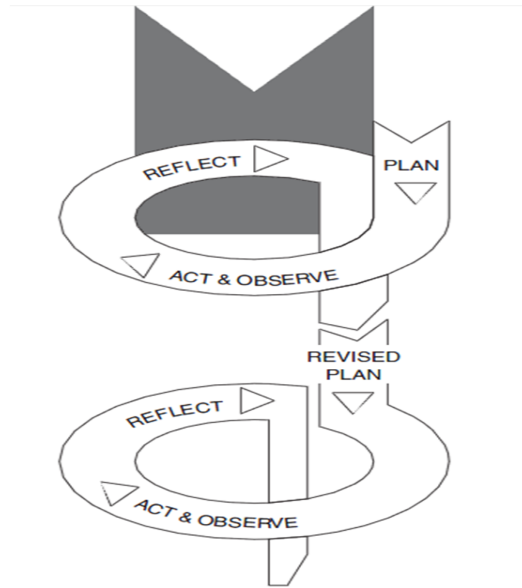
### 1.4 Research approach and methods

Chosen approach for this thesis is action research, because findings and insights of the study are reflected on actions executed by the researcher himself (me) during the business development of Shoulders of Giants Ltd. In general, action research can be described as “*an approach in which the action researcher and a client collaborate in the diagnosis of the problem and in the development of a solution based on the diagnosis*” (Bryman & Bell 2011, 414). Through this approach it is assumed that both internal and external social worlds are constantly changing when researcher and the research are one part of these changes (Collis & Huxley 2011, 67).

In the context of action research, the development process is discussed through self-reflective cycles where planned and implemented actions are followed with reflection on processes of change and re-planning. Steps of the action research spiral can be described as follows (Kemmis & McTaggart 2000);

1. *Planning in order to initiate change*
2. *Implementing the change (acting) and observing the process implementation and consequences*
3. *Reflecting on processes of change and re-planning*
4. *Acting and observing*
5. *Reflecting*

In visualized form, the cycles of action research spiral looks like this;



*Figure 1. Kemmis and McTaggart's (2000) Action Research Spiral*

This action research is retrospective in sense that taken actions are described through work diary that I have written during the development. The study itself then retrospectively reflects on taken actions as “continuum” to ponder on possible insights and re-planning considerations. The different phases of this research process are segmented in 4 quarters which all include 3 months, totalling up to 1 year of SoG’s development.

### **1.5 Relevance of the development project: Aims, limitations and theoretical scope**

The relevance of this development project is significant since it aims to clarify the strategic intentions in SoG’s development starting during the year 2016, so the time span of this action research is approximately 12 months. The strategic considerations have been mainly considered by me and Aarni Moisala in close collaboration. The aim of the study is to insightfully describe the strategy formulation process of SoG’s product and business positioning. The main objective is to create framework for strategic planning which can be used for strategic considerations also in the future. To gain valuable insights, the relevant concepts and tools of strategic planning are discussed and then applied through retrospective approach on the strategy formulation process. Limitations occur due to short timeframe,

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small scale of operations and lack of formal strategic procedures, but essentially the study aims to clarify SoG's strategic intentions through the help of described theoretical framework.

Theories are discussed systematically from macro- to micro-level, starting with an overview of strategic management theories and then proceeding through the strategic IT considerations. Chosen theories assist in describing the unpredictable, reactive and emergent nature of IT startup's strategy formation. Research methods are therefore qualitative, also due to the lack of quantitative measures for evaluating the process.

## **2 Strategy in theory**

### **2.1 Mintzberg's 10 Schools of Thought**

The Ten Schools of Thought model from Henry Mintzberg is a framework that can be used to categorize the different approaches to strategic management. He first described this framework in a publication called "Perspectives on Strategic Management" (HarperCollins 1990) published by Jim Fredrickson. After this release, one of his colleagues Bruce Ahlstrand at Trent University used this paper as course material and then got in touch with Mintzberg by suggesting that he should make a book out of it. At that time, they agreed to write the book in cooperation and decided to ask Joseph Lampel to join as a third member for the team. Through their contribution, a book called "Strategy safari: A guided tour through the wilds of strategic management" (Mintzberg, Ahlstrand & Lampel 1998) was created in order to describe the history and evolution of strategic management through a

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holistic and synergistic approach.

According to Mintzberg (1998) the Ten Schools of Thought are listed as follows;

1. The Design School: Strategy formation as a process of *conception*
2. The Planning School: Strategy formation as a *formal* process
3. The Position School: Strategy formation as an *analytical* process
4. The Entrepreneurial school: Strategy formation as a *visionary* process
5. The Cognitive School: Strategy formation as a *mental* process
6. The Learning School: Strategy formation as an *emergent* process
7. The Power School: Strategy formation as a process of *negotiation*
8. The Cultural School: Strategy formation as a *collective* process
9. The Environmental School: Strategy formation as a *reactive* process
10. The Configuration School: Strategy formation as a process of *transformation*

Out of ten described schools, three are chosen to describe the macro-level theoretical framework for the study, which are The Positioning School, The Entrepreneurial School and The Learning School. Theoretical background of these schools are first discussed in overall and then discussed through a more in-depth evaluation of the key notions chosen for the study.

### 2.2.1 Positioning school

The foundation of positioning school is based on the same premises as the planning and designing schools by seeing strategies as formally specific, identifiable and investigative, but it added a new prescriptive approach which argues that strategies should be reflected against current and future competitors. As mentioned earlier, the notion of strategic positioning has its roots deep in history since Chinese military strategist Sun Tzu used this term already during 5<sup>th</sup> century in his publication "The Art of War". Positioning school is based on the premise that only a few key strategies are needed in any given industry in order to define the desired position in the economic marketplace and the actions to

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achieve it. In contrast to its predecessors, this school was the first to emphasize the content of strategies instead of describing the formulation process. Therefore, it was also the first school of thought to demonstrate a prescriptive approach on strategic management (Mintzberg, Ahlstrand & Lampel 1998, 82). The foundation of positioning school describes only a few basic categories of strategic management which focus on product differentiation and focused market scope.

According Mintzberg, Ahlstrand and Lampel (1998, 85), premises of this school can be summarized as follows:

1. *Strategies are generic, specifically common, identifiable positions in the marketplace.*
2. *That marketplace (context) is economic and competitive.*
3. *The strategy formation process is therefore one of selection of these generic positions based on analytical calculation.*
4. *Analysts play a major role in the process, feeding the results of their calculations to managers who officially control the choices.*
5. *Strategies thus come out from this process full blown and are then articulated and implemented; in effect, market structure drives deliberate positional strategies that drive organizational structure.*

### 2.2.1.1 Porter's model of competitive analysis

Michael Porter's model describes five forces in organizational environment that influence competition. This framework was published as a part of his second book "Competitive Advantage" in 1985.

The first force he describes is *Threat of new entrants* (1), which according to Porter means that; *"Industry is a like a club in which firms gain admittance by overcoming certain "barriers to entry", such as economies of scale, basic capital requirements and customer loyalty to established brands. High barriers encourage a cozy club in which competition is friendly; low barriers lead to a highly competitive group in which little can be taken for granted."* (Mintzberg, Ahlstrand & Lampel 1998, 100). This notion basically states that the degree of barriers define the nature of competition within

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industries which therefore can differ significantly.

Secondly Porter took *Bargaining power of firm's suppliers* (2) into account, since firms and suppliers have contradicting business motives: Suppliers aim to charge the highest price possible of their products when simultaneously the buyer firm obviously hopes for the lowest price. According to Porter, the one with more options where to choose from has an advantage in bargaining power because that entity has less to lose if cooperation comes to its end.

Porter also describes another view on *bargaining power*, and that is of *customers'* (3). Customers add their own element to that by demanding either to get prices decreased or quality of products increased. Their individual bargaining power depends on their financial resources, level of product knowledge and their willingness to experiment with alternative purchasing options.

The fourth factor is *Threat of substitute products* (4) which considers the potential of other industry's product innovations replacing the ones in another. For example within IT industry the possibility for these kinds of situations to occur is high, since many highly resourced and skilled software development companies can create digital services for almost any industry. Adding to that, many modern IT companies are agile-oriented in their operations which enables to change their industry orientation rapidly if there is a recognizable competitive advantage to support change in focus.

Lastly Porter described the fifth force as *Intensity of rivalry among competing firms* (5) in which all the mentioned forces "converge on rivalry, which to Porter is a cross between active warfare and peaceful diplomacy" (Mintzberg, Ahlstrand & Lampel 1998, 102). Basically this force describes the dynamics of competing companies when they aim for a certain place in markets. To achieve the desired position companies may directly compete with each other, tactically agree to coexist or form cooperation agreements.

In summary, the Porter's model of competitive analysis is more like a foundation for strategic considerations instead of strategic management model. The observation of these five forces certainly explains many strategies that companies decide to adopt, but on the other hand one could argue that



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the amount of external factors affecting companies' competitive environment is much higher. Still, Porter counters this argument by stating that "only a few generic strategies survive competition in the long run", which pretty much summarizes the key notion of Positioning school.

### 2.2.1.2 Porter's generic strategies

According to another theory by Porter, he states that there are only two basic factors for companies to gain competitive advantage: Low cost or differentiation. He argues further by saying that these two factors should be in alignment with the scope of business in order to achieve above-average performance in chosen industry. Porter calls combination of these factors the "three *generic strategies*: Cost leadership, differentiation and focus" (Mintzberg, Ahlstrand & Lampel 1998, 103).

According to Porter, companies should make a choice from either one of these in order to gain competitive advantage in their operations. He considered that too broad strategic scope would lead to what he called "being all things to all people which is a recipe for strategic mediocrity and below-average performance" (Mintzberg, Ahlstrand & Lampel 1998, 103).

The following figure displays how competitive scope and advantages are related to each other with the three mentioned generic strategies:

**PORTER'S GENERIC STRATEGIES**

		Competitive Advantage	
		Lower Cost	Differentiation
Competitive Scope	Broad Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Figure 1. Porter's generic strategies (Porter 1985, 12)

To understand the three generic strategies, they can be shortly describes as;

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1. *Cost Leadership: Strategy that aims to be the low-cost producer in chosen industry.*
2. *Differentiation: Strategy that focuses on the development of unique products or services through offering higher quality, better performance or unique features.*
3. *Focus: Strategy to serve a narrow target segment and this chosen “focus” can consider certain customer groups, product lines or geographic market areas.*

Throughout the years, there have been many theorists who questioned Porter's notion of focusing on one strategy in order to achieve above-average performance. For example Miller, Baden-Fuller and Stopford (1992) conclude that “there are enormous rewards for those who can resolve the dilemma of opposites” (Mintzberg, Ahlstrand & Lampel 1998, 104), meaning that companies can choose to focus on both differentiating their products and producing them on large scale, for example. Gilbert and Strebel (1988) also give an example of “outpacing” strategies, where companies make a choice to first enter markets as low-cost producers, but later on differentiates their products or services in order to increase their market share.

### **2.2.2 Entrepreneurial school**

While positioning school belongs to a group of prescriptive strategies (along with planning and design schools), entrepreneurial school has a stronger emphasis on understanding the process of strategy formations as it unfolds in practice. Prescriptive strategies tend to view formal leadership important, where chief executive's mental work on conceptualizing the strategy is the root of any strategy formation, but it dismisses any personal or intuitive aspects of it. Entrepreneurial school takes another perspective by seeing strategy formation as a visionary process, where the intuition, judgment, wisdom, experience and insights of a single leader are also considered. This school therefore takes a view on strategy as a perspective with image and sense of direction, also called as vision (Mintzberg,

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Ahlstrand & Lampel 1998, 124). Still, it stands between both prescriptive and descriptive schools, by being both deliberate and emergent in its nature: Deliberate when it comes to its broad lines and sense of direction, but emergent in its details to adapt these during ongoing implementation process.

In the history of economics, Joseph Schumpeter was the first to take entrepreneurial approach on capitalism, by introducing the notion of *creative destructo* as the engine that keeps capitalism moving forward and the driver of that engineer is the entrepreneur, which is the person with the business idea and a vision for it (Mintzberg, Ahlstrand & Lampel 1998, 124). To clarify this notion, Schumpeter stated that: "*The problem that is usually being visualized is how capitalism administers existing structures, whereas the relevant problem is how it creates and destroys them*" (Schumpeter 1950, 84).

### 2.2.2.1 Entrepreneurial personality and strategic functions

Different scholars and thinkers have greatly differing views on the functions and purpose of entrepreneurs. Schumpeter (1947) argues that entrepreneurial functions stop once the innovating ceases, meaning the creation of new combinations in this context. He clarifies this by saying that it means "*the doing of new things or the doing of things that are already being done in a new way*" (Schumpeter 1947, 132). From his point of view, an entrepreneur is the one with focus on the vision of business idea, but not necessarily the person who invests capital or invents the product or service in the first place.

Knight (1967) has a different view on entrepreneurship by associating it strongly with heavy risk and the handling of uncertainty. Peter Drucker contributed to this definition by identifying entrepreneurship with managerial functions; "*Central to business enterprise is...the entrepreneurial act, an act of economic risk-taking.*" (Knight 1970,10). Cole (1959) took both Schumpeter's and Knight's definitions one step further, by naming the four types of entrepreneurs: the calculating inventor, the inspirational innovator, the over optimistic promoter and the builder of a strong enterprise.

To have more individualized approach on these functions, the study on entrepreneurial personality focuses on defining the key traits of successful entrepreneurs. These personality traits are identified to

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be for example: Strong needs for control, independence, a resentment of authority and tendency to accept moderate risks (Mintzberg, Ahlstrand & Lampel 1998, 132). In favour to entrepreneurial school's notions, this is essential area of study because of its emphasis on personalized leadership and the "great leader" approach on strategic functions.

Stevenson and Gumpert initiated the definition of "strategic orientation" by stating that the entrepreneur is: "*constantly attuned to environmental changes that may suggest a favourable chance, while the administrator wants to preserve resources and reacts defensively to possible threats to deplete them.*" (Mintzberg, Ahlstrand & Lampel 1998, 133). In terms of strategic functions, Mintzberg named four dominant characteristics of entrepreneurial approach:

1. *In the entrepreneurial mode, strategy is dominated by the active search for new opportunities.*
2. *In the entrepreneurial organization, power is centralized in the hands of the chief executive.*
3. *Strategy making in the entrepreneurial mode is characterized by dramatic leaps forward in the face of uncertainty.*
4. *Growth is the dominant goal of the entrepreneurial organization.*

Still, the entrepreneurial school doesn't set much focus on the actual planning and economic functions of strategies, but rather on visionary leadership in their execution. This refers to chief executive with strong emphasis on business' vision. Bennis and Namus defined the vision as: "*mental image of a possible and desirable future state of the organization.*" (Bennis, Namus, 1985, 89). They took this definition further by clarifying the difference between leaders and managers: Leaders focus on vision and therefore utilize the emotional and spiritual resources of the organization, meaning values, commitment and aspirations. Managers on the other hand operates on the physical resources, meaning capital, human resources, materials and technologies (Bennis, Namus, 1985, 92).

Profoundly, the key notions of entrepreneurial school comes down to defining the proactive nature of entrepreneurs, role of personalized leadership and single-minded vision of strategy formulation. The problems lie in the qualitative nature of this school, because strategic processes are not described and defined further.

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### 2.2.3 Learning school

The key notion of this school is to observe strategies as outcomes of learning, when individual or collective group of people encounter a situation to learn about it. In business context this also means to learn about organization's capability of dealing with the situation at hand (Mintzberg, Ahlstrand & Lampel 1998, 176). Charles Lindblom's article "The science of muddling through" (1959) is thought to be the first publication of this school, in which Lindblom states that strategies are not controlled and structured processes but rather a chaotic one where strategists try to find ways to cope with the world that is too complicated for them. This school is primarily descriptive instead of prescriptive in its nature, meaning that it focuses on understanding how strategies actually form in organizations. Researchers who support this school contribute to the learning school by stating that significant strategic decisions do not emerge from formal planning activities, but instead through several small actions and decisions made by variety of people who are working together. These small changes often produce a major shift in strategic direction over time.

#### 2.2.3.2 Emergent strategy

In comparison to prescriptive approaches on strategies where the focus is on deliberate control of strategy formulation, emergent strategy emphasizes learning that takes place through taken actions in organizations (Mintzberg, Ahlstrand & Lampel 1998, 189). In respect to this approach, the emergent strategy acknowledges company's capacity to experiment and it understands that the initial source for strategy formation can emerge through interaction between individuals or groups in organizations.

To clarify the initial collective process that takes place within organization, Mintzberg describes a grass-root model of strategy formation. He summarizes the key points of this model as follows (1989, 214-216);

- *Strategies grow initially like weeds in a garden, they are not cultivated like tomatoes in a hothouse. The process of strategy formation can be over-managed.*
- *These strategies can take root in all kinds of places, virtually anywhere people have the capacity to learn and the resources to support that capacity. Sometimes an individual or unit in*

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*touch with a particular opportunity creates his, her or its own pattern.*

- *Such strategies become organizational when they become collective, that is, when the patterns proliferate to pervade the behavior of the organization at large.*
- *The processes by which the initial patterns work their way through the organization need not be consciously intended by formal decision-makers. Patterns may simply spread by collective action.*
- *New strategies, which may be emerging continuously, tend to pervade the organization during periods of change, which punctuate periods of more integrated continuity.*
- *To manage this process is not to preconceive strategies but to recognize their emergence and intervene when appropriate.*

In order to manage emergent strategies, Mintzberg also followed-up this model with what he calls the hothouse model of strategy formation, in which he clarifies the role of a strategist in this process (Mintzberg, Ahlstrand & Lampel 1998, 197);

1. *There is only one strategist, and that person is the CEO (other managers may participate; planners provide support).*
2. *The CEO formulates strategies through a conscious, controlled process of thought, much as tomatoes are cultivated in a hothouse.*
3. *These strategies come out of this process fully developed, then to be made formally explicit, much as ripe tomatoes are picked and sent to the market*
4. *These explicit strategies are then formally implemented.*
5. *To manage this process is to analyze the appropriate data, preconceive insightful strategies, and the plant them carefully and watch as they grow on schedule.*
6. *New strategies, which may be emerging continuously, tend to pervade the organization during periods of change, which punctuate period of more integrate continuity. Periods of convergence (exploits prevalent, established strategies) tend to be interrupted by periods of divergence (experimentation with new strategies and accepts new strategic themes).*
7. *To manage this process is not to preconceive strategies but to recognize their emergence and intervene when appropriate. Management must know when to resist change for the sake of*

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*internal efficiency and when to promote it for the sake of external adaptation.*

To summarize the key notions of learning school, strategy formation happens as a form of learning that happens through interaction between both individuals and groups. As described in Mintzberg's hothouse model, the school also acknowledges the importance of leader in strategy formation and management, but the definition is determined through collective process. Essentially learning school sees the role of leadership as managing and guiding the learning processes in organization. By understanding the patterns that emerge from taken actions and interactions through time, strategists can receive signals for defining and executing the actual strategy.

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### 3.1 Strategic IT

#### 3.1.1 IT's relation to process planning

The book "*Breakthrough: Strategic IT and Process Planning*" (Lientz, Bennet P. 2009) argues that company's IT strategies and process planning should be considered hand in hand because "*the value of IT lies in its contribution to the business through business process performance and use of knowledge and information for cumulative improvement*" (Lientz, Bennet P. 2009, 7). Through this argument, it is clear that IT can bring many advantages to business processes and these are for example competitive advantages through cost savings, enhanced efficiency, business flexibility and agility, which can be measured with performance measures or Return on Investment (ROI). When intertwining IT and business objectives together, the problems occur when businesses are expected to transform each time when technological changes take place, and vice versa. Modern example could be when the company is scaling up their operations with cloud services in order to approach foreign markets.

In terms of business objectives, the value of IT components such as systems, softwares and projects cannot be realized if the business does not change accordingly to utilize these capabilities. Some theories argue that the obstacle to prevent this from happening is the fact that some benefits of IT investments take long to be realized. The following chart demonstrates in which the value of work declines after initial implementation of the IT project:



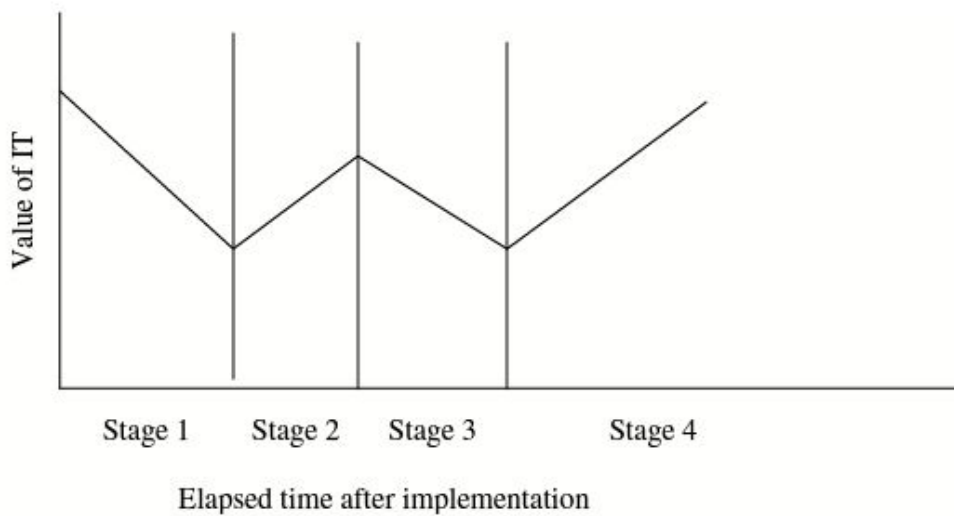


Figure 3. Delivery of IT value after project completion (Lientz, Bennet P. 2009, 8)

According to the chart, the real value of IT comes during the final stage, when IT components are utilized to simplify business processes. In order to realize the value of IT faster, it is recommended to link IT and process management closely with each other. Linking them together aims to decrease or totally eliminate the effects that are demonstrated in the graph.

### 3.1.2 Objectives of IT strategic planning

As explained in the previous chapter, the reason to link IT and process planning is to accelerate business performance, flexibility and agility by improving business processes and IT systems, technology and resources. This requires to link strategic IT planning to measurable and realistic objectives, which can be for example (Lientz, Bennet P. 2009, 8-9):

- *The plan's action items, strategies and objectives should point to measurable, substantial business benefits through the processes*
- *The plan must be understood and supported by management and employees*
- *The plan should lead to more effective internal IT processes and infrastructure so as to increase IT's ability to support strategic business initiatives and operations*

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- *It should be easier to develop successive strategic IT and process plans in the future, based on experience and lessons learned*
- *The plan should result in greater control of IT resource so that more effort is devoted to supporting strategic business goals*

Successful execution of the planning effort leads to the alignment of IT with the key business processes. IT operations are usually considered to be reactive to the changes that happen in business, but with the plan it has the possibility to be proactive. Without the plan IT can still tactically perform well in terms of maintenance, administration and enhancement work, but there is a lack of impact if operations are not connected with business' key strategic goals.

To support the business and its objectives, the combination of IT and process planning helps to describe how benefits will be achieved and what are the needed key resources. This points out the fact that IT strategic planning also requires resource management and allocation. Problems that often arise with IT planning effort is the lack of time and willingness to participate, because people both in IT and business departments are busy but also they consider themselves to be separate units. In reality, strategic IT and process plan is just one of four key documents that IT should provide to business management. The other three documents are *report on the results of the IT work and performance*, *technology and process assessment* and *resource allocation plan of IT resources* (Lientz, Bennet P. 2009, 13).

When the IT planning effort initiates, it is often considered first as a project, but through time it becomes program that is followed and developed. Planning method should be scalable so that it can be utilized by both small and large organizations. Also the employment of planning method should be fast, so that it takes only a couple days instead of weeks or months and maintenance should be possible with internal resources without outside assistance. Once company is maintaining and developing the method, it should not require full-time effort or disturb operations.

Breakthrough: Strategic IT and Process Planning (Lientz, Bennet P. 2009, 13) proposes an approach to IT planning which includes the following activities:

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- *Assess past planning efforts and gather lessons learned*
- *Identify key business processes, systems, projects and infrastructure*
- *Collect information and build the project plan*
- *Assess the business and competitive environment*
- *Understand business strategies, objectives, vision, mission and issues*
- *Evaluate the technology, systems and architecture*
- *Analyze processes and determine their alignment to the business*
- *Define issues and opportunities for the plan*
- *Determine objectives and action items*
- *Implement short and long-term action items*
- *Fight for resources to get longer-term action items*
- *Measure the results, update the plan*

Before making final decision on objectives of IT planning, it needs to be confirmed that determined action items are both realistic and measurable. When implementing the plan according to its objectives, businesses should also ensure that there is enough flexibility in operations because process changes are needed to realize the benefits of IT investments. Also strategic resource allocation and measurement goes hand-in-hand to achieve success in strategic IT.

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### **3 Development project: Overview of the operational environment (Q4)**

#### **3.1 Introduction**

The following subchapters describe Shoulders of Giants Oy's operational environment during the development of our first solution: SoG Co-Teacher. The components of operations describe the situation at the end of 2016 when our team have been through one full year in the development of our startup.

While the first main research chapter (4) describes the operational environment of SoG's current situation (Q4/2016), the second (5) chapter opens up the strategy formulation process after one full year of development between Q1-Q4/2016.

This chapter includes overview of the product and insights on competitors and educational industry as well as related stakeholders of SoG's business development activities. Since our startup is still at the pre-seed stage in its operations, I will not discuss Co-Teacher's functions, SoG's approach on AI algorithm or business operations in detail in order to protect our intellectual properties.

##### **3.1.1 The product: SoG Co-Teacher**

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Figure 4. Picture of SoG Co-Teacher's logo and its key benefits

As demonstrated in the above picture, the functions of Co-Teacher focus on 3 key benefits:

- *Seeing teachers as developers*
- *More students, less teacher's time*
- *Shared learning support and tutoring*

In its core, Co-Teacher aims to provide one platform for shared learning support and virtual tutoring. It coordinates students in achieving set learning objectives and study data to Co-Teacher is retrieved from existing Learning Management Systems through student code anonymously. Users can still optionally include more personal information like preferred learning styles or personality traits because the AI that will support tutoring will benefit from providing more information.

With the student's information, Co-Teacher also retrieves information about study courses that user is attending either during ongoing semester or in the next one. The next view that will appear for the student is called "Course Canvas", where all the courses are visualized with all essential information and SoG's tools:

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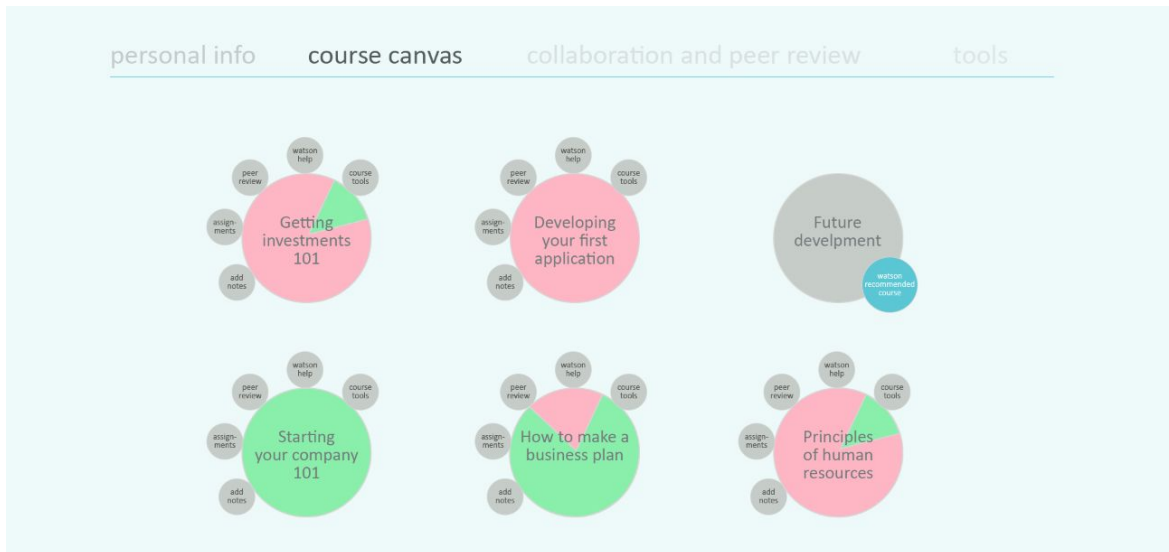


Figure 5. View of Co-Teacher's course canvas (demo mockup)

Here courses, their objectives and assignments appear on a single canvas. Course canvas allows students to manage their courses holistically and have all important study information in one place to support their studying progress. Co-Teacher assists students in course management and this view is also visible for teachers. For teachers, we wish to include feature to track targeted analytics of students and their progress which they can monitor in administrator's view. When we will have AI to support the functionality of Co-Teacher, it can for example set reminders and suggest relevant learning content for students.

From "Course Canvas", students have option to move on to "Collaboration and Peer Review" space. Here is visual example of how students and Co-Teacher interact with each other:

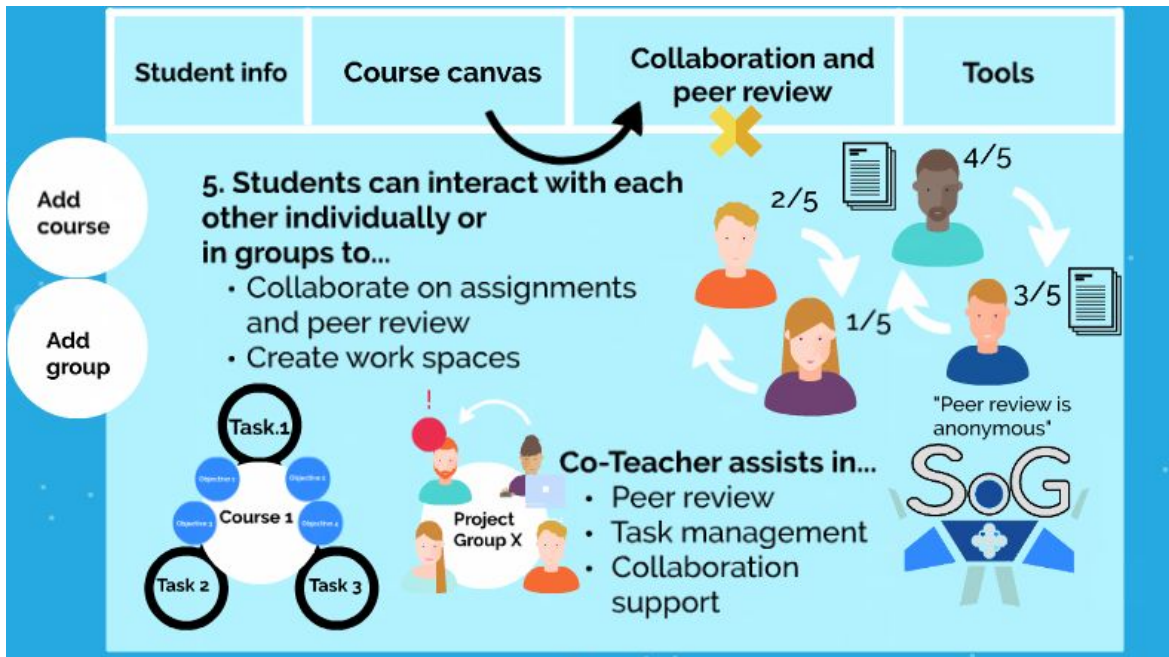


Figure 5. View of Co-Teacher's Collaboration and Peer Review space

In this space students can interact with each other individually or in groups to collaborate on assignments, have anonymous peer reviews or create project workspaces. Co-Teacher assists students in peer review coordination, tasks management and collaboration support.

The circles that we use in the visualization of courses and assignments is what we call "Circular Model". Regarding that, we also have our framework for developing SoG's own AI algorithm but I will not go into details of its functions in order to protect our intellectual property.

### 3.1.2 Competitors

This subchapter represents an overview of potential competitors for SoG Co-Teacher in the educational technology sector, mainly focusing on Scandinavian region. Even though we have plans to approach educational markets in USA, I think it's reasonable to focus on competitors in Finland at this stage of development, because we are going to localize our operations here in the first place.

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Many of the discussed companies are proportionally new, so therefore the observations are mainly assumptions based on my desktop research. Regarding some companies, I have acquired field observations through my professional network and those insights will be mentioned separately. Based on my desktop research and some field observations, I will discuss the assumed business objectives, strengths, weaknesses and IT assets of 3 EdTech companies in total.

After the overview of competitors, I will reflect my competitor analysis on the strategic considerations of SoG Co-Teacher's product development.

### Claned Group Oy Ab

**Official website:** <https://claned.com/>

**Revenue at the end of 2015:** 25,000 euros

According to their website, Claned is "*cloud-based platform learning platform developed in close collaboration with end-users and educational experts*" (Claned Group 2017). They have a broad scope that focuses on solving the learning challenges in three customer segments: learners, educators and organizations. Claned states three sample challenges it seeks to solve (Claned Group 2017):

- *How to help learners study more efficiently?*
- *How to offer adaptative and collaborative learning materials efficiently?*
- *How to apply digital learning in an intuitive and easy way?*

Claned adopts the combination of artificial intelligence and real-time learning analytics to provide insights into study performance, orientation and motivation for both educators and learners. Two key focus areas are in helping to create personalized learning paths and empowering learners to be in charge of their own learning. They have bold statements about helping individual learners wherever they are, whether it is inside or outside educational institutions. Emphasizing the concept of "life-long learning" seems to be all over their official website.

Regardless of impressive customer cases (The European Olympic Committees, Icare, The Economic



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Information Office etc.) and team members of the Claned Group, the whole product concept seems vague. There are no further descriptions about their core customer segments or how Claned platform is practically used to support learner and educators. I logged into Claned with my own test account and couldn't find much content so I guess that there is not much going on in their learning community just yet. One of my EdTech entrepreneur friend gave me a hint that Claned was suppose to collaborate with IBM Watson with same the kind of purposes as we are now, but failed. Still, Claned is utilizing artificial intelligence in their platform as well in ways that I am unaware of, and they have strong international partner: Microsoft World Education.

Nevertheless, I don't think that they are not our straight competitor since we are working on add-on to be integrated with existing learning management systems.

### **Moodlerooms**

**Official website:** <https://fi.moodlerooms.com/>

**Revenue:** Could not find

Moodlerooms states to be the biggest Moodle partner in the world and it has over 1400 clients with over 4 million active users. It utilizes open APIs of Moodle to extend the features of original Moodle platform. Moodlerooms' core competency seems to be its integration possibilities with X-Ray Learning Analytics, video chat platforms and Office unel365 software. Besides the platform itself, they also offer EdTech consultancy and training programs for their solutions.

Core features are summarized on their official website as follows (Moodlerooms 2017);

- *Open Source Technology*
- *Predictive Analytics Technology*
- *Blackboard Integration Tools*
- *Worldwide presence*
- *Global support 24/7*

Moodlerooms contributes to higher education by offering professors and students possibility to create

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interactive online courses and learning methods. Platform can be integrated with activities such as videoconferencing, virtual classrooms, open content and Office 365 services. Moodlerooms also takes part in creation of such interactive courses by supporting with integration of its diagnostic tools and helping to utilize academic models that are predictability.

Since Co-Teacher is also planning to also use analytics for both to support drop-out students but also to provide insights for teachers, it can be the case that Moodlerooms is very potential competitor to us. They already have well-established customer base as well as technological enablers to make such solution in their own platform, but also as with Claned, their focus is elsewhere. Moodlerooms' core strength is also the seamless integration possibilities to Moodle, so it has the potential to enhance the platform with its features to a new level. In that case, it would be also hard to compete with them in cost-efficiency, because Moodle as a platform is free-to-use for schools. EdTech entrepreneur colleague of mine suggested that in the future of our development, Moodlerooms could potentially be our analytics partner in the future or that we offer Co-Teacher as an addon for their solutions.

### **Arcusys**

**Official website:** <http://www.arcusys.fi/web/en>

**Revenue: Could not find**

Arcusys is internationally growing IT company that specializes in the digitalization of learning. They have headquarters in Joensuu, Finland and six offices in total, both in USA and Russia. Arcusys' key technological partner is Liferay, which is internationally acclaimed open source technology platform that can be modified according to the latest trends in IT and it is very well-known for it. The design and usability of Liferay platform can be easily modified, so Arcusys utilizes their platform to create user-friendly interfaces in their digital learning solutions.

Their key product is Valamis Learning Experience platform, which is an open source learning solution that enables both formal and informal learning, independent of time and space. Valamis is based on Liferay technology, so eLearning tools and analytics can be chosen flexibly to build flexible and

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user-friendly learning environment to fit and respond with different needs of organizations.

Arcusys seems to have quite similar vision to Claned's, which is to enable both formal and informal learning regardless of time and space. Regarding technological enablers, Liferay is well-known for its flexible user interface and therefore Arcusys can have many possibilities for learning solutions with their software development expertise. Still, they seem to focus more on the B2B sector and I think that Co-Teacher could function as an add-on for Valamis just like in the case of Claned's platform.

### **Reflections on competitors and SoG's competitive advantage**

By referring to Porter's generic strategies (1985, 12), we have progressed from broad to narrow scope considering our product strategy. During Q1 2016, our vision arose out of the visualization model ("Circular Model") that was initially created by Pete Stockley. At that point, we did not think about idea's economic or even functional value for schools, but rather only the visualization aspect and how useful it would be for students to visually observe their learning paths "as a map". But still, like we later on realized, students are not our paying customers but rather institutions and their decision-makers.

After the first 6 months of our development (Q1-Q2), we really decided to challenge our idea to find out SoG's real competitive advantage and this emerged after researching more on the economic problems that institutions are dealing with. At that point we also started to research on our potential EdTech competitors more and realized that there are already many companies enabling visualized learning paths and comprehensible course management interfaces.

Through this observation I realized that we have to clarify our product strategy so therefore I took a look at the research insights we gained through our interviews with schools. I found out that there is one common economic problem considering both higher educational institutions and also lower levels of education; How to decrease the rate of drop-out students? This realization got also approved by the university teachers that I knew, because the fact is that schools can lose from 10,000 euros to up to 100,000 euros per student that either delays or drops out of their studies. Still, there is no tailor-made

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software product of any sort available to tackle this problem so I came to a conclusion that this could be very relevant focus for our first learning solution, which we decided to be SoG Co-Teacher.

In summary, the product strategy of SoG got crystallized through understanding economic problems of schools and simultaneously when we were comparing our initial vision (visualization model) on our competitors' products and services. In relation to Porter's generic strategies (1985, 12), SoG Co-Teacher's competitive advantage is essentially about differentiation focus because we realized that we have to do something different than our competitors to avoid what Porter calls *the threat of substitute products*, which is the one of the five forces that influences competition between businesses. Due to this, we ended up moving away from developing learning management system to focus on creating an add-on that can be integrated with such platforms, like Moodle or Claned. Through this change on product strategy, we also have Porter's element of "*Cost Focus*" (Porter 1985, 12) as our competitive advantage, because utilizing Co-Teacher to decrease the amount of drop-out students is found out to be very relevant buying motive for schools in order to have cost-savings. We also avoid straight competition since we develop SoG Co-Teacher as an add-on, so the mentioned competitors can probably become our platform partners in the future of our development.

In a nutshell, Co-Teacher's competitive advantage is about focusing on our niche to create highly tailored add-on solution for which we can consider platform co-operation with other EdTech company later on or maybe somebody will approach us for acquisition.

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### 3.1.3 SWOT and industry analysis

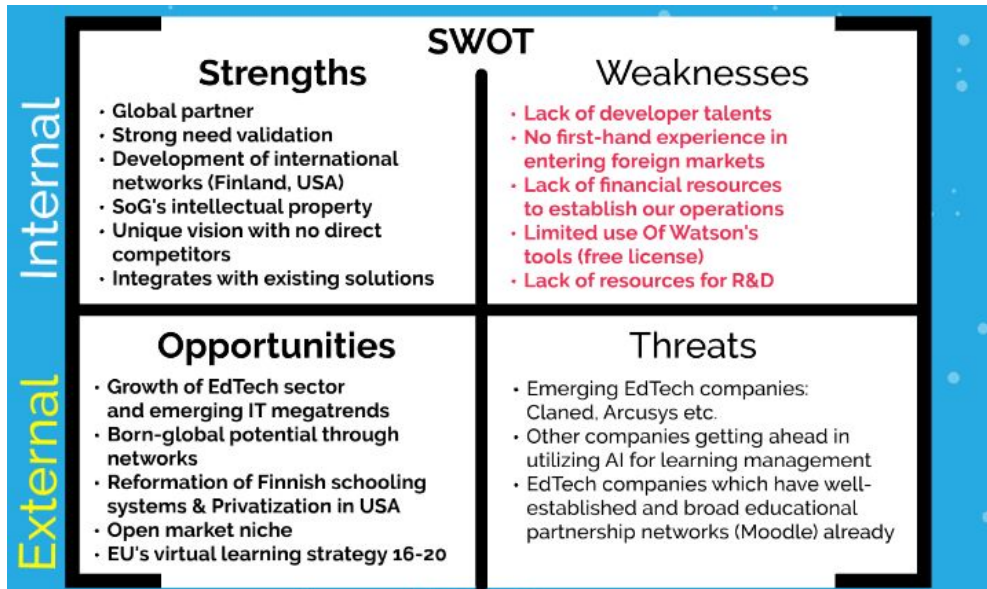


Figure 6. SWOT Analysis of SoG

In this chapter I will discuss about the internal and external environment of Shoulders of Giants' business development. The above figure of SWOT analysis is taken from Co-Teacher's investor presentation which was created on December 2016.

#### Internal environment

At the core of our technological enablers is having IBM Watson as development partner through IBM's Global Entrepreneurship Program. It not only allows us to use Watson API's but also solutions for software development and IT infrastructure through Bluemix platform. The main contribution of Watson is for Co-Teacher's functionalities, but it also intertwines with SoG's intellectual property; We are working on our own AI algorithm to enable shared learning support so therefore understanding Watson will give us insights and know-how for developing our own approach. Like mentioned in the SWOT analysis, one of our core technological competencies is also that we want to develop SoG

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Co-Teacher to integrate with existing solutions so therefore it only retrieves the study data from platforms.

Regarding our vision to focus on mass learning management (solutions to manage expanding amount of students) and assisting drop-out students, we haven't found any direct competitors with the same scope. Therefore, I consider that our vision is also internal competence since it has high differentiation value. Also the research about the economic problems of higher educational sector (Finland, USA) brings more value for SoG's vision in terms of need validation.

Our team and Board of Directors has all the needed expertise and know-how for EdTech, pedagogy and business IT development. We also have the networks for internalization initiatives but none of us have the first-hand experience in entering foreign markets so that is one skill area that we consider filling in near future. Nevertheless, we have been developing our international networks since the beginning of development so the potential of our networks will be realized when we consider expanding our operations beyond Finland in the future.

SoG's most significant internal weaknesses comes down to the lack of HR and R&D resources. At this stage of development, our team doesn't have software developer talents because we lack financial resources to pay proper salaries. Simultaneously the IT sector in Finland is booming so therefore we have encountered great challenges to keep potential candidates in the team because they are offered with high-salary jobs. Since we are still at the pre-seed stage of development, we also lack the resources for further research that would be in great need for Co-Teacher, both for the software and AI development. Especially regarding AI development, we currently have the needed stakeholders for such research but we should take couple more steps with operations to convince them.

### **External environment**

When considering SoG's external environment Finland, there are many opportunities and threats within the educational sector. On a global level, our biggest opportunity is to take use of emerging EdTech markets and IT megatrends. The growth of global EdTech sector is estimated to grow up to 252 billion by 2020 (EdTechX 2016) and regarding IT industry, our solution is between 2 emerging

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megatrends: AI and Big Data. Regarding IT sector, I have vast networks for such solutions through my sales experience at Trainers' House (I worked mainly with IT companies) so we have many co-operation opportunities to consider when needed.

When I consider the EdTech sector through my observations, Porter's fifth (5) force about *Intensity of rivalry among competing firms* comes to my mind. I think that direct competition among educational companies is not the case, because EdTech companies seem to have very different scopes on how they deal with education; Some focus on B2B sector, when some focus solely on co-operating with universities. Many of the emerging EdTech companies, such as Arcusys, have stronger B2B focus. Also when I think about the "nature" of educational industry, it's about creating efficient learning solutions so basically all companies have common "good" purpose. Therefore I consider many of the existing competitors as opportunities instead of being threats to our business development. There is a vast amount of possibilities between the public and private sector of education which equals to having many possibilities to find SoG's niche as well. Currently we are building networks both in public and private sector (IT) to understand both sides of the industry and only time will tell which is more reasonable one for SoG to focus on.

Also educational structures in different countries need to be considered; In Finland, the public sectors covers most of the schools while in USA the private sector is in a much bigger role for providing education. Our strategic advantage in Finland is definitely the fact that our Board and the team consists of people who are working in educational institutions and they are working closely with decision-makers so we get a lot of "in-house" information to understand what is happening with the industry. For example, our teacher colleague is working in EU learning project that is intertwined with EU's virtual learning strategy that will be implemented between 2016-2020.

When considering USA's educational sector, our board member Robert Guzman mentioned that the privatization of institutions is taking more and more ground out there. In light of this, it can also be the case in Finland since due to economic crisis the government is narrowing down educational budgeting and that can create more market space for private institutions to emerge. Especially in Finland, private institutions could have more eye for offering unique solutions (Co-Teacher) in comparison to public

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schools, and are certainly more considered about cost-savings since they are run privately.

Our major external threat is EdTech companies who work on utilizing AI for learning management because they have many resources and enablers through existing technology partners (like Arcusys with Liferay-technology) to get “ahead in the game”. Also if existing EdTech giants like Moodle will decide to develop such AI approach they have well-established international networks that cover all continents and adopting Co-Teacher-like solution would have international coverage very fast. Still, to scroll back to what was discussed before, Moodle could potentially be our partner if we focus all our efforts to make Co-Teacher the best niche solution available for decreasing drop-out rates.

### 3.1.4 Overview of operations and product development after one year

Before proceeding to the research section, this chapter describes SoG’s operations at the end of its first year in development. The following summary is taken from Shoulders of Giant Oy’s official LinkedIn page, which pretty much summarizes our vision and mission (written by me);

“ Shoulders of Giants (SoG) is an EdTech software, outsourcing and consultancy start-up from Finland. Our internationally oriented team consists of members both from Finland and USA, who are currently working on our first AI-based virtual tutoring solution: SoG Co-Teacher. Our vision is to take Giant's view on learning management, which enables the mass management and virtual tutoring simultaneously: SoG’s Circular Model for managing mass learning communities, while our Virtual Co-Teacher assists the growing amount of students to achieve set learning objectives.

The aim of our solutions is to free time and financial resources of both schools and educators. We convince schools to adopt SoG as their primary learning solution with pedagogy first focus on solution delivery and consultative approach on developing each school’s best pedagogical practices. By harnessing the full potential of our vision, we will create self-sustaining learning platform to manage whole learning programs where virtual tutoring guides the expanding amount of students at the same time. “

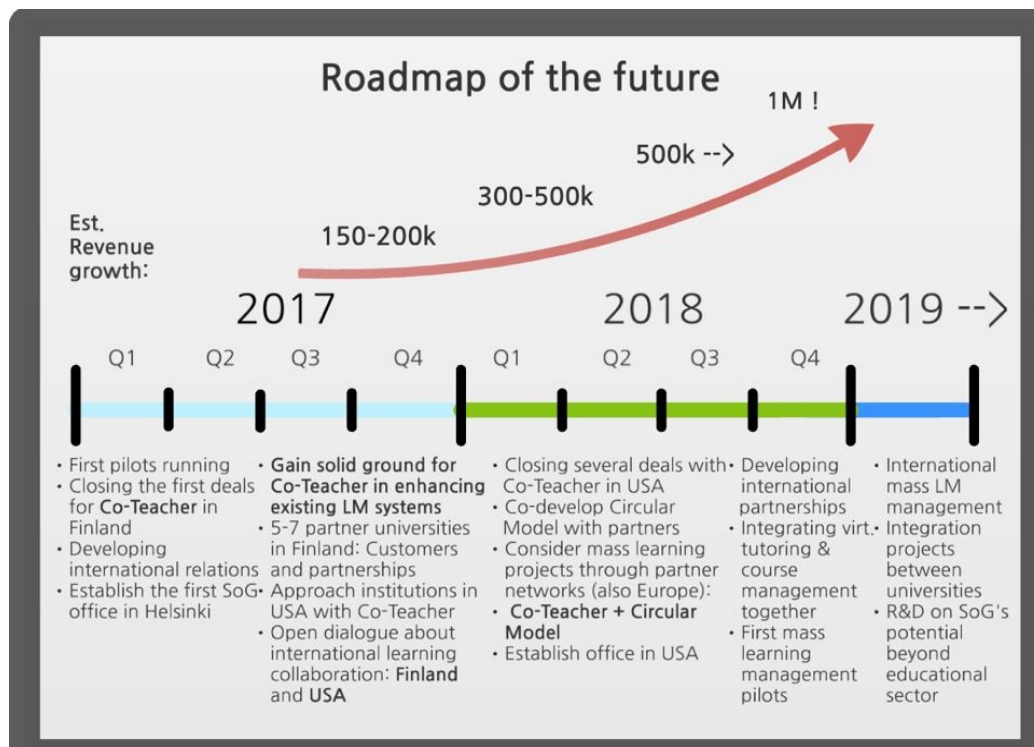


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Currently we don't have our own office yet and we've been mostly developing networks, doing field research and clarifying our business plan. A lot of effort has been put in clarifying the product niche and understanding educational markets through the research. In near future, we are expected to get either public or private funding for further product development, because at this stage we lack IT operative resources (developers, technological enablers etc.) to finish the Co-Teacher demo for piloting. We will use the initial funding or investment for establishing the office in Helsinki, recruiting developer talents and covering IT operative costs. Due to our broad networks, solid business plan and strong need validation for the product I expect that we are getting our seed funding any time soon so this describes a moment just before the "launch-off".

To anticipate the future of SoG's development, I created the following "roadmap" of the development until 2019 (for the investor presentation so that's why it is rather optimistic);



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### *Figure 7 “Roadmap of SoG’s development”*

This graph describes the anticipated actions that will be made in SoG’s product development. Regarding this initial plan, the approach on Co-Teacher’s product strategy is bottoms up; We will first gain solid ground in enhancing existing learning management platforms with our add-on before moving on to actually managing learning communities and programs. To keep an eye on this approach, we co-develop our Circular Model alongside the Co-Teacher to utilize it to manage “bigger structures”, not only to help the individual drop-out students. Solutions that we will develop in the future focus on realizing our vision, which is to enable mass learning management so that schools can take in more students and decrease the administrative workload of teachers with the help of such digital learning solutions. We also wish to be bridge builders between our partner institutions (Finland and USA in the first place) and encourage them for collaborative mass learning projects with the help of SoG’s solutions.

According to my research about the revenue logics in the EdTech industry, they are expected to be flexible since different institutions have greatly varying buying processes. Some are publicly owned, some are fully private and there are also hybrids that are in between. In private institutions the decision-making can be centralized in the hands of schools’ directors but in case of public ones they often make common decisions about used solutions and this process is coordinated by government entities. For Co-Teacher, we consider different invoicing approaches in accordance with the buying processes of each institution. Still, there is one core logic we rely on; Invoicing is scalable according to the amount of students (or teachers) that Co-Teacher helps with their studies. We also have thought that another approach could be to take a certain percentage of cost-savings we realize with SoG’s solutions (decrease in graduation times for example). Especially for our first pilots and use cases, there also should be initial payment that covers deployment and IT support for possible bug fixes, administration and maintenance. I got determined of this approach through my work in sales with many IT companies because most of them rely on scalable revenue logics so the invoicing is based on the actual use of software or service by customers. In SoG’s case this means that the buyer is only charged of actual benefits that we actualize for institutions.

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Our intellectual property consists of SoG's Circular Model and framework for the AI algorithm. We use the first one as visualization model to help students to comprehend bigger structures and concepts in their learning activities. The circular shape is used for several other functionalities of software as well. Our approach on AI aims to enable shared learning support through thinking learning communities as "self-sustaining" organisms where the AI coordinates students in order to harness the "swarm intelligence" of learning. As mentioned earlier, I will not go into more details about the functionalities in order to protect our intellectual property.

## **4 Development project: Describing the strategy formulation process**

### **4.1 Background and the beginning of development (2014-Q1/2016)**

Regardless of the fact that the development of SoG officially started in January 2016, the roots of the idea go all the way back to 2014 when I started my BBA studies in Haaga-Helia UAS.

Back then, I attended "Creative Sales" summer course during which I got to know Principal Lecturer Aarni Moisala who was holding the course. We got along very well because he was impressed of my enthusiasm as a student and I was inspired by his high-flying ideas on both business and educational development. I think this encounter set the ground for our future co-operation; He saw the potential in me as enthusiastic growth-seeking young professional when at the same time I was impressed of Aarni's business know-how combined with highly creative thinking and sharp "eye" for spotting the potential in disruptive educational innovations. Aarni passionately shared his ideas about reformations and economic changes happening within the higher educational sector but I had no knowledge to reflect on them constructively. At that point, I had no clue that I would witness his business skills in practice when he ended up to be my start-up mentor almost 1,5 years later.

Through knowing my passion towards educational solutions, Aarni got me in touch with Pete Stockley

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who was still working as Assistant Lecturer in Haaga-Helia where he presented his initial idea called “Shoulders of Giants”, which described a visualization model for evolving and expanding learning communities. He had created the IT concept of idea with visual interface and description of basic functions around the time when we met. Even before meeting him in person, the idea inspired me a lot and at that point the only “driving force” I had was my passion to work on something meaningful. This motivational factor still defines my enthusiasm toward business coming to this day; To work on such services and products that offer solutions for social, economic or sustainable development.

On January 2016, me and Pete started the development together since we compensated each other very well; While both of us had very different fields of expertise, we still appreciated each of our expertise from the day one because we knew that both of us had an “area” to cover in SoG’s development. For Pete, it was to create the concept for product development and for me it was to take his idea to the next level through networking, acquiring partners and creating the business plan. At that point, I was overly enthusiastic about carrying the idea further; I started to brainstorm on different business models, revenue logics, partnership scenarios and branding concepts, but unfortunately we didn’t have any clear vision for the business or which problem the anticipated product mission would actually solve. In the beginning, there was Pete’s ideas for the IT implementation of SoG platform and The first couple months of development (01-03/2016) we spent brainstorming on the concept and SoG’s features, but it solely lacked the substance for any strategic considerations; We lacked the vision for product development.

As Mintzberg argues in his model of *strategic thinking as seeing* (Mintzberg 19,12), a good vision of the future is based on a profound understanding of the past. This means that seeing the clear vision of anticipated future requires substance from the past as well which we certainly did not understand at this stage. We used a lot of time on planning IT resources and business development without having the direction towards to work on. After the first couple months of development, I knew that we had to get on the field to gain insights from the educational sector in order to validate the value of our ideas and have the sense of direction in what we do.

### 4.2 Defining the product strategy and vision (Q1-Q2/2016)

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At the beginning of March, Pete managed to get SoG as commissioner for two IT course that were held in Haaga-Helia UAS. Other course was about conceptualization of software product and other about creating the visual interface so we were happy to offer this opportunity for students to work on concrete case. Still, we didn't get the results we anticipated but that is understandable since we could not offer clear vision of platform's functionalities at this stage.

If I reflect our work on these project cases to strategic IT practices, there was also one key point that we were missing in order to get valuable outcomes from these project collaborations; *Our plan's action items, strategies and objectives did not point to measurable, substantial business benefits through the process* ((Lientz, Bennet P. 2009, 8-9). We didn't actually have plan at all because there was nothing to "point" on; Me and Pete believed in students and wanted to see what they could come up with by themselves. This was kind of "emergent" approach just to see what these students ideate and implement without guidance but on the other hand, the conceptual framework and pieces of interface that were created did not serve our product development at all. Still, the real value that we acquired from these project cases was feedback from end-users (students) about useful features we could have in our platform and that was exactly what we needed to clarify our product mission one step further; Focus on helping students.

While Pete was mainly responsible of monitoring students through these courses, I was already running on the field to get more insights for SoG's further business development. I met Forum Virium, Sitra and Finland's Ministry of Education to discuss about possible fundings for educational development. Especially from the Ministry we got very promising feedback about the uniqueness of our approach on visualization (Circular Model) which convinced us to carry on. I took further steps by getting in touch with some of teacher colleagues that I knew and all of them wanted me to get back in touch later on when we have the product ready. When considering my strategic thinking skills during Q1-Q2 I certainly didn't have "eye" for prioritizing my activities; I took all information and insights that I gained as "important" without understanding how to reflect them on long-term goals. I was already talking about acquiring investments, partners and we even made IT resourcing plan for setting up our office. Of course all this planning helped later on when we got closer to getting our seed funding, but there was still a lot of useless work we did without knowing what to prepare for.

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At the end of Q1, Aarni Moisala started to show growing interest towards our activities and at the beginning of April he approached us by asking that could he join SoG as business partner. He said that he could help by mentoring me with business plan creation (later on he actually helped us also to establish the actual company). Me and Pete were very open for this proposal because we both had the feeling that we didn't quite know where to focus and therefore how to carry our development further. Since Aarni joined, we started to accelerate our operations with much greater confidence; We hired two voluntary coders from my student friends and I finished course in Haaga-Helia about IT strategic thinking. I also started part-time work at Trainers' House (well-known B2B sales organization in Finland) where I was mainly working in IT sales projects so I could have some special opportunities to understand the world of IT both in terms of strategic planning and sales.

At the end of April, we got some end results out of the student projects and our feeling of uncertainty about the "wrong focus" (more like the lack of it) started to grow stronger. Suddenly Aarni approached us in order to challenge the idea and proposed us to clarify the problem-solving aspect of it; *What is really the problem that we are trying to solve? What is the real value of Pete's visualization model for schools? We honestly didn't know how to answer this question.*

This was the first point when I started to question the future of SoG greatly. I was asking from myself; *"If we can't even explain the customer problem that we will solve, why carry on?"*. As mentioned earlier, we still didn't have anything else than our enthusiasm to work on SoG without any real insights for our entrepreneurial functions or for any strategic considerations. We discussed further about Aarni's suggestion and he explained about the economic problems that schools are facing since there is a dilemma to provide personalized learning solutions when at the same time public institutions are narrowing down their financing. We came to a conclusion that it would make more sense to focus on solving such problems instead of creating the whole learning management system from scratch, for which we didn't even have any beneficial functions anticipated to solve actual problems. In this moment, I realized something that resonates well with Stevenson's and Gumpert's definition of "strategic orientation"; Entrepreneur is the one who is *"constantly attuned to environmental changes that may suggest a favourable chance"* (Mintzberg, Ahlstrand & Lampel 1998, 133). This was exactly

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the time when we had to spot this chance through problem-solving orientation and change our focus to develop something smaller and more tangible. According to Aarni's insights, we decided that our product strategy will focus on tackling one of the economic problems in schools with an add-on solution that can be integrated with existing learning solutions.

This turning point that happened at the turn of April to May is well described by Schumpeter (1947) when he argued that entrepreneurial functions stop once the innovating ceases, meaning "*the doing of new things or the doing of things that are already being done in a new way*" (Schumpeter 1947, 132). Lack of direction which was clarified through Aarni's intervention "forced" us to reconsider our vision so it would focus on something concrete, in this case to solve economic problems that schools are facing due to delayed graduation times, drop-out students and lack of financial resources.

We certainly didn't know which problem to focus on in the first place, but I felt growing sense of responsibility to understand the "big picture" of SoG's development and realized that we need to get on the field to understand our potential customers and their processes in order to determine our strategic direction.

### **4.3 Kick-starting the R&D and understanding strategic considerations (Q2/2016)**

After we got determined of our problem-solving focus we knew that it was about time to get to know more about the challenges and economic problems that schools are facing. In the first place, Pete suggested that he could set interview research for universities and other schools to get more insights on the problems that Aarni mentioned (drop-outs, desire to decrease graduation times etc.). Simultaneously I was working at Trainers' House in IT-centered sales projects from which I got the enthusiasm to get deeper into understanding the IT industry. Varying sales projects offered me a broad view on different IT solutions that were in the Finnish market. To understand IT's strategic functions in practice, I decided to attend e-course in Haaga-Helia about strategic IT planning to prepare my skills for future's challenges in development. The core insight I got out of this course was

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about understanding IT's relation to planning our business development activities; *the value of IT lies in its contribution to the business through business process performance and use of knowledge and information for cumulative improvement*" (Lientz, Bennet P. 2009, 7). I got to use the knowledge that I gained quite soon because we decided to sit down with Pete to do some IT resource planning for our voluntary coders and to estimate how we will use the seed funding once we get it. This was the first point when I started to think in a way what Mintzberg called *seeing beyond* (1998, 127); To anticipate on a future that would not exist at all without strategist's subjective thinking. I continued Pete's initial resource plan with conceptualizing SoG's first partnership and ownership scenarios. After sharing my ideas I was surprised that it was already quite clear for both Aarni and Pete to see me as CEO in the future so of course I took SoG's development even more seriously because expectations towards me were so high. In reality I was pondering on these considerations one year too early because we acquired our very first seed funding during Q2/2017. To be honest, I didn't have any realistic scope on the amount of work that was still ahead of us.

While Pete was still doing his research I decided that I have to do my own part. I approached some teachers that I knew for feedback about our doings and also went to some IT fairs and events to understand more about possible technologies we could use but also to find potential future partners. Feedback from both teachers and EdTech professionals convinced us about narrowing down the product vision to focus on economic problem-solving. At the end of May we also got results from Pete's research in which he reflected the anticipated features of SoG to the economic challenges Aarni shared with us. Fortunately we found out that 95% of interviewees agreed that institutions would be in great need to tackle such problems; To decrease graduation times, the rate of drop-out students and administrative workload of teachers.

At the end of Q2/2016 we eventually reached the first important milestone in our product development; We could define the problems that our solutions are expected to solve but I didn't have enough "research data" yet to be determined of which one to focus on or to anticipate what are our solution's key features to solve such problems. Nevertheless, this period was very important for me personally since I got more insights about the entrepreneurial functions of me being the central strategist in the team; I was the one who was supposed to see the "big picture" of where we are going



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and how. This realization also made me to think about Pete's and Aarni's contribution to further planning of SoG's business development; Pete's role was to make sure that our IT development (managing work of voluntary coders and planning further product development) is progressing. When Aarni got involved he became my mentor by offering insights from educational sector and assisting me in planning SoG's business development. Therefore at the end of April he proposed to make initial draft of the business plan for SoG which I will continue. He actually mentioned IBM Watson as possible development already at this time but either me or Pete could not see clear connection to our plans with SoG until later on so we left it aside.

Ultimately this period taught me about the entrepreneurial functions; To see beyond the current situation and to understand the role of central strategist who is holistically coordinating business processes. My daytime work in IT sales projects and the strategic IT course in Haaga-Helia also provided me with insights on how different technologies should be aligned to support our business development. I still missed something that is according to the most schools of strategic planning crucial to the role of central strategist; The clear vision which can be described as *"mental image of a possible and desirable future state of the organization."* (Bennis, Namus, 1985, 89). We took an important leap towards this after getting some first insights of the economic problems SoG could solve, but we didn't have clear focus yet. The next chapter describes further steps taken in order to clarify SoG's business plan along with its product mission.

#### **4.4 Forming the business plan and clarifying product mission (Q3/2016)**

At the beginning of Q3 (June) me and Aarni created the first rough draft of SoG's business plan. It mainly included the introduction of our team and description of the business case SoG aims to solve but atleast we started something to work on. We also got in touch with IBM for the first time when their university co-operation representatives were visiting Haaga-Helia and we agreed to get back in touch later to discuss about possible co-operation.

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After me and Aarni discussed about the business plan with Pete we encountered our first disruptive change; Pete said that he doesn't want to take part in the ownership of our soon-to-be company. This was our first serious setback because the rest of us felt strongly that we are building on Pete's vision of SoG and he should be the one leading the IT development. Nevertheless, he said very noteworthy reasons for his retreat; Pete wanted to continue with his daytime work in InnoOmnia and also he had his family to take care off. My emotional reaction was very strong on his retreat because I felt like getting abandoned by one of my "teachers" and that I didn't have the rights to continue his work. I got urgent need to find trust inside myself and for SoG's vision because It felt like being left on an empty ground. Aarni still couraged me to move on and we agreed to sit down to discuss about our next moves in development. Happily we came to an agreement with Pete that he will continue his work with voluntary coders until the end of summer to finish SoG's first demo mockup. We also agreed that he will do his best to find follower for his position.

One month later we already realized that things are not progressing as they should; We couldn't get our voluntary coders motivated to work on the mockup and Pete was also too busy himself to monitor their work. When looking at this situation now, how they could have even? We didn't have clear vision to work on yet especially regarding the functionalities of SoG. Therefore, finishing the mockup got delayed and I think this should have been the point to realize that we needed more actual data of our end-users, meaning to research on the needs of students and teachers. We would have needed this to validate the problems we anticipated to solve but also the urgency of them. On the other hand, while Pete stepped aside at the end of summer there was more space to re-define our vision and its mission which we really needed.

Through realizing that I am now the main responsible of SoG's business development I honestly got too excited of it. I was expected to continue the business plan me and Aarni initiated so I began to brainstorm on many things; How we could create scalable revenue logic for SoG through Pay-per-Student model where the invoice would fluctuate according to the amount of individual students we help and how we move on from helping students to co-creative solutions that also include teacher's contribution. I also created some very simple Excel-calculations to anticipate how much the

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cash flow would grow in a couple years if we would have 3-4 new partner institutions each year with couple course implementations to manage. Meanwhile Aarni got back in touch with IBM and to our surprise they actually proposed us to meet up about using AI tools of Watson in SoG's development. Because of this I also included some wild ideas in our business plan about AI teacher coordinating the growing amount of students to decrease teachers' administrative workload.

As one can guess out of these considerations, I had big vision emerging inside my head but the problem was that I was anticipating the unexpected without any data or insights to validate either our business plan, vision or further strategy in development. I didn't have any critical eye or even time to reconsider my ideas because soon Aarni informed me that IBM's Watson representatives want to meet us and my expectations of SoG's future just grew even larger. At that point I realized that one of Pete's earlier hypothesis about the irrelevance of Watson co-operation seemed to become false and it was about time to think of SoG's development from another perspective. Adding to that, Pete told us that he found potential replacement for his position from Marius Cojoc who is Business IT graduate from Haaga-Helia and soon we agreed that I will have meeting with him as soon as possible.

I met Marius at the end of August and we got along well together from the first moment met. I explained him about what we've done so far and he got very excited of SoG's concept. His involvement was essential for my motivation since I finally had someone on my level to share my "novice level" struggles with. Marius took a catch of Pete's work and started monitoring the work of our voluntary coders on SoG's demo mockup. Meanwhile me and Aarni were waiting for IBM to choose one of the times we proposed for meeting and we also forwarded a small presentation to anticipate how we could utilize Watson in SoG. The following picture is one of the PowerPoint slides from the presentation:

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*Figure 8 "Power Point slide from presentation to IBM"*

We prepared for the upcoming meeting by getting to know about the functions of Watson API's and regardless of Pete's low expectations before, me and Aarni found that there are several useful functions we could utilize. When we prepared for this meeting it was actually the first time when the idea about "Co-Teacher" started to emerge. We explained in the presentation that Watson could act as tutor between students and teachers by assisting with analyzing materials (reports, scientific papers, assignments etc.) and helping to find relevant information from external sources in the internet. In teacher's case Watson API's could decrease the time used in evaluating students' assignments and students could get help in finding the most relevant information for their studies much faster, for example when they are writing reports or doing other assignments. Basically discussing about these anticipated functions was the agenda for our first meeting.

We had the meeting with IBM on September which was very promising but we clearly didn't have enough work done to truly understand how to use Watson API's for our purposes and we didn't have clear product mission either. The representatives of IBM were clearly interested of our approach since

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it was unique but they also thought that SoG's concept wasn't clear enough even though we had good ideas on how to benefit both teachers and students. I think that our vision on combining our visualization ideas to Watson functionalities was "too much" and we should have focused on more simple functions to start with because our first presentation anticipated to use 4 different Watson API's for several purposes. We still agreed that there is a common ground for co-operation and promised to get back in touch with a more clear plan for development.

After the meeting we agreed to sit down immediately with Aarni and Marius to discuss about narrowing our scope and to make a decision on which is the most urgent problem we should focus on solving. We commonly agreed to move away from the visualization model and Aarni pointed out that there is one economic problem that exists in all schools: The financial loss due to drop-outs or slowly progressing students. I agreed that this was clearly the first problem we should start with and now it was about time to answer the "How?" question. Therefore we had couple more intensive meetings because in order to convince IBM to co-operate with us we had to demonstrate clearly how Watson could function as a part of SoG. As a result we decided that we think about utilizing the visualization model later and focus now solely on helping students with data search and analyzing study materials in order to accelerate their learning processes. We also came up with promising ideas to actually stimulate students to study with the help of AI instead of just focusing on learning management aspect. When we had clarified our scope Aarni suggested that his "Creative Sales" course could be a perfect case to test these functionalities in real-life case.

This was very important phase for us since IBM's involvement forced us to clarify our plans and therefore we finally found connection between our vision and product's (Co-Teacher) mission. The work on our business plan and Pete's retreat also gave me the first possibilities to train my strategic thinking when I was left to be the main responsible of SoG's development. After we agreed to test the mentioned functionalities of Co-Teacher in Aarni's course I also realized that my duty as the CEO was not to monitor the product development but rather see beyond the current situation and what's to come.

I think that the way we approached to SoG's product mission demonstrated how we were moving

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away from Entrepreneurial School approach where strategy is formulated by “head strategist” (CEO) towards becoming a learning organization; We encountered challenges in which we had to understand each of our contribution to move forward and to get the most out of what I call “collective problem-solving” in spirit of Mintzberg’s Learning School. The phase which I discussed in this chapter clearly demonstrates how our whole team became strategists when we tried to figure out how to clarify SoG’s product mission. Aarni through his insights from Finnish educational sector, Marius as recent Business IT graduate from Haaga-Helia and me as BBA student. Also our voluntary coders brought their valuable insights to understand how to bring Watson functionalities into SoG’s product mission.

### **4.5 Understanding strategic functions and relations (Q3-Q4/2016)**

This chapter discusses the happenings besides SoG’s product development which brought me into understanding strategic partnerships and networks. During this phase I also made the first long-term strategic considerations for the next 2 years of SoG’s business development. This phase is divided into two chapters where in the first one (5.5) I will explain how I learned to understand strategic functions and in the second chapter (5.6) I will tell how I turned my developed knowledge into SoG’s first strategic plan with clarified vision and mission statement.

While our whole team was pondering on the Co-Teacher’s product development to turn it into EdTech software product, I took significant steps in acquiring more valuable networks and strategic knowledge to benefit SoG’s development. Those actions took place both during my IT sales work at Trainers’ House and also while I was in touch with some of my personal contacts about SoG. First of all, my daytime sales work gave me a broad view on the Finnish IT market because I got the chance to learn about wide range of solutions from the best practices of software development (DevOps, Agile development etc.) to infrastructure and business intelligence solutions. Understanding these solutions didn’t provide concrete value at this time, but I certainly realized that to prepare for the future I had to make sure that SoG’s choices in IT development contribute to our business process performance and that the use of IT solutions will aim for cumulative, measurable improvement (Lientz, Bennet P. 2009, 7). Introduction to IT Strategic Thinking course that I attended in Haaga-Helia also contributed to

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developing my strategic skills and I could bring the theory to practice immediately; While others were thinking of IBM Watson co-operation from product's (Co-Teacher) perspective, I was pondering strategic enablers it could realize; Potential of utilizing AI in educational sector to find uncovered business segment and the fact that AI is a rising megatrend which haven't been utilized yet effectively for educational purposes.

Regarding my personal networks, the first person whose contribution I have to mention is my friend Kevin Guzman from Puerto Rico. I've been in touch with him through all the phases of SoG's development and he started to show growing interest towards our doings during Q3/2016. I met up with him in 2014 when he was visiting our common friend in Finland and since then we've been sharing thoughts regularly coming to this day. I found out that his dad happened to be Professor of English in University of Puerto Rico (UPR) so I also gave Kevin the permission to discuss with him about what we do at SoG. Only a while after I was discussing with Robert as well more in detail because he could see the value of Co-Teacher to benefit and easen his work as a teacher.

Kevin's and Robert's involvement gave me new ideas for SoG especially regarding internationalization; Since we decided to work on decreasing the rate of drop-out students and the administrative workload of teachers, why wouldn't this problem occur also occur in other countries? We discussed about networking with USA's universities for which Robert could bring valuable contribution and since Kevin didn't have any business experience before, he asked one of his friend to coach him on sales and negotiation skills who is local financial guru in Puerto Rico. Things started to fall into place and I got convinced that internationalization to USA was certainly the aspect I had to consider as well. I brainstormed with one of my EdTech entrepreneur friend about my new ideas on internationalization and he agreed that it would make sense to approach USA's educational markets with Finnish EdTech product since our country has such a good reputation in pedagogy and the market in USA is huge. Secondly, it would be also significant strategic enabler for future development in order to convince IBM about co-operating with SoG. He also gave an advice that in order to acquire our first seed funding, It would be more efficient to attract both SoG's future investors or Finnish public institutions (such as Tekes, which is public funding institution that grants funds for innovative product development ideas) with plans on expanding in foreign markets.

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Since Kevin was supposed to turn the message of SoG into sales pitch, me and Aarni also started to ponder on the right approach to “sell the idea” for Finnish schools and how to actually do it. Just like companies, schools also have head decision-makers which are not teachers so we agreed that we would start from approaching them because they should be the first ones interested of tackling economic problems. Still, these decision-makers are not end users but rather teachers and students so we still had to focus on solving their actual problems and challenges with Co-Teacher in the first place. At this point I realized that SoG is dealing in fact with three different stakeholders: Schools’ decision-makers, teachers and students. For decision-makers, we had to emphasize economic benefits. For teachers, we had to emphasize the fact that we aim to decrease their workload and thirdly for students, the benefits should solely be realized in helping them with their study progression.

I shared my ideas on approaching to USA’s educational sector to Aarni and he was also impressed of our progress with SoG Co-Teacher’s first prototype we were working on. We made a decision that it was about time to establish limited liability company for SoG and it was commonly agreed that the ownership will be split between me and Marius in the first place. I was nominated officially as CEO, Marius as Head of IT and Aarni as my mentor. At the time I am writing this Aarni is still working at Haaga-Helia and therefore he did not take part in the ownership.

Until the end of Q4/2016 I went more on the field to network and get more clarification on our business plan; I met some startup development consultants from both public and private sector and attended Slush for potential investor and partnership contacts. I acquired potential leads for future partners and investors but our phase was still too young to make official agreements on partnerships or convince someone to invest on us. These encounters didn’t change our strategic scope significantly but gave us more aspects to still clarify our further plans. Consultants gave valuable insights on clarifying SoG’s functions and how they realize the economic benefits when the investors I met at Slush on the other hand challenged us to enhance our business plan so it could be finally set on long-term objectives.

Coming to this point at the end of Q4/2016, my key insight about strategy formulation has been that



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the process haven't been in my control, even though I thought so during the Q1-Q2/2016 when I was more naive and "alone" as business responsible. The strategic vision started to get clearer through small actions and collective learning processes on the problems that happened by all of us in the team. Most importantly my contribution was to detect whether these actions or learned lessons were significant or irrelevant, meaning to justify their strategic significance in bigger picture of SoG's development and make a decision to either act according to them or not.

Therefore, I can mostly relate to Mintzberg's grass-root model of strategy formation and especially to its two lastly mentioned points (1989, 214-216);

- *New strategies, which may be emerging continuously, tend to pervade the organization during periods of change, which punctuate periods of more integrated continuity.*
- *To manage this process is not to preconceive strategies but to recognize their emergence and intervene when appropriate.*

The last chapter (5.6) will explain how I turned this developed knowledge into SoG's first strategic framework when we finally got our vision and product mission more clarified.

### **4.6 Creation of SoG's first strategic framework (Q4/2016-Q1/2017)**

Once we set established the company at the beginning of Q3/2016 we came to a conclusion that the

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first thing which should be clarified and written down is SoG's product mission and long-term vision. From my perspective I thought that they were the most essential aspects to be clarified in the first place in order to make any further strategic considerations. In November 2016 we finally had our one-pager summary of SoG's product mission and vision which goes as follow (Shoulders of Giants Oy Ltd 2016);



### **SoG Learning Solutions Mission and Vision**

*“ During the recent years in Finland, there has been a growing pressure towards educational institutions to provide more cost-effective and personalized learning solutions but at the same time, governments are narrowing down their financing constantly. Due to this dilemma, resources of schools remains limited, while the number of students keeps on growing constantly. The situation does not occur only in Finland; All schools prefer to take in more students if they would have capabilities to do that, meaning enough teachers and the right learning management solutions.*

*SoG learning solutions focus on enabling the mass management and tutoring of students hand in hand; SoG's Circular Model for managing mass learning communities, while our virtual Co-Teacher assists the growing amount of students to achieve set learning objectives. We convince schools to adopt SoG as their primary learning solution with pedagogy first focus on solution delivery and consultative approach on developing each school's best pedagogical practices. By harnessing the full potential of our vision, we will create self-sustaining learning solutions to manage whole learning programs where virtual tutoring guides the expanding amount of students at the same time.*

*To achieve this vision, we start with our initial mission by solving the grassroot problems with SoG Co-Teacher: Virtual tutoring solution to motivate students to achieve set learning objectives and simultaneously, free time of teachers so they can focus on developing their best pedagogical practices and achieve shorter graduation times.*

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*Our skilled and internationally-oriented team (Finland-USA), solid background work on validating the problems, Finland's position as world leader in education, global AI partnership and booming growth of EdTech sector (up to 252bn by 2020, EdTechXGlobal 2016) has made our team convinced to take the Giant's View to the new era of Mass Learning Management. "*

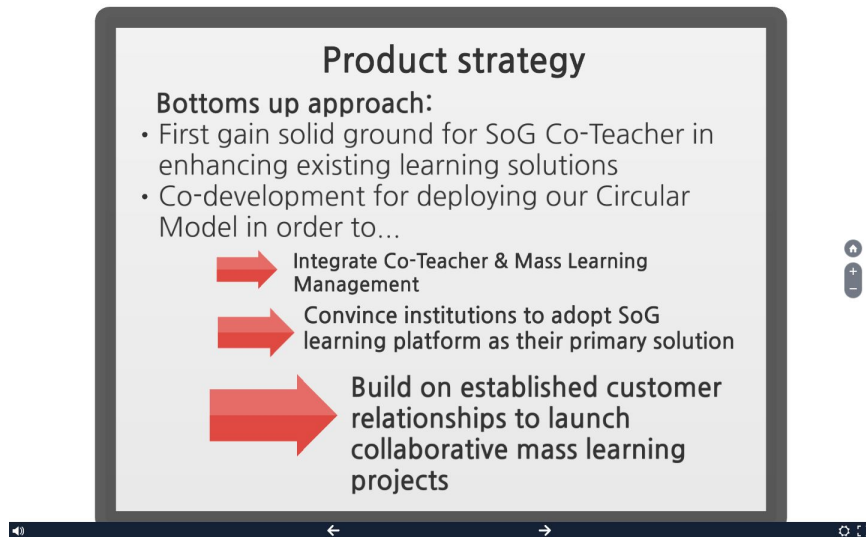
In this summary we demonstrated our knowledge on the economic problems of Finnish educational sector and SoG's approach to solve them in order to validate our product mission. The described solution basically combines our earlier approach on visualization model (learning paths, visual mapping of studies) with the anticipated AI tutoring solution SoG Co-Teacher, which is the end goal of our vision to decrease the rate of drop-out students and administrative workload of teachers.

As described at the end of the summary, I got determined that our product strategy will be bottom up meaning that utilizing Co-Teacher starts from solving grassroot problems of students and teachers. In terms of our sales strategy, we still had to understand how to sell the benefits to the key decision-makers of schools through communicating and realizing the economic benefits to them. Since Co-Teacher is anticipated to be an add-on, we will first gain solid ground in enhancing existing learning management solutions and further in development co-develop our visualization model (Circular Model) in order to integrate AI tutoring (Co-Teacher) to support Mass Learning Management. This term is invented by me and it anticipates a scenario where schools could run course implementations with hundreds of students without losing the aspect of personalized tutoring and study guidance. Once we have several partner institutions and well established customer relationships, SoG also aims to be the "bridge-builder" and key partner for realizing such Mass Learning projects within its educational networks. The first cross-continental Mass Learning co-operations we wish to realize between Finland's and USA's universities.

The discussed product strategy is presented in the following visualization which is a slide from SoG's first investor presentation which I created in Q4/2016;

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*Figure 8. Product strategy of SoG 2016*

Next I will discuss about long-term strategic objectives which is related to the “Roadmap of SoG’s development” (Figure 7, 39) which I also created for our investor presentation at the end Q4/2016. Since this Thesis was written during Q1-Q2/2017, I will also reflect on the moment I am writing this because many things happened in the development coming to this day (April 2017).

As described in the Figure 7, our main strategic objective for 2017 is to gain solid ground for Co-Teacher in enhancing existing learning management solutions and by the end of year we aim to get 2-3 Finnish universities as our partners, or more realistically to have pilots with. During Q1/2017 we got a chance to run our first pilot of Co-Teacher in Haaga-Helia with Aarni’s help and got a proposal for international learning co-operation project from another University of Applied Sciences so by this time we have acquired 2 potential partnership cases. Also, since Kevin Guzman joined in our team officially as International Relations Manager he has already started to be in touch with USA’s universities which was also one of our objective for 2017; To start developing international relations and open a dialogue about international co-operation between Finland and USA.

Many of our strategic objectives for 2017 also concern the requirements we need to run SoG as limited liability company. We got our ownership agreement already done between me, Marius and

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Aarni but what we still needed was to set up the Board of Directors. Fortunately, as we mentioned to Pete earlier when he left, we promised to give him some privileges later on in development since he founded the whole idea and the company name so we invited Pete to join the Board as Chairman. Happily he was grateful to take the position and now we could use his EdTech and IT knowledge for the benefit of SoG's development. Secondly, through Kevin's enthusiasm his father Robert got also more and more interested to get involved in SoG so we decided to have a discussion about his possible contribution as well. Surprisingly, we found out that he is a two times Ted Talker and quite acknowledged professor in his field so we proposed him to join the Board as an Pedagogic Advisor to which he agreed as well. Therefore, we could set up our Board of Directors already during the Q1/2017 but currently we are still missing one Deputy Member. Both Pete and Robert have important strategic role in SoG's future development; Pete could advise us in EdTech development because he was still Senior Learning Solutions Expert in InnoOmnia and has broad networks with many schools in the capital area of Helsinki. Robert on the other hand could share his pedagogical knowledge so we could understand the functions of Co-Teacher more from teacher's perspective and most probably we will benefit from his USA's educational networks in the future as well.

After we had company established and the Board set up, next was to think about our strategic partners. First of all, we came to an agreement with IBM to start co-operating through their Global Entrepreneurship Program so that we can use Watson API's in our development for up to 1000 euros per month. This happened after the meeting we had about our clarified plans for SoG Co-Teacher on February 2017. The following two pictures are from the presentation we demonstrated to them:

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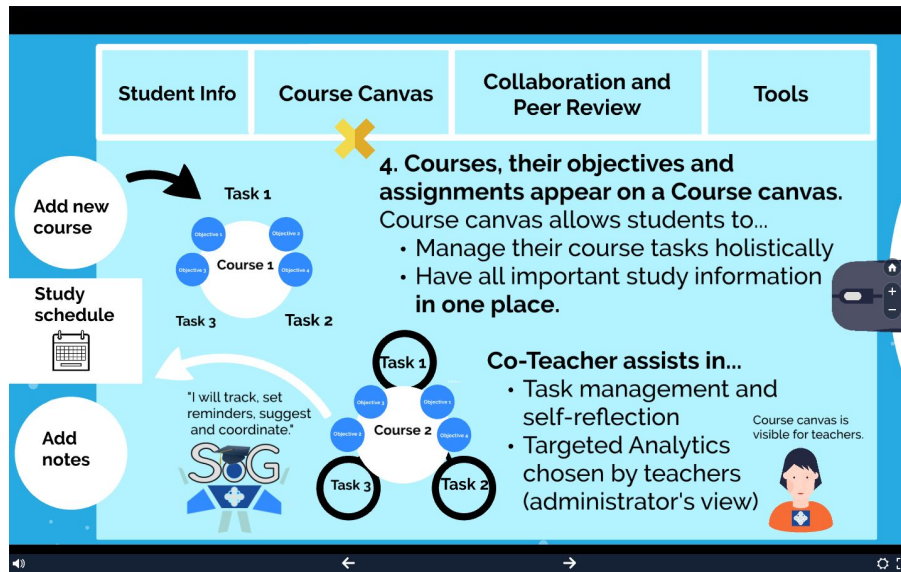


Figure 9. Functions of Co-Teacher 1.

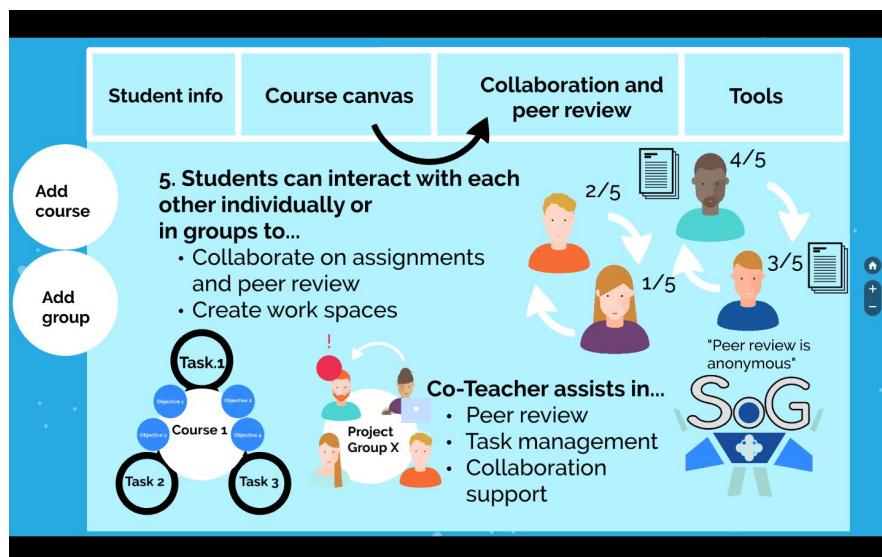


Figure 10. Functions of Co-Teachers 2.

The fact that we got this possibility with IBM Watson was of course essential for many strategic enablers; We could freely use Watson API's for our purposes and teach its AI as we wished. The

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program also offers infrastructure possibilities through IBM's data centers so when have the time to pilot Co-Teacher abroad for example in USA it can be done through that infrastructure. Like I mentioned in the last chapter of the operative environment chapter (4.1.4), we also defined our own approach on AI development for which we could greatly benefit from understanding Watson's functionalities and algorithm. As I discussed earlier in page 40, our approach on AI aims to enable shared learning support through thinking learning communities as "self-sustaining" organisms where the AI coordinates students in order to harness the "swarm intelligence" of learning. Still, I will not go into details about its functions in order to protect our intellectual property. During the time I am writing this, we are currently looking for AI partnership with couple Finnish universities to start developing our own AI algorithm with them for such purposes.

Besides IBM, we also had to find development partner for creating the actual software. By the end of 2016 we realized that our voluntary coders didn't have the required skills and we also struggled to find proper talents to join our team. I think the main reason for the lack of talents is that the IT sector in Finland is currently booming and all talented developers are hired fast for good positions with proper salaries, so working in a startup would not be their first choice. Therefore, I came to a conclusion that we could outsource the development to some software development company we could partner with if we just could find a good match for our purposes. Strategically, I knew that this was important decision since many such companies didn't have experience especially about EdTech solutions so we could not just accept anyone. When I was discussing about our urgent need for development partner with many of my friends I happened to come across one who knew a small Finnish software startup who was working on educational solutions in the past so I immediately got in touch with them. Fortunately I came along well with company's COO and we agreed to get in touch about co-operation later on once we have acquired our first seed-funding to start development of Co-Teacher. We also discussed shortly about scenarios to have company mergers between SoG and their company in the future of development.

Coming to this day when I am writing this Thesis (April 2017), we have the Co-Teacher's pilot running in Haaga-Helia University of Applied Sciences and we also got our first temporary office established in Helsinki. We have just made our first application for Finnish public institution Tekes to get our first

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seed funding of 50,000euros but we still have work to do with clarifying our business plan. Also Kevin is about to move from USA to Finland to work full-time on SoG once he has networked more with universities and when we have acquired the funding to pay him salary.

We have all the operational enablers set up to continue the development from here, but clarifying our business plan and the strategy still keeps evolving as discussed. Optimistically, we expect to close our first deal during Q3-Q4/2017 since we are soon getting our first Watson functionalities set up for SoG Co-Teacher.

### **4.7 Strategic scenarios for brand and product development (Q1-Q2/2017)**

The following last two chapters of the research includes my strategic considerations for the next 2 years ahead. The strategic plans that I represent are simplified in order to protect our business secrets and intellectual property. I will explain the product strategy of 2017 more in detail but the year 2018 only vaguely.

At the time when I'm writing this (April 2017) I've just re-made our plan for the product strategy because we agreed with the team that the one I created in Q4/2016 doesn't correlate with our current plans on Co-Teacher anymore. Also the feedback from consultants and investors we've met during Q1/2017 have given us the same message.

Here is the simplified slide of the product strategy for 2017 which I created for this Thesis;



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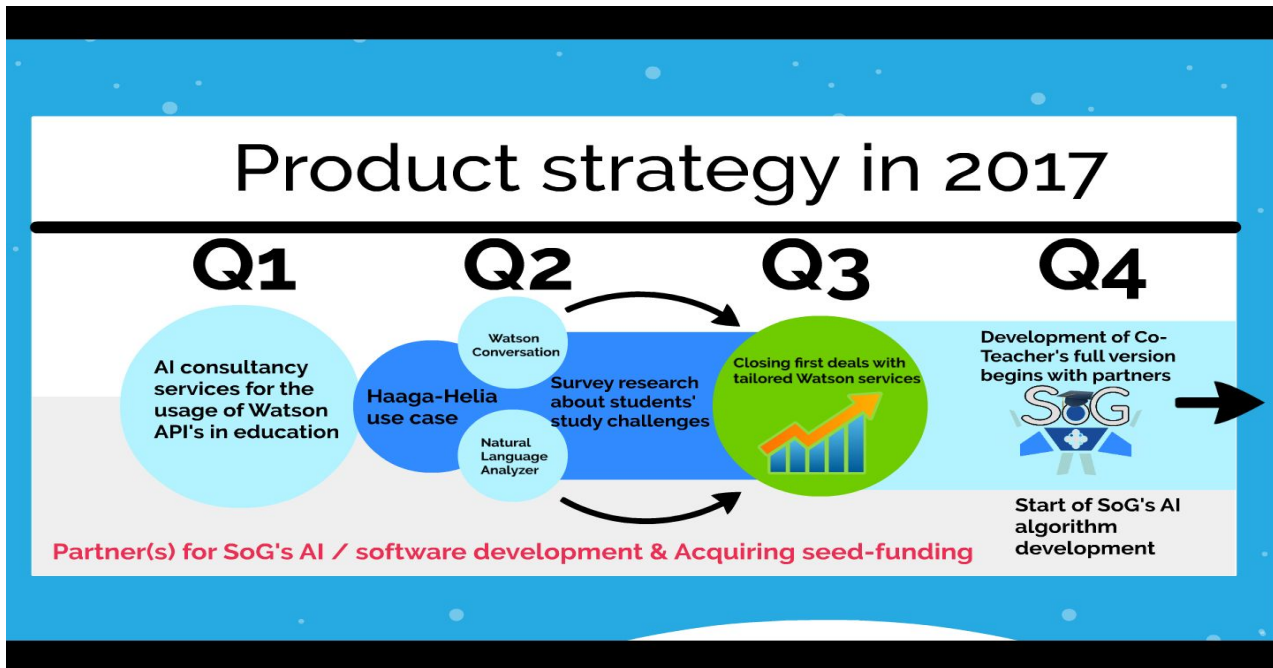


Figure 11. Product strategy of SoG in 2017

We are in the first phase of product strategy right now which means that we are piloting the 0.1 version of Co-Teacher in Haaga-Helia for one e-course implementation. Idea is that through the use case we can validate which Watson API's should utilized in Co-Teacher in order to support student's and their learning processes. We start with AI consultancy services for usage of Watson API's in education. Our team is also preparing survey research about students' study challenges that we will forward to several Finnish universities by June 2017. In the research we will also try to get insights about study challenges outside learning processes which can include personal, economical or sociocultural challenges that some students may face. Functions in teacher's administrative view will be thought later on in the development.

In current situation the most crucial objective is to acquire our first seed-funding in order to start the software development of Co-Teacher with our partner and on the other hand acquire university partnership for developing SoG's own AI algorithm. We are planning to approach 2 Finnish

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universities which are currently known to research on AI development.

By the end of Q2/2017 we expect to have validated the use of 2 mentioned Watson API's (Watson Conversion and Natural Language Analyzer) and currently we are creating the framework of utilization for them to support generic learning processes. After we have gathered data from our use case we expect to close the first deals during Q3/2017 with tailored AI services that are based on web-based platform. If we manage to get the seed-funding by Q2/2017, we expect to start the development of Co-Teacher's full version with our software development partner (as described in Figures 9 and 10) between Q3-Q4/2017 as well as agree on university co-operation for SoG's AI algorithm development.

Next I will discuss some of the anticipated actions in SoG's product and business development for the year 2018. As mentioned earlier, I will not go in details about our further plans in order to protect our business secrets and intellectual property. The following slide is from our latest Co-Teacher's investor presentation includes some of the anticipated actions in 2018:



The slide features a blue background with a white central area. On the left, there is a partial view of a light blue circle with a blue arrow pointing right. The text 'Office' is visible in red, and 's in USA' is visible in black. On the right, there is a globe icon. The main content is a list of bullet points under the heading 'What to expect in 2018'.

### What to expect in 2018

- Co-development of learning management approach (**Circular Model to Co-Teacher**)
- Development of SoG's AI approach: **SoG algorithm framework + IBM Watson API's working together**
- **3-4** Partner universities in **Finland**
- First pilots/deals in **USA**
- Expanding the Board of Directors with experts from **EdTech/AI/BigData/Business**
- Further investments for internationalization and R&D (**USA**)
- Raise the interest of partner universities for international **Mass Learning Projects**

Figure 12. Anticipated actions in SoG's development for 2018

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By expecting that we have acquired our seed-funding and that the product development will progress as described in Figure 11, we will start to co-develop our learning management approach for Co-Teacher at the beginning of 2018. Practically this means that with the background work in 2017 we have validated the usage of mentioned Watson API's (Watson Conversation and Natural Language Analyzer be very least) and the next will be to utilize SoG's Circular Model to visualize the results of Watson API's as concept maps or learning paths. Therefore we use Watson as SoG's functional "engine" but we will start building SoG's own visual interface on it as described in Figures 9 and 10 earlier.

For 2018 we also aim to get further private investments for internationalization and R&D so we can set our first international pilots through the networks we have in USA or with international partner institutions of Finnish universities. Since our teams doesn't have hands-on experience about internationalization or advanced AI development, we also seek to broaden our Board of Directors with startup development and research experts.

If we manage to progress with our strategy in 2017 as described earlier, we can consider opening up the dialogue with our partner universities and customers about Mass Learning projects between Finland and USA.

SoG also seeks to to start aggressive marketing and branding efforts on Q4/2017 to raise the awareness of Co-Teacher and also for the fact that we will close first sub-deals during Q3-Q4/2017 for adopting the Co-Teacher during Q1-Q2/2018. That's why I decided to add some strategic considerations regarding the branding of SoG as well because brand development is strongly related to product development. These concerns will mainly discuss branding efforts in Finland because in order to make further marketing initiatives for example South America (where Mexico is one of our key target markets from which we have approached the embassy and government so far) we have to have IPR & trademark concerns in place.

I made actual brand development plan for SoG and reflected its objectives to our strategic considerations with the product development. Objectives of the action plan are summarized as

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follows;

Q4/2017	Q1/2018	Q2/2018	Q3/2018	Q4/2018
<ol style="list-style-type: none"> <li>1. New website</li> <li>2. Research end users (HH project)</li> <li>3. Guidelines for visual content</li> <li>4. Co-Teacher's relation to SoG's brand / potential change of name</li> <li>5. Send recommendation letter to Mexico's government / UNAM</li> <li>6. Branding plan for CEO</li> <li>7. Create "the story of SoG" for the new website</li> </ol>	<ol style="list-style-type: none"> <li>1. SoG's trademark / IPR legally established</li> <li>2. Attend Ed. / IT / Business events in Finland to market Co-Teacher</li> <li>3. Re-define content guidelines / brand message etc. for Lat. American markets</li> <li>4. Spanish version of the website</li> </ol>	<ol style="list-style-type: none"> <li>1. Approach Mexico / attend events &amp; fairs</li> <li>2. Action plan for Mexico <b><u>(potentially earlier)</u></b> / other potential markets that may emerge</li> <li>3. VISP Delta's brand strategy in relation to SoG - How?</li> <li>4. Acquire potential partnerships with Ed. Export companies</li> <li>5. Determine marketing approach (FB, LinkedIn etc.) for Mexico</li> </ol>	<ol style="list-style-type: none"> <li>1. Development of Co-Teacher's Spanish version</li> <li>2. Strat. partnerships from South American region for brand distribution / educational co-operation</li> <li>3. Close first deals with schools in Mexico</li> <li>4. Build networks further with government / embassies and schools (potentially Mexico, Cuba, Chile etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Close first deals with schools in Mexico</li> <li>2. Further market research &amp; networking in South / Lat. American regions</li> <li>3. Determine revenue logic for VISP Delta services <b><u>(potentially much earlier)</u></b></li> </ol>

I broke down the main points of the action plan also into to-do lists that will be executed by the team;

### Q3-Q4/2017:

- Create the new website - First English in August 2017, by the end of the year Finnish version
- Create initial guidelines for all visual content in website and social media channels
- Get determined of our brand development strategy for the next 2 years
- Get determined on how we communicate "The Story of SoG" to our target customer segments
- Send recommendation letter of Co-Teacher to Mexico's government / UNAM (Robert & Kevin Guzman)

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- Clarify what is Co-Teacher's relation to SoG as a brand & other possible product and service lines (VISP Delta)
- Start the preparations for marketing initiatives beyond Finland ( first Latin/South America) which we will start implementing between Q1-Q2/2018
- Radically raise awareness about Co-Teacher as a product on nation-wide level in Finland (beyond Capital City Region)
- Create personal branding plan for the CEO - Elja-Ilari Suhonen

### Q1-Q2/2018:

- In case that our plans with approaching Mexico's educational markets goes as planned (whether public or private, will be decided later which is prioritized); Create action plan for Mexico / Latin America
- Get SoG's trademark / IPR legally established
- Determine the brand strategy of VISP Delta in relation to SoG's brand
- Approach Mexico's educational institutions, government and embassies
- Attend educational / IT / business events in Mexico to market Co-Teacher
- Attend educational / IT / business events in Finland beyond capital area to market Co-Teacher
- Re-thinking content creation, the message we deliver & marketing channels etc. for international target markets
- Acquire partnership with potential Education / EdTech export companies (such as Polar Partners) to accelerate internationalization
- Start making content guidelines for materials in Spanish etc.

### Q3-Q4/2018:

- Have fully established Spanish version of SoG's website (potentially we may need this earlier)
- Start the development of Co-Teacher's Spanish version for South American markets & other Spanish speaking countries
- Acquire strategic partnerships from South American region (Mexico primarily) with institutions or potential B2B companies for brand distribution & marketing
- Close first deals for piloting with schools in Mexico

### 2019:

- Market research to brand SoG broader in South American region; Cuba, Colombia, Chile or Brazil etc.
- Have 6-10 partner universities from Finland & Mexico with Co-Teacher
- Creating & Implementing targeted branding & marketing strategies to approach potential new markets

## 4.8 Summary of strategic business objectives

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The strategy for 2017 includes mostly objectives that are related to getting our operations established properly. The ones we have already achieved are;

- *Company is established*
- *Board of Directors is confirmed (with one Deputy Member missing)*
- *IBM co-operation confirmed through Global Entrepreneurship Program*
- *Team and software development partner confirmed to work on Co-Teacher's prototype that will be finished by the end of 2017*

The main objectives we still should achieve between Q2-Q4/2017 are;

- *AI development partnership with some Finnish university (Helsinki or Jyväskylä university)*
- *Acquire seed funding or initial private investment*
- *Establish office in Helsinki with the initial capital*
- *Confirm the Watson functionalities in our prototype to finish the first version by the end of Q4/2017*
- *Close our first deals with the prototype during Q3-Q4/2017*
- *Collect more data on the challenges of drop-outs; Piloting and research*
- *Determine our service portfolio and delivery regarding Co-Teacher*
- *Define the trademark and intellectual property of SoG*
- *Determine our branding strategy*
- *Build networks in South/Latin America and decide which countries or institutions to start co-operation with*

These objectives fall mainly into 3 categories:

1. To establish our IT operations
2. To get determined on Co-Teacher's functionalities in order to scale up the business operations
3. To get determined on SoG's international scope: Where to focus

Q2-Q4/2017 in SoG's development is still about doing the groundwork and collecting more data about the customer problems. More piloting and research is needed to understand what are the common

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issues in schools so that we can utilize Co-Teacher to solve these and make it a scalable solution that can fit to the needs of different institutions. Our product strategy relies on the kind of approach where we fully develop the basic functions first which are validated through finding common struggles among different schools and this will be the “basic” version we sell. Further development will add more features for both students and teachers which can be enabled in Co-Teacher’s premium version. My cash flow estimations about selling Co-Teacher state that if we could have 3-4 partner universities yearly and with each of them 300-400 students to manage SoG should reach 1-1,2 million in revenue within 3 years.

During Q1-Q4/2018 we expect to start concrete actions with our internationalization strategy to approach countries in South and Latin American region. As according to our vision SoG aims to be the “bridge builder” between Finland and American countries to coordinate educational development countries between these continents. So far, our first target market has been Mexico from which we have approached Embassy and from Finland Finpro which is heavily involved in educational projects that are exported to Mexico. We’ve found out that Mexico’s educational sector has very urgent struggles with drop-out students and acquiring skilled teachers but technologically they are not advanced enough yet to be open for such high-end solutions.

To start our internationalization and continue Co-Teacher’s product development according to our plan, we also seek for further investments during the Q1-Q4/2018; Primarily from Finnish institutions such as Finpro which fund Finnish small- and medium-sized enterprises to approach international markets. Still, we are also benchmarking some Latin American investors which we have acquired through our colleagues in Puerto Rico (according to the countries we have decided to approach).

### **Author’s notes and the conclusion:**

This product-oriented Thesis describes the “big picture” of strategic thinking at the very beginning of becoming an IT entrepreneur. The end result is certainly not a complete strategy framework because the focus is in describing the process and how thinking develops once new situations emerge and further actions are taken. I think that the business case is unique as it is and hopefully someone who

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wants to become IT entrepreneur or EdTech professional could get overall framework of different strategic considerations that have to be taken into consideration on an entrepreneurial journey.

Lastly, the author will reflect the set research questions (3) on the development process. These questions are listed as follows and they are followed-up by author's insights on them;

*a. How initial strategies evolve in startup organizations?*

- This thesis demonstrates the process in which strategy formulation shifts from CEO's centralized planning (Entrepreneurial School) to collective problem-solving as in fashion of the Learning School by Mintzberg. In my opinion, one of the main insights is to demonstrate how strategic planning is an emergent process which "builds up" from made actions in business development towards more clarified view of how different components in operations, IT development and teamwork contribute to strategic thinking and planning.

*b. Why clarifying startup's vision and product mission is essential to strategy formulation?*

- The period described in the development project demonstrates how clarifying vision and mission is related to evolving one's strategic thinking. In chapter 4.2 the author discusses how understanding the core customer problems affects as a shift in strategic orientation which later on was proven to be very important move for the future of SoG. Company's vision and product mission should be tied to solving concrete problems within the chosen business field and evidencing this should have real data as groundwork. If we wouldn't have shifted the vision from visualization model (Circular Model) to starting the development of Co-Teacher we would have focused on too vague objectives without delivering real value and economic benefits for schools.

*c. How the development team, stakeholders and partners are related to strategy formulation process?*

- Especially in chapters 4.3-4.5 the author discusses how broadening networks abroad (South/Latin America) evolves strategy formulation process towards new potential target markets and strategic partnerships. These chapters also demonstrate the shift from observing startup's internal environment (teamwork, IT and business operations) to understanding the



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external components (stakeholders, foreign markets and partnerships) of startup development and their relation to strategy formulation.

## **5 Discussion**

### **5.1 Conclusions and usability for further research**

The following conclusions are not the end result of the study, because this Thesis describes the strategy formulation process coming to this day (26.06.2017) and we still have a lot of work to do to clarify our business strategy further.

This Thesis has been written by me, the CEO of Shoulders of Giants Oy. The gathered research data and insights of the study provides me the groundwork for further strategic considerations to anticipate the future of SoG's business development. Ultimately this study provides the real-life case about the emergent nature of startup's strategy formulation process. Between the Q1-Q4/2016 the strategic approach changed from CEO's centralized strategic planning (Entrepreneurial School) towards collective problem-solving in the nature of learning organization (Learning School). Practically this means that the approach of planning shifted from subjective and abstract estimations into understanding the present moment through research, made mistakes and taken actions in order to

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anticipate the future of SoG's development.

Further study could take this given information as research data and anticipate the strategy of SoG's development further in the future. Example of research approach could be to take a closer look at different scenarios of where SoG's development could progress according to given research data and information. Still, there is a significant amount of research data lacking from understanding the problems of SoG's end users (teachers and students) and also about the educational sector itself, both regarding Finland and USA. There is a possibility that I will continue this study further in my Master's Thesis which would be more quantitative in its nature.

The main research objective of this study is to offer an example of strategy formulation in startups which are taking a leap into the unknown to figure out where to focus on with their vision and strategy. Hopefully it can provide insights for someone who wants to become an entrepreneur or for those who are struggling to clarify their company's vision or initial strategy to start with.

We are still on our way to step on the Shoulders of Giants.

### **5.2 Evaluation of one's learning**

The significance of this study was essential for me since I could retrospectively observe my own actions from more mature perspective and think of adjustments to them accordingly. I could see the process from objective view by understanding the discussed strategy theories and faced situations, challenges and disruptive changes provided good examples on how to turn the strategy theories into practice.

Writing this Thesis took me around 8 months because of the fact that I've had both daytime job and SoG's development to take care of. Still, I feel that gathering the theoretical framework was the most time-consuming aspect in this study because there is so much literature about strategic planning and

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choosing the most relevant theories for describing the process was very challenging.

Learning curve during the writing process was immense because my core studies have only included two course about strategic planning so I had to learn about strategic thinking basically from scratch. Once I started I writing the research and understood how to reflect different theories into taken actions the writing process was both very rewarding but also challenging.

The key learning outcomes are summarized as follows;

- Learned how to reflect different strategy theories into taken actions, happened changes and challenges.
- Understood about the relation of collective problem-solving to strategy formulation instead of making subjective estimations
- Learned many essentials of strategic thinking regarding startup's product development and strategic partnerships
- Learned how to observe my own actions and thinking from objective view and how think of adjustments to them critically
- Learned the practices of strategic planning in startup organization

## 6 References

Mintzberg, H & Ahlstrant, B. & Lampel, J. 1998. Strategy safari: Guided tour through the wilds of strategic management. 1st ed. THE FREE PRESS. New York.

Lientz, Bennet P. 2009. Breakthrough: Strategic it and Process Planning. 1st ed. World Scientific Publishing Co. Pte. LTd. Singapore.

University of Helsinki 2016. Johanson, J. Johdanto strategiaan. Helsinki. URL:

<http://blogs.helsinki.fi/jjohanso/files/2009/11/hy09luento1.pdf>

## Abstract

Date 27.09.2017

Accessed: 15 December 2016.

Seinäjoki University of Applied Sciences 2011. Siren, Elina. Yrityksen strateginen suunnittelu ja tulevaisuuden näkökulmat yritysjohtamisessa : Liiketoimintastrategia yritykselle Lemmikkieläinliike Tarantella Oy. Seinäjoki. URL: <https://publications.theseus.fi/handle/10024/24710>

Accessed: 12 December 2016.

Oulu University of Applied Sciences 2016. Pk-yritysten johtamis- ja kehittämistyökalupakki. Strateginen suunnittelu: Johdanto. Finland, Oulu. URL: <http://www.oamk.fi/hankkeet/pkk/pakki/strategiat.htm>

Accessed: 20 December 2016.

Encyclopaedia Britannica, Inc. 2017. Eliot A. Cohen. Strategy: Fundamentals. UK. URL: <https://global.britannica.com/topic/strategy-military>

Accessed: 26 November 2016.

Wikipedia 2017. The Art of War. URL: [https://en.wikipedia.org/wiki/The\\_Art\\_of\\_War](https://en.wikipedia.org/wiki/The_Art_of_War)

Accessed: 25 November 2016.

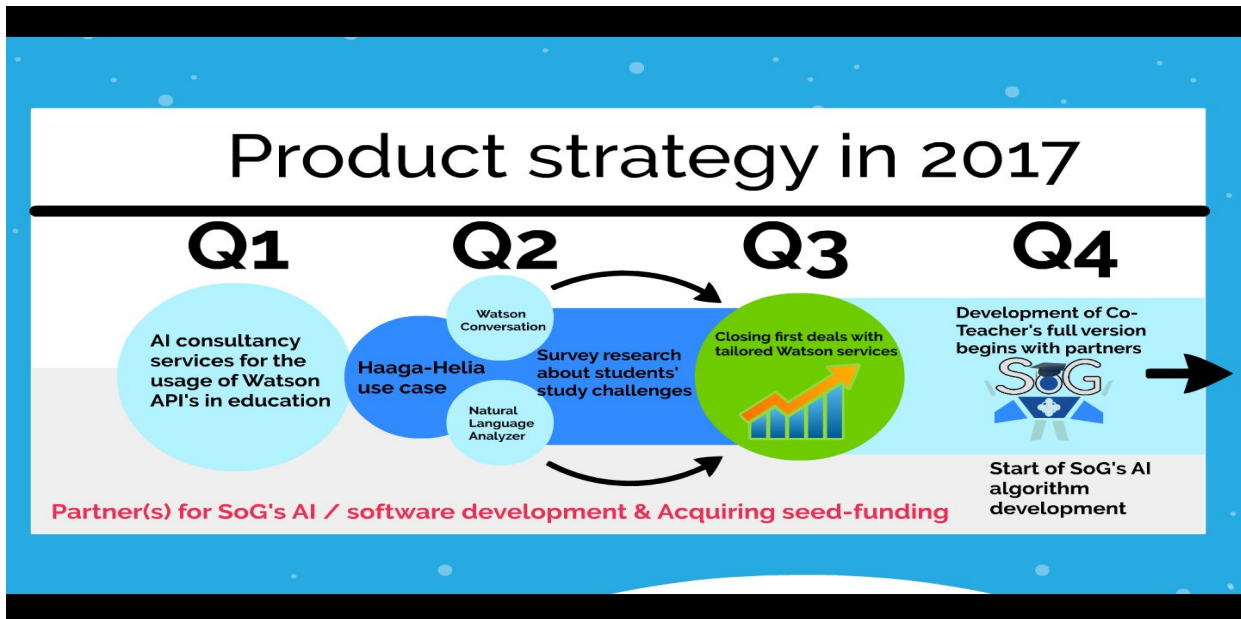
## Appendices

The following appendices include files related of SoG's business development and strategic planning.

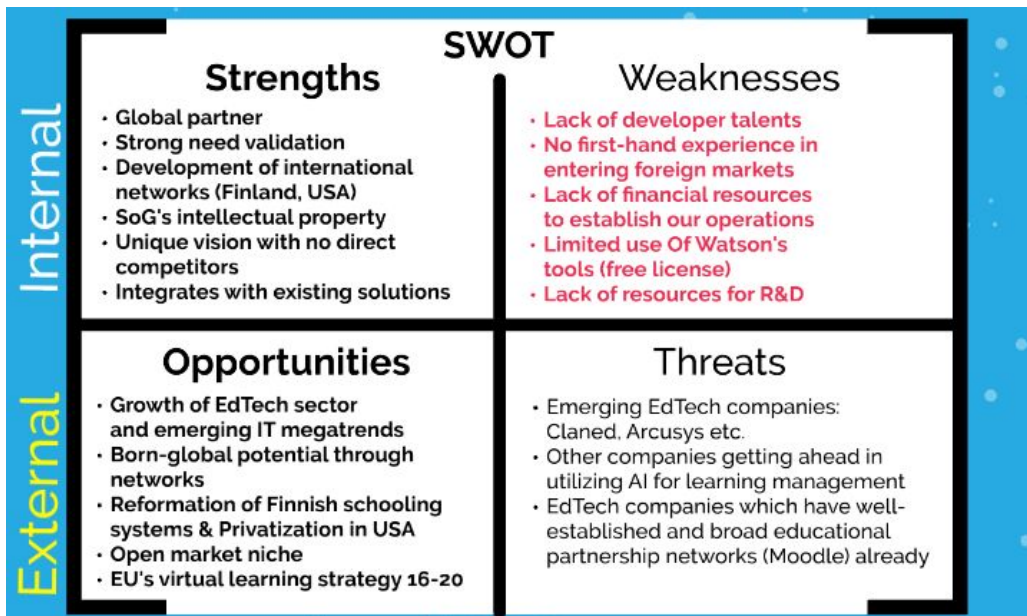
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## Appendix 1. Prezi. SoG's product strategy in 2017 (Q1/2017)



## Appendix 2. Prezi. Slide from investor presentation: SWOT analysis of SoG (Made on Q4/2016)



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## Appendix 3. Excel. Strategic checklist of 2017 ( Made on Q1/2017)

	A	B	C	D	E	F
1		<b>SoG 2017 - Strategy</b>				
2						
3		<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	
4		Company established	AI dev. partnership with H. University ?	Closing first deals		
5		Board confirmed	Meeting some universities before Summer	Determining our service delivery / portf. Aarni jumps back in ---->		
6		IBM co-operation confirmed	Integrate Watson API's to our pilot	Approaching more universities (Beyond pk-seutu)		
7		Software development partner: Nolventure	(determine one tool that will be utilized)	Develop relations in USA?		
8	Antti wants to discuss about shares once we get the seed funding	Seed-funding	Acquire seed funding / 30K (URGENT)	Launch AI development with Helsinki University ?		
9			Determine partnership with Nolventure (URGENT)	Deepen co-operation with Haaga-Helia / Laurea?		
10			Money for Kevin = Meeting = Moving ( URGENT )	Establish permanent office in Helsinki		
11		<b>Objectives in our long-term plan:</b>	<b>Deputy Member for the Board. Urgent ?</b>	<b>Approach private investors for further R&amp;D and internationalization</b>		
12	Reflections...	Domain up	DONE	Comments:		
13	<b>Objectives in our long-term plan for 2017</b>	Confirm partnership with IBM	DONE	DONE, but we need to get more professional one up / as Marius mentioned, c		
14		Seed-fundig (Tekes)	Our idea is validated but...	DONE !!! We are free to use resources of Bluemix up to 1000eur/month. Other		
15		Send Kevin on the field	In progress	We need to get 30k somewhere. Antti's comment; "You guys have 3 options -		
16		Approach institutions	In progress	He will go and meet universities in USA once we can pay him salary		
17		Confirm the Board of Directors	75 % Done	Meeting coming with Henley Business School and Reykjavik University.		
18		Establish an office	50 % Done - Rionkatu	We still need to get one Deputy Member: Maybe AI or Bus. Dev. guru?		
19		Closing our first deals	On hold	Hopefully we have an idea for permanent office spaces by the end of April. M		
20		Launch first pilot	In process	We still need more leverage for product development... Closing deals might d		
21		Meet more investors	On hold	Applied Research & Development is good		
22		At least 4 partner universities by Q4	50% - Laurea & HH	Aape Pohjavirta of Funzi is available once we want to meet him. Friend of Ade		
23				Pilot with HH and project co-operation coming up with Laurea. Waiting for mc		
24						
25						
26						

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**Appendix 4.** Excel. Strategic objectives of 2016-2017 (Made on Q4/2016)

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Appendix 5. Prezi. Slide from investor presentation: SoG's networks in Finland and USA (Made on Q4/2016).





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Appendix 6. Prezi. Slide from investor presentation: What to expect in 2018 (Made on Q4/2016).

ership networks (module/already)

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**What to expect in 2018**

- Co-development of learning management approach (**Circular Model to Co-Teacher**)
- Development of SoG's AI approach: **SoG algorithm framework + IBM Watson API's working together**
- **3-4** Partner universities in **Finland**
- First pilots/deals in **USA**
- Expanding the Board of Directors with experts from **EdTech/AI/BigData/Business**
- Further investments for internationalization and R&D (**USA**)
- Raise the interest of partner universities for international **Mass Learning Projects**

Appendix 7. Word. Graphs from SoG strategic branding plan

Summary of the action plan for brand development:

Q4/2017	Q1/2018	Q2/2018	Q3/2018	Q4/2018
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<ol style="list-style-type: none"> <li>1. New website</li> <li>2. Research end users (HH project)</li> <li>3. Guidelines for visual content</li> <li>4. Co-Teacher's relation to SoG's brand / potential change of name</li> <li>5. Send recommendation letter to Mexico's government / UNAM</li> <li>6. Branding plan for CEO</li> <li>7. Create "the story of SoG" for the new website</li> </ol>	<ol style="list-style-type: none"> <li>1. SoG's trademark / IPR legally established</li> <li>2. Attend Ed. / IT / Business events in Finland to market Co-Teacher</li> <li>3. Re-define content guidelines / brand message etc. for Lat. American markets</li> <li>4. Spanish version of the website</li> </ol>	<ol style="list-style-type: none"> <li>1. Approach Mexico / attend events &amp; fairs</li> <li>2. Action plan for Mexico <b><u>(potentially earlier)</u></b> / other potential markets that may emerge</li> <li>3. VISP Delta's brand strategy in relation to SoG - How?</li> <li>4. Acquire potential partnerships with Ed. Export companies</li> <li>5. Determine marketing approach (FB, LinkedIn etc.) for Mexico</li> </ol>	<ol style="list-style-type: none"> <li>1. Development of Co-Teacher's Spanish version</li> <li>2. Strat. partnerships from South American region for brand distribution / educational co-operation</li> <li>3. Close first deals with schools in Mexico</li> <li>4. Build networks further with government / embassies and schools (potentially Mexico, Cuba, Chile etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Close first deals with schools in Mexico</li> <li>2. Further market research &amp; networking in South / Lat. American regions</li> <li>3. Determine revenue logic for VISP Delta services <b><u>(potentially much earlier)</u></b></li> </ol>
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### Messaging strategy:

	Decision-makers	Public / Government	Teachers	Students
<b>How</b>	F2F meetings LinkedIn marketing Education events	F2F meetings & fairs References from public schools Decision-makers: Twitter	LinkedIn marketing Network marketing through partners F2F interviews	Social media marketing (FB, Instagram) Mobile marketing (later)
<b>What to emphasize</b>	Economic benefits through scalable learning management	Benefits of AI learning management & our willingness to solve ed.	How Co-Teacher can ease their job so they can focus on what is essential	AI tutor being 24/7 available for them Flexibility, personal attention

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		challenges (Mexico)	(pedagogic development)	Stimulate & motivate learning
<b>Channels to use</b>	LinkedIn / FB / Fairs / F2F	F2F / Fairs / References / Twitter / LinkedIn	LinkedIn / Education fairs / partner school networks	Schools (F2F) / Mobile & Social media marketing (Instagram, FB)

Market profile: Finland

Competition	Technological capacities	Groups of prospects with similar wants & needs	Size / Nature of the market
<ul style="list-style-type: none"> <li>- Several emerging EdTech companies: Claned, Arcusys, Moodle BlackBoard, EdVisto</li> </ul>	<ul style="list-style-type: none"> <li>- Very high: Finland is known to be cutting edge country in technology &amp; ICT</li> <li>- Government institutions such as Ministry of Education funds digitalization of learning</li> <li>- IT sector booming</li> </ul>	<ul style="list-style-type: none"> <li>- Government official trainings</li> <li>- Education Export companies (Polar Partners)</li> <li>- B2B staff training</li> <li>- Ministry of Education</li> <li>- Consumer time / task management tool ?</li> <li>- xEdu Acceleration program</li> </ul>	<ul style="list-style-type: none"> <li>- In total 1,87 million students (300,000 in high ed)</li> <li>- 15 Universities / 26 AMK's</li> <li>- Mostly public institutions funded by government</li> <li>- Private: Some emerging private universities offering degrees for example from UK (HELBUS, Henley)</li> <li>- More potential in B2B sector for growth</li> </ul>

Primary and secondary stakeholders of SoG's brand

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Primary stakeholders	Secondary stakeholders
<ul style="list-style-type: none"> <li>- Customers: Schools &amp; decision-makers</li> <li>- End users: Teachers &amp; students</li> <li>- SoG's Employees</li> <li>- Owners (40/20/20)</li> <li>- Advisory Board</li> <li>- Outsourcing partner Neocard: 12,5% of A-shares</li> <li>- IBM - Global Entrepreneurship Program</li> </ul>	<ul style="list-style-type: none"> <li>- Embassy &amp; Government of Mexico</li> <li>- EU</li> <li>- Finland's Ministry of Education</li> <li>- Tekes / Finpro</li> <li>- xEdu Accelerator Program</li> <li>- Companies Exporting Education from Finland</li> <li>- Nebula &amp; Bassoradio (through winning StartUp Carage competition)</li> <li>- Companies looking to acceleration organizational learning &amp; B2B staff training</li> </ul>

Prioritization of website's different components in relation to SoG's brand development

	Philosophy & Vision	Core brand message & value promise (Co-Teacher)	Story of SoG & People behind it	Company culture & Values
<b>Priority</b>	<b>Very High</b>	<b>High</b>	<b>Medium</b>	<b>Medium</b>
<b>Components</b>	<ul style="list-style-type: none"> <li>- Isaac Newton quote</li> <li>- Mass Learning Management</li> </ul>	<ul style="list-style-type: none"> <li>- How Co-Teacher benefits students &amp; teachers</li> <li>- Value we bring for schools</li> </ul>	<ul style="list-style-type: none"> <li>- Story of SoG section on the website (starting from Jan 2016)</li> <li>- Pictures of the whole team</li> </ul>	<ul style="list-style-type: none"> <li>- Company values section</li> <li>- Emphasizing our values in developing education &amp; learning</li> <li>- How we work</li> <li>- Customer references / case stories</li> </ul>
<b>Purpose</b>	<ul style="list-style-type: none"> <li>- To give "flesh" for the giant - Emphasizing vision is the key</li> <li>- The Giant's View; Seeing where others can't, foreseeing</li> </ul>	<ul style="list-style-type: none"> <li>- To clearly communicate the benefits we deliver for our potential customers and stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>- People are "storytelling beings" (Jason Silva); they want to hear emotional story of how we got to this point and what's the</li> </ul>	<ul style="list-style-type: none"> <li>- Since we deal with education, it is important to have high morals with our company ethics and culture</li> <li>- Emphasizing our approach on</li> </ul>

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	the “unknown future” of AI based learning management		purpose to move onwards	how we work
<b>Activities</b>	<ul style="list-style-type: none"><li>- New SoG logo</li><li>- Re-defining our vision about how it expands beyond education (Co-Teacher is just the beginning)</li></ul>	<ul style="list-style-type: none"><li>- Product presentation video for the website</li><li>- Infograph-like summary of how Co-Teacher works and what benefits it delivers</li><li>- Q&amp;A section for the product(s)?</li></ul>	<ul style="list-style-type: none"><li>- Pictures and videos of our team gatherings</li><li>- Owners write the story of SoG together and make it “lively” with visuals (can also be visual video or interview)</li></ul>	<ul style="list-style-type: none"><li>- Pictures from our office &amp; of our work</li><li>- Sharing news and pictures of the work we’ve done (projects, partners, customer successes etc.)</li></ul>