Effectuation heuristics for the incumbent firm

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Abstract

In order to find effectuation heuristics for the incumbent firm, an action research study has been applied. This research distinguishes in two ways: 1) Actionable guidelines based on the effectual logic are created, for actually *using* effectuation. So far effectuation was only analyzed retrospectively. 2) In an uncertain environment, the heuristics are applied to an incumbent firm, contributing to a recently opening field of research: effectuation in the corporate context. The research question 'How can effectuation heuristics be applied in the incumbent firm?' is answered by means of the following heuristics, designed for use in the incumbent firm.

1M.	Make a pool of resources: map your company's and your employee's means.
2M.	Create an organizational structure which incorporates the pool of resources and stimulates and rewards employee's effectual behaviour.
3M.	Find creative ways to use the available means to the company's advantage.
4M.	Experiment with different products and/or business models to see what works best.
5A.	Invest/ risk only what can be afforded to lose.
6A.	Select opportunities based on minimization of risks and costs.
7A.	Use creative ways of financing, or getting resources. Use bootstrapping.
8L.	Use potential setbacks or external threats as advantageous as possible.
9L.	Add new information to your pool of resources and check if new opportunities arise.
10Q.	Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.
11Q.	In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.
12Q.	Use pre-commitments from partners, suppliers, customers and employees as often as possible.
13Q.	Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.
14Q.	When a partnership is established, combine your pools of resources and make use of the synergetic effect.

Preface

I would like to thank my supervisors Jeroen and Martin for their support, and for offering me the kind of research on which I wanted to graduate, but for which I could not find a suitable assignment or supervisor until I met them. Earlier ideas got rejected because I was considered to be playing the role of consultant too much, and as a researcher I could not interfere with the process I was researching. This I did not take for granted, in the end my personal goal for this thesis was to advance my learning in entrepreneurship by applying my knowledge, because in my opinion the best way of learning is doing. Luckily for me, pieces fell together eventually: these two new supervisors pointed me in the right direction where the demand of science and my personal wish could be combined.

I would like to thank Alex for his support and for the responsibility and freedom he gave to me during my time at NextSelect, especially for the cooperation to apply this effectuation framework on a real-life company, I really appreciate it. I hope the proposed organizational structure will contribute to future success of the company. During this project I really started to see the potential of effectuation, and I feel like it will contribute not only to me as entrepreneur, but the application of its underlying ideas can contribute to life in general. Special thanks also to NextSelect's employees for their cooperation and the good time I had, luckily we could attend some events in spare time together. And last but not least thanks to all my family and friends who supported and motivated me!

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1. Introduction

Already at the beginning of the twentieth century, famous economist Joseph Schumpeter (1912) pointed out that the entrepreneur is the underlying force of economic development. About one hundred years later this statement is still represented in the OECD's[1] report *'Fostering Entrepreneurship':* "Entrepreneurship is central to the functioning of market economies." (Carlsson, McKelvey, & Persson, 2013). Many scholars have reported positive effects of entrepreneurship, for example on economic growth (Minniti & Lévesque, 2010), on employment creation, productivity growth and innovation (van Praag & Versloot, 2007), and on GDP/capita, exports/GDP, and employment (Cumming, Johan, & Zhang, 2014). Kuratko (2014) defines entrepreneurship as follows: "Entrepreneurship is a dynamic process of vision, change, and creation that requires an application of energy and passion toward the creation and implementation of new ideas and creative solutions." While entrepreneurship is usually linked to new venture formation, and through the 1990's little distinction was made between small business and entrepreneurship (Carlsson et al, 2013), entrepreneurship research is not limited to just that. "Entrepreneurship as a scholarly field seeks to understand how opportunities to bring into existence 'future' goods and services are discovered, created, and exploited, by whom, and with what consequences." (Venkataraman, 1997, p. 120) Still entrepreneurship research remains an embryonic field of study (Shane, 2012), and there is a lack of a common theoretical framework or central research paradigm (Carlsson et al, 2013).

1.1 Effectuation

A shift can be noticed from the assumption that opportunities are found and exploited to the idea that opportunities can be created (Venkataraman, 1997; Read, Song & Smit, 2009). These two alternative approaches are conceptualized by Sarasvathy in her paper 'Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency' (2001). Causation and effectuation fundamentally refer to cognitive processes, as they describe how expert entrepreneurs think and act during the new venture creation process (Sarasvathy, 2001). Causation focuses on exploiting knowledge, based on a given or chosen effect, within existing markets, based on competitive strategies, whereas effectuation focuses on exploiting contingencies based on given means, and creating markets based on cooperative strategies (Sarasvathy, 2008). Causation can be described as the

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[1] The OECD is the Organisation for Economic Co-operation and Development (OECD), which mission is to promote policies that will improve the economic and social well-being of people around the world. (source: http://www.oecd.org/about)

traditional management approach (Andersson, 2011), while effectuation is designed for use in uncertain circumstances, and with today's world becoming more and more dynamic it promises to be an important framework in the future of entrepreneurship. Therefore this thesis will, consistently with its popularity in scientific literature, elaborate on effectuation. The two approaches will be described in more detail in section 3.1. Effectuation research is still in its infancy, slowly entering an intermediate state (Perry, Chandler, & Markova, 2011), therefore leaving wide possibilities to contribute to science. Perry et al (2011) ask for examining the consequences of *using* effectual reasoning, which had not been done yet. This research responds to that call in a new, distinctive manner: while most literature describes to what extent effectuation was used, and then checks its effects retrospectively, here the correct use of the effectuation framework is guaranteed by actively applying effectuation. While the effectuation framework is based on new venture formation, on which it has a positive effect (Read, Song & Smit, 2009; Perry et al, 2011; Sarasvathy & Dew, 2005), the question arises if and how this framework can be applied to incumbent firms (Wiltbank, Read, Dew & Sarasvathy, 2009; Andersson, 2011). Chandy & Tellis (2000) discuss why traditionally radical innovation was found to decrease with a firm's age, but argue that there are ways for incumbent firms to radically innovate, among which effectuation principles can be recognized (partnerships and effective use of resources) as can the effectuation framework itself (dynamic organizational structure). Though effectuation research within the corporate context is limited and only occurring since 2012, some scholars have commenced on this topic and found reasons to apply effectuation in incumbent firms (Brettel et al, 2012; Johansson & McKelvie, 2012). Kalinic, Sarasvathy, & Forza (2014) found that effectual behavior in incumbent firms in an international context helps to overcome liabilities of outsidership, by extending the international network. This thesis will help to further proceed this subfield of research by using effectuation in the incumbent firm.

1.2 Research objective

Most empirical research so far has tested the use of effectuation retrospectively, so it had no influence on the application of effectuation itself. Although scholars are attempting to create measures of the effectual dimensions (Werhahn et al, 2015; Brettel et al, 2012; Chandler et al, 2011), there is no consensus on this measurement yet. This research distinguishes itself by applying effectuation directly in the company, therefore being able to observe effects closely. Even though the effectuation framework gives well-defined insights on its application, there is not a direct actionable guideline that tells you how to apply it: it gives no clear heuristics. This research attempts to fill that gap by the creation of

effectuation heuristics, in this case for the incumbent firm. After first arguing how the heuristics can be modified for use in the incumbent firm, their application is tested on an incumbent firm, after which an additional modification can take place if necessary. The final heuristics can serve as generic basis for future research. Moreover, they make effectuation more accessible, and therefore more attractive, to practitioners. This is a practice-oriented project, of the design type (Verschuren & Doorewaard, 2010). The research objective is twofold (also) because of the use of action research; objectives of the researcher and the researched object (NextSelect) go hand in hand synergistically. An objective should be useful, realistic, feasible, clear and informative (Verschuren & Doorewaard, 2010), leading to the following two objectives.

Objective A (science):

Extend Sarasvathy's effectuation framework to its usage in the incumbent firm, by creating effectual heuristics and applying these in an action research.

Objective B (firm):

Support NextSelect in determining the company's future direction, by providing and applying effectuation heuristics.

1.3 Research model

After the topic of effectuation has been studies, and the context has been defined (incumbent firm) an argumentation on these topics leads to effectuation heuristics for the incumbent firm. The research will be guided through the cyclical process model of canonical action research (Davison, Martinsons, & Kock, 2004). Executing this plan will lead to learning points and insights on how the heuristics work in the case of NextSelect. Based on these outcomes new heuristics for the use in incumbent firms can be argued. Moreover the company is taught effectual reasoning which can be applied in the future.
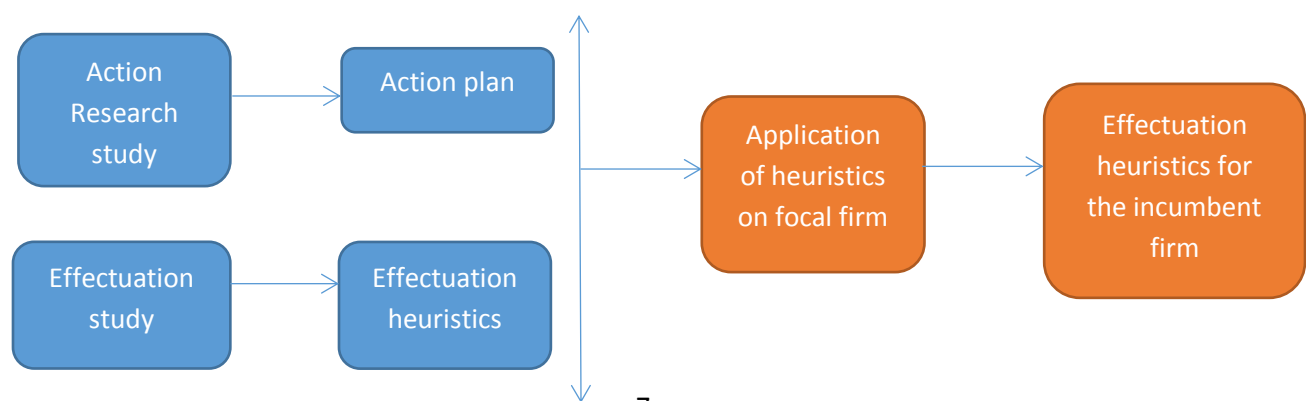
1.4 Research questions:

Supporting both research objectives the following **research question** is presented:

How can effectuation heuristics be applied in the incumbent firm?

Sub questions:

S1. What effectuation heuristics can be applied in the incumbent firm?

S2. What issues arise applying effectuation heuristics in the incumbent firm?

S3. How can the effectuation heuristics be adjusted to fit incumbent firms?

This project will be executed at a firm which has more characteristics than just 'incumbent'. The focal firm and therefore the scope of this project can also be described by 'in an uncertain environment', 'in the IT niche', 'for business-to-business organizations', or 'for the small firm'. Because every one of these four characteristics constricts the applicability of effectuation; it might for example serve the consumer market or deliver services other than IT, these characteristics were not used to narrow the research scope.

The incumbent state is one that, in contrast to the other characteristics, will not change during this project and is also interesting for science as described in section 2.2. Incumbent here defines a state in which the company has transcended the start-up state, which is interesting because most effectuation literature is based only on start-ups. Other words may be used for this state, such as 'extant' or 'mature' firm, but incumbent is chosen because this one is used most in literature. 'Incumbent' hit two times more than 'mature' and twenty times more than 'extant', searched for in combination with 'firm or compan* or organi*ation'.

1.5 Action Research

The chosen method, action research, "aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework" (Rapoport, 1970, p. 499 as quoted in Kock, 2007, p. 288). I will explain the concept of action research in paragraph 4.1. This method passed the test on three important planes: At first the value for science: "action research places the researcher in the 'middle of the action', allowing for close examination of real-world business situations in their full complexity, and thus is a particularly useful research approach for the study of relatively "new" business topics" (Kock, 2007), which effectuation is (Perry, Chandler, & Markova, 2011). Secondly, according to Jarvinen (2007) the

action researcher is, as opposed to the 'normal' social and natural scientist, interested in the utility of the system he is examining; his "intent is to plan and to take action in order to change a part of reality" (Jarvinen, 2007, p. 52). Therefore this method, compared to other research methods, can make a significant contribution to the venture NextSelect. And thirdly my personal goal is met with this method, as stated above I can play a role in the middle of the action, and apply the knowledge I have obtained during my study.

1.6 Company

Effectuation applies well in an unstable situation (Chandler, DeTienne, McKelvie, & Mumford, 2011; Sarasvathy, Kumar, York, & Bhagavatula, 2014), therefore the company NextSelect is suitable for this research. NextSelect provides fully customized software solutions for business processes. It was found in 2002 and employs seven employees with a total of five FTE's. The software solutions are tailored according to the wishes and requirements of the customers. Every software solution has to be built from scratch, which is very time consuming. The customer base of NextSelect is rather small and the cash flow is unstable and irregular because work is project-based and due to a payment system based on the hours worked.

2. Literature review

In this chapter first an introduction to causation and effectuation is given (section 3.1), in which its origin, underlying reasoning and the creation of the effectuation heuristics are explained. While this research focuses on the incumbent firm, and effectuation was originally found to be applied on start-ups, this path will be followed through literature by elaborating on the differences between start-ups and incumbent firms (3.2) and the role of (effectuation in) corporate entrepreneurship (3.3). Then we go into more detail on effectuation by explaining the five principles of effectuation (3.4 – 3.8), for which each section will be concluded by the determination of its corresponding heuristics for incumbent firms. This chapter will be closed by visualizing the continuous nature of effectuation by the effectual process model in 3.9.

2.1 Causation & effectuation: an introduction

The prevalent assumption in entrepreneurship research was that entrepreneurs pursuing opportunities engaged in rational goal-driven behavior (Perry et al, 2011). This behavior is referred to by Sarasvathy as causation (2001). Sarasvathy also found a logic of thinking and acting among expert entrepreneurs which she named effectuation (Sarasvathy, 2008). This was found by an experiment where she let 27

expert entrepreneurs (who founded companies raising $200M to $6.5B in annual sales) think aloud while they solved ten decisions typical for a start-up (Sarasvathy, 2001; 2008). According to Perry et al (2011, p. 857) effectuation appears to "describe the actual thoughts and behaviours that some entrepreneurs experience when starting a venture" better than causation. The differences between causation and effectuation are shown in the next table.

Categories of Differentiation	**Causation Processes**	**Effectuation Processes**
Givens	Effect is given	Only some means or tools are given
Decision-making selection criteria	Help choose between means to achieve the given effect	Help choose between possible effects that can be created with given means
	Selection criteria based on expected return	Selection criteria based on affordable loss or acceptable risk
	Effect-dependent: choice of means is driven by characteristics of the effect the decision maker wants to create and his or her knowledge of possible means	Actor dependent: given specific means, choice of effect is driven by characteristics of the actor and his or her ability to discover and use contingencies
Competencies employed	Excellent at exploiting knowledge	Excellent at exploiting contingencies
Context of relevance	More ubiquitous in nature	More ubiquitous in human action
	More useful in static, linear, and independent environments	Explicit assumption of dynamic, nonlinear, and ecological environments
Nature of unknowns	Focus on the predictable aspects of an uncertain future	Focus on the controllable aspects of an unpredictable future
Underlying logic	To the extent we can predict the future, we can control it	To the extent we can control the future, we do not need to predict it
Outcomes	Market share in existent markets through competitive strategies	New markets created through alliances and other cooperative strategies

Table 2.1: Contrasting Causation and Effectuation, derived from Sarasvathy (2001)

As explained in the introduction recent literature focuses more on effectuation, this thesis will further elaborate on effectuation and not on causation. Sarasvathy created five principles which together form

the logic of action called effectuation. All of the principles embody a technique of non-predictive control: "reducing the use of predictive strategies to control uncertain situations" (Sarasvathy, 2008, p. 16). The five principles are the bird-in-hand principle (start with your means), the affordable loss principle (focus on the downside risk), the lemonade principle (leverage contingencies), the crazy-quilt principle (form partnerships), and the pilot-in-the-plane principle (focus on what can be controlled). These principles are further explained in the next sections.

Heuristic forming

As effectuation was founded as a grounded theory (Chandler, DeTienne, McKelvie, & Mumford, 2011), it does not always describe immediate actions to take. The goal of this thesis is to create a clear actionable guideline of the effectuation framework, which will be done by conversion of the effectuation principles into heuristics, so a clear guideline on how to act effectual is created. Heuristics are strategies using readily accessible, though loosely applicable, information to control problem solving (Pearl, 1983).

An important notion here is that effectuation is seen as a communal construct, valid for every individual within the company and not just the owner. The effectuation heuristics are argued to fit incumbent companies based on the original framework by Sarasvathy (2001; 2008), and Read et al (2011), as summarized earlier in this chapter, and are further inspired by the articles of Brettel, Mauer, Engelen, & Küpper (2012), Werhahn, Mauer, Flatten, & Brettel (2015), and Chandler, DeTienne, McKelvie, & Mumford (2011) who attempted to conceptualize the effectuation principles. Effectuation literature so far has ordered the effectuation heuristics per principle. Therefore this outlook will be maintained and the heuristics for this thesis are determined for each principle apart, which will be done in the corresponding sections in this chapter. The heuristics are numbered, and to every number a letter was added to make clear to which principle it belongs. M = means (bird-in-hand), A = affordable loss, L = lemonade, Q = crazy quilt, and P = pilot-in-the-plane.

2.2 Incumbent firm defined

This research moves the focal environment of effectuation from start-ups to incumbent firms. Though effectuation is originally designed for use in start-ups, its use fits within uncertain, dynamic environments (Sarasvathy, 2001). This can still include application in a corporate context, though this has been tested empirically by only a few (Brettel et al, 2012; Johansson & McKelvie, 2012). We assume that the environment stays uncertain within this research. What differences can then be expected? Let's first try to define the differences between start-ups and incumbent firms.

Stam (2007) defines five different phases of organizational development based on their dominant processes: start-up, initial survival, early growth, growth syndrome and accumulation. A start-up concerns processes of opportunity recognition and resource mobilization, while the initial survival phase affects value creation and delivery, and capturing returns. The area between start-up and incumbent firm is a fuzzy one, but these first two phases are typical for a start-up. When a firm has surpassed the early growth phase, and maintained there for a few years or passed through to the accumulation phase it can be called incumbent.

Another example to define this focal shift is independent versus corporate entrepreneurship. Independent entrepreneurship involves organizational creation by individuals not associated with an existing corporate identity, while corporate entrepreneurship involves organizational creation, renewal or innovation, instigated by an existing organizational entity (Sharma & Chrisman, 1999). Following these definitions, independent entrepreneurship focuses on the individual, presumably the founder of the organization that is being created (the start-up). Corporate entrepreneurship is pushed from an existing organizational entity, which apparently is no longer recognized as start-up but as an incumbent firm, so this can involve innovation by employees, for example triggered by the owner or an organizational structure.

This research's focal shift from start-up to incumbent firm might bring along the following challenges:

- While a firm matures, the environment can become more predictable, on which causation should be applied.
- Resistance against organizational change (when effectuation is introduced).
- Motivation of employees (to apply effectuation)/ involvement in the company; employees can see their job as 'just their work' and are not willing to put in extra efforts.
- Formalization and routinization can have a negative effect on flexibility (Johansson & McKelvie, 2012).

These challenges will be taken into account with the creation of the heuristics and during the execution of the action research.

2.3 Corporate entrepreneurship

While effectuation falls within the entrepreneurship domain of research, moving it to the incumbent firm and therefore to the corporate level logically shifts the focus to the domain of corporate

entrepreneurship. The positive effect of corporate entrepreneurship is proved by for example Rotharmel (2001). Ireland, Covin, and Kuratko (2009, p. 21) define corporate entrepreneurial strategy as "a vision-directed, organization-wide reliance on entrepreneurial behaviour that purposefully and continuously rejuvenates the organization and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity". Every phrase of this definition, except 'vision-directed', can directly be found in the effectuation framework. Effectuation can be argued to be a vision on its own. Firms execute various degrees of CE strategy (Ireland et al, 2009), and while effectuation may be partly used by firms it may fall under the domain of CE strategy. According to Kuratko (2010, p. 129) "developing organizational environments that cultivate employees' interest in and commitment to innovation contribute to successful competition in today's global economy". An organizational structure based on effectuation can provide in this; for example stimulate employees to use their own means and network for the good of the company, for which they in turn also profit. The adjustments of the effectuation principles for incumbent firms can open the door for effectuation to be investigated as a corporate entrepreneurship strategy.

2.4 The bird-in-hand principle

''This is a principle of means-driven (as opposed to goal-driven) action. The emphasis here is on creating something new with existing means rather than discovering new ways to achieve given goals.'' (Sarasvathy, 2008, p. 15)

There are three categories of means available to all human beings:

- Who I am
- What I know
- Whom I know

Who I am consists of the stable of traits, abilities, and attributes of the entrepreneur. What I know includes your education, experience, and expertise. Who I know refers to your social networks. Your pool of resources is the sum of the above three categories of means. The question then becomes: What effects can I create, given who I am, what I know, and whom I know.

Read et al (2011) state that ''there is no one particular set of skills, abilities, or personality types necessary and sufficient for entrepreneurial success'' (p. 74). Therefore, the entrepreneur's own

uniqueness can provide the basis for his entrepreneurial opportunity as well as the competitive advantage for his future venture.

Bird-in-hand heuristics

This is the most straight forward principle, it tells you to make use of your existing resources. Therefore these resources (the means) should be mapped, and used as a basis for the creation of products or services, business processes and jobs, rather than setting goals and then search for the means. Resources are for example the company's available systems, inventory, financial capital and company knowledge, and the owner's and employee's resources; their network, knowledge, experience, competencies, preferences, and personality.

1M.   Make a pool of resources: map your company's and your employee's means.

This can initially be done by a questionnaire or interviews, it is important that the employees know the purpose behind this so they are stimulated to think and act effectually; be open to, or actively search for means which can contribute to the company. Employees should have the freedom to add means to the pool of resources and bring in innovative ideas on their own initiative at any time. Besides this can be seen as an intrinsic reward, additional rewards can help to stimulate this behaviour (Hornsby, Kuratko, & Zahra, 2002). Using employee's means implies that these means belong to the employee. The company should beware not to become dependent on this, because would an employee leave, it sounds reasonable that his means leave together with him. It could be useful to have rules on how to handle this.

Because effectuation is a continuous process, the most effective approach would be to incorporate this into the organizational structure. Such a structure can be especially useful for incumbent firms, because when firms grow communication lines can become longer and the employee's innovative behaviour may decrease. Werhahn et al (2015) also point to this: effectuation relates to "…a strategic direction that motivates its employees to exert a controlling or shaping influence on their firm's environment by attempting to co-create future markets and demand or to influence trends."

2M.   Create an organizational structure which incorporates the pool of resources and stimulates and rewards employee's effectual behaviour.

Now with all the information available in the pool of resources, the next step is to transform the means into useful ends. Besides new products or services, it may also lead to new insights regarding the

organization itself; work, structure, or human resource issues. The transformation types suggested by Read et al (2011) may help to take advantage of your means:

- Deleting/ supplementing: "Any form of (re-)combination, adding to and subtracting from something existing."
- Composing/ decomposing: Reorganizing what is already there
- Exaptation: Use something for a purpose for which it was not originally designed
- Re-weighting: Increasing and decreasing the relative emphasis of features or attributes of a product or market

For more transformation types and a more extensive elaboration on them, I refer to Dew, Read, Sarasvathy & Wiltbank (2011) and Sarasvathy & Dew (2005).

3M.   Find creative ways to use the available means to the company's advantage.

Effectuators control the unpredictable future through action; through experimenting with different solutions (Sarasvathy, 2001; Chandler et al, 2011). So besides choosing one 'right' innovation upfront, different innovations can be tried out to determine which works best. As a guideline for experimenting with new products the popular 'lean startup' method can be used (Ries, 2011).

4M.   Experiment with different products and/or business models to see what works best.

2.5 The affordable-loss principle

Most entrepreneurs start with small financial resources, if any at all. Arranging funding is often seen as one of the biggest thresholds for entrepreneurs (Read et al, 2011). Effectuation anticipates to this with the affordable loss principle, which says that entrepreneurs should risk only what they can afford to lose. Because the financial upside potential is always unsure, choices are rather made based on the controllable downside. Effectuation tries to control an unpredictable future, where causation tries to predict an uncontrollable future (Sarasvathy S. , 2001). All of the 27 subjects of Sarasvathy's (2008) research made no predictions about potential returns or an ideal level of investment for their projects. Instead they wanted to spend only what they could afford to lose. The bird-in-the-hand principle takes a creative look at fundraising: it *might* even be better for a business to have no money at all than to get a big investment early on: it releases a source of creativity (Vanacker et al, 2011). "The key to learning from failures is to keep them small and kill them young." (Sarasvathy et al, 2009, p. 68) Limiting investments to a consciously chosen acceptable level of loss does not only reduce the amount of

financial failure, but also the psychological impact this failure has. Special attention can be paid to the bootstrapping: "finding creative ways to avoid the need for external financing through reducing overall cost of operation, improving cash flow, or using financial sources internal to the company" (Ebben & Johnson, 2006, p. 851). Read et al (2011) dedicated a whole chapter to bootstrapping (p. 105 – p. 112).

Affordable loss heuristics

Affordable loss tells us to invest only what can be afforded to lose. While initial investments for setting up the company, like for example property, machinery and furniture can be expected to be made already for incumbent firms, affordable loss can regard other investments or new projects. Decisions should be made on basis of the potential downside instead of the upside (Sarasvathy, 2008). The idea behind effectuation is to control what can be controlled. The potential upside cannot be controlled, but the downside can. You decide how much you invest and therefore what the maximum loss is. Effectuation prefers partnerships over loans, so high investments and thereby risks are shared.

5A.   Invest/ risk only what can be afforded to lose.

6A.   Select opportunities based on minimization of risks and costs. (Derived from Brettel et al, 2015)

Besides the idea of minimizing cost (by looking at money, time or effort), there are other ways possible to invest or risk as little as possible. Risk can be spread by sharing it with partners, and bootstrapping can be a useful tool. The list here under may help in finding creative ways to "get around the money hurdle" (Read et al, p. 109):

Options to negotiate with stakeholders:

When dealing with suppliers:

- Delayed payment terms
- Payment as a percentage of revenue
- Direct capital investment
- Paying them in direct services (making them customers)
- Using their process/assets/talent during their downtime (use their slack resources)
- Getting them to guarantee a line of credit for you at their bank

When working with customers:

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- Pay first purchase order (PO) in cash upfront for better pricing

- Get a solid purchase order and then connect that to a lender that will accept that as collateral

- Use their commercial bank and piggy back on their line of credit (slack resource)

- Get them to guarantee a line of credit

- Pre-sell them the first years' worth of their purchases

When going to investors:

- Borrow money from them, don't just take investment

- Pay them back as a variable cost against a percentage of revenues (not against time)

- Get them to guarantee a line of credit

- Take investment but negotiate for a 'clawback' where you can earn back ownership if things go well

When hiring employees, think about offering:

- Options rather than cash

- Percentage of sales rather than base salary''

7A.   Use creative ways of financing, or getting resources. Use bootstrapping.

2.6 The lemonade principle

'A pessimist sees the difficulty in every opportunity, an optimist sees the opportunity in every difficulty.'

Winston Churchill

The lemonade principle is about dealing with contingencies: 'if life gives you lemons, make lemonade' (Sarasvathy, 2001). Effectuators look for the opportunity that lies in a contingency, and have the power to transform a bad event into a positive outcome, or to recognize the potential in contingencies that don't seem valuable at first sight. Contingencies do not automatically shape the future direction of a venture, it is the reaction of the entrepreneur to that opportunity that makes the difference; his

leverage Read et al (2011). In effectuation contingencies are seen as resources, which are therefore an input into the first step of the effectual process, contingency is the bird that lands right on your hand

In a nutshell: "this principle suggests acknowledging and appropriating contingency by leveraging surprises rather than trying to avoid them, overcome them, or adapt to them." (Sarasvathy, 2008, p. 16) The rationale here is that when a contingency appears, instead of directly trying to bend it the way that your original plan is followed, fully receive the contingency and think of what possibilities it might offer:

8L.   Use potential setbacks or external threats as advantageous as possible. (Brettel et al, 2012)

This principle includes, next to (unpleasant or surprising) contingencies, any form of new information. By staying up to date with the latest news and technology within your business as well as in general, there is a possibility to influence trends (Werhahn et al, 2015) and to stay ahead of competitors. Also, keep your eyes open for new (growing) companies. You might be the first company to self-select your partnership into their venture; you might even convince them of the advantages based on the effectuation framework. Contingencies, events occurring in the external environment and other potentially useful information should be added the pool of resources, where they can further be taken advantage of. The structure as described for heuristic 2M should also trigger this behaviour.

9L.   Add new information to your pool of resources and check if new opportunities arise.

2.7 The crazy-quilt principle

''Effectuators do not choose stakeholders on the basis of preselected ventures or venture goals; instead, they allow stakeholders who make actual commitments to participate actively in shaping the enterprise.'' (Sarasvathy, 2008, p. 88) ''It is effectual partnerships that create the venture, and not the venture that dictates the partnerships'' (Read et al, 2011, p. 113), so when stakeholders are selected their means are added to the total resources available (the bird-in-the-hand). These self-selected stakeholders eventually make the venture what it is.

Read et al (2011) consider three effectual decision-making elements for partnerships:

- Each stakeholder brings new means to the venture
- Each stakeholder strives to invest only in what he can afford to lose

- Any environment and epoch in human affairs contains unexpected contingencies (lemonade principle)

A key point here is that stakeholders do actually make commitments to the venture, which makes them involved. Effectual logic assumes that stakeholders co-create the new venture. As Read et al (2011, p. 124) put it ''without commitments, you don't have a partner; you have merely a potential partner.'' They also take persuasion skills as a critical resource: ''if you can't convince anyone to work and create with you – be it potential customers, suppliers, etc. – then you have no business'' Read et al (2011, p. 120). This persuasion works the other way around too; stakeholders influence you too, though ideally this interplay causes the co-creation of the effectual venture. Capturing pre-commitments early-on is argued not to be a merely effectual approach, while it is also used in causational models (Chandler, DeTienne, McKelvie, & Mumford, 2011). They suggest that effectuators use pre-commitments to reduce uncertainty, minimize cost of experimentation, and maintain flexibility, while causators use them as a way to acquire essential resources and implement plans.

Crazy quilt heuristics

Because incumbent companies are largely shaped already, the co-creation of the company together with stakeholders will apply less on them compared to start-ups. Still, future directions can be shaped based on this principle. Instead of a share or participation in the company, partners could make use of each other's resources; information or network. Incumbent firms may experience more ease applying the crazy quilt heuristics while they have overcome the liability of newness; it's easier for (potential) partners to trust them compared to start-ups.

10Q. **Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.** (Werhahn et al, 2015)

11Q. **In order to reduce risks, start partnerships** (derived from Brettel et al, 2012)**, with partners that are willing to commit from the onset** (derived from Werhahn et al, 2015)

This includes the self-selection of partners, while the self-selection as described by Sarasvathy (2001) involves stakeholders who make commitments themselves early-on. Sarasvathy also characterizes effectuation by the use of pre-commitments; effectuators use pre-commitments to reduce uncertainty, minimize cost of experimentation, and maintain flexibility (Chandler et al, 2011).

12Q. **Use pre-commitments from partners, suppliers and customers as often as possible.** (Derived from Chandler et al, 2011)

And, already adapted for the incumbent firm:

13Q. **Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.** (Derived from Werhahn et al, 2015)

When partners have made commitments and a partnership is established, the pool of resources can be expanded, and a synergetic effect will appear; two pools of resources combined can bring forth many more combinations than just the two sets of means apart. This shows how beneficial the crazy quilt principle is.

14Q. **When a partnership is established, combine your pools of resources and make use of the synergetic effect.**

One remark on this heuristic: not all information can be shared freely, it may be confidential.

2.8 The pilot-in-the-plane principle

The pilot in the plane principle captures the essence of effectuation: to the extent that we can control the future, we do not need to predict it. So take control of those things that can be controlled, and don't waste resources on trying to predict what cannot be predicted anyway. Instead of exploiting exogenous factors such as technological trajectories and socioeconomic trends, the entrepreneur relies on and works with human agency as the prime driver of opportunity (Sarasvathy, 2008), thereby taking place in the pilot's seat. This means also letting go of prediction; sufficient control is enough. "While novice entrepreneurs seek to find necessary conditions for success, experts master the art of making sufficient conditions" (Read et al 2011, p. 175). Effectuators believe the unpredictable parts of the future can be studied in a systematic way through testing and experimentation (Sarasvathy 2001), thereby creating reliable expertise over time and in the longer term they may even be able to make a prediction. For pricing for example the subjects of Sarasvathy's (2008) experiment "all used a rather experimental attitude (...) rather than an analytical or predictive calculation of any kind" (p. 43).

Pilot-in-the-plane heuristics

While this principle basically covers the underlying logic of effectuation, the above mentioned heuristics have together already covered this idea. Therefore no heuristics are created for this principle.

2.9 The effectual process

Representing effectuation's continuous nature, the principles are applied in a dynamic process model. The process consists of two concurrent cycles: expanding means and converging goals. "Using effectual principles, entrepreneurs will grow their means through an expanded stakeholder network while simultaneously converging on goals through stakeholder self-selection and executing on commitments made with them." (Sarasvathy et al, 2014, p. 75) This model can be used to support the action research iterations following in chapter four.
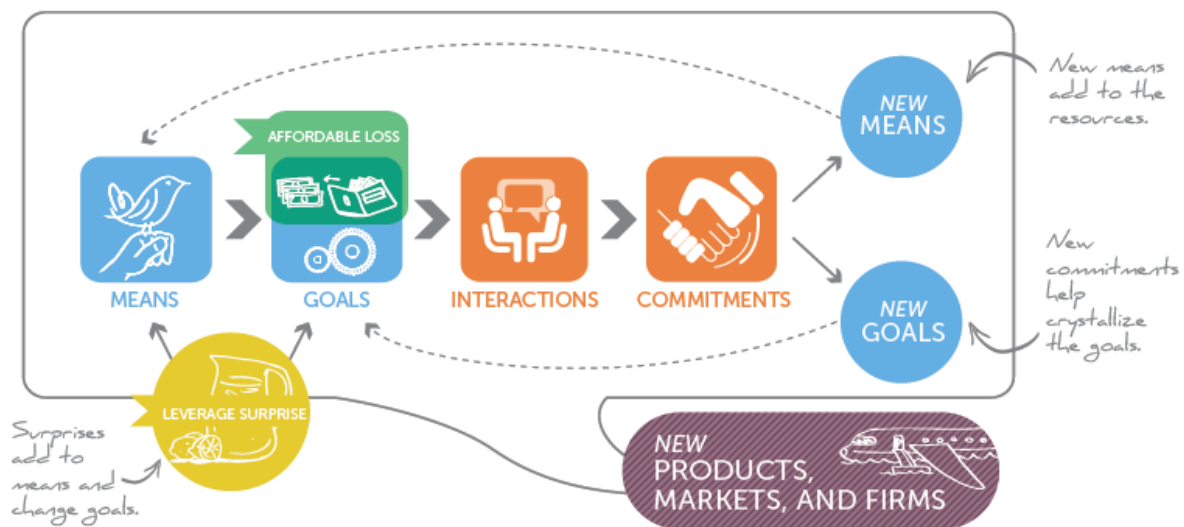
Figure 2.1: The effectuation dynamic process model (retrieved from http://effectuation.org/sites/default/files/documents/effectuation-3-pager.pdf)

2.10 Conclusion

Concluding the literature review the first sub question can be answered:

S1.   What effectuation heuristics can be applied in the incumbent firm?

Following the argumentation in this chapter, the following fourteen effectuation heuristics for the incumbent firm were created:

1M.	Make a pool of resources: map your company's and your employee's means.
2M.	Create an organizational structure which incorporates the pool of resources and stimulates and rewards employee's effectual behaviour.
3M.	Find creative ways to use the available means to the company's advantage.

4M.	Experiment with different products and/or business models to see what works best.
5A.	Invest/ risk only what can be afforded to lose.
6A.	Select opportunities based on minimization of risks and costs.
7A.	Use creative ways of financing, or getting resources. Use bootstrapping.
8L.	Use potential setbacks or external threats as advantageous as possible.
9L.	Add new information to your pool of resources and check if new opportunities arise.
10Q.	Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.
11Q.	In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.
12Q.	Use pre-commitments from partners, suppliers and customers as often as possible.
13Q.	Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.
14Q.	When a partnership is established, combine your pools of resources and make use of the synergetic effect.

Table 2.2: Effectuation heuristics for the incumbent firm: before execution of the action research. M=means (bird-in-hand) principle, A=affordable loss principle, L=lemonade principle, Q=crazy quilt principle.

3. Methodology

Quality and up-to-date status of literature is ensured by selecting (next to relevance) on the number of times cited, the quality of the journal by SJR ranking (http://www.scimagojr.com/journalrank.php), and the date of publishing. More times cited, a higher ranking and a more recent date are preferred. For referencing APA style was used (sixth edition).

3.1 Research method: action research

Following Sarasvathy's 'pragmatist approach' to entrepreneurship, leading to effectuation as a logic of entrepreneurial action, this research aims to find how this logic can be used to shape the environment, in this case for the incumbent firm. Sarasvathy (2008, p. 62) describes a logic as "an internally consistent set of ideas, that form a clear basis for action upon the world". Inspired by Perry et al (2011) who ask for examining the consequences of *using* effectual reasoning, action research is a suitable research method because it "places the researcher in the 'middle of the action', allowing for close examination of real-

world business situations in their full complexity" (Kock, 2007, p. 288). Also, action research is a particularly useful approach to study relatively new business topics (Kock, 2007), which effectuation is Perry et al (2011). According to Jarvinen (2007) the action researcher is, as opposed to the 'normal' social and natural scientist, interested in the utility of the system he is examining; his "intent is to plan and to take action in order to change a part of reality" (Jarvinen, 2007, p. 52). Therefore this method can make a significant contribution to the venture. Action research was struggling for legitimacy until the late 1990s (McNiff, 2013). Therefore was chosen to include only papers on action research starting from this period, preferably as new as possible. An interesting story on the development of action research through history can be found in Boog (2003). Nowadays action research is an accepted research method, applied to a wide range of professional and organizational contexts (Stringer, 2007).

The most actionable guideline on action research that was found is from Davison et al (2004). They describe five principles of canonical action research, for which they created a checklist. Canonical action research (CAR) is one of the ten forms of action research named by Baskerville & Wood-Harper (1998). CAR follows a combination of four characteristics that distinguish it from other forms of action research (Davison, Martinsons, & Kock, 2004): First, CAR is iterative; it forms a cyclic process of intervention. The effectual process cycle should also be applied continuously, therefore this action research method fits with the effectual process. Second, CAR is rigorous while interventions are carefully planned and executed which, following a continuous process of problem diagnosis, implies its relevancy (Davison, Martinsons, & Kock, 2004). Third, it is collaborative for that the researcher and the organizational clients work together in roles that are culturally appropriate (Davison, Martinsons, & Kock, 2004), effecting both their goals synergistically (Avison, Lau, Myers, & Nielsen, 1999). This implies the fourth characteristic of CAR: its focus is on organizational development as well as the generation of (scientific) knowledge. In order to comply with these four characteristics Davison et al (2004) created a set of five principles, each complemented by a set of criteria which the researcher can check upon. The implementation of this thesis will now be explained with reference to these principles and criteria.

1. **The researcher-client agreement (RCA)**

The researcher-client agreement helps the organizational client understand the benefits and drawbacks for the organization, as well as the scientific theory/ goals. It may thus require a knowledge transfer. Roles and responsibilities of the researcher and client organization members are specified explicitly. Mutual guarantees and commitments are a prerequisite for action research, therefore this agreement serves as a solid basis for building trust among the various stakeholders, thereby contributing to the

internal validity of the research (Davison et al, 2004). The RCA helps to promote a spirit of shared inquiry, by having clients contribute in each process of the action research cycle (Davison et al, 2004). The researcher-client agreement used for this research can be found in Appendix B.

2. **The cyclical process model (CPM)**

Visualizing the cyclic characteristic of CAR, Davison et al (2004) created the cyclical process model, based among others on the five phases of diagnosing, action planning, action taking, evaluating, and specifying learning by Susman and Evered (1978), which is the most prevalent description in action research (Baskerville, 1999). Following these phases sequentially ensures that the project is executed with systematic rigor (Davison et al, 2004).
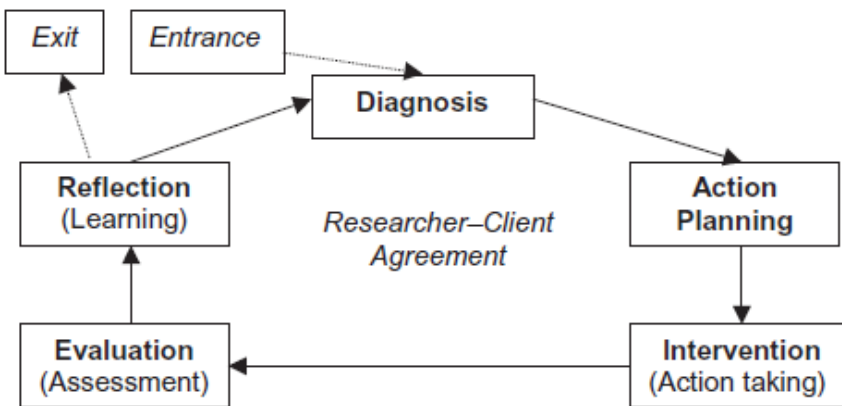
Figure 3.1: The CAR process model, adapted from Davison et al (2004, p. 72)

a. Diagnosis: In this stage a description of the current situation is given. For every iteration a new diagnosis is made. For the first iteration the company was analyzed based on conversations with the director and my diary.

b. Action planning: Based on the diagnosis the choice is made between taking action starting from the company's problem or from the effectuation framework. Then is determined which effectual heuristics can be applied, how this is done, and the expectations are discussed.

c. Intervention: Here the application of the heuristics takes place, which will be described here.

d. Evaluation: Here a comprehensive assessment of the situation after the intervention is made. Occurring events and changes are closely monitored and documented. Special attention is given to whether the planned actions were actually implemented and whether the observed effects were caused by the effectual heuristics. This is also the stage where the answers to the second

sub question can be found: what issues arise applying effectuation heuristics in the incumbent firm?

e. Reflection: A comparison is made between the situations before and after the intervention. This stage comprises of the lessons learned, and determines for example whether the applied heuristics are suitable in this case or should be adjusted. Results are also considered in terms of implications for further action within the project, within the research domain in general, and the applicability of action research. The third sub question of this research may also (partly) be answered here: how can the effectuation heuristics be adjusted to fit incumbent firms? At the end of this stage the decision is made whether or not to proceed the research through an additional process cycle.

During this research four iterations of the cyclical process model have been executed, after finishing the fourth one the project had to be closed because of time restrictions for the thesis.

3. The principle of theory:

Every action should be justified by a scientific theory, which is the effectuation framework (Sarasvathy, 2008), especially its underlying logic, for this project represented by the heuristics for the incumbent firm, created through sections 2.4 – 2.7. An overview of the heuristics is given in table 2.2.

4. The principle of change through action

This principle reflects the essence of (canonical) action research: taking action to change the current (unsatisfactory) situation. Each action is explained and justified as a remedy to the diagnosed problem, which is done during the 'action planning' stage.

5. The principle of learning through reflection

Reflection and learning result in practical progress as well as the advancement of knowledge. In action research the relationships among participants are organized as joint learning processes (Greenwood & Levin, 2007), for which the lessons are learned at the reflection stage (Davison et al, 2004).

Making sense of what happens when things do not go according to plan is just as much part of an action enquiry as when they do. The research is in the action, whether the action goes as we hope or not. The learning is in the practice. (McNiff, 2002, p. 71)

Learning from the CAR project should involve both the internal and external environments. First, learning enables the restructuring of organizational norms to reflect the new knowledge gained during the research. Second, it informs further interventions within the current project. Third, it contributes to the advancement of knowledge by generating new theory or informing/ re-informing existing theory. It is useful to consider various theoretical alternatives that may illuminate different facets of the research. Fourth, it enables lessons to be elicited for wider application of the methodology. (Davison et al, 2004, p. 77)

Davison et al (2004) advice to specify the learning as soon as possible after it occurs during the project, so that the lessons learned are documented clearly and comprehensively.

To check the performance of this method the set of guiding questions by Davison et al (2004) is used during the project as an evaluation tool, these can be found in appendix A.

3.2 Data collection & analysis

The necessary information during meetings (with the director, employees, and at customer Alpha), was gathered by memoing (Babbie, 2010). The notes (memo's) were typed out and analyzed directly after the meetings in order to prevent loss of data. Furthermore, while I was working in the office of NextSelect, I kept a diary (Cassell & Symon, 2004) to note those things that drew my attention that might have been influential to this project. Action research is a qualitative method, and most data collected consisted of outcomes of the meetings (done by memoing), or in case of the first iteration emails with the answers to the questionnaires. For most effectuation heuristics their effects became clear during the intervention, and could directly be noted. In the evaluation stage the 'action planning' section and the notes were compared. If no answer could be collected, or had to be waited for, this was written down in the diary and on a to-do list for the project. The missing information would come in later to me via a conversation (real or email) from the director, and otherwise I would ask for it myself. Information that was still missing was requested upon three days before the end of the research. Sometimes changes, internally or externally, occurred that had nothing to do with the (heuristics for the) specific action planning or intervention stage. These changes were noted; and in agreement with the director (through who the news usually came in) was chosen to act upon them or not.

3.3 Reliability & Validity

Even though validity and reliability may not always be considered important in an action research study (Ivankova, 2015) a number of issues is worth mentioning. Because of the earlier mentioned rigor and

relevance, the canonical action research method per definition strives for validity (Davison et al, 2004). Each step taken during the execution of the project has been justified, also because this is a prerequisite for action research (Davison et al, 2004). Each iteration consists of the same steps, and following this structure was checked by the guiding questions which can be found in Appendix A. Still, the validity and reliability of the results are hard to guarantee, while the data may be distorted, for example because the source twisted the data because it is better for his business, or because he was informed falsely himself. Also possible is that valuable data is missing, employees might have forgotten to enter decisive means in the questionnaire, simply because they did not think about it. To prevent this specific example from happening, the effectuation organizational structure will help (heuristic 2M), because it will stimulate to share this information with the company also on another point in time.

Another issue concerning the reliability is the generalizability of action research in general, but especially in this case with only one focal firm. Even though the focus of this thesis is on the incumbent firm, the focal firm can be categorized under other characteristics such as its smallness, its niche, its business-to-business operations, or its project-based operations. All of these could have been of influence to the outcomes of this project, and based on this research only, it can be argued, but it cannot guaranteed that these variables have not played a role in the outcomes of the research. The in-depth possibilities that action research offers therefore bring along their limitations as well. Generalizations of this research should therefore be made with caution.

4. Results

Following the cyclical process model as a guideline, the project was started with a researcher-client agreement (see appendix B for this document). After the goals, demands, benefits and possible drawbacks of the project were clear to both the researcher and the client, the first iteration of the cyclical process model could be started. The results will be described in chronological order, working through the cyclical process model step by step. While this project has two mutually shared objectives, a choice had to be made on how to execute the iterations. On the one hand, the company's problems could be tackled with an effectuation approach, on the other hand, effectuation heuristics could simply be applied to the company. In action research this choice is made collaboratively among the company stakeholders and the action researchers (Greenwood & Levin, 2007), therefore we made the choice to stay flexible throughout the project, and to determine which approach to choose next in the reflection stage of each iteration. Due to reasons of confidentiality fictitious names were used for the customers

(Aplha, Beta, Gamma) and other stakeholders (Epsilon). Note: because NextSelect develops software the verbs 'develop' and 'build' are used throughout this thesis as a synonym for 'work' or 'produce'.

4.1 Iteration 1

In this first iteration the most complete description of the company should become available, which is necessary to serve as a basis for the actions to be taken during this project; solving a company problem, and determining affordable losses, existing and potential partnerships. This iteration starts with an overview of the status of the company, which is complemented with the company's means after applying the first set of heuristics from the bird-in-hand principle.

4.1.1 Diagnosis

In this stage the status of the company at the beginning of the project is described, including an overview of problems and possibilities. With this description the context of the focal firm becomes clear, which is necessary information for the following actions to take, this is therefore chosen to be done first. Together with NextSelect's director the situation of the company was discussed.

NextSelect is a company providing fully customized software solutions for business processes. The software solutions are tailored according to the wishes and requirements of the customers. This gives the customer full control over the design of their own IT systems which can give them a competitive advantage. Every software solution has to be built from scratch, which is very time consuming. NextSelect employs seven employees with a total of five FTE's, of which three FTE's deal with software development, one is involved in administration, human resource, and several other tasks, and one is the director, working mostly on customer relations, preparing work and managing the developers.

The customer base of NextSelect is rather small: Currently three customers are active and one customer is 'sleeping'; a solution has been built but they did not require any more service since then. Only one of the three customers brings the certainty of a contract, with a minimum and maximum of hours to be invoiced every month. Even though the other two customers provide enough projects, NextSelect runs at full capacity all the time, there is no certainty in black and white. Projects are handled in a similar way for every customer: a request is done by the customer, for which NextSelect estimates the hours needed for development and sends a quote to the customer based on the number of hours expected times an hourly rate. For every project that is requested the costs have to be negotiated, and the customer needs approval to spend its IT budget on a specific project. When a customer project is finished the cash flow essentially stops. When problems arise during development, it is basically NextSelect's responsibility to

solve these, putting in extra hours when necessary. So this actually costs the company money, and this happens too much. Because of this system the cash flow is unstable and irregular. The financial unbalance has put the continuity of the firm at jeopardy. The importance of a contract with the other customers as well emerges.

The financial unbalance and the time needed to develop the software solutions were the main reasons for developing a "software framework" which should allow NextSelect to build the fully tailored software solutions at a faster rate and with a higher quality. The idea of building the framework has failed with the first implementation, a lot of work still has to be done to make it work. The question is if it is worth to continue the building of this framework.

There is a buffer of pending projects waiting to be started, NextSelect could develop at least a month or two ahead at this moment, and pending projects are piling up. So there is money waiting to be collected. An additional (though it'd be part-time) developer could be useful at the moment. But expanding your own resources without having certainty that the demand for work will continue doesn't go without risk.

Another major problem is that organizations tend to underestimate the investments needed to keep a fully tailored software package up-and-running. There is no awareness that with the small investments they make, the only job possible is patching an already existing system, instead of creating a new system or new lay-out in accordance with present technological possibilities. The client is the only organization using its custom software package and therefore this client has to cover all costs related to the support, research, innovation and development. While technology evolves fast, systems that were created ten years ago and extended along the way, are running behind the current technological possibilities, and may look outdated when compared to competitor's new systems. Sometimes the client's budget is very minimal which leads to a very minimal software solution. This may cause the client (Alpha especially) to think that NextSelect delivers low quality, while this is basically caused by their own minimal investment.

Recently there have been some major business developments for Alpha, which operates in the EDM (Electronic Dance Music) market. This market is growing with a very fast rate. More and more competitors are joining the market that have the need for software that supports their business processes, which are essentially the same as Alpha's. Currently NextSelect does not build software for other EDM companies due to a 'gentleman's agreement' with Alpha. This was discussed when the first

order of the fully tailored software package was given, though never written down into an official agreement. This exclusivity is nothing more than NextSelect being loyal to its customer. There is nothing wrong with being loyal to your customer, in fact that should be the basis of any relationship. However, if the continuity of NextSelect is unstable and the risks are rising due to competitors, a change in strategy is needed. For the moment NextSelect seems safe because there is no complete package that can compete with the fully tailored software package NextSelect has developed for this customer. However, having in mind that the business processes of Alpha are not so unique, it is only a matter of time before a competitor software customer enters the market with a complete solution that is most likely better in every aspect.

The question arises if NextSelect can stay in business with only fully tailored software solutions. At first the solutions were built for very specific business processes for every customer. Up till now there is basically no competition because as far as we know currently no software solution exist that could easily replace the existing fully tailored software packages and it would most probably cost more to make a change to new software package instead of the investments made for the fully tailored software package.

Because the EDM market is expanding quickly, and NextSelect is aware of its knowledge within this market (it serves one of the biggest organizations), it already considered creating a generic software solution to serve the growing number of organizers of EDM events. Totally in effectuation style, the shortage of cash was recognized and tried to solve by cooperating with its customer, proposing that revenues of the generic solution would be put into their custom system. This request was rejected however, they even got a bit angry with it. Anyway it got things going, while a few months later basically exactly the same proposal was done by the customer, with the difference that they brought in a company, supported by their own business incubator, which already offered such a solution. This company is Epsilon, also a developer of event organization software. Epsilon develops a generic tool for EDM organizations, focusing partly on the same job as NextSelect does, though NextSelect totally customizes this process solely for Alpha. Alpha has plans for a huge project, which should be the biggest in the history of NextSelect, and there is also a high budget for this one. Epsilon seems more or less pushed from Alpha to cooperate with NextSelect on this project. It is kind of a strange situation, while NextSelect has never gotten a higher budget during all their loyal years, and now all of a sudden there is a high budget and another party comes into existence which seems to be able to step in easily. This can be put into perspective because the project should be finished within half a year, and NextSelect does

not have enough capacity to execute this all on its own on such a short term. A conversation is planned with the three parties: NextSelect, Alpha and Epsilon to discuss the possibilities on this subject. This conversation and its preparation will be the second intervention within this iteration of the cyclical process model.

The context in which NextSelect operates is now clear, though the pool of resources is not yet completely mapped. Therefore the following action is planned:

4.1.2 Action Planning

To complement the diagnosis (not all means of the company are readily available) and get a more complete view of the company the first bird-in-hand principle will be applied:

1. Make a pool of resources: map your company's and your employee's means.

In order to do this, a questionnaire was made for the employees as well as for the owner, which triggers them to think about how they can use their means for the good of the company and so for themselves. With means are meant for example the company's available systems, inventory, financial capital and company knowledge, and the owner's and employee's resources; their network, knowledge, experience, competencies, preferences, and personality. This questionnaire can be found in appendix C.

We specifically chose here to focus only on this heuristic, to identify the means of the company, and starting from the second iteration make use of other heuristics too. While the time for this research is limited, executing the other bird-in-hand principles would take too much time while there is an urgent issue waiting to be dealt with. This will be handled in the second iteration, for which the outcome of this iteration serves as a basis.

4.1.3 Intervention

The questionnaire was sent to the employees and the owner by email, and they spent one to two hours to answer the questions, spread over two days, leaving some room to think about the answers.

4.1.4 Evaluation

The results of the questionnaire are discussed here, leading to a more fully updated overview of means. This pool of resources is the outcome of the intervention.

Questionnaire results

"Given these personality traits I would ultimately see myself best fit as a strategic thinker, with as main goal to achieve the long term survival/maximization of the company's current and long term profits as well as maximizing the satisfaction of the employees. One aspect that is involved in the survival of the company is thinking about innovation and seizing new business opportunities. Thinking out of the box, brainstorming about new (adventurous) ideas and being responsible for working out the plans, possibly using different people/parties with unique skills, combining them (creating synergy), which involves motivating people, diplomacy and overseeing the progress of the project(s). … I also like promoting/marketing/selling stuff. (Sometimes) being the sales-guy on the marketing side would also be joyful for me" (Jelte)

"It would be awesome if I could take on the role of marketing manager and/or different tasks in the CRM (Customer Relations Management) at some point. And I would love to extend the department of Human Resource Management, because I think it's such an important aspect. I'm really interested in these aspects of business, and they were all a big and important subject when I wrote my thesis for my BBA degree at TIO (Hotel and Event Management)." (Fiona)

At the moment of this iteration NextSelect has no specific marketing, sales, strategy or innovation staff. These tasks, if they occur, are done by the director. If NextSelect's capacity grows, these employees could for example work on attracting new clients or creating new products. Or take over some of the tasks of the director who is actually too busy at the moment.

"I think that we could improve the way of assigning projects to a developer. It often goes wrong that a developer did not mention that he will run out of work, or did mention it and he gets some small updates that would keep him busy for a short while but the next day he still runs out of work. In the project folder we can find new projects but we don't really know who fits these projects best and what the expected implementation date is." (Sjoerd)

I think it would be the best for both the company ánd for the employees if we could adapt the tasks and responsibilities to the employee; they all differ, and where one employee excels at being a leader and leading a project, the other one really doesn't like to be a leader and struggles with it." (Fiona)

"It helps if I'm involved or present during the conceptualization phase of a project, the more I can understand the issues and the thinking behind the proposed solution the better." (Sander)

The developers have that freedom (to bring in your own ideas during projects or in the company in general), at least I try to give it to them, though most times they are restricted by the customer's budget. Still, I think the developers don't take the initiative to do this. (Alex)

The last four all point to fitting the right employee to the right project. Advisable seems to

- Let employees assign themselves to projects
- Involve employees early on in the project creation
- Map each employee's capabilities and preferences, and keep this in mind with assigning the tasks.
- Create a list of pending projects, possibly with some describing characteristics, from which employees can choose.

"Firstly, move to the West. Secondly, a new customer. Despite that NextSelect is making custom software and it's not really needed to have a new customer, it could be very handy. Having a new customer means creating new software from scratch. We could build a new application with the current technologies web3.0 that could be our showcase. Furthermore it creates more certainly, currently we have 3 customers, if one backs out, one third is gone. A new customer with a multi-year contract will create more certainly." (Sjoerd)

"There are EDM organizations in Indonesia (http://dreamfields.co.id/). And I think there are several EDM organizations spread throughout Southeast of Asia. There is the FMFA (Future music festival Asia) as one of the biggest event also. But from my point of view, NextSelect can also build a portal to link event and all the artist, there is a competitor in that field, but I think our connection with SFX and all the event can be used to link the artist with all the SFX event. Of course with a price or other scheme. So, a "start-up" DJ can promote his skills in one of the SFX events, of course with a fee that will profit SFX and NextSelect." (Charles)

Alpha at the moment offers great possibilities, while this company is so large and has a very extensive network. They want to take over the world and be the number one in their niche, and NextSelect can grow along with them. There is the artist management part which may have to be rebuild for Alpha. The company currently providing it might go bankrupt? NextSelect is able to take on this project. Also, a well-built documentation for the event's photos is missing in the system. There is a demand from Alpha's employees for this to be created. (Alex)

So there is probably a whole new (unexperienced?) market opening up in Asia, which could be accessed with help of Alpha who has a large network. Also the current tool used for this customer can be extended with some large extra features, there is actually a demand for this. 'MIDS NextSelect' is mentioned multiple times (Jelte, Alex) as well as the framework (Jelte, Charles, Alex). The framework is explained earlier in this subchapter, and MIDS is a system that was built for Beta, but which NextSelect has adjusted for own use. These are good examples of using your means, which is apparently already done by NextSelect.

Next to the questionnaires, I talked to a prospective intern for NextSelect. We discussed scrum software methods, and he indicated that the freedom and responsibility to choose your own tasks appeals most to him.

List of NS means:

The questionnaires were made for the employees, who possess a large part of the company's means: knowledge, competencies, experience and network. The other company means were discussed in a separate conversation, based on this questionnaire, including more personal information of the director. These means are financial, inventory and network.

Financial means:

The company can cover its costs, though it is still dependant on the customer's payments to pay its employees. This is also what is meant with the financial unbalance. So there are no financial resources present to make an investment.

Inventory:

NextSelect owns no building, the office is now rented. The office has eight workplaces at the moment, but it is large enough to expend to twelve workplaces. If even more space is needed there currently are bigger rooms available in the same building on the same floor. The office is nicely decorated and includes everything needed to perform all tasks necessary. Also there is a chill out corner with a large sofa, a television and refrigerator, employees have the possibility to hang out here if they feel like, watch a series together, play games or take a powernap. All inventories are owned by NextSelect, including servers. Only the back-up server is rented which is located in Germany.

Network:

Next to running NextSelect, the owner is head photographer for one of the daughter companies of Alpha. This means he is present at almost every event, which is basically only in weekends, but during summer almost every weekend and at some events for multiple days. Therefore his network within this customer extends far beyond just the IT department, but outside of Alpha within the same niche the network is present. Besides this Alex has connections within the photography world. Also there is a student IT company owned by a friend with whom a partnership seems possible, and there are a lot of friends with an entrepreneurial mindset, who are starting up companies or owning them. Currently Alex is working out an idea with one friend, which is the building of an app, which seems to get support from a very big player in its field.

Conclusion

Based on the questionnaire, the following means can be added:

- Employees willing to think along with company vision & future
- Employees willing to work on (or manage) marketing, sales, HR, innovation, strategy.
- Possibility to extend MIDS, and possibly use it for other (future) customers as well
- Possibility to continue with the implementation of the framework, which will improve efficiency.
- The SFX tool and its 'customers', and SFX' network. Markets can be opened in Asia, with help of SFX' network.

And the following advices can be given/ implemented.

- Let developers self-select into projects. For this an overview of pending projects should be created.
- Involve employees early on in the project, possibly upon a request, probably a developer can replace Alex' work there. Alex can focus on other tasks and just check an SRD for approval.
- Capture a new customer, to create more certainty in income.
- Create a new product (possibly for this new customer), which will serve as showcase. It can be built from scratch so new technologies (web 3.0) can be used.
- Assess the developed systems in terms of usability for other existing customers, new customers, new markets, different uses, or own use.
- Propose the requested adjustments to Alpha's tool.

Based on the diagnosis in 4.1.1 the problems can be mapped:

Problems:
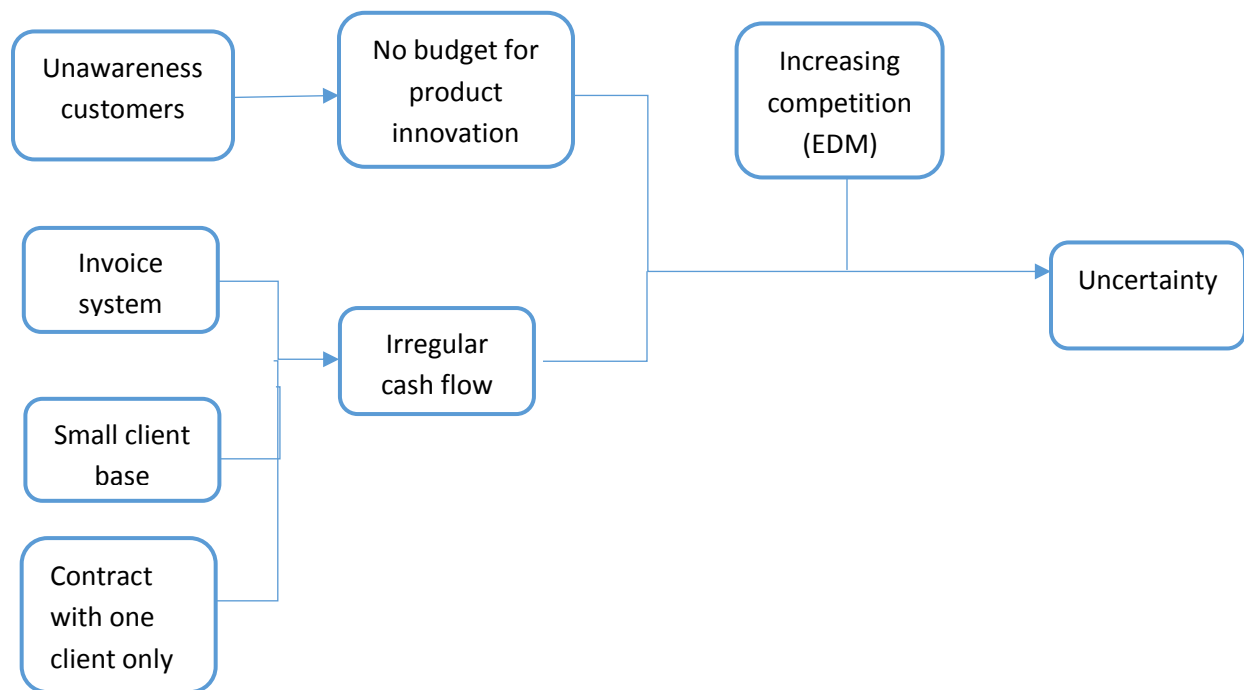
4.1.5 Reflection

As a result of heuristic 1M: 'Make a pool of resources: map your company's and your employee's means' the director and all employees have indicated their means. After analysing these means with the director, it was found that most means were already known. Because it is a small firm (only the director and five employees), the personnel knows each other and communicates a lot together, also because they work on projects together. The director is the founder and his been there from the start, therefore he knows a lot about the company. It can be argued that the mapping of means can deliver more interesting results for companies larger in number of employees, where a more formal structure dictates, and where employees collaborate less.

Most of the employees have extensively answered the questionnaire, and it seems like they want to come up with ideas and think along with the company. It is not known yet if employees will come up with ideas their selves, or they need to be stimulated to do so. Besides the creative ideas coming from the questionnaire, no specific innovations were derived from the means yet. Therefore principle 3M (find creative ways to use the available means to the company's advantage) should be applied later during this research.

The director found it useful that the outcome of the questionnaire was brought under his attention. Especially the demand of self-selection into projects and early involvement of employees in projects will be acted upon. Actually this was already planned but because of the busy schedule not yet acted upon. From now on this will be taken into account for every project started. As a test some employees will start to interact with the customer about the requirements for a project and work on the agreement themselves, work that the director usually did by himself. Also the idea to create a new product to use as a showcase for future customers is accepted, this may possibly be executed in the form of the new project for Alpha, so it is important to have more clarity on this subject as quickly as possible. Therefore we choose to shift the focus of this research to that project, instead of further elaborating on the bird-in-hand principle.

Conclusion iteration 1

The mapping of the pool of resources by means of the questionnaire did not bring any groundbreaking results. While the mapping of means may always seem useful, even if it is 'just to be sure', the question raises to what extent this is still true in companies with short lines of communication. Therefore I suggest that the effect of heuristic 1M (make a pool of resources: map your company's and your employee's means) might be moderated by factors such as company size (in employees), level of formality, and collaboration among employees. Also, even though not tested in this case, for the same reason I argue that heuristic 2M (create an organizational structure which incorporates the pool of resources and stimulates and rewards employee's effectual behaviour) could be affected by the same moderators, because the fact that all present means are already known within the company, implies that new means turn into known means rather fast, which could be due to short communication lines.

Because in this iteration no further actions were taken on the means, and because this was only a one-time measurement (valuable data could appear at another point in time): to be able to make fully use of the pool of resources, applying all of the bird-in-hand heuristics is advised.

4.2 Iteration 2

With the pool of resources mapped, the foundation for all other actions is laid. The most urgent issue is the upcoming meeting with Alpha and Epsilon. This meeting is the main dish for this iteration.

4.2.1 Diagnosis

Compared to the first diagnosis, the pool of resources has now become available, which can be found in the first iteration and will therefore no further be discussed here. Next to this, more information about the new project and Epsilon has become available. Alpha and Epsilon had a first meeting together which was regarded positive. Epsilon has a liquidity problem and needs an investor; it can therefore well use a partnership with Alpha. Alpha proposes the creation of a new corporation, in which all three parties (Alpha, NextSelect, Epsilon) take a share (as an example Alpha named 33% for all). This new corporation will supply the specific Alpha-tool (now developed solely by NextSelect) as well as the generic event market tool (now developed by Epsilon). In this way Epsilon can make use of NextSelect's expertise (and customer), and Alpha's funding and network; in exchange NextSelect and Alpha get a share in a potentially growing product in a booming market, especially internationally where Alpha has a huge network.

4.2.2 Action planning

The results of the diagnosis and the questionnaire were discussed with the director at the end of the first iteration. We decided to act on the most urgent issue: the current situation with Alpha and Epsilon. Just like the mapping of means is a prerequisite for the actions to take during the remaining of the project, the outcome of this situation is a prerequisite for any other actions to take, while the project discussed here is so big that, if accepted, the project itself will demand more capacity than NextSelect currently has. Therefore additional personnel should be hired, the work for other customers depends on that, and the possible search for other customers should be delayed. A meeting has been planned with Alpha and Epsilon to meet each other in person and to discuss the possibilities, which may be a partnership. Epsilon could be seen as a threat, which the director and the employees do. Though effectuation states that the appearance of Epsilon should be seen as a possibility, it might even be a lucrative partner. Clearly the partnership principle applies in this situation; it will now be discussed whether to use them or not and why:

10Q. Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.

Epsilon should be seen as a potential partner, and the possibilities for partnership should be discussed, also together with Alpha. Discuss company's visions and see if there is any fit. Although for now the idea is to work together on one big project, there may be more possibilities and the companies could benefit from each other's strengths. For example: NextSelect has 13 years of development experience for what

is now the largest company in its niche, Alpha has a very extended network within this niche, and Epsilon operates within and beyond this niche, building a client base within other niches, but where the same kind of product/ service is needed. Pursuing a generic event organization tool these three parties could create a competitive advantage.

11Q.   In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.

First, as it is stated 'in order to reduce risk', the question arises what risk is reduced by starting this partnership. Apparently Alpha's project is very important to them, and while NextSelect does not have enough capacity, there are two options: NextSelect hires (be it temporary) extra developers, or another party is introduced (which Alpha does: Epsilon). While the project should be finished in 4.5 months (and probably it will take another month before this is arranged) there is only little time to install a whole team of new developers. And what are the guarantees after this project? Is there still plenty of work then, or will everything go back to normal? It may not be ideal to find a team of developers who should work on a project devotedly and also not on a high budget. So only based on the assumption that this project will be executed anyway, starting a partnership seems the better option. Second, in order to become partners commitment is very important and this should be promised before the start of the partnership. So commitment is an important topic to be discussed during the meeting.

12Q.   Use pre-commitments from partners, suppliers and customers as often as possible.

Heuristic 12Q differs from 11Q in that it is more generic and takes other stakeholders into account, and it can be applied to extant relationships. Because 11Q focuses more on the start of a new partnership including its commitments, and this iteration is about a possible new partnership, heuristic 12Q will be left out in this part of the research.

13Q.   Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.

Sharing gains and risks is important for any fair relation. The expected risks and gains are a point of discussion before any agreements are made. Expected/ planned shares should be mapped as well as the risks involved with a potential partnership and the project. It asks some special attention in this case where NextSelect has been the sole IT-supplier of Alpha for so many years, it seems fair that gains are shared in proportion, and the bigger risk for them seems present by sharing their unique position as sole IT-supplier.

14Q.   When a partnership is established, combine your pools of resources and make use of the synergetic effect.

It may be indicated during the meeting that this is a plan for when the partnership is established. However, this cannot be seen as a prerequisite to start the partnership, and therefore will be left out of this iteration.

Next to the crazy quilt heuristics, two other heuristics seem especially applicable to this situation:

5A.   Invest/ risk only what can be afforded to lose.

In case investments are discussed already, make clear that NextSelect cannot invest any financial resources, while they are simply not present. So another creative way to find funding should be invented when this is necessary. Also belonging to this principle is the sharing of the software code. This may not be financial, but is a highly valuable asset of NextSelect, according to the director this is worth more than the money of the project. So it cannot be shared without any commitments. This will be made clear as well.

8L.   Use potential setbacks or external threats as advantageous as possible.

The upcoming of Epsilon is actually seen by NextSelect as an external threat, and therefore seems to be treated as such. Following effectual logic, a shift in thinking is required to convert healthy suspicion into possibility. That is what the implementation of this heuristic will do: inform NextSelect with the effectual logic, especially on partnerships and contingencies, to open up the view on this situation and allow these 'threats' to become advantageous.

Applied heuristics:

During this intervention the following five heuristics will be applied:

5A.   Invest/ risk only what can be afforded to lose.

8L.   Use potential setbacks or external threats as advantageous as possible.

10Q.   Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.

11Q.   In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.

13Q.   Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.

Expectations:

In the current situation, a partnership with Epsilon and Alpha is expected, in which the project for Alpha will be developed, mainly by NextSelect and in which NextSelect gets at least half of the budget/ work for this project, and NextSelect gets a share in Epsilon's generic market product. Epsilon is expected to cooperate in this not just because they can make use of the resources of two experienced parties, but also because they are dependent because they have liquidity problems. There is no financial investment from NextSelect and neither can there be from Epsilon, so Alpha should provide in this. This financial investment will basically mean paying the costs of the project (partly) in advance, which sounds reasonable. NextSelect remains the preferred supplier for Alpha, also after the implementation of the project. Their position may not be endangered due to the coming of Epsilon. Here NextSelect should take a stand.

4.2.3 Intervention

The moment of the intervention is the preparation of the meeting with Alpha and Epsilon, which consists of the actions as described under action planning, as well as the meeting itself, during which this preparation is applied. Present were one representative from Alpha, the director, two developers of NextSelect and me as researcher, and three employees of Epsilon. During this meeting the NextSelect and Epsilon staff could meet each other, and get to know each other a bit, while both parties indicated that the mutual feeling should be good in order to start a partnership. I introduced myself as researcher and told shortly about the effectual logic and partnerships in particular. Only minor details about the software development of the project and possible constructions of a partnership were discussed. Also the budget and possible construction of shares were mentioned, though nothing In the end all three parties decided they would like to continue their partnership so far, and agreed upon presenting a three-year vision of their company regarding the partnerships with the other two parties and the Alpha project, during a meeting next week.

4.2.4 Evaluation:

This meeting was namely to check if a partnership was possible, and on what basis this could happen. The outcome of the meeting is that all three parties involved would like to further negotiate on the

possibilities of a partnership. In what form, will be discussed later. First it is important to determine whether a partnership will be possible for the big project of Alpha, which should be finished by December. The parties will create a document with their company's three-year vision and present it next week, to further elaborate on the partnership. The plan is to make a decision whether to agree on a partnership or not, after that meeting. Alpha proposed what they called a 'kiss-trajectory', in which NextSelect and Epsilon could work together during the project, to experience their cooperation. Then after these four months a definitive decision can be made, whether or not to continue their cooperation. Alpha's project is so big that NextSelect estimates that they will need to focus almost fully on this project, and if they do that together with Epsilon they might still be short on capacity. Now the application of the heuristics will be discussed:

5A.   Invest/ risk only what can be afforded to lose.

It was made clear that there is no money available for investment, and that any project should be paid ahead. The same was true for Epsilon. While a construction was discussed in which also Epsilon's tool should be funded, this was a point of discussion. Alpha actually does not want to pay for that. Therefore it was suggested that the budget for the project goes into the new corporation, which pays NextSelect and Epsilon who develop the Alpha resp. the generic tool, and the money from the generic tool would flow back into this new corporation, with which the development of its own tool can be funded again. This was just an idea, and details would be discussed after the 'kiss trajectory', which unfortunately will be outside the timespan of this research. Still, it became clear that opportunities exist to apply the affordable loss principle, which is in this case proposed to be solved by forming partnerships. For the big project which will be developed first there should be no financial risk, while Alpha pays for it in advance. But, it an estimation of the costs still has to be made, when NextSelect and Epsilon go into the developer's details of the project. The sharing of the main software code should not have to be done, because Epsilon will focus mainly on developing a new part, apart from the development done by NextSelect (which builds further on its own tool). Still, NextSelect demands that agreements on this are made and will be signed in a contract. A contract for this 'kiss trajectory' is requested upon.

8L.   Use potential setbacks or external threats as advantageous as possible.

While the healthy suspicion remains among NextSelect's employees, the director sees things more positively after this meeting. The feeling was right for him, and another reason is that he spoke to a person at Alpha which told him that it happens more often that Alpha simply buys a smaller company

when they see growth potential (this refers to Epsilon's generic tool, for which Epsilon would give away share in the new corporation). Young companies get to work with Alpha and can make use of their resources, for which in exchange they get a share in that company, sometimes even more than 50%. As they put it towards those companies 'you can better have a 10 % share of a company that is worth ten million euros than a 100 % share of a company that is worth 50.000 euros'. And there are examples in which young firms actually did grow very large with help of Alpha's resources. Some of these companies are within the director's network.

10Q.   Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.

It is clear now that Epsilon is seen as a potential partner, more on this will be sure next week. Considering the co-creation of the future, the construction of the new corporation as proposed by Alpha offers the possibility to co-create the future, pretty much as described in the action planning section on this heuristic. However, if this is truly going to happen will unfortunately not be known during this research due to the time restriction.

11Q.   In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.

To reduce the risk of losing valuable software code, commitments have to be made, otherwise NextSelect will not go into a partnership. Also the commitment must be made that NextSelect's position will not be done harm; they remain the main supplier for Alpha. These restrictions should be put in the contract that will be made for the kiss-trajectory.

13Q.   Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.

Some gains and risks have been discussed, among which the earlier mentioned software code and the financial investment. But no binding agreements could be made yet.

Outcome/ conclusion:

The focus after this meeting shifts from a general partnership to a 'kiss trajectory' between NextSelect and Epsilon, a period of 3-4 months in which the two companies will work together and on which they can base their future plans together (or cancel these in case it does not work well together).

Speculations about what will happen after this period are discussed, but the actual implementation of these plans falls outside the timespan of this research, unfortunately.

There will be a meeting next week, for which each party will deliver and present their company's vision for the next three years, about:

- Their role in Alpha's project, and how they think to fulfil this role.
- The cooperation with the other parties.
- Their general company vision.

When the parties agree to go into a partnership for this kiss trajectory, a contract has to be made, including the sharing of gains and risks; this includes the division of the budget, access to the software code, and for NextSelect preservation of their current position at Alpha (maybe trivial, but an exception may be underperformance).

Furthermore, there is not yet enough information available to measure the effects of most heuristics, the introductory character of this meeting implied that no decisions have been made yet. More time is needed, possibly a contract for the kiss trajectory. Therefore the evaluation of the heuristics will be 'parked' for now and addressed again later in this report when more information is available.

4.2.5 Reflection

The question arises to what extent effectuation is truly influencing this project. For example heuristic 8L (use potential setbacks or external threats as advantageous as possible) seems to work so far, NextSelect sees more possibilities than threats. But, was this because of effectuation? For the feeling after the meeting, we simply don't and cannot know. The example that was told, may also have triggered the shift in thinking. And this could have happened without effectuation as well. Also, effectuation was not always applied purposively, sometimes effectual events appeared on their own. Whether this was intended or not, the purpose of this thesis is to examine the effects of effectuation heuristics on the incumbent firm, which is still achieved in this way: I will elaborate on this here. Starting with the event that the idea to build a generic market tool (an idea which in effectual language would have been created by making use of your own means) was offered to Alpha by NextSelect just before the start of this research, and therefore without conscious knowledge of effectuation. Also, when later Alpha proposed this idea itself, they were the ones that came up with a partner for NextSelect to cooperate with. Also the idea of this partnership did not come from NextSelect or from this research. But because of that, it did bring in a potential threat, for which the lemonade principle could be applied.

Also, the crazy quilt (partnerships) heuristics could still be applied on Epsilon. Therefore, one way or another, the effect of the effectuation heuristics can be examined.

Apart from the description, I observed that in the history of the company and its founder, effectual logic has been applied multiple times, during some major decisions. For example: the journey of the founder began with photographing at Alpha's events (back then a daughter company of the present Alpha), which was his hobby. Next to shooting people (with the camera), software development also was his hobby. When Alpha was growing the demand for a software tool increased, on which he knew to anticipate, and that is the moment that NextSelect was born. You can see here that from starting with your means (hobby/ preferences/ skills) a contingency occurred (the need for a software tool) within his network (means again). Effectuation appears to be natural behavior in the environment of this research, which is an interesting outcome. This could mean for example, that the director of NextSelect possesses the logic of thinking of expert entrepreneurs, as well as do the people at Alpha. In the remaining part of this research we might see if this can be confirmed of rejected.

In the case of the founding of NextSelect I must add that taking action is the one thing that is necessary to successfully utilize this possibility. The role of entrepreneurial action may be an interesting avenue for future research on using effectuation, for now I will restrict it to a reference to an interesting article from McMullen & Shepherd (2006).

Next step:

With the meeting for next week planned already, the path to follow to the next iteration seems clear: prepare a three-year vision for NextSelect's role in the project, the cooperation with Epsilon, and the general company vision. While no decision has been made yet on the partnership, and with the deadline for the Alpha project still apparent, this remains the most important issue to act on for NextSelect. With this in mind, the next iteration will start its diagnosis, after which will be argued how effectuation heuristics can contribute to this situation.

4.3 Iteration 3

In this iteration NextSelect's future vision as well as its view on the partnership with Epsilon will be expressed, and presented during the second meeting (ten days after the first meeting) after which it should become clear if the partnership with Epsilon will take place, and in what form.

4.3.1 Diagnosis

Little has changed compared to the diagnosis at the last iteration, the parties have now met each other and at least for now 'the deal is still on'. Further ideas and details will be discussed during the coming (second) meeting. NextSelect now knows a bit more about the possibilities with Epsilon and the director sees opportunities to work with them. The current situation was discussed a lot after the first meeting. NextSelect sees the product of Epsilon, the generic market application, as a potential goldmine. By entering a partnership in the form of a new company, as proposed, NextSelect can get a share in this product without a direct financial investment, and if contractual arranged properly, also other risks of losing Alpha as customer or sharing valuable software code could be kept low.

4.3.2 Action planning

The next meeting has to be prepared: this consists especially of the three-year vision file, in which NextSelect's preferences as well as the effectuation heuristics should be processed. The plan for the meeting is to convince the other parties of the most favourable (though realistic) situation for NextSelect. This is the chance for NextSelect to shape the environment it operates in (pilot-in-the-plane principle). Even though the focus has shifted to the 'kiss trajectory', ideas about what will happen after this period should still be represented in this file, and be given a serious thought. Three main themes appear in this vision, which are filled based on the vision of the director and all of the heuristics as addressed in the second iteration (5A, 8L, 10Q, 11Q, 13Q). The ideas regarding the implementation of these heuristics have not changed and will therefore not be mentioned again here.

- What is NextSelect's general company vision?

This was discussed with the director: growth is necessary in order to survive. He and NextSelect have invested a lot in Alpha and it has not really paid out yet. This may be the chance. First, Alpha's project brings along the highest budget so far for NextSelect for one project, and the partnership with Epsilon also offers fruitful opportunities after that project. Preferably this will occur. Next to this opportunity, customers should become aware of the research and development costs inflicted with a custom software solution. If customers want to pay for this, software can stay up to date and it generates a more certain income flow.

- How does NextSelect see the cooperation with the other parties (Alpha and Epsilon)?

This is about the cooperation after the kiss trajectory:

- Alpha and NextSelect both become 30% stakeholder of Epsilon.

- NextSelect ensures at least 30% of the Alpha tool development budget goes to Epsilon; this means Epsilon will help with the development of the Alpha tool.

- NextSelect remains leading developer and "hires" Epsilon for development.

- Information sharing, so all parties will benefit and make the Epsilon tool successful in the global EDM market.

- Alpha tool remains fully tailored tool according to the needs and wishes from Alpha.

- Revenues from the EDM market also flow to Alpha and NextSelect and can be used for further research and development of the Alpha tool.

- What will NextSelect's role in Alpha's project be, and how will this role be fulfilled?

For the director they will be playing the same role for this project as described above here.

Altogether these heuristics and ideas are processed in NextSelect's three-year vision, which can be found in appendix D.

A discussion with the employees will be started in order to get support for this new project, and the partnership. The director believes that everybody should support the vision and the actions to take, because if it cannot be done as a team he is convinced it is useless to start the project. This can be seen as an internal pre-commitment. Heuristic 12Q could be applied, adding 'employees' to the stakeholders mentioned already. The need for committed employees may seem redundant to mention, though in a project-based environment it could occur that some projects or partners are less tolerated by employees, which may lower performance. To make sure that this is not the case in this important project, the director finds it necessary to discuss this with the employees. Also, he thinks the employees should self-select onto the different subprojects the project bring with it.

When the parties agree to go into a partnership for this kiss trajectory, a contract has to be made, including the sharing of gains and risks; this includes the division of the budget, access to the software code, and for NextSelect preservation of their current position at Alpha (maybe trivial, but an exception may be underperformance). Both the pre-commitments from the employees as well as from the partners belong to the following heuristic, the only heuristic that will be added next to the five which have been 'brought' from the second iteration.

12Q.   Use pre-commitments from partners, suppliers and customers as often as possible. (add employees to this heuristic)

4.3.3 Intervention

The three-year vision was presented during the meeting, this time attended by the same people as last week complemented with Alpha's IT manager. Different possibilities were discussed, but in the end all parties agreed that the proposition of NextSelect would be the most suitable solution under these circumstances. Alpha pointed at the possibilities for the generic tool to grow worldwide, with help of Alpha's extended network. They are already networking all over the world and according to them the market for EDM outside of Europe is huge and they have seen with own experience that the software solution they use, are not available to most organizations. They need it! Alpha makes it sound like the new corporation can grow really big. Another issue discussed is integrity, apparently there seems to be a sort of rivalry amongst Alpha and its competitors. It is even that bad, that Epsilon got their services rejected a Alpha's competitors because they were doing business with Alpha. This could be a huge problem because: Alpha is the largest organization in its niche worldwide, and they are already provided with their own custom made software solution: the Alpha tool. So in order to make money on a generic software solution, this should be sold to competitors. But if that rivalry truly is that bad, and competitors get to know that Epsilon (their supplier) works together with Alpha, they may not sell anymore. Concurrently Alpha points that this rivalry happens mainly in the Netherlands, but not so much in the rest of the world.

Now back to the current plan: the kiss trajectory. All three parties agree to work together in the kiss trajectory, and to specify their demands so they can set up a contract for this period. Because of the deadline it is demanded to start as soon as possible though.

4.3.4 Evaluation

The three-year vision was received well, and it seems like the preferable structure for all parties. Still, every party would like something like a 'try-out' period, in which they can work with each other before stepping into this serious partnership directly. There are two ways to look at this, it can be seen as a pre-commitment (though temporary), or it can be seen as postponing the true commitment (or both). A few weeks later NextSelect and Epsilon start working on the project already, but the contract is still not signed. A non-disclosure agreement (NDA) was signed though.

For the future Alpha indicated they have big plans with the product of Epsilon, which they will be able to promote over the whole world, mainly in booming markets as the U.S.A. and Asia. This sounds like a fruitful opportunity, and may be very lucrative if it can be added to the pool of resources.

4.3.5 Reflection

It is remarkable that the signing of a contract seemed like a prerequisite to start the kiss trajectory, but while the project is now started without the contract this suspicion seems to have shifted to trust. After discussing this there still seems to be some level of healthy suspicion, but also a believe that it will be alright. Therefore I wonder what has caused this sudden 'easy going'. If trust is truly built, what has caused this? This is an interesting question, where the fields of entrepreneurship and psychology can intersect.

The role of incumbency should also be discussed here; one might argue that the opportunity offered to NextSelect, to take part in a new, promising corporation is linked to its incumbent state. NextSelect is trusted by Alpha, and has a created a lock-in effect for itself, by being the only company who has knowledge of their full organizational software. Probably a start-up would not get a chance like this that easily.

At this point we have reached the time deadline for the thesis. Therefore the cyclical process model will be ended at this stage. Next is a section on effectuation events that occurred alongside this process, not intendedly triggered by this research, followed by a conclusion of this whole chapter.

4.4 Unplanned effectuation events

As already mentioned in the reflection of the second iteration, some (effectuation) effects seem to appear naturally, without a purpose coming from this research. In this section I will describe some of these events, and discuss their value for this research.

4.4.1 Arrange subsidy

The director brought to my attention that there exists a subsidy for innovation in IT-companies. Simply described, a company can apply for this if it implements any (radically) innovative activity, which is actually beyond the scope of their core business. This is an idea from the government to stimulate innovation. An appointment was made with a company specialized in this subsidy; they came for an introductory meeting, and will request this subsidy if it seems viable. These meetings are for free, the only thing they charge is a percentage of the subsidy you receive, and only *if* you receive it. So the only investment on your part is some time, assuming that the information provided is treated confidentially, which you can while this is signed in a contract. It is not yet known if a subsidy will be provided, but actually knowing and applying for this subsidy is a creative way of searching for financial resources.

Therefore heuristic 7A (use creative ways of financing, or getting resources, use bootstrapping) was applied here, and subsidies can be added as an example here.

4.4.2 Use pre-commitments from customers

Of the three active customers only Beta has a fixed contract, in which a minimum and maximum number of hours are secured. For Alpha it is still unclear how the contract will look like, as described in the previous iterations. Then the customer Gamma remains, for which the director is working on a contract as well, also with a min/ max hour structure. This is done without a push from this research, so without an effectuation intensity. NextSelect as incumbent firm tries to use as much pre-commitments as often as possible (heuristic 12Q).

4.5 Conclusion

The biggest project in the history of NextSelect is started. This project was so large that additional developers were needed, which have come in the form of Epsilon, a partner of NextSelect's customer Alpha. The current partnership is described as a 'kiss trajectory', and after this try-out period a decision will be made on how to continue. There are plans for the creation of a new corporation among the three parties, in which the development of the Alpha tool and the generic Epsilon tool will be shared among NextSelect and Epsilon, from the viewpoint of the focal firm NextSelect this is advantageous because Epsilon offers a generic tool and Alpha wants to promote this tool worldwide and make it real big.

The following heuristics have made this possible:

5A.   Invest/ risk only what can be afforded to lose.

8L.   Use potential setbacks or external threats as advantageous as possible.

10Q.   Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.

11Q.   In order to reduce risks, start partnerships, with partners that are willing to commit from the onset.

12Q.   Use pre-commitments from partners, suppliers and customers as often as possible. (add employees to this heuristic)

13Q.   Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.

Also heuristic 7A (use creative ways of financing, or getting resources, use bootstrapping)

was found to be applied, though not on purpose of this research. Find subsidies can be added as an example here.

In the specific case of NextSelect, heuristic 1M (make a pool of resources: map your company's and your employee's means) did not contribute directly to the company. This could be due to the smallness of the company represented by short communication lines.

5. Conclusion & Recommendations

5.1 Conclusion

In order to find effectuation heuristics for the incumbent firm, an action research study has been executed on the firm NextSelect. This research distinguishes in two ways: 1) Actionable guidelines based on the effectual logic are created, for actually *using* effectuation. So far effectuation was only analyzed retrospectively. 2) In an uncertain environment, the heuristics are applied to an incumbent firm, contributing to a recently opened field of research: effectuation in the corporate context.

The research question 'How can effectuation heuristics be applied in the incumbent firm?' is answered by means of the following heuristics, designed for use in the incumbent firm.

1M.	Make a pool of resources: map your company's and your employee's means.
2M.	Create an organizational structure which incorporates the pool of resources and stimulates and rewards employee's effectual behaviour.
3M.	Find creative ways to use the available means to the company's advantage.
4M.	Experiment with different products and/or business models to see what works best.
5A.	Invest/ risk only what can be afforded to lose.
6A.	Select opportunities based on minimization of risks and costs.
7A.	Use creative ways of financing, or getting resources. Use bootstrapping.
8L.	Use potential setbacks or external threats as advantageous as possible.
9L.	Add new information to your pool of resources and check if new opportunities arise.
10Q.	Perceive new actors on the market as potential partners, and approach them very early on in order to jointly co-create the future.
11Q.	In order to reduce risks, start partnerships, with partners that are willing to commit from the

	onset.
12Q.	Use pre-commitments from partners, suppliers, customers and employees as often as possible.
13Q.	Aim to insure that gains and risks in new as well as existing partnerships are shared fairly.
14Q.	When a partnership is established, combine your pools of resources and make use of the synergetic effect.

Heuristics 2M, 3M, 4M, 6A, 9L and 14Q were only theoretically funded and were not tested in this research.

Unfortunately, not all effects of the applied heuristics could fully be analysed, while the partnership only just started and it is not known yet how this will develop. Another fact is that a partnership *did* come forth out of this study, and while effectuation is a continuous process, final effects will always be hard to measure. For now the heuristics have worked, and brought a positive effect to the incumbent firm.

5.2 Limitations

The first iteration raises the question to what extent the mapping of means is useful in small companies. In the case of NextSelect the employees work closely together, and the director is also the founder. Therefore a lot of information coming from the means was already known. Still, information might be known, but not acted upon. Therefore a mapping of means is advised for incumbent firms, though its effect might be moderated by factors such as company size (in employees), level of formality, and collaboration among employees.

Though focused on the incumbent firm, an important assumption in this research is the presence of environmental uncertainty in which effectuation can best be applied. This research was operated in such an environment. This research does not speculate any outcome based on incumbent firms in certain environments. It must be said that the relationship between the heuristics and the outcomes may be moderated by environmental, psychological or other factors (Sarasvathy, 2008).

Due to a limited time span, final results cannot be given with 100% certainty, while the final effects are not known at the moment of publication. It might happen that some effectuation heuristics, as they were initiated during this project, experience delayed effects.

Effectuation was not always applied purposively, sometimes effectual events appeared on their own. Whether this was intended or not, the purpose of this thesis is to examine the effects of effectuation heuristics on the incumbent firm, which is still achieved in this way:

The question arises to what extent effectuation is truly influencing this project. For example heuristic 8L (use potential setbacks or external threats as advantageous as possible) seems to work so far, NextSelect sees more possibilities than threats. But, was this because of effectuation? For the feeling after the meeting, we simply don't and cannot know. But the example that was told, may also have triggered the shift in thinking. And this could have happened without effectuation as well. Also, effectuation was not always applied purposively, sometimes effectual events appeared on their own. Whether this was intended or not, the purpose of this thesis is to examine the effects of effectuation heuristics on the incumbent firm, which is still achieved in this way: I will elaborate on this here. Starting with the event that the idea to build a generic market tool (an idea which in effectual language would have been created by making use of your own means) was offered to Alpha by NextSelect just before the start of this research, and therefore without conscious knowledge of effectuation. Also, when later Alpha proposed this idea itself, they were the ones that came up with a partner for NextSelect to cooperate with. Also the idea of this partnership did not come from NextSelect or from this research. But because of that, it did bring in a potential threat, for which the lemonade principle could be applied. Also, the crazy quilt (partnerships) heuristics could still be applied on Epsilon. Therefore, one way or another, the effect of the effectuation heuristics can be examined.

Heuristic 8L: 'Use potential setbacks or external threats as advantageous as possible.' seems to work so far, NextSelect sees more possibilities than threats. But, was this because of effectuation? For the feeling after the meeting, we simply don't and cannot know. But this example that was told, may also have triggered the shift in thinking. And this could have happened without effectuation as well.

5.3 Recommendations for future research

While the mapping of means may always seem useful, even if it is 'just to be sure', the question raises to what extent this is still true in companies with short lines of communication. Therefore I suggest that the effect of heuristic 1M (make a pool of resources: map your company's and your employee's means) might be moderated by factors such as company size (in employees), level of formality, and collaboration among employees. Also, even though not tested in this case, for the same reason I argue that heuristic 2M (create an organizational structure which incorporates the pool of resources and

stimulates and rewards employee's effectual behaviour) could be affected by the same moderators, because the fact that all present means are already known within the company, implies that new means turn into known means rather fast, which could be due to short communication lines.

With regard to the earlier mentioned influence of effectuation; in the case of the founding of NextSelect I must add that taking action is the one thing that is necessary to successfully utilize this possibility. The role of entrepreneurial action may be an interesting avenue for future research on using effectuation.

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Appendix A: Guiding questions for canonical action research

By (Davison, Martinsons, & Kock, 2004)

Criteria for the RCA:

1a Did both the researcher and the client agree that CAR was the appropriate approach for the organizational situation?

1b Was the focus of the research project specified clearly and explicitly?

1c Did the client make an explicit commitment to the project?

1d Were the roles and responsibilities of the researcher and client organization members specified explicitly?

1e Were project objectives and evaluation measures specified explicitly?

1f Were the data collection and analysis methods specified explicitly? (Davison et al, 2004, p. 70)

Criteria for the CPM:

2a Did the project follow the CPM or justify any deviation from it?

2b Did the researcher conduct an independent diagnosis of the organizational situation?

2c Were the planned actions based explicitly on the results of the diagnosis?

2d Were the planned actions implemented and evaluated?

2e Did the researcher reflect on the outcomes of the intervention?

2f Was this reflection followed by an explicit decision on whether or not to proceed through an additional process cycle?

2g Were both the exit of the researcher and the conclusion of the project due to either the project objectives being met or some other clearly articulated justification? (Davison et al, 2004, p. 72)

Criteria for the Principle of Theory:

3a Were the project activities guided by a theory or set of theories?

3b Was the domain of investigation, and the specific problem setting, relevant and significant to the interests of the researcher's community of peers as well as the client?

3c Was a theoretically based model used to derive the causes of the observed problem?

3d Did the planned intervention follow from this theoretically based model?

3e Was the guiding theory, or any other theory, used to evaluate the outcomes of the intervention? (Davison et al, 2004, p. 74)

Criteria for the Principle of Change through Action:

4a Were both the researcher and client motivated to improve the situation?

4b Were the problem and its hypothesized cause(s) specified as a result of the diagnosis?

4c Were the planned actions designed to address the hypothesized cause(s)?

4d Did the client approve the planned actions before they were implemented?

4e Was the organization situation assessed comprehensively both before and after the intervention?

4f Were the timing and nature of the actions taken clearly and completely documented? (Davison et al, 2004, p75.)

Criteria for the principle of learning through reflection:

5a Did the researcher provide progress reports to the client and organizational members?

5b Did both the researcher and the client reflect upon the outcomes of the project?

5c Were the research activities and outcomes reported clearly and completely? (Are facts and judgments distinct?)

5d Were the results considered in terms of implications for further action in this situation?

5e Were the results considered in terms of implications for action to be taken in related research domains?

5f Were the results considered in terms of implications for the research community (general knowledge, informing/re-informing theory)?

5g Were the results considered in terms of the general applicability of CAR? (Davison et al, 2004, p. 77)

Appendix B: The researcher-client agreement

Agreement on the research project between the 'researcher', Koen Vliek, and the 'client', Alex van Oostrum. The project executed is a research project executed by the researcher for achieving the 'Master of science' grade in Business Administration at the University of Twente, executed at the client's company, NextSelect.

This agreement provides a mutual understanding of goals, expectations, benefits and drawbacks of the project. The demands and expectations of both the researcher and the client are described. The goals of this research are:

Objective A (science):

Extend Sarasvathy's effectuation framework to its usage in the incumbent firm, by creating effectual heuristics and applying these in an action research.

Objective B (firm):

Support NextSelect in determining the company's future direction, by providing and applying effectuation heuristics.

The researcher will try to address the company's issues, as discussed before the start of the project and to be further investigated during the execution of the project, by applying effectual heuristics.

Next to tackling these problems, effectual heuristics will be applied to the company from an entrepreneurial view.

Striving to meet both objectives, the action research method is used. In action research the researcher and the client work together closely, the research focus is chosen collaboratively and the relationships among participants are organized as joint learning processes. Action research focuses on doing 'with' rather than 'for' stakeholders. Action research is unique in the way it associates research and practice, so research informs practice and practice informs research synergistically.

As a guideline the cyclic process model (CPM) will be used. It consists of five stages as shown here.
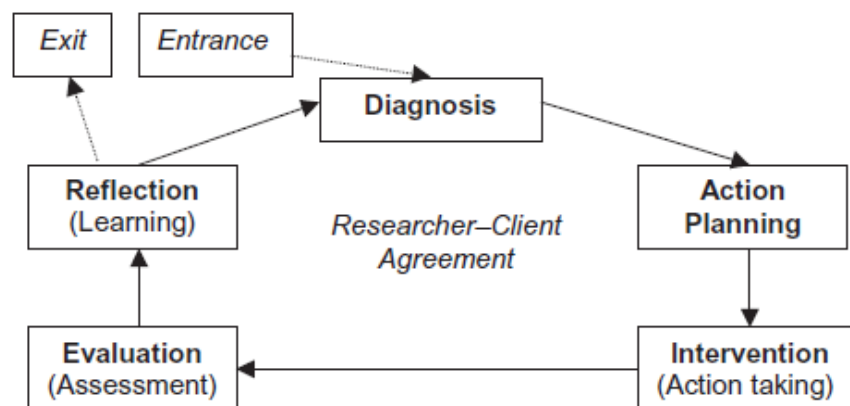
Every cycle starts at the diagnosis stage and ends at the reflection stage. Steps for every stage will now be described:

Diagnosis:

During this stage the current situation is analyzed. What problem is *present*? This means a new diagnosis is done each cycle. In the first diagnosis a business analysis is done based on the company's assignment (see appendix) and own experiences (diary) so far. Then meet with Alex to discuss if this is correct and what can be added.

Action planning:

Here a fit between the current situation and effectual heuristics is being sought. Where this is possible and justifiable, effectual heuristics are planned to be applied on the company. Measures to determine its effects are created in this stage, along with a guideline on how and when to check these. If applying effectual heuristics is not possible or not justifiable, another approach is chosen. This is ok for the

research too, then it will simply mean effectuation does not work in that specific case. Here again, everything is agreed upon with the client.

Intervention:

In this stage the planning is being executed. Everything that is done has to be documented exactly.

Evaluation:

This is a comprehensive assessment of the situation after the intervention. Was the planned action actually performed? Or where certain things not possible? What issues arose? What results are measured? Can other effects be expected in a later stage?

Reflection:

A comparison of the situation before and after the intervention. What do the results indicate? Were effects solely caused by the effectual approach? What can we learn from this cycle? Are the applied heuristics suitable in this case or should they be adjusted? Also, consider results in terms of implications for further action within the project, within research in general (the domain), and the applicability of AR. The reflection stage finally provides the choice to proceed through an additional process cycle or finish the project. This should be well justified. At the end of a cycle a progress report is made by the researcher, which will be spread among organizational members.

Start & finish

The projected will be started today (July 2nd, 2015) with an analysis of the company by the researcher. Due to time restrictions, the time span will not be more than two months. In the first week of September the results should be reported. Depending on the quantity and richness of the information retrieved, the total number of CPM cycles will be chosen.

Events occurring outside of the CPM:

The researcher will keep a diary. Relevant events which occur along, and are not specifically a part of the CPM can be found in the diary.

The role of the researcher:

The researcher will be doing the work where possible. He will consult with the director always before making a decision or finalizing a stage of the CPM.

The role of the client:

The client is expected to cooperate in this research, providing time, knowledge and data if necessary for the research. If he requests to do so, data will be treated confidentially and not be published.

Researcher: Koen Vliek   Client: Alex van Oostrum

Date: Date:

Place: Place:

Signature: Signature:

Appendix C: Means survey for employees

Most of you will have heard something about the project I execute here for my master thesis in innovation & entrepreneurship. I will be applying the effectuation framework, which basically tells you to innovate with your means available, build partnerships, invest only what you can afford to lose, and focus on controlling (only) those things you can control. The unbeatable competitive advantage of every company are its employees. For every person is unique, every person has its own unique set of means: personality, knowledge and network. Ideally, these means are used to excel in your own performance, and that of the company. Therefore I am thinking to organize NextSelect in such a way that every employee has the chance to give its best, thereby serving the company as well as themselves. To map these characteristics for NextSelect I would like to ask you the following questions. Think out-of-the-box here, questions are not limited to a NextSelect or a programming context. In the end connecting the dots may lead to interesting innovative possibilities.

Please have a good thought about them, and send me a reply tomorrow (Friday) before 13:00. It would be great if you can fill it in today, and maybe some more thoughts pop up tomorrow.

1. Based on your personality, what work or tasks would fit you best?
2. Can you describe what knowledge, competencies and experience you excel at?
3. Based on this, what tasks do you think suit you best?

4. Can you describe what work you would love to do? Any answer is correct here.
5. Can you think of people/ company's you know, which may offer opportunities to NextSelect? Maybe you know people that work in same niche, possible new developers, EDM organizations (possibly for the in2event tool), companies in search of a software solution, or can you make a totally different link..
6. Do you feel like you have the freedom to bring in your own ideas during projects or in the company in general? Would you like to? (e.g. While you are the developer, you see possibilities within the system you create, that may fall out of the customer's range. Being able to openly and directly discuss such ideas with the customer might create new projects for NextSelect on the one hand, and a customer satisfied with an innovative supplier on the other hand.)
7. Do you have other ideas which could improve the working situation or the company's performance for example?
8. If you were the director of this company, what would you do to create more certainty; in this case a stable income in the long-term?

Feel free to add any comment or idea that seems valuable to you.

I will get back to you with the results, thank you!

Koen

Appendix D: Three-year vision

Alpha-tool: global 3-year vision and strategy plan
NextSelect – July 2015

The Alpha-tool was built with passion and dedication, however innovations and big improvements were not possible due to restrictive budgets. It now has evolved to a point that it either needs a massive rebuild – Alpha-tool 3.0 – or needs to be replaced.

To push the Alpha-tool to the next level, this our ultimate vision:
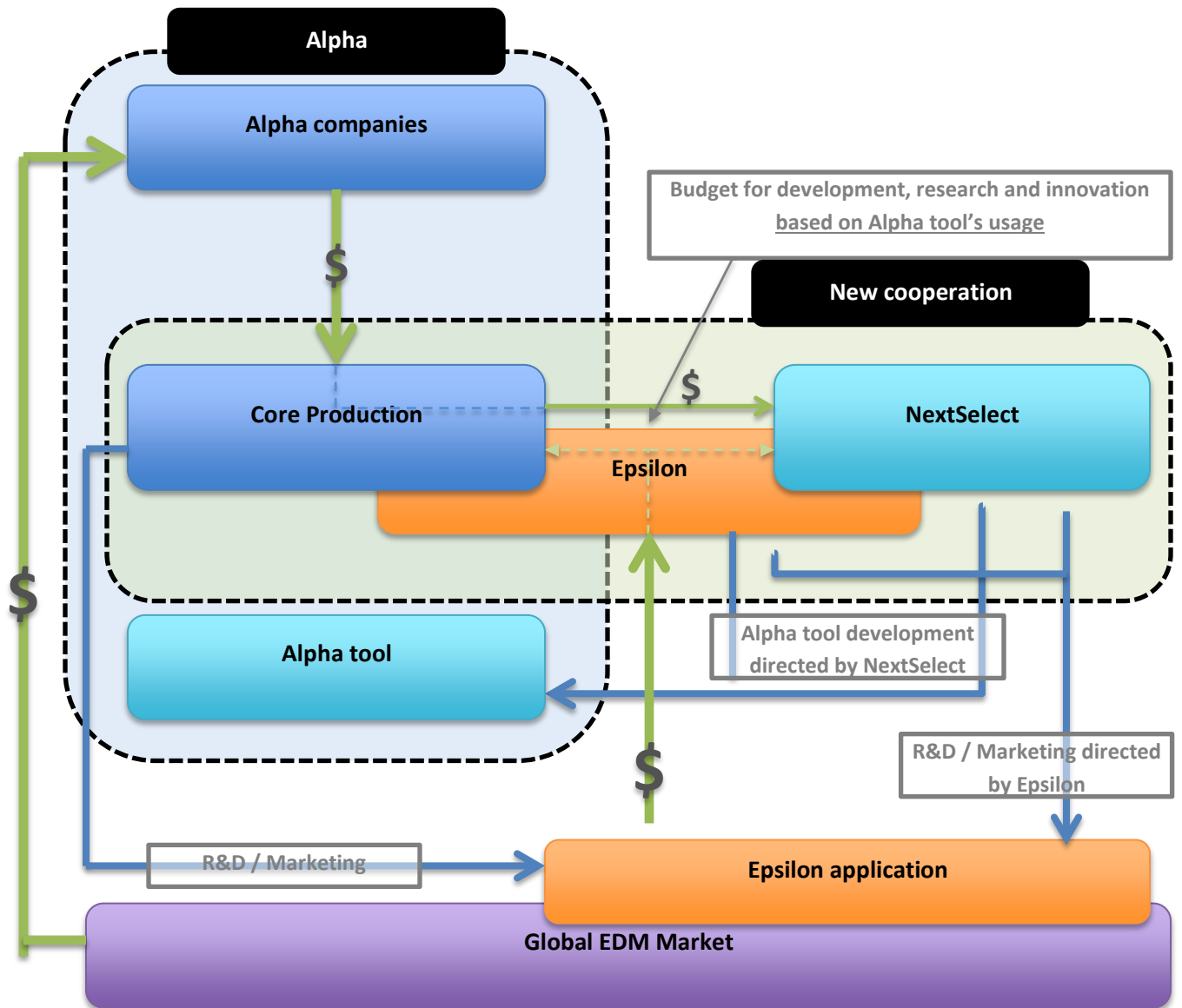
A "win-win" structure must be achieved and therefore we suggest the following:

- Alpha and NextSelect both become 30% stakeholder of Epsilon.
- NextSelect ensures at least 30% of the Alpha tool development budget goes to Epsilon; this means Epsilon will help with the development of the Alpha tool.
- NextSelect remains leading developer and "hires" Epsilon for development.
- Information sharing, so all parties will benefit and make the Epsilon tool successful in the global EDM market.
- Alpha tool remains fully tailored tool according to the needs and wishes from Alpha.
- Revenues from the EDM market also flow to Alpha and NextSelect and can be used for further research and development of the Alpha tool.
- Timeline details for the next three years need to be determined.

How did we get there? Let's state some facts:

1. Alpha has positioned itself as the biggest organization in the global EDM market.
2. The global EDM market is a fast (!) growing and changing market.
3. Alpha tool is a 100% tailored software solution; this means only one application of this kind exists and only Alpha can use it.
4. It has a huge advantage: the software adapts to the changing business processes so the business processes do not have to adapt to the software. Due to the fast EDM market changes and the changes/growth within the organization the Alpha tool is able to make fast changes, even big changes relatively fast. As opposed to this, standardized software (think of Sales force) is not easily changed. This gives Alpha a competitive advantage.
5. It also has a disadvantage; due to the fact that Alpha is the only user, Alpha also has to pay for all development, research and innovation.

What is the problem?

Foundation of Alpha tool and budgets

The current Alpha tool is not ready for smooth integration into all divisions globally. The main reason for this is that the foundation of the application is currently not suited for a large and growing company like Alpha and this will result in an extremely time consuming task to integrate the software globally.

Back in 2007 Alpha was in need of a centralized database solution for their events business and NextSelect was the key partner in this. Here the Alpha tool was born. The first version had a foundation that is comparable with the foundation of a nice customized house. Although it was modern for that time, it had flaws because of the available low budget and as a result it was not built for the future. In the years to follow the Alpha tool grew; whenever a festival needed new data or an update somewhere there was a small budget available – but there was no centralized budget for big improvements and innovations. Eventually the Alpha tool grew into a large multi-story building using the same foundation. It lacks innovative techniques currently available for modern web applications and the user interface is out-dated and does not comply with modern web apps. In other words, the multi-story building is growing towards a skyscraper but has the foundation of an outdated house. Sooner or later the foundation will collapse under the weight of the building.

What is needed?

In short: <u>a much higher budget</u> (for as long as the Alpha tool is in use). With this budget the following requirements should be made possible:

- **Super admins with focus and resources:** Alpha super admins should have the resources to focus fully on Alpha development (currently only one), but Alpha is too extended for one person to manage and therefore this must grow to at least 2-3 persons in the following 3 years. For example: Europe (and rest), North America, Asia. They should have periodic meetings with key users and Alpha tool developers leaded by NextSelect to discuss issues, improvements, new features and plans.

- **Simplification of application:** this is achieved by:
  - Simplifying user interface with innovative designs – application is not only tailored to the customer's needs, it is tailored to the user's needs.
  - Easy to use wizards that help users to create and manage objects (e.g. events) in the application.
  - Embedded documentation and extensive help system integrated online in the system, so no books or paper documents have to be read, everything is in the applications.
- **Perform innovative research:** a portion of the budget must be put in research and innovation– keep the software at the next level. A big mistake is that people tend to think that a 100K investment is enough and the product is finished; <u>the Alpha tool will never be finished</u> (until it is not used anymore). In Dutch: "*Stilstaan is achteruitgang, innovatie is vooruitgang*"
- **Extensive testing:** currently testing of new releases is at a too low level.
- **Product life cycle development:** good and well-formed plans for regular releases of the Alpha tool with minor (e.g. monthly) releases and major (big yearly releases). Plan ahead, budgets; development plans must be known months before starting with development.
- **Workshops, trainings and demonstrations:** no matter how easy we make the product, it remains a highly versatile product that is always changing. Workshops, trainings and demonstrations are required. Especially for new divisions of Alpha.

How can we achieve this?

Alpha needs to generate and maintain stable funding to keep the fully tailored solution operational. Funding needs to be scaled to the size of the application and organization and will –most likely – need to expand as the organization grows. There are three options, listed in order of favour of NextSelect.

1. Stable funding for the Alpha tool is achieved from two sources:

a. A lightweight version of the application that is brought onto the EDM market. This product will generate cash flow based on revenues from license fees.

b. Alpha itself is a market, all divisions need to 'pay' a license fee to Alpha / Core production based on a usage calculation. This will generate a stable cash flow based on the size of the company and the size of the Alpha tool. There is a huge opportunity to achieve this relatively fast with the cooperation of Epsilon.

2. Only create stable funding via the Alpha marked, as described above. There will not be any extra lightweight product; only funding generated by Alpha tool usage by Alpha divisions. The downside of this approach is that the market is asking for software like the Alpha tool and it would be lost not get revenues from this potential marked. Also Alpha will have to pay for all development and research costs.

3. Generate budget for Alpha tool development based on feature requests; as far as NextSelect concerns the least viable option. Which more or less forces NextSelect to uphold the pay per hour based. This construction is the worst for the development life cycle of the product.

With the first two options a change from a commercial point of view occurs; currently development of the Alpha is based on budget that comes available and executed basically on a pay per hour base. This cannot change without growth assurances and makes it hard for NextSelect to invest into the product as the development flow can stop at any time. When budget flows are scaled based on Alpha division usage, Alpha can be seen as a growing market and this means investing from a NextSelect point of view becomes commercially interesting.