ACCELERATE

A platform for the acceleration of go-to market in the ICT-industry

Title:

Current state of art and practice, industrial needs for methodologies

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Author:
Tiina Apilo, Irina Fiegenbaum, Kaisa Still, Päivi Jaring, Arto Wallin, Marjaana Komi, George Suciu

Organisation:
VTT, LUT, Beia

The Accelerate consortium consists of:
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Title: Current state of art and practice, industrial needs for methodologies

Summary / Contents:
State of the art
Acceleration concept
State of the practices
Needs for methodologies for acceleration

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1. INTRODUCTION

1.1 PURPOSE OF THE DELIVERABLE

This document is the deliverable D1.1 "Current state of art and practice, industrial needs for methodologies" of the Accelerate project (A platform for the acceleration of go-to market in the ICT-industry). This document provides both literature and practical overview on the topic of acceleration in March 2015.

The aim of the Accelerate project is to create services based on technological innovation, advanced processes and new software technologies that will enable massive adoption of acceleration know-how in the European technological industry. The project addresses the "European Paradox" – great science, poor marketable innovations. The current acceleration market consists primarily of knowledge providers and large sections of acceleration are not taken into account because they require specific technological innovations. The objective of Accelerate is to address these sections of the growing market. describes the objectives, innovation targets and deliverables of the project.

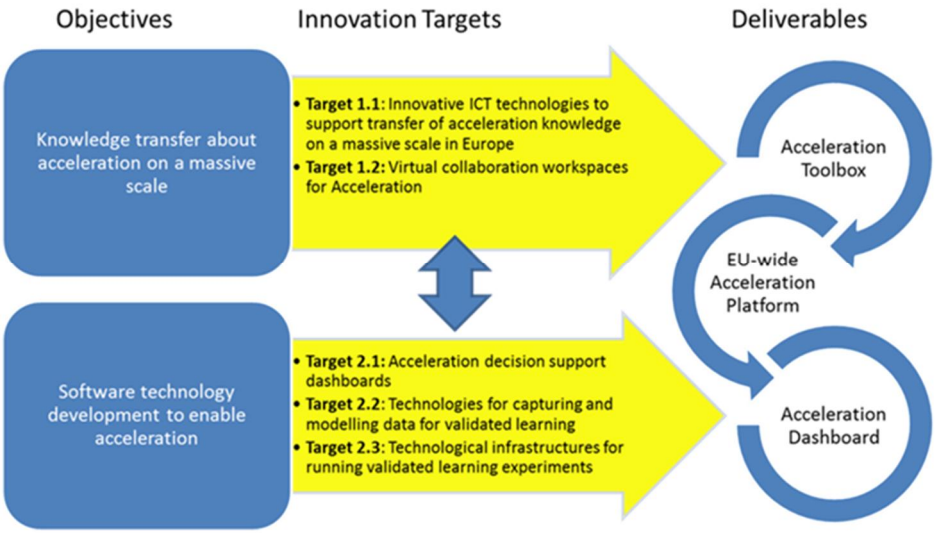

Figure 1. Acceleration project objectives, innovation targets and deliverables.

The Accelerate project looks at advanced and novel accelerate methods and performance indicators that can help companies to manage their innovation commercialisation. These methods will support EU high tech companies, established ICT companies and non –ICT companies that wish so extent their solution into the ICT market to commercialise their solution in different phases of the go-to market life cycles.

This document handles the following research challenges:

- How to develop a methodology for acceleration?
- What role can ICT technology itself play in acceleration?
- How do we get towards a "market" of acceleration services?

The objective of this document is to describe recent model of innovation management from go-to market point of view. The current state of innovation practices both mature and start-up companies and the case companies needs for methodologies constitute practical part of initial description. The description of the acceleration practices lays the foundation for development work of dashboard and go-to-market toolbox, which will be developed in WP 2.

This document focuses mainly on methods and tools among acceleration methodologies. Deliverable 1.2 "KPI's, success criteria metrics for Acceleration" Q3 will cover key performance indicators - KPIs part of methodologies.

Figure 2 presents the outline of this document.

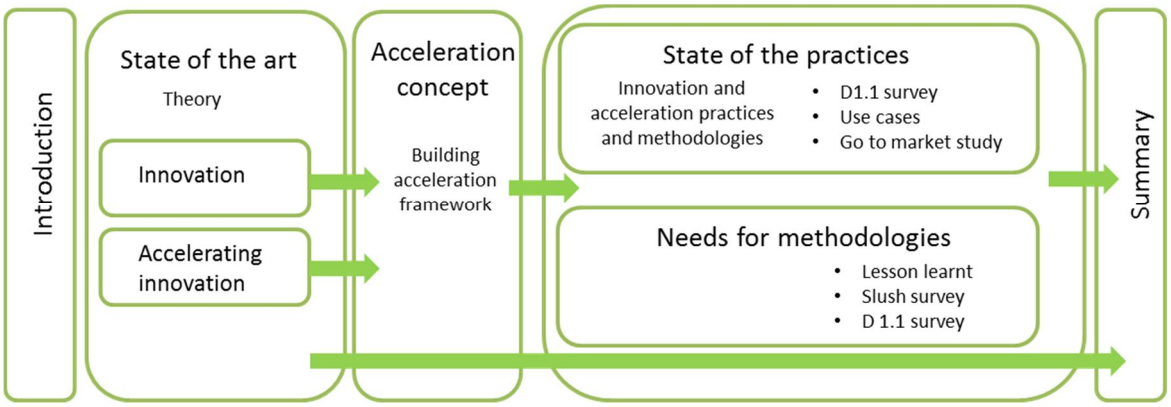

Figure 2. Outline of the deliverable.

1.2 STATE OF THE PRACTICE DATA

As information sources for the state of the practice of this document were used:

- status reports of the project
- review material of the project
- analysis of methodologies in D3.0 and D3.1
- D1.1. survey
- Slush survey
- EIT ICT LAB study
- Survey on acceleration service providers

1.2.1 D1.1 survey

A survey for D1.1 was made to get better understanding from the needs of the companies and their practices.

The survey was realised by a web survey the link to which was sent to the contact person and the contact person was asked to answer it and forward it to 2-5 other persons in the company that are working either in general management, product development or marketing.

Replies were received from 8 companies of which two were SMEs/start-ups. Five companies did not reply to the survey. From one company seven replies were received, from others - 1-3.

With the survey we aimed to gain an understanding of the needs of companies to provide input to new practices and tools. To make answering easier lot of different answering options were provided. On the other hand several open-ended questions were added to get additional views.

With the survey we managed to summarise the appearance of certain topics, but they could not be ranked as if the respondent gave several answers to a question, we did not ask to rank the questions, it cannot be said which development points are most important; we can only say to how many people/companies certain are important according to the respondents. The answers are classified per company; not per person.

One of the goals was to extend the survey also to companies outside the consortium, but after making the survey, it is concluded that the two last phases has to be classified in a more detailed level. The survey also has to be edited to be

more suitable to a quantitative research (vs. current qualitative research). If the survey will be used for a quantitative research with a bigger sample then the different topics also has to be able to be ranked.

1.2.2 Slush survey

The Slush-survey was conducted with start-up representatives, who were attending the SLUSH 2014 event in Helsinki, Finland. The event took place in November 2014. About the event:

> "Slush is the focal point for start-ups and tech talent to meet with top-tier international investors, executives and media. In 2014, Slush brought together over 14.000 attendees and more than 3500 companies for the two-day event. More than 750 investors came to Helsinki to meet start-ups in nearly 3.800 pre-booked meetings. "http://www.slush.org/

The semi-structured short interviews (10-20 minutes) were conducted by three researchers during the two-day event, using the process view of acceleration, consisting of phases of idea, MVP (Minimum Viable Product), validated MVP and scalable product. The interviewees were asked:

1. To show the acceleration phase of their organization
2. To describe a problem that have they experienced in getting to that phase
3. Who has helped them in solving the problem
4. What kinds of needs do they see start-ups having—what would be beneficial for acceleration in general

The data was then coded and analysed by the three researchers using content-coding and theme-based categorization.

In total, 39 interviews were conducted. The majority of the interviewed start-ups were Finnish (34 companies, representing 87 percent), however, the sample also included non-Finnish companies (Sweden, Ireland, Slovakia, Argentine and UK).

1.2.3 EIT ICT LAB study

Start-up practices were studied by interviewing start-up and early stage companies from six countries (Finland, Germany, France, Italy, UK, and Netherlands) that have been participating to EIT ICT Labs Health and Wellbeing business community in 2014-2015.

1.2.4 Analysis of methodologies in D3.0 and D3

To get overview of methodologies used in the use cases and their state of the practice, deliverables 3.0 and 3.1 were analysed. Further aim of the analysis was to identify gaps, where new methodologies and tool support are needed.

1.2.5 Acceleration service providers

The goal of this study was to find out and categorise existing accelerate service providers in order to get an understanding of the existing offering in Finland. The survey was made by using information from public sources (e.g. Internet). This light survey found out all together over 20 different service providers with varying service offering. Currently it is laborious for companies to find and compare different services, understand what they actually need and what is the best solution in a specific situation they have in question (product, sector, market, location the company, etc.). This survey proves that there is a need for smart guidance in selecting focus and needed services.

Also, a study was conducted in Romania on existing EU Accelerators. In this study (so far) it has been identified over 20 accelerators, which offer various programs for startups and people with innovative ideas. See the Annex 4: EU Accelerators is a summary of EU solutions found in the study.

1.3 STRUCTURE OF THE DELIVERABLE

After the introduction, in section three we describe the main types of innovation, accelerating innovation practices, lean start-up concept and organisational learning practices. Section four represents case organisations innovation processes and learning activities starting with start-up companies. Section five gives overview of need for new practices, tools and methods for acceleration.

2. STATE OF THE ART

2.1 INNOVATION

2.1.1 Innovation types

Innovation is a concept that is understood in many different ways. Innovation has the following characteristics:

- It can be linked both to business renewal (e.g. Bowen et al. 1994, Brown & Eisenhardt, 1997), growth, and competitiveness of companies, networks and ecosystems (e.g. Moore 1993).
- It is more than just one idea or invention.
- It needs to be ***utilised*** or ***adapted*** (e.g. Badawy 1988, Miller & Morris 1999, Bledow et al. 2009), and
- It can be seen as result, but also as process.

OECD (1991) definition accentuates technology as source of innovation: "*an iterative process initiated by the perception of a **new market and/or new service opportunity** for a technology-based invention which leads to development, production, and marketing tasks striving for the **commercial success** of the invention*". Importance of product innovations was emphasised in earlier literature, but nowadays broader definitions have become more general. For instance, four P model consists of product, process, position and paradigm innovation (Tidd & Bessant 2009). Similarly, OECD (2005) has broadened their definition "*the implementation of **new or significantly improved product (good or service)**, or **process, a new marketing method**, or a **new organisational method** in business practices, workplace organisation or external relations.*"

From process point of view innovation is ***composed of the new arrangement of existing or new element of business systems*** (Valkokari et al. 2011). And if we consider companies with future competitiveness and emphasize organisational learning activities (e.g. Tidd & Bessant 2009) in innovation process, a comprehensive and short definition to innovation is following: ***an organisational learning process, which produces utility & success and also future development potential.***

Table 1 below presents different innovation types.

Table 1. Innovation types.

Innovation type	Important	Typical	Challenges	Questions
Technology	Invention, R&D, research cooperation	Newness, creativity, knowledge	How to embody into products, services and processes	What is possible?
Product (good & services)	Need identification, concepts, development process, network utilisation, user involvement	Newness to user, changing, improving, combining, user driven	Timing	What is needed?
Process	Way of doing things, network	Changing, improving	Readiness for change, inter-organisational processes	How?
Strategy/ business	Business models	Distribution of work in network	Changing mind set, ecosystem building	What business are we in? Who are our customers? What are we offering and with whom?

2.1.2 Software innovation

The practices of software development and ICT industry have some different characteristics compared to non-software innovation practices (e.g. Pikkarainen et al. 2011). These differences need to be noticed in software innovation processes and practices. Table 2 below presents the characteristics of software innovation.

Table 2. Characteristics of software innovation.

Characteristic	How it is manifested	Pay attention to following points
a. Malleable	Software products are often delivered in increments (releases).	Utilise feedback and new information received after the release before next releases. Check business model opportunities and strategy fit during continuous innovation process. Keep in mind that innovation is much more than increasing new features.
b. Intangible	Customers cannot see or hold it the hand software beforehand in their hand. Large software purchase decision is complex.	Software quality and compliance needs to be considered: expectation on software should be met. Good argumentation of benefits and references/success stories.
c. Threshold to enter market is low	Upfront investment, production and delivery costs are all low compared with other industries. New emerging players compete successfully against well-established players.	Define your strategy, customers and business model(s). Identify your role in value network/ ecosystem.
d. Dependence on ecosystem success & its actors	Software companies consolidation.	Compare different ecosystems' potential. Identify your role in your ecosystem(s) and adjust your business model(s).
e. Battle for user attention in consumer market	Users are not interested to have more features or devices. Life cycles of social media applications are short.	Importance of co-development with users. User experience methods.
f. Global market	Access to the market is instantly global. All competition is global.	Make sure that your product is competitive on global market & be aware of your competition.

2.1.3 Innovation generation factors

Innovation management can be considering an ***organisational learning process*** (e.g. Tidd & Bessant 2009), as ***an organizational competence*** (e.g. Lawson & Samson 2001) or as an ***organisation's dynamic capability*** (e.g. Teece et al. 1997, Eisenhardt & Martin 2000).

Table 3. Innovation generation factors modified from Apilo (2010). presents an overview of matters considered significant in innovation literature when evaluating the innovative capacity and ability of companies. The core of the list consists of series of studies focusing successful (product) innovation projects. In addition to success factors, the table includes factors from discussions on organisational learning, strategic renewal and value creation.

Table 3. Innovation generation factors modified from Apilo (2010).

Level	Discussion	Factor		References
Individual	Creativity	Creativity (individual & team)		Amabile 1988
	Entrepreneurship	Internal entrepreneurship		Drucker 1985; Burgelman & Sayles 1986
Team	Team structure	Innovation roles		Schon 1963; Allen 1971; Frohman 1978
	Communication	Internal communication		Marquis 1969; Rothwell 1972; Keller 1986; Dougherty 1992
		External, importance of gatekeepers[1]		Rothwell et al. 1974; Ancona & Caldwell 1992; Imai et al. 1985
	New Product Development, NPD	Cross-functional team[2]		Baldridge & Burnham 1975; Cooper 1979; Wheelwright & Clark 1992
		Strong team leadership		Clark & Fujimoto 1991
Project/ Process		Superior product		Cooper 1979
		Projected development by stages		Cooper 1983, 2008
		Importance of front end		Reinertsen 1985, 1999; Cooper & Kleinschmidt 1987; Koen et al. 2001, 2002
		Executive champion/ management support		Rothwell et al. 1974; Daft & Becker 1978; Damanpour 1987
	New service development	Service development process, service concepts		Alam & Perry 2002, Nijssen et al. 2006, Vargo & Lusch 2004
	Organisational learning, OL	Learning from failures		Maidique & Zirger 1985
		Knowledge creation		Nonaka & Takeuchi 1995
Organisation		Absorptive capacity[3]		Cohen & Levinthal 1990
		Sense making[4]		Weick 1995; Dougherty et al. 2000
	Source of innovation	Technology	Technology knowledge	Szakasits 1974; Rothwell et al. 1974; Dewar & Dutton 1986
		Market	Market knowledge	Marquis 1969; Rothwell 1972
			High need high growth & familiar market	Cooper 1979
			New value creation	Christensen 1997, Kim & Mauborgne 2005
		Customer	Customer need understanding	Rothwell 1972
			Product unique	Cooper 1979
			User-centricity	von Hippel 1976, 1986, 2005
	Strategy	Shared vision		Nonaka & Takeuchi 1995; Hamel 2000
		Dynamic capability		Teece et al. 1997; Teece 2000; Eisenhardt & Martin 2000; Zollo & Winter 2002
		Disruptive innovation		Christensen 1997; Kim & Mauborgne 2005
		Experimentation		Thomke 2003, Ries 2011
	Business model/ service dominant logic	Value proposition		Osterwalder & Pigneur 2010, Vargo & Lusch 2004
	Culture & structure	Flexibility & freedom		Burns & Stalker 1961
Network	Supplier involvement	Efficiency		Imai et al. 1985
	Networked innovation	Efficiency		Rothwell et al. 1974
		Innovativeness		Chesbrough 2003

[1] Gatekeepers are individuals who obtain external knowledge and share it within the group (e.g. Brown & Eisenhardt 1995).
[2] A cross-functional team is a project group whose members represent more than one function within the company, e.g. design, manufacture and marketing (e.g. Brown & Eisenhardt 1995).
[3] Absorption capacity is the measure of a company's ability to recognise the value of external information, to adopt it and to commercialise it (Cohen & Levinthal 1990).
[4] Sense making is a social process where an organisation develops a shared understanding by organising information, views and ideas (Dougherty *et al*. 2000).

	User innovation	User involvement	Von Hippel 2005

These innovation generation factors are also elements which help companies go faster to right markets.

Next are the same innovation generation factors of companies and innovation networks converted to short ***practical guideline*** by combining practical innovation management literature and references of the .

Individual

Seeing innovation in its wide meaning as a process of organisational renewal gives every employee a possibility to take part in innovation work. Innovation should be a part of daily activities of all employees.

Employee's creativity in one factor that contributes to innovativeness of organisation, but it is not the only one. Innovativeness on an individual level includes more than just creativity capacity. General skills and competences, task specific knowledge and social skills play important roles. Furthermore, openness, self-confidence, flexibility, initiative, independence from criticism, and ability to reflection are all very important characteristics.

In a company where radical innovation is being sought, individual's courage to seek new possibilities, entrepreneurial spirit and risk-taking come up as valuable characteristic too. In spite of individual characteristics, employees who consider their work challenging and rewarding are more likely to participate in innovative work than highly creative persons in less satisfying conditions. Sufficient free ideation time makes it possible to generate and develop new ideas outside of planned routines.

Team

Team work is characteristic to innovative companies. Teams have more to offer than individual in terms of both innovativeness, in idea generation and efficiency in solution development. Innovation is about combining different perspectives and knowledge in problem solving.

There are team member roles based on the experience or position. General team key roles area project manager, a sponsor[5], a champion[6] and gatekeeper. There are roles as a representative of own function department. A right combination of team members varies depending on the question at hand (idea generation, conceptualization, evaluation, launching..) Employees in the front line with direct contact to end-users and customers are an important source of new innovations. They understand user's needs through direct experience and conversations. Therefore, front line employees should have also representatives in the cross-functional development teams. In addition to the people directly involved in the innovation work, there are lot of people in supportive roles.

In each innovation project the most appropriate team structure should be chosen (see **Error! Reference source not found.**).

Table 4. Four different innovation team structures.

Team structure	Appropriate innovation project type
Cross-functional team	multi-expert knowledge and customer understanding for solving "customer need"
Functional team	for simple continuous improvement projects
Autonomous team	with entrepreneurial project manager for testing new venture-like structures
Virtual team	with clearly defined responsibilities for utilising expertise from different organisations and locations

In the team level innovativeness includes team spirit and good relationship among team members. Because communication plays a significant role in innovation, trust and openness are one of the most important building blocks

[5] A sponsor is senior manager with power and influence within the organisation who supports innovation work
[6] A champion is individual who defends an innovation in its early stages.

of organisation's innovation culture. While an innovation work is combining different ideas, it is needed to have effective conflict resolution mechanisms within the team.

Leadership and management

Strong leadership is essential to achieving continues renewal. Top management must clearly communicate that innovation is an integral part of everyday operations. They main objective is to create an inspiring vision that challenges the organisation to go beyond its current performance. They are responsible for defining and adapting an innovation strategy that fits the company, and linking it to the business strategy. Also, the top management is to establish and guide the evolution of organisational culture so that the company has the ability and courage to change. They need to guide the building of innovation structure and processes, and fight organisational resistance to change, bureaucracy and not-invented-here syndrome. They has to take care that adequate resources are committed to innovation and development work internal and also manage relationship with external key partners and main stakeholders in their innovation network. Furthermore, someone (/team) in the top management needs to take responsibility for all innovation work, and others in the company know who the person (/team) is. This manager's duty consists of: finding out the best way of managing innovation in their company, managing innovation work and improving innovation work.

Middle management and superiors have an important role in converting organisation level vision into practical goals by supporting and controlling practical innovation work. They are responsible for encouraging employees to take part in innovation work by motivating, supporting and rewarding. They also need to determine the objectives for practical innovation work, and organise innovation work by allocating resources to development projects. They answer for day-to-day leadership through commitment and own example. Middle management is also responsible for proving employees learning possibilities like training, job rotation.

Process/project

Processes, practices and tools (e.g. idea management system) help innovation management, but leadership, inspiring vision and organisation's capabilities is stressed in successfully innovative companies.

Organisation

Seeing innovation as a normal and frequently repeated event will motivate organisations to develop innovation management practices. If innovation is seen only as the creative work of an individual-inventor, it doesn't deal with a whole company. Innovation is primarily a question of leadership and change management – how to encourage people to find a new and better way of doing. It is a process of learning and unlearning. Innovation culture is part of organisation culture. Changing the innovation culture is a slow transformation process. A good starting point to develop is to evaluate it. According to evaluation, a target level of innovativeness in all it dimensions will be defined. For improving innovation culture it is useful to choose fast tasks so that their success stories can be used to inspire the other development tasks.

One of the main challenges is to find the right balance between creativity and efficiency for each organisation.

Innovation is based on learning and unlearning. Adapting new ways of thinking and doing is the basis of innovation. Shortly, learning is a process, where data is converted through communication into information that is then converted through interpretation and experience in a specific context into knowledge.

Organisational learning

Organisation and teams learn when their individual members learn. Team learning processes include acquiring or sharing knowledge that one of the team member already possesses, generating new knowledge through collaboration and interaction, interpreting and evaluating knowledge, and integrating knowledge. Team level learning happens when the team members are motivated to share their knowledge. Diverse teams, where the members possess different information due their variable backgrounds, boost learning. The organisational level learning has two processes:

integrating and institutionalising knowledge. Organisational knowledge is embodied in physical artefacts (equipment, layout, databases, and documents), organisational structures (routines, standard operational procedures, roles, reward systems) and people (skills, values, beliefs, practices). So, to be able to utilise organisational knowledge, the organisation must filter, categorize, store and share the knowledge.

To describe different learning practices, two different kinds of knowledge are defined: tacit and explicit. Explicit knowledge is "knowing what" and it is easy to store in written or coded form. Tacit knowledge is "knowing how" and it is created through experience and practice. Tacit knowledge is difficult to put into words and it is hard to explain to others. Examples of individual learning practices for explicit learning are training courses, manuals, process descriptions and books. To tacit knowledge fitting ways to learn are learning by doing, job rotation and so called "tandem learning", where an expert and an apprentice are working together in order to transfer expert's knowledge.

Table 5. Examples of practices and tools which enhance learning.

Practices and tools	Learning objectives
Internal meeting	-sharing information and knowledge -converting tacit knowledge to explicit (documented form)
Workshops	-sharing and creating knowledge -converting tacit knowledge to explicit (documented form)
Project lesson learned	-learning from success and failures -converting tacit knowledge to explicit (documented form)
Job rotation	-transferring tacit knowledge to other task and contexts
Training	-sharing information and knowledge
Expert group	-sharing and creating knowledge
Development group	-creating knowledge
Databases and information systems	-capturing and storing information
Intranet (discussion column, blogs, wikis)	-sharing information -building common understanding
Incentive system	-motivating through rewarding to share information
Expert catalogue	-helping to find experts (tacit knowledge)

Network

Any organisation has all necessary capabilities, resources and knowledge to manage innovation itself. A company can utilise its innovation network in all innovation phases e.g. research and idea generation partner, as engineering capacity, as a marketing or distribution channel. In most cases aim of networked innovation is to increase efficiency or innovativeness and also cut to time to market. Very important in networking strategy is to determine company's own core competency and evaluate all other necessary competencies from efficient point of view. We are also going more and more into ecosystemic business, so it is crucial to notice own ecological niche and recognize key players in your business ecosystem.

Customer understanding and involvement to an innovation process is vital to innovation success. The following subchapter 2.1.4 concerns that user driven innovation approach.

Strategy

More often innovation is so-called business innovation, which challenges the market's dominant solution. That kind of strategical approaches to find new business opportunities offer e.g. blue ocean strategy and disruptive innovation approaches. Again business strategy and innovation strategy needs to be linked, but they don't need to be written in stone. Better option is that both strategies dialogue emergently and based on experimentation.

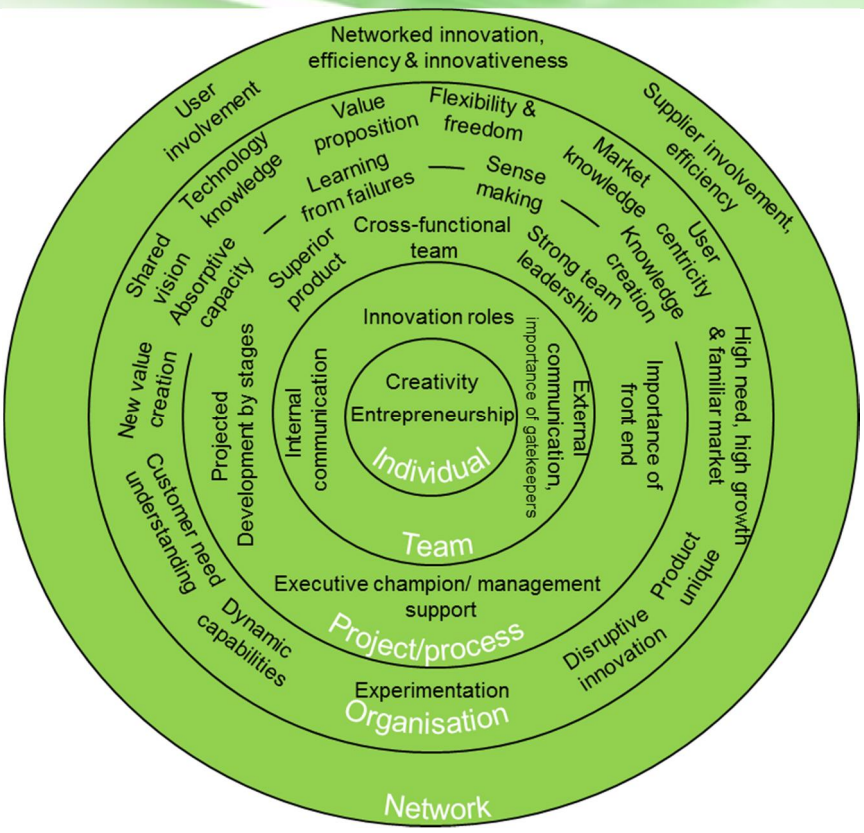

Figure 3. Innovation generation factors in different level of organisation.

Figure 3 summarizes innovation generation factors which help companies go faster to the right markets.

2.1.4 User driven innovation

Both open and user innovation theories tell us, that customer involvement is necessary and inevitable in modern innovation processes (Piller and West, 2014). Various authors have emphasized the importance of users in technology development and innovation process. There is hardly any firm, which could reach long-term success without assessing customer needs, desires, satisfaction etc. (Piller and Ihl, 2009). A number of empirical studies show that most successful new products were initiated by information about user needs, often referred to as *need pull* (Baker et al., 1967; Utterback, 1971; Robertson, 1973). In many cases, technical improvements were realized during the diffusion phase by user feedback or re-invention by users (Rogers, 1995). Ornetzeder and Rohrache's (2006) studies of user innovation show how the users can be involved in the design and dissemination of technologies at different levels of intensity. For example, early users can start completely new technologies and design new products. They can find and test new applications of a product as well, can appropriate unconventional building technologies and design solutions in the course of collective planning processes. However, as the analysis of literature reveals, the role of users in innovation processes is much broader than simple direct user participation. Even without active user engagement, designers are still able to represent the needs and expectations of future users and match it with the design of a product trough imagination about future uses and users or through the experiences of designers or producers as users. Users may also try to change or re-design technologies, or block their usage (Ornetzeder and Rohrache, 2006). There is a number of opportunities for users to participate in product/service development. Different kinds of contributions by users have been identified, for instance quality improvement, customization of existing products, refinements and niche-targeted variety, or breakthrough innovative ideas. Some of the authors believe that users do not play a part in the initial generation of new product ideas; users are only contacted after the company has developed a new solution to evaluate it, e.g. focus groups (McQuarrie & McIntyre, 1986). However, von Hippel has stated that users can be perceived as sources of new ideas or inventions (von Hippel, 1977, 1978, 1988).

As depicted in the paragraph above, the whole user literature seem to understand user mainly (or even exclusively) as an end customer, player of business to customer market (B2C), whereas what about business customers in business to business environment (B2B)? Here we can relate to the main difference of open and user innovation literature, and claim, that the B2B co-creation with customers is primarily viewed in open innovation literature (e.g. Paasi et al., 2014), which leads us to the principle difference between open and user innovation as described by Piller and West (2014) – user as source vs user as contributor. For the sake of this research, we will rather operate on the open innovation grounds, talking about co-creation with customers in B2B context, however will utilise some notions of user innovation.

2.1.4.1 User participation in innovation

User involvement – a review

Traditionally the only people involved in innovation process were the ones from R&D department (Jensen et al., 2007). As open innovation teachers us, innovation activities are rarely carried out within a single organization (Chesbrough, 2003; Still et. al, 2011; Piller and West, 2014). Rather, the required knowledge and other resources are often extracted from multiple sources, which include networks, co-creation with customers and end users, etc. (Chesbrough, 2003; Still et. al, 2011). Barki and Hartwick (1989) conclude that psychology, organizational behaviour, and marketing have converged to a definition of involvement '...as a subjective psychological state, reflecting the importance and personal relevance of an object or event' (p. 61). Therefore, the term user involvement, according to the authors, should be used to refer to a psychological state reflecting the importance and personal relevance of a new system to the user. It also should be noted that user participation and user involvement are two distinct constructs. User (customer) participation refers to 'the degree to which the customer is involved in producing and delivering the service' (Dabholkar, 1990). Users seen as participants of the innovation process when they take part in, or contribute to, the innovation being developed. Participation can therefore be measured by assessing the specific assignments, activities, and behaviours that users or their representatives perform during the innovation development process. (Barki and Hartwick, 1994). Regardless this distinction between the 'participation' and 'involvement' terms we use both of them as synonyms in this study, meaning both physical and psychological involvement of users in various stages of the innovation process.

Direct contact between users and product developers has been found to be an important element in user involvement (Howe, 2008). Therefore, one of the dimensions on which user involvement can differ is the degree of freedom of the user-collaborator relationships. Kaulio (1998) distinguished three degrees of such relationships: design for users, design with users and design by users. Design for users denotes a product development approach where products are designed on behalf of the customers. This type of user involvement coincides with the 'market pull' paradigm, as the user remains a passive stakeholder in terms of input to the innovation development (Schuurman et al., 2013). Design with users refers to a product development approach that focuses on the customer and utilizes data on users' preferences and their needs and requirements. In addition, this also includes presenting different concepts to users, so they can react to different proposed design solutions (Schuurman et al., 2013). Design by users allows for the highest degree of end-user freedom. End-users are actually developing the products themselves. (Schuurman et al., 2013).

A dimension of user involvement in open innovation relates to the nature of involvement. Jespersen (2008) defines five possible user roles that differ in terms of interaction control as well as task/social orientation:

- user as a resource (unstructured interaction and task oriented);
- user as a co-creator (structured interaction and task oriented);
- user as a product (unstructured interaction and socially oriented);
- user as a buyer (structured interaction and socially oriented) and;
- user as a 'user' (in the middle of both dimensions).

Although these roles often appear in combination and are not mutually exclusive, they provide insight for structuring user involvement in open innovation.

The combined framework for types/methods of user involvement in open innovation (see Figure 4) is based on the

framework presented in the study conducted by Schuurman et al., 2013 with major modifications in types of user involvement.

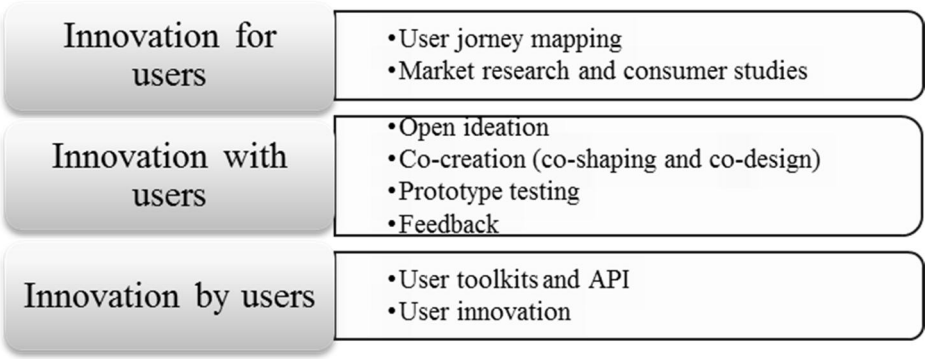

Figure 4. Types of user involvement (based on Schuurman et al., 2013)

All in all, the framework shows that it is important to distinguish between whether the users are directly or indirectly involved in the innovation process. In addition, it is also crucial to distinguish between acknowledged and unacknowledged user involvement.

User involvement at different stages

Most of research concerns with user involvement at the ideation stage (1) of innovation process. Such concepts as crowdsourcing relates to the idea gathering at the earliest stage (Estelles-Arolas and Gonzalez-Ladron-de-Guevara, 2012; Howe, 2006, 2008). Idea generation is usually seen as a part of research stage of the innovation process. At this stage company works with the variety of the ideas from different sources. In case of user-driven innovation company filters ideas, assessing whether the idea fit into the scope of the company and/or have the market potential to succeed. After screening the ideas, company finalizes which project to continue with and prepares preliminary project plan. This is very time and resource intensive task and therefore very seldom user ideas get into the process, as most companies are missing filtering mechanisms.

Development stage (2) requires detailed investigation of available and necessary resources from the producer's side in order to ensure successful concept development. Innovation projects often associate with human resources and knowledge and, therefore different intellectual property (IPR) rights procedures such as patenting and licensing. This means that companies should not only create new knowledge themselves, but also find the right patents from the existing ones. IPR-related matters could significantly hinder the innovation process. According to von Hippel (2005), present-day intellectual property regimes are far from the expectations of theorists and policy makers, and since user-driven innovation is often associated with free reveal of the inventions by users, both firms and society could benefit from that. In case of MNC's, mergers and acquisitions could happen on the development stage due to the fact that it is cheaper to acquire patent and know-how holder than developing the technology from the scratch. Another important part of the development stage is testing and validation phase that helps to minimize risks of failure of the innovation on the market after launch. Role of users and testers on this phase is vital; therefore, companies should not cut costs at this stage as it may affect the whole project. It should be noted that testing procedures should include not only lead users and enthusiasts, but also control groups of the common users and so-called technological conservatives, laggards or sceptics. The response from latters sometimes is the most important one, since diffusion of innovation and commercial success comes from the mass adoption of the innovation by majority of the users. Many practitioners agree on the fact that lead users or technology enthusiasts or visionaries account only for 5-10% of the whole number of users (von Hippel 1988, 2005), which make testing and validation by common users a key to successful innovation diffusion.

The last stage of innovation process is commercialization or market launch (3), when product or service going to the mass market and company expects to capture value from it. Commercialization stage covers most of the diffusion of innovation, which starts at the late development stage, where only small portion of the users is acquainted with the product. User acquisition, word of mouth and other marketing techniques are among the most important factors of success of the innovation on this stage. Hence, user involvement at previous stages of innovation process helps to

establish user base, which would account for the initial customer pool for the new product.

However, it should be mentioned that in case of user-driven innovation promoted by users themselves, commercialization stage represents the process of offering the product made by the company for lead user to his peers among the professional community. Examples of such commercialization by lead users could be found in medical equipment or some extreme sports industries, where user develops a prototype himself and the company plays a role of contract manufacturer (Franke et al., 2006; Rosted, 2005).

According to Bråtå et al. (2009) there are numbers of opportunities for users to participate in product development, most commonly at early stages of product development, though user participation can be decreased due to very vague and abstract nature of the product. The case is the opposite at latter stages of product development. Bråtå et al (2009) suggests a scheme that shows opportunities for users to participate in the innovation process (See **Error! Reference source not found.**).

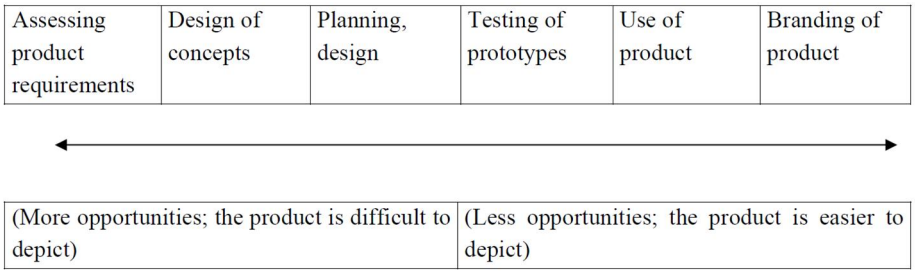

Figure 5. User's opportunities to affect the innovation process (Bråtå et al., 2009)

Literature suggests that in most cases related to user-driven innovation companies tried to attract users to participate in idea development and initial product requirements assessment, rather than on later stages, where users could test and validate the product before market launch. Active user involvement and participation at each stage of innovation process could positively affect commercialization of the new product given that users ensure utility and usability of the developing product. Initially, at the research stage companies could collect and screen inbound ideas from users or encourage existing customers to share their ideas for the new product. Developing first prototypes or drawing schemes of the future product or service is crucially important on this stage, since it helps users to depict the image of the future product and simulate its characteristics. Development stage of innovation process requires as much user attention as research stage does, given that first working prototypes emerge on this stage. Most of the flaws of the future product could be avoided on this stage by considerable amount of user testing. Another important thing to mention here is that lead users and enthusiasts, which participate in preliminary tests, could help to build the image of the product for mass market and spread the word of mouth about upcoming innovation. It is clear, that every human interaction may also lead to certain problems, which challenge user innovation process, however the research on the challenges of user innovation is scarce, if at all existing (throughout the thorough literature search, no work focusing on this topic was found).

2.1.4.2 Challenges of user innovation in IT industry

According to several studies (Hienerth and Lettl, 2011; Schweisfurth and Raasch, 2014) companies in different industries face similar challenges with user involvement. Apart from user specific limitations to the user involvement such as cognitive and motivational barriers (Lettl, 2007), companies often have their own hinders. According to Paasi et al. (2014), the challenges B2B sector operating companies face can be divided to strategic and operational, with strategic challenges related to the choice of customers to cooperate and operational ones to practical integration of customer input. Literature shows that ICT industry characterized with the same challenges as other creative digital industries, sports, toys, medical industries (Schweisfurth and Raasch, 2014; Parmentier and Mangematin, 2014). Such challenges could be attributed to different stages of innovation process, which are adopted from Hienerth and Lettl, 2011; Keinz et al., 2012.

1. Research stage
   - Corporate innovation strategy and policy
   - Existing standard equipment and techniques in the community
   - Knowledge about the lead user in the community
2. Development stage
   - Lack of feedback
   - Lack of complementary technical knowledge
   - Lack of funds for prototype development
   - Time constraints
3. Commercialization stage
   - Lack of knowledge about broader market
   - Lack of funds for production
   - Cost of large-scale production

On the research or idea generation stage challenges could occur due to rigid corporate innovation strategy and policy, existing equipment and technology in use or lack of knowledge about lead users in the community. Rigidity of innovation strategy, strong focus on risk averse clients e.g. military or governmental organizations and lack of innovation policies and routines naturally create a barrier to user involvement in innovation process, which in terms slows down the innovation activity of the company.

2.1.5 Innovation in small versus large companies

Comparing SME and start-up companies to large, mature companies in their innovation capabilities we find differences but also many similarities. If we caricaturise SMEs, they have are more innovative in new idea point of view. They are flexible and employees are generally enthusiastic about future possibilities, entrepreneurship is natural for them. Same, if we caricaturise large companies, they have resources, both monetary and knowledge. They have large networks relationship and processes to co-operate with other companies, universities and other ecosystem partners. Similarly, Buckland et al., 2003 describe the "venture paradox" that large companies have the resources such as reputation, experience and financial backing to create and scale successful new ventures but miss the organizational flexibility, creativity and readiness that start-ups require.

Table 6 outlines and generalizes opportunities and challenges which small and large companies will meet. This is based on the following studies: Quinn 1985, Dougherty 1992, and Gibb 2000.

Accordingly, innovation management, and further strategy management literature claim that large companies can be and can stay innovative by behaving like small entrepreneurial firms (e.g. Quinn 1985, Kanter 1983, Blank 2013)

Gibb (2000) represents entrepreneurial learning organisations, which will encourage active learning under conditions of uncertainty, model components as following:

- creating/reinforcing strong individual ownership of activities
- reinforcing freedom/control to make things happen
- maximizing potential for wide individual tasks structure responsibility
- creating responsibility to see things through over time
- individual and organization excellence defined/appraised through broad stakeholder eyes
- maximizing potential for staff to develop own networks
- linking rewards to meeting stakeholder needs (particularly customers)
- tolerating ambiguity, managerial overlap and mistake making
- encouraging individual strategic thinking without formal plan constraints
- emphasizing the importance of trust building through know who and strategic networking
- building ways of learning by doing into the job and particularly learning from stakeholders
- maximizing potential for holistic management

Table 6. Innovation opportunities and challenges.

	SME/ start-up	Large company
Potential failure	- only some ventures/start-ups survive, but fails receive little notice - use judgement to take calculated risks	- absorb all potential failure cost itself - failure risk may be socially/ managerially intolerable
Consequences of success	- new business and growth	- risk of loosing an existing investment base - risk of cannibalising recent offering - integration risk in case of complex systems - need to convert existing operation - need to convert customer base
Atmosphere and vision	- tend to be need/achievement oriented - take initiatives to make things happen - autonomously management - take responsibility for and ownership of things	- innovative companies appreciate continuous innovation and have value systems and atmosphere to support it - many senior executives have little contact with conditions of "factory floor" or with customers
Orientation to the market	- opportunity identification by own view of market need - opportunity seeking and grasping	- innovative companies tie their vision to the practical realities of the marketplace - a strong market orientation at the very top of the company - mechanisms to ensure interactions between technical and marketing people
Innovation process	- hand-in-hand with customer demand - avoid early formal plans - proceed step-by-step - creatively problem solving - put things together creatively - tend to be pioneers in their technologies	- excessive bureaucracy (e.g. approvals) - missing interactive feedback - duration of experimentations - innovative companies move faster from paper studies to physical testing
Entrepreneurial fanatics	- tend to be fanatics to solving problems - see things through - commitment allows to persevere despite the frustration, ambiguities and setbacks	- entrepreneurial fanatics seen as embarrassments or troublemakers
Time horizon	- tend to underestimate length of time to success	- pressure to a continuous stream of quarterly profits
Costs and accounting practices	- low early costs (cheap facilities and equipment's, limited resources)	- high development expenses (assessing all direct, indirect, overhead, overtime etc. costs against a project)
Multiple approaches	- highly committed entrepreneurs tend to tolerate chaos	- formal plans can block out potential solution - excessive rationalism - innovative companies have simultaneously multiple approaches - innovative companies encourage several prototype programs to proceed in parallel
Flexibility and quickness	- without formal processes trial-error approach - adjust quickly entry strategies to market feedback - variety of sources available to finance start-ups	- innovative companies try to keep the total organisation flat, project team small and operational divisions below 400 people - innovative companies emulate small company by using groups that functioned in a skunkworks style
Incentive	- foresee tangible personal reward if they are successful	- inappropriate incentives - designed to minimize surprises
Networking	- effectively networking (to manage interdependence)	- innovative companies learn interactively with variety of partners

2.2 ACCELERATING INNOVATION

2.2.1 Accelerating innovation commercialisation

Acceleration or acceleration of innovation is not a common term. Here we understand acceleration as accelerating innovation go-to-market and commercialisation.

In order to get better understanding acceleration we went through relevant literature from several theoretical discussions. Figure 6 presents overview from these research areas and discussions and theories in these areas. About innovation, user driven innovation and organisational learning we discussed earlier. Next we deal with entrepreneurial marketing, branding, effectuation and creation theories, social commerce, business modelling and experimentation.

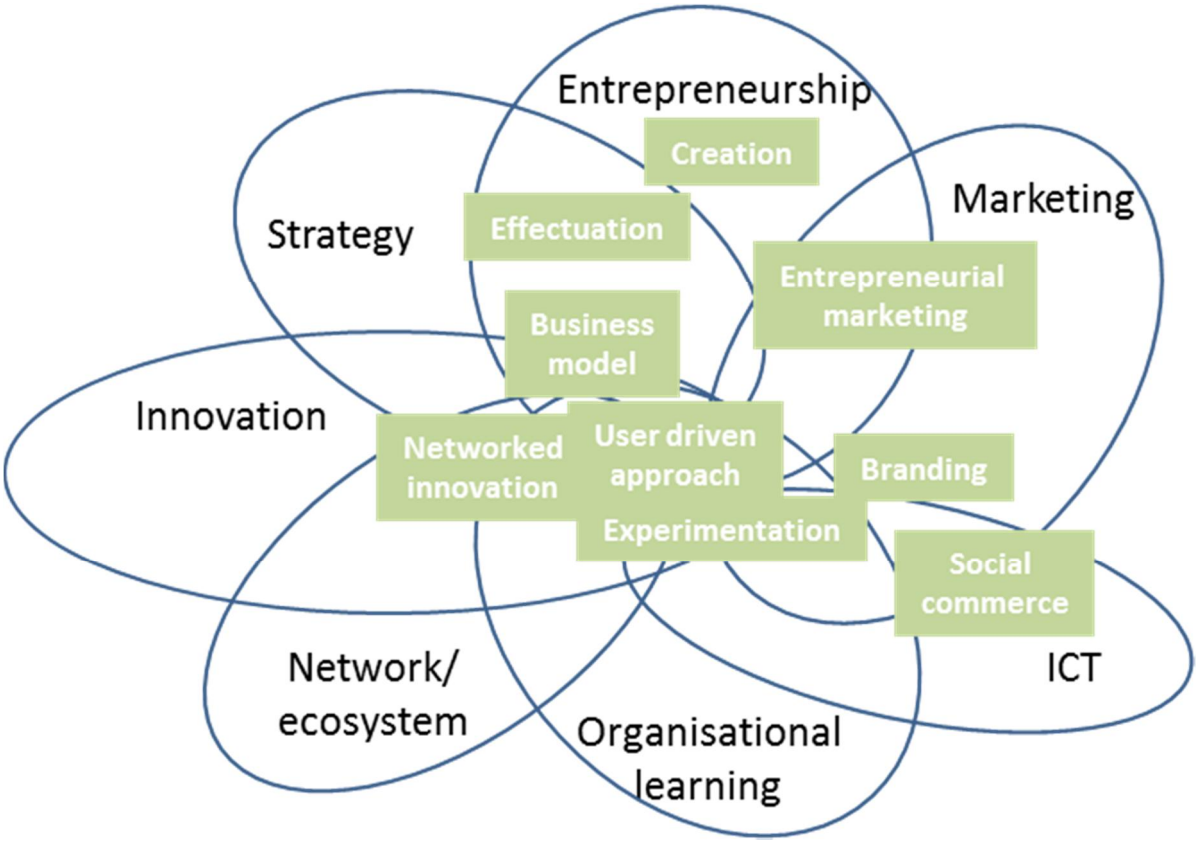

Figure 6. Theoretical discussions relating to acceleration of innovation.

Entrepreneurial marketing

Entrepreneurial marketing EM concept or approach can be understood as "marketing with an entrepreneurial mind-set" (Kraus et al. 2009). This broad definition is applicable for small young and also large mature companies. Table 7 outlines a loose and fragmented EM literature into three entrepreneurial marketing schools. Furthermore, Wales et al. (2011) propose another typology based on locus of EM. They concern three different locus of EM: vertical – EM as top management strategy; horizontal - EM is a process that is adopted across the organisation as culture; temporal phenomenon – EM as a stage in the evolution of marketing within organisation and/or a strategic response to environmental turbulence (stress).

Table 7. Entrepreneurial marketing schools (adapted from Miles et al. 2014).

School of thought	Concept	Seminal works
EM as entrepreneurship in marketing	• **Different way of doing** marketing • Creates value by exploring anticipated and latent needs and satisfying them • Entrepreneurship enables a firm to create radical innovations (new uses for existing products, new products, new markets) through opportunity discovery, assessment and exploitation	Hills 1981, Dickson & Giglieraro (1986), Miles and Arnold 1991, Hills & LaForge 1992, Becherer & Maurer 1997, Morris et al. 2002
EM as relationship and network marketing in SMEs	• **SME**s conduct business and marketing in a fundamentally different **way** than large corporation • Owner-manager viewpoint • Network integration into SME marketing • CRM activities through personal networking and face-to-face interaction (versus formal software-driven CRM) • Adoption of social media	Birley 1982, Carson 1985, Carson & Cromie 1989, Grönroos 1990, Coviello et al. 1999, Coviello & Brodie 1998, Hultman 1999, Hultman & Shaw 2003, Read et al. 2009, O'Dwyer et al. 2009, Harrigan et al. 2008, 2011, 2012
EM as marketing in entrepreneurship	• Marketing tactics as a function of **opportunity-seeking strategic management** • Based on understanding of customers, competitors, suppliers and business environment • Need for appropriate organisational culture	Murray 1982, Morris & Paul 1987, Covin & Covin 1990, Covin et al. 1994, McDougall et al. 1994, Schindehutte et al. 2008, Webb et al. 2011

Branding

Brands can be seen for the company as markers for the offerings and as metrics for measuring effectiveness of marketing activity and also as a financial asset. Furthermore, for the customers brands serve a promise of particular quality level to simplify choice and reduce risk. (E.g. Keller & Lehman 2006). Although brands are built on the product, the marketing management research topics are related more into brand positioning, brand intangibles, brand personality, brand relationships, brand experience, corporate image and reputation, strategically managing of brands, integrating bran elements and marketing and assessing brand performance in a large company with wide consumer product portfolio than a new product branding. Focus on research of branding of new products is a way of brand extension – e.g. how brand extensions strengthen parent brand association (Keller & Lehman 2006).

Discussions about branding focus in many cases to BtoC market. Business marketing and purchasing differs from end customer buying: the value of the transaction is much larger, the complexity of buying process and buyers are normally not end-users (e.g. Kotler and Pfoertsch 2006, Glynn 2011). Kotler and Pfoertsch (2006) present in their book of BtoB brand management two different acceleration approaches through branding. A traditional branding process contains planning, analysis, strategy, building and audit phases. Tools to support that process they suggest customer-based brand equity pyramid (CBBE) and brand strategy model, which emphasize values and association, not only a product itself (Figure 7).

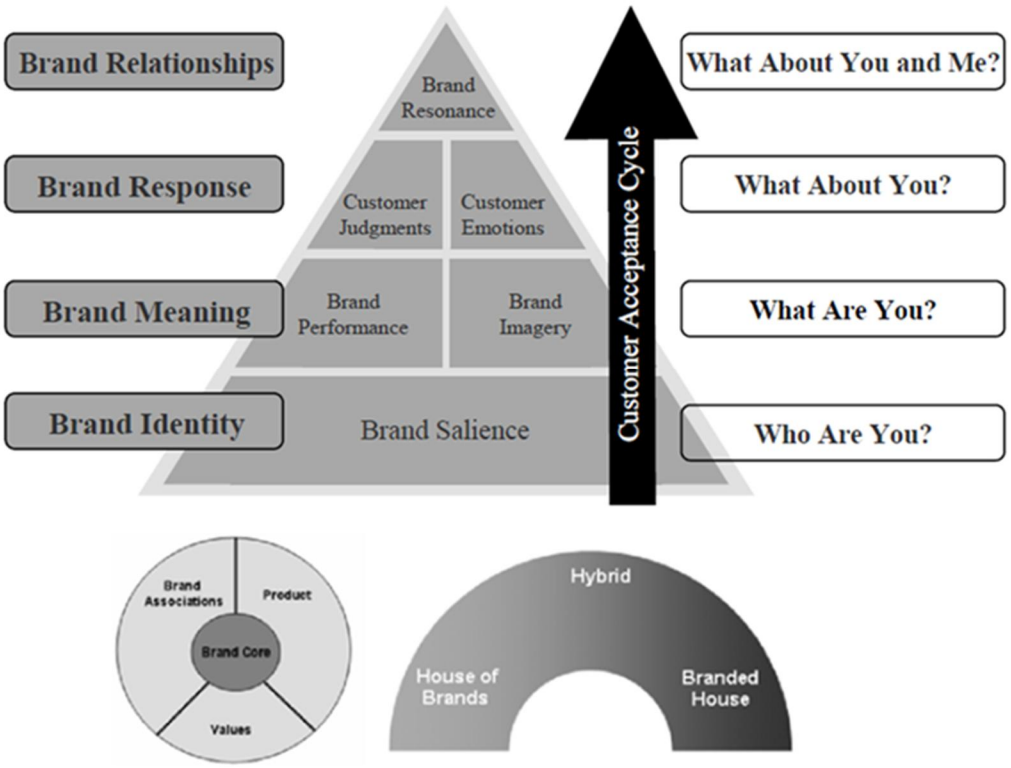

Figure 7. Customer-based brand equity pyramid CBBE model with brand strategy and architecture (Kotler & Pfoertsch 2006).

Nevertheless, Kotler and Pfoertsch (2006) argue that their approach is not so relevant in the situation where it is need to brand a concept from scratch. For start-ups, new ventures or new identity building they propose Kevin Clancy's and Peter Krieg's (2000) 5 step brand building process (Figure 8).

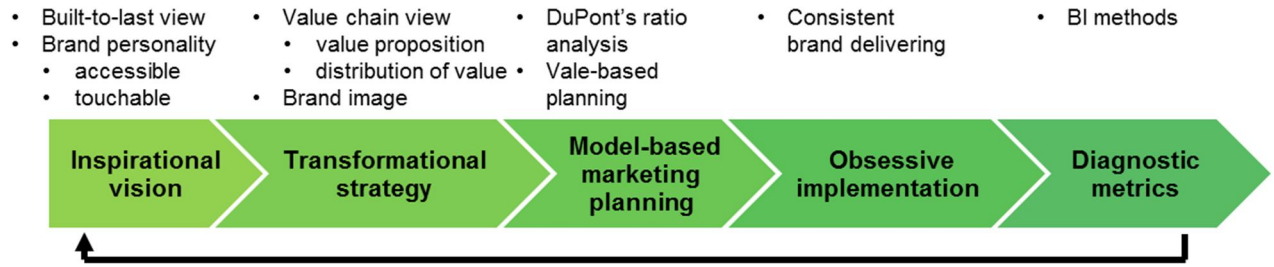

Figure 8. 5 step brand building process (adapted from Clancy & Krieg 2000).

Recently, importance of social media in brand management has been noticed also in branding literature. Through social media consumers are becoming more and more from audience to author of brand stories (Gensler et al. 2013). Now, companies have lost their pivotal role in marketing communication. Consumer-generated brand message is more impactful than advertising based spread through traditional channels because they utilize social networks, are digital, visible, ubiquitous, available in real-time, and dynamic (Hennig-Thurau et al. 2010).

Henning-Thurau et al. (2010) argue that new marketing strategy and tactics are needed because of new media. They identified ten key phenomenon and their affects to consumer behaviour, which researchers and marketers need to take account in their new marketing framework development and further build a "pinball" framework to illustrate effects of new media on customer relationships (Figure 9). They present brand management as a pinball game, where companies serve up a ball – brand and brand building message - into a cacophonous environment, which is then diverted and accelerated by new media, which as for the offering's course in chaotic ways. After the ball is in play, company tries continuing to guide it with agile use of new and old media, but the ball not always go where it is intended to. Even for

product brands, which are not consumed within social media, the shift to social media as channel for branding is relevant (Davis et al. 2014). Therefore, the information about a brand is multidirectional, interconnected and difficult to predict and not controllable.

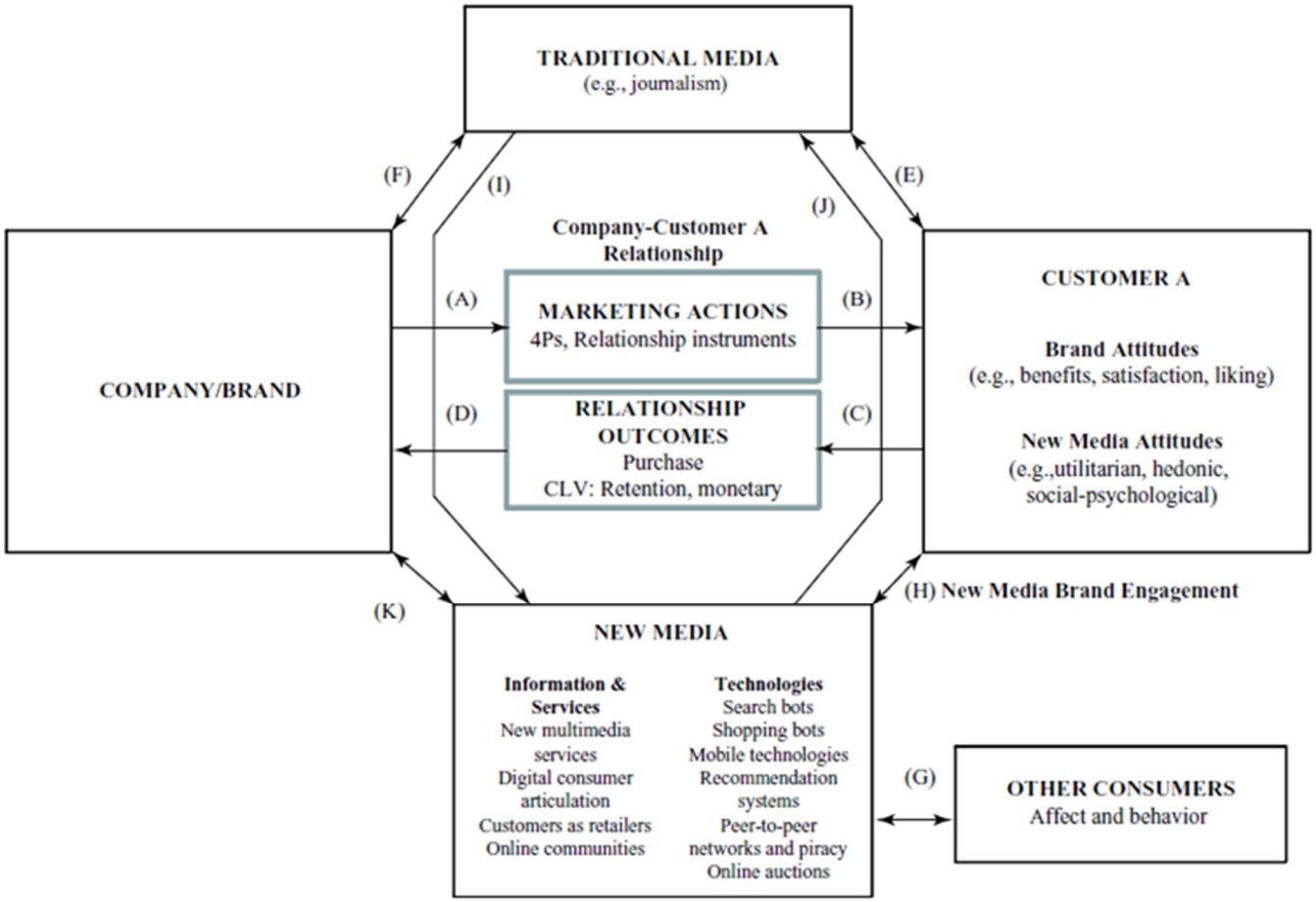

Figure 9. Conceptual pinball framework of brand message (Henning-Thurau et al. 2010).

Because of brand consumption is increasingly carried out in social media and consumption is became the social co-production of shared meanings there is need to increase understanding of brand consumption in that context. Davis et al. (2014) identify five core drivers of brand consumption: functional, emotional, self-oriented, social and relational. Table 8 lists characteristic of these five models.

Table 8. Five sources model (adapted from Davis et al. 2014).

Consumption model	Motivation
Functional	- reducing effort or money - gaining tacit knowledge
Emotional	- alleviating personal problems or situation - feeling privileged, recognised and valued by a brand
Self-oriented	- self-actualization - enhancing self-perception - self-branding
Social	- changing experience - attaching community - building links - social interaction
Relational	- co-creation of the service offering - the desire for personalized brand interaction - the desire to know real people behind the brand

Effectuation

The start-up process has been described in academic literature until the end of the 20th century as a chronological multi-phased process with the focus on prediction (e.g. Lynn et al., 1996), in which aim was first to develop the product and then find customers. Sarasvathy (2001) introduced it effectuation theory to describe process of firm creation in markets that do not exist, because it helps to make decision in absence of any pre-existing goals (Read et al. 2009). The main principles of effectuation are following (Sarasvathy 2001, 2004): 1. affordable loss rather than expected returns, 2. strategic alliances rather than competitive analyses, 3. exploitation of contingencies rather than exploitation of pre-existing knowledge, 4. controlling an unpredictable future rather than predicting an uncertain one. So, effectuation has logic of control, in contrast, causation rests of logic of prediction (Sarasvathy 2001).

An example of a causation model is Kotler's (1991) procedure for bringing a new product/service to existing market.

1. analyse long-run opportunities in the market
2. research and select target markets
    - identify segmentation variables and segment the market
    - develop profiles of resulting segments
    - evaluate the attractiveness of each segment
    - select the target segment(s)
    - identify possible positioning concepts for each target segments
    - select, develop, and communicate the chosen positioning concept
3. design marketing strategies
4. plan marketing programs
5. organize, implement, and control marketing effort

Blank's (2005) customer development process and Ries' lean start-up (2011) concept and entrepreneur-friendly sales model (Onyemah et al. 2013) (Figure 10) are practical examples of effectuation models (more about the customer development and lean start-up models in subchapter 2.2.2.).

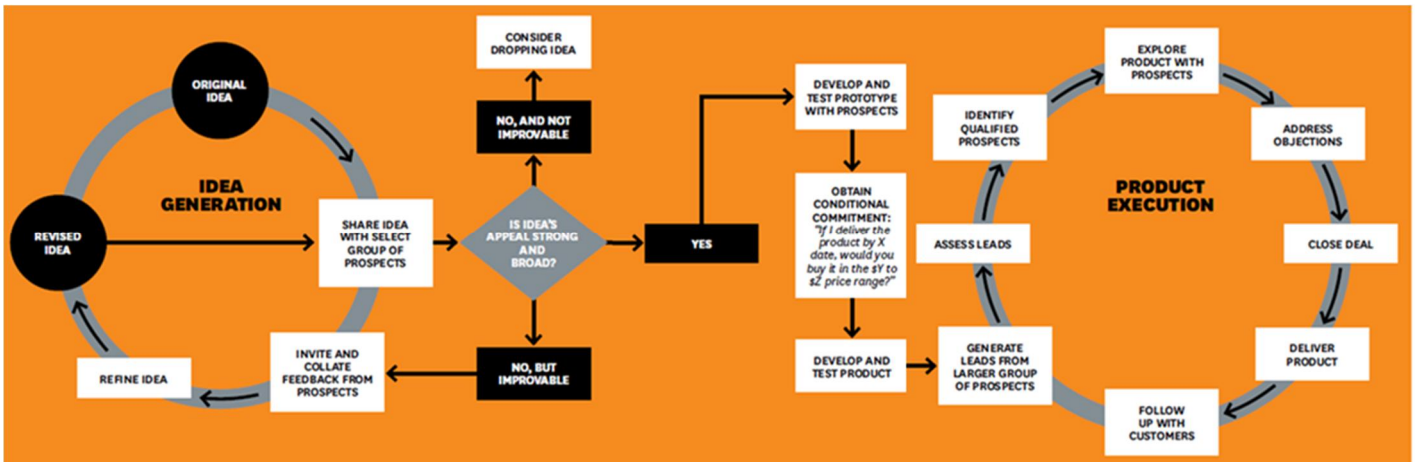

Figure 10. Entrepreneur-friendly sales model (Onyemah et al. 2013).

Creation theory

Creation and discovery are alternative theories of entrepreneurial actions. They both are examples of teleological theory and seek to explain actions that entrepreneurs take to form and exploit opportunities. These theories have different assumptions of business opportunities existence. Discovery theory bases on assumption that new

entrepreneurial business opportunities exist e.g. due to technological, political or regulatory changes and wait just to be discovered. In contrast, creation theory assumes that there are no opportunities independent on entrepreneurship. (Alvarez & Barney 2007)

Table 9 specifies characteristic of discovery and creation theory approaches.

Table 9. Entrepreneurial actions in discovery and creation contexts (Alvarez & Barney 2007)

	Discovery Context	Creation Context
Leadership	Based on expertise and (perhaps) experience	Based on charisma
Decision Making	Risk-based data collection tools; Risk-based decision making tools; Importance of opportunity costs	Iterative, inductive, incremental decision making; Use of biases and heuristics; importance of affordable loss
Human Resource Practices	Recruitment: Specific human capital recruited broadly	Recruitment: General and flexible human capital recruited from pre-existing social networks
Strategy	Relatively complete and unchanging	Emergent and changing
Finance	External capital sources: Banks and venture capital firms	'Bootstrapping' and 'friends, families, and fools'
Marketing	Changes in marketing mix may be how new opportunities manifest themselves	Marketing mix may fundamentally change as a result of new opportunities that emerge
Sustaining Competitive Advantages	Speed, secrecy, and erecting barriers to entry may sustain advantages	Tacit learning in path dependent process may sustain advantages

In creation theory, opportunities are not assumed to be formed by exogenous shock. Rather, they are created by the actions, reactions, and enactment of entrepreneurs exploring ways to produce new products or services (e.g. Baker and Nelson 2005, Gartner 1985). Then, the entrepreneurs are not so much combining pre-existing information and knowledge, but, rather, by asking the right questions, designing new experiments, remaining flexible, and learning (Mintzberg, 1994).

Social commerce

Social commerce is a form of commerce mediated by social media involving convergence between the online and offline environments (Wang and Zhang 2012). Social commerce involves the use of Internet-based media that allows people to participate in the marketing, selling, comparing, curating, buying, and sharing of products and services in both online and offline marketplaces, and in communities (Zhou et al. 2013).

Zhou et al. (2013) point out that social commerce is not just a simple fusion between e-commerce and social networking technology, regardless of whether it takes the form of adding a social layer to e-commerce web sites or plugging a retail layer into social media sites. People also are central to a new dimension that has been social commerce unleashes the power introduced in various refinements and additions to the original ''4P'' marketing mix (McCarthy 1964) framework - product, price, place, and promotion.

Business modelling

Teece (2010) defines that "business models reflect management's hypothesis about what customers want, how they want it and what they will pay, and how an enterprise can organize to best meet customer needs, and get paid well for doing so". Business model design within the entrepreneurship field is a recent topic; it is gaining growing attention in the literature (Trimi & Berbegal-Mirabent 2012). Earlier entrepreneurship literature emphasise importance of new products. Zott and Amit (2010) affirm that business model design stands as a key issue also for any entrepreneur willing to create a new business.

Disruptive innovation (Christensen 1997), blue ocean strategy (Kim & Mauborgne 2005) and open innovation (Chechbrough 2006) brought business model innovation in corporate context into spotlight. Moreover, business model canvas (Osterwalder & Pigneur 2010) offered practical method and tool for business modelling and further emphasised importance of business modelling in any new product, service or business development and value creation.

Experimentation

The importance of experimentation in strategy execution has been stressed for instance by Thomke (2003) and Brown & Eisenhardt (1997; 1998). Chesbrough (2010) also emphasises the importance of experimentation in the development of business models. Brown and Eisenhardt studied success stories in the IT industry to explore how a company can stay at the cutting edge of competition in a rapidly changing industry. They said that successful companies use their competitive advantage for actively seeking new opportunities and not for maintaining their existing position. Additionally, such companies do not attempt to predict future developments in staking all their development resources on a single product strategy. Lester and Piore (2004) agree with this in noting that a company should not even attempt to guess at what customer needs might be; instead, a company should offer a variety of products and services in seeking its strategic orientation so that the market can decide which way the company should go and which aspects it should develop.

Other

Other relevant discussion related to the topic are in marketing area e.g. viral marketing (e.g. Juvetson & Draper 1998, Godin & Gladwell 2001, Krauz et al. 2009), digital marketing, real time marketing, Guerrilla marketing (e.g. Levinson 1984, Krauz et al. 2009) , Buzz marketing (e.g. Rosenbloom 2000, Krauz et al. 2009). Furthermore, in the field of agile (e.g. Higsmith 2002, Abrahamsson 2002, Nerur & Balijepally 2007) and lean (e.g.Womack et al. 1990, Womack & Jones 2010), organisational learning (Argyris & Schön 1978, Huber 1991, Nonaka & Takeuchi 1995), ecosystem building (Moore 1993, Iansity & Levien 2004) and also ambidextrous change management (March 1991, Tuchman & O'Reilly 1996) have many interesting viewpoints, which would help to understand acceleration approach.

2.2.2 Lean Start-up and validated learning

The lean start-up started as a scientific approach to create and manage start-ups and to get products faster to the market. However, the lean start-up has grown to a movement that is transforming how new products and services are built and launched, and it is applied more and more also outside start-up scene (Blank 2007).

Five key principles of lean start-up

The five key principles of the lean start-up are (http://theleanstartup.com/principles):

1. **Entrepreneurs are everywhere**

"you don't need to work in garage to be an entrepreneur" -Eric Ries

Eric Ries (2011) defines that the concept of entrepreneurship includes anyone who works within a human institution designed to create new products and services *under conditions of extreme uncertainty* (i.e. within a start-up) . This means that entrepreneurs are everywhere and lean start-up methodologies can be applied in any industry and in any size of the enterprise.

2. **Entrepreneurship is Management**

"Start-up is a temporary organisation searching for a scalable and repeatable business model" –Steve Blank

Since start-ups are not yet executing but just searching for a viable business model, managerial practices and process that are developed for companies that are aiming to execute existing business models as effectively as possible don't apply for start-ups. Nevertheless, this doesn't mean that start-ups don't need management. The management of the start-up is utmost important, but the management methods should be specifically geared to the context of the start-up.

3. Validated learning

"Validated learning is principal antidote to the lethal problem of achieving failure: successfully executing a plan that lead nowhere" - Eric Ries

Ries (2011) defines validated learning as a rigorous *method for demonstrating progress* when one is embedded in the soil of extreme uncertainty in which start-ups grow. Thereby, learning should be seen as a new and better way to demonstrate and validate the progress of the start-up, and learning should replace traditional measures of progress (such as achieving product milestones or delivery dates). Validated learning demonstrates empirically that the team has discovered valuable facts about start-up's present and future business prospects.

Validated learning is tightly coupled with lean thinking (from the lean manufacturing). The idea is to remove all unnecessary waste from the product/business development. Hence, in a validated learning you aim to work backwards to understand what are we trying to learn and what is the least amount of work required to learn that.

"..every product, every feature, every marketing campaign – everything a start-up does – is understood to be an experiment designed to achieve validated learning" Eric Ries

4. Innovation accounting

Innovation accounting enables start-up to prove *objectively* that they are learning how to grow a sustainable business.

Three *learning milestones* of innovation accounting:

I. Establish the baseline to evaluate the growth model
Use minimum viable product to establish the baseline i.e. real data on where the company is right now

II. Tune the engine
Every product development, marketing or other initiative that a start-up takes should be focused on tuning the growth engine of the company. Tuning should be based on pre-defined metrics and set of experiments designed to test (riskiest) assumptions.

III. Pivot or persevere
With clearly pre-defined goals and metrics start-up can judge whether it is going to the right direction, and if not there is clear data to support decision to make a pivot. Hence innovation accounting framework makes it clear when the company is stuck and needs to change the direction.

Metrics:
Lean start-up defines to types of metrics: 1) vanity metrics, and 2) actionable metrics. *Vanity metrics* provide 'the rosiest picture possible' and can be misleading information (e.g. gross number of customers), which don't really tell if there is improvement made over time. Following example explains how vanity metrics might work:

> "The company launches a new feature or new product, and a few days later, traffic (or revenue, or customers) starts going up. Everyone involved with that product celebrates. In fact, I've noticed that people tend to believe that whatever they were working on that preceded the metrics improvement probably caused the improvement itself. So the product guys think it's the new feature, the sales guys think it's that new promotion — I've even seen customer service reps be convinced it's due to a new customer-friendly policy. In many cases the fluctuations are random or caused by unrelated external events. Unfortunately, the same mental trickery doesn't apply when the numbers come back down.

> Human beings have an unfortunate bias to take credit for positive results and pass the blame for negative results."
> Eric Ries (2009) Vanity metrics vs. Actionable metrics http://fourhourworkweek.com/2009/05/19/vanity-metrics-vs-actionable-metrics/

On the contrary, actionable metrics should be easy to link actions that have been taken and therefore metrics can lead to informed business decision and subsequent actions.

> "Now consider the case of an Actionable Metric. Imagine you add a new feature to your website, and you do it using an A/B split-test in which 50% of customers see the new feature and the other 50% don't. A few days later, you take a look at the revenue you've earned from each set of customers, noticing that group B has 20% higher revenue per-customer. Think of all the decisions you can make: obviously, roll out the feature to 100% of your customers; continue to experiment with more features like this one; and realize that you've probably learned something that's particular valuable to your customers."
> Eric Ries (2009) Vanity metrics vs. Actionable metrics http://fourhourworkweek.com/2009/05/19/vanity-metrics-vs-actionable-metrics/

5. Build-measure-learn

The fundamental activity of a start-up is to turn ideas into products, measure how customers respond, and then learn whether to pivot or persevere. All successful start-up processes should be geared to accelerate that feedback loop. It should be remembered that the validated learning is the key goal, and build-measure-learn loop enables rapidly learning what customers' really need and hence what needs to be built.

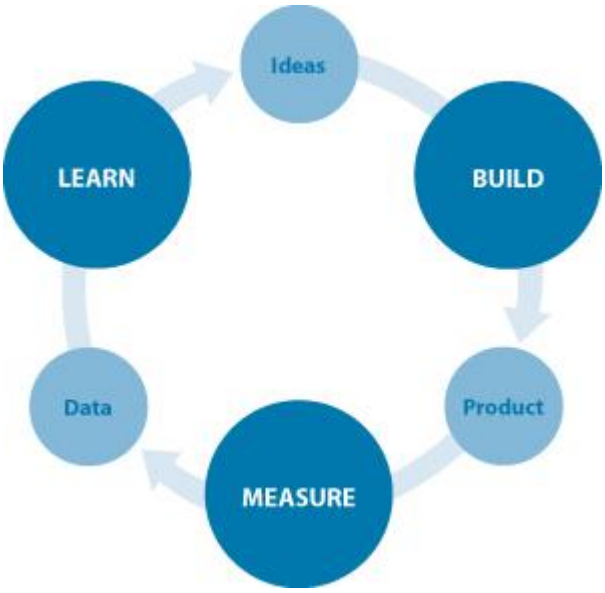

Figure 11. Build-measure-learn loop

Difference to the traditional methods

Figure 12 illustrates that companies utilizing lean-start-up methodology differ in many aspects from 'traditional companies'. Lean companies focus on business model design and validation (Osterwalder 2010) instead of long-term business plans, they use agile development to build product iteratively and incrementally, customer development (e.g. Blank 2013) is key method to get customer feedback, and key metrics also differ from the traditional ones. One key

difference is also that lean start-ups think that failure is a way to find sustainable business, whereas traditionally new businesses have been avoiding failures at all costs.

Figure 12. What lean start-ups do differently (Blank 2013)

2.3 STATE OF THE ART INPUT INTO ACCELERATION APPROACH DEVELOPMENT

Beginning of this chapter reviews theories and frameworks, that consider innovation acceleration from different viewpoints. To conclude the state of the art to innovation acceleration approach from development viewpoint, five different situations can be described (Table 10).

Table 10. Acceleration challenges and relevant approaches.

Acceleration challenge	Description	Relevant approaches, models
Business creation "from scratch"	- start-up - new business model concept	Effectuation, creation theory, lean start-up, business modelling, social commerce, business modelling, experimentation, customer development process
New technology	- start-up - new technology based product idea	Discovery theory, EM as relationship and network marketing in SMEs, entrepreneur-friendly sales model, social commerce, business modelling, experimentation
New solution	- large, mature company - solution and business model in line of recent strategy and offering portfolio	Customer-based brand management, EM as entrepreneurship in marketing, branding through new media, social commerce, business modelling, experimentation
New business	- large, mature company - radical solution and/or business model	Lean start-up, business modelling, EM as marketing in entrepreneurship, effectuation, social commerce, experimentation, customer development process
Growth	- SME - new solution/market/business model	EM as relationship and network marketing in SMEs, entrepreneur-friendly sales model, social commerce, business modelling, experimentation

3. ACCELERATION CONCEPT

3.1 FIRST COMMON UNDERSTANDING OF ACCELERATION

At the beginning of the Accelerate we defined acceleration an umbrella concept: **acceleration is a combination of means: processes, tools and methods, which help companies go faster to the right markets**. And what is most important here, is realize that it is not a sequential process to innovation process. Figure 13 illustrates our common understanding of acceleration. The issues (or themes) identified from literature were organized around these, including innovation culture, technology foresight, market foresight, ecosystem, funding possibilities, user experience, emergent strategy, value proposition design, collaboration, team work, co-creation, customer and user involvement, crowdsourcing, social media, evaluation and branding. Acceleration is understood here organisational learning process, which go along through opportunity mapping, business modelling to minimum viable solution. Finally minimum viable solution is evaluated using validated learning methodology. Here we used minimum viable solution instead of minimum viable product (e.g. Ries 2010) to emphasize that result can be a physical product, a software product or services or as in most of cases a solution combines elements of all these three and business model is there what differentiates it from other solutions.

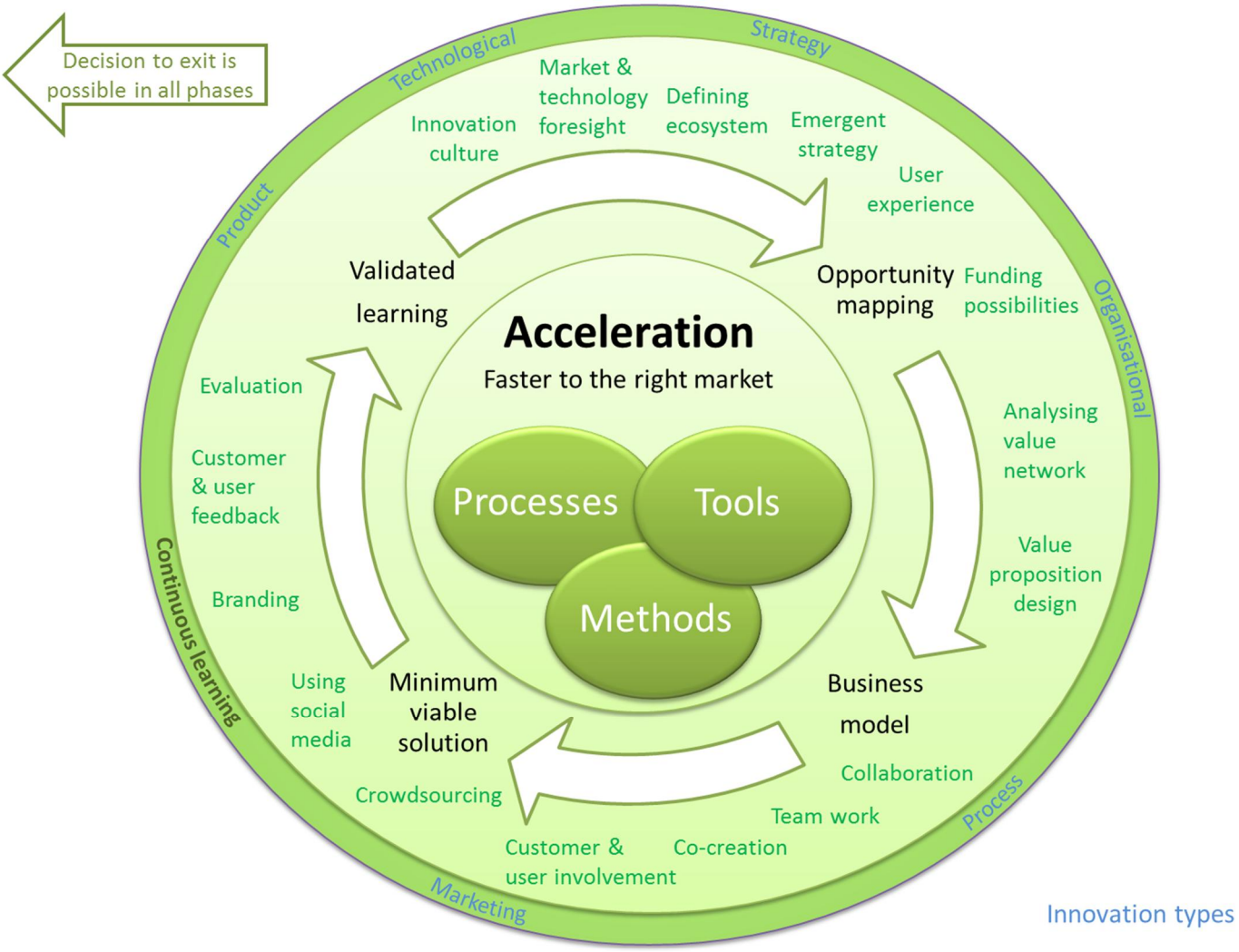

Figure 13. First Accelerate project common understanding of acceleration.

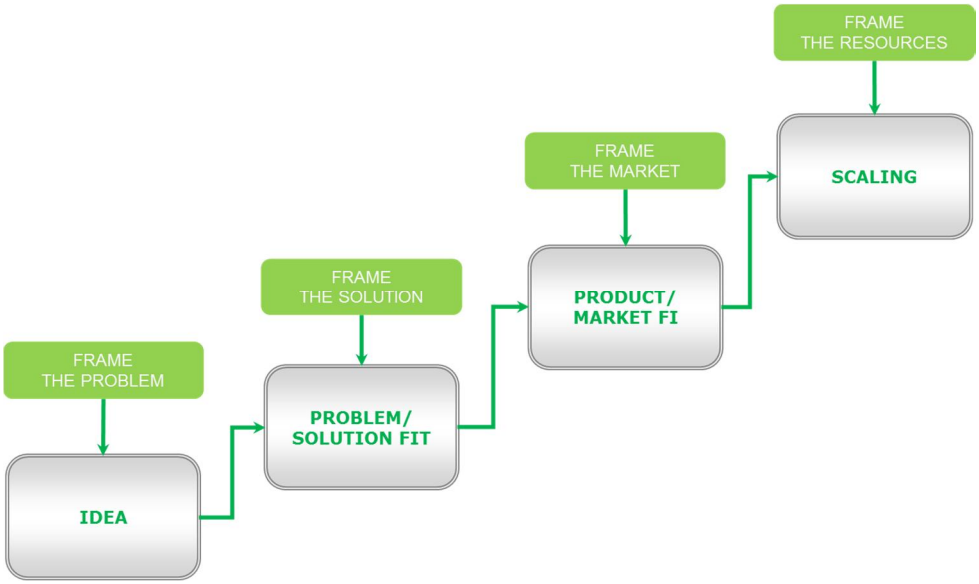

Figure 14. The four-phased acceleration frame (Sirris, D3.1).

Further, the acceleration methodology is sharpened from phases view point. The four-phased acceleration frame is progressive. In the first phase – ***frame the opportunity*** - , the focus is on the transformation of ideas to concepts that are quickly evaluated by intended user groups and ecosystem partners. After selecting the most promising idea, the focus shifts to developing a minimal viable solution and appealing value proposition in the second phase, which we call ***frame the solution.*** In the third phase – ***frame the market,*** the development and testing of business model becomes crucial. Finally, the viral coefficient must be greater than 1 to have viral growth in the fourth ***frame the resources*** phase. In other words, the last phase emphasizes that a single customer acquisition should result more than one customer, on average, by means of the customer referral. **Error! Reference source not found.** lists key activities, methods and KPI's in each of these four phases.

Table 11. Illustration of the four-phase methodology in acceleration and the key characteristics in each phase (D3.1).

Phase	Frame the opportunity	Frame the solution	Frame the market	Frame the resources
Key activity	Research, ideation and exploration	The development and validation of MVP and value proposition	Business model generation and testing	Business (hyper)scaling
Key methods	Ideation process support, ecosystems, market reality check	Mock-ups, market validation, co-creation activities	Market feedback, advisory boards, ecosystems	Product as a channel, direct customer connection, 3rd party APIs
Key KPIs	#ideas making transitions, strategic fit, qualitative metrics	Speed of development, Growth rate, customer retention, average user activity	NPS, cost of service, ARPU, average cost of customer acquisition	Conversion rates, customer retention, online presence

3.2 WORKING DEFINITION OF ACCELERATION

Working definition in Accelerate project further development and research work we use ***iterative acceleration learning cycle*** (Figure 15Figure 13**Error! Reference source not found.**). It combines earlier illustrated common understanding of acceleration circle (Figure 13) and four-step framework (Figure 16). The idea behind the iterative acceleration learning cycle is that it is relevant for both start-up and mature companies.

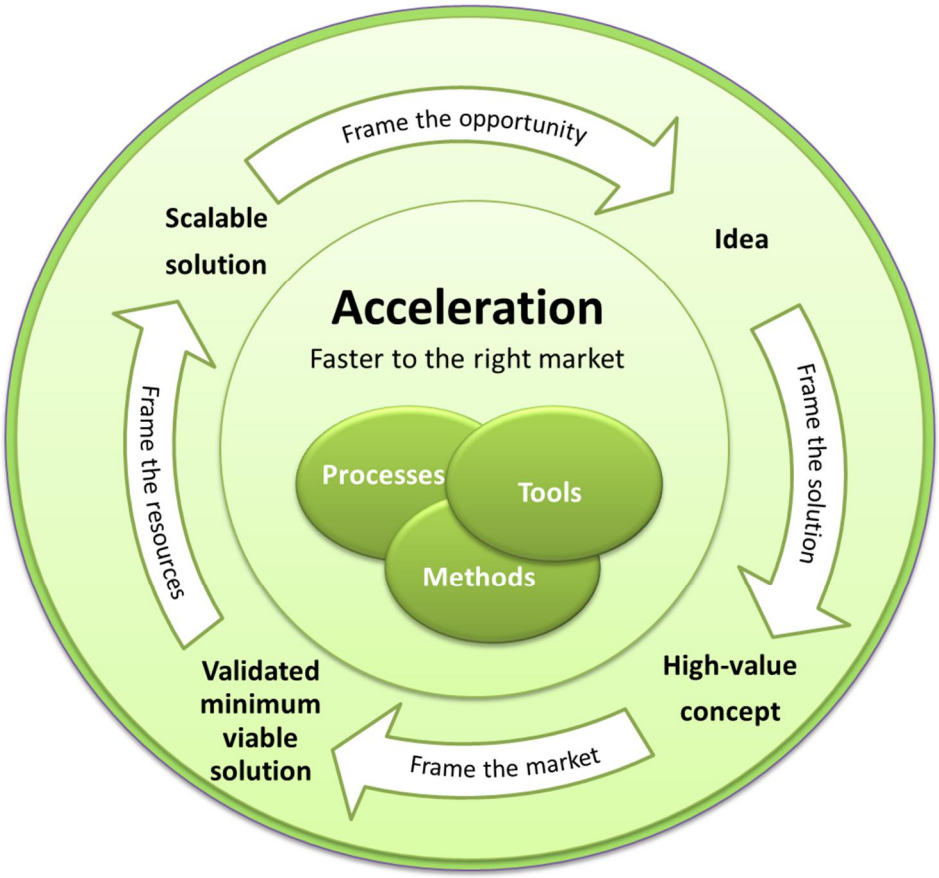

Figure 15. The iterative acceleration learning cycle.

We can outline main principles of our acceleration concept as following:

- acceleration is a combination of means: processes, tools and methods, which help companies go faster to the right markets
- basic concept is applicable in all companies in all size, in all time in their lifecycle, and in all industries which utilise ICT or provide ICT based solutions
- acceleration process is an iterative learning process, in which an organisation and its innovation network participate
- it is inspired by learn-start up and validated learning concepts
- each of four phases are iterative processes themselves
- organisation's innovation culture create a basis for good breeding ground to acceleration
- customer understanding and also both end-user and customer involvement to acceleration are essential
- business environment knowledge and foresight help to find potential opportunities with great business potential
- exploiting ecosystem role is important
- each component in business model has a crucial role

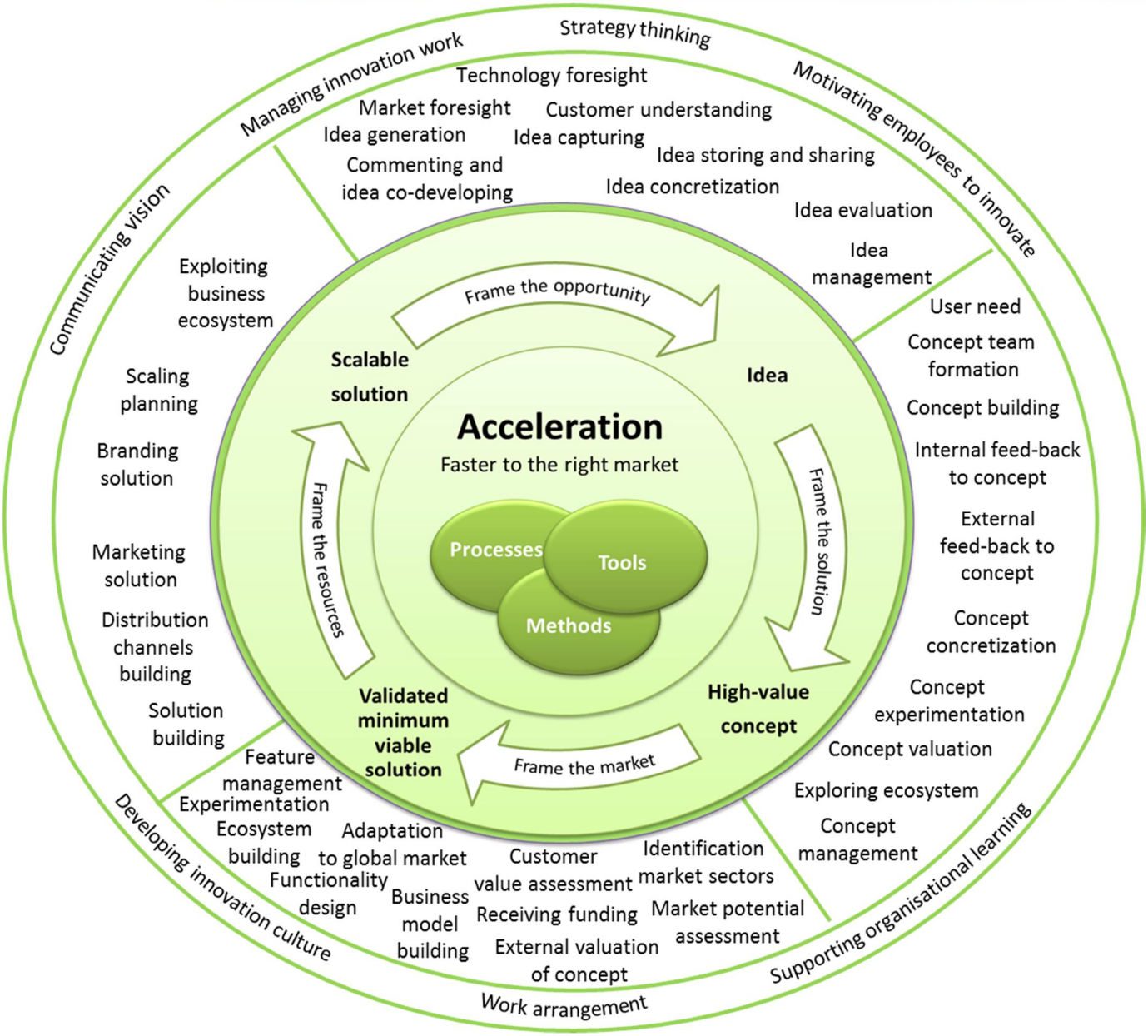

Figure 16. The iterative acceleration learning cycle with tasks.

4. STATE OF THE PRACTICES

The aim of the state of the practices is find industrial need for methodologies. The identified needs set development targets to development work in use cases and in other methodology improvement and new development work to be done in Accelerate project.

Following key success factors have identified so far (02/15) from the use cases.

- External first –thinking (market first)
- Growth hacking
- Development as an ideation method
- Participation and idea creation
- Alliances with appropriate partners
- Knowledge of the business
- Thinking outside of the box
- Collaborative opportunity evaluation
- Viable, sustainable and scalable model
- Repeatable and rapid external validation capability with real test product and real customers

4.1 STARTUP INNOVATION AND INNOVATION PROCESS (D1.1 SURVEY)

Accelerate consortium SME/start-up companies see innovation significance to their company very high - a keystone of companies' succeeds. The most relevant changes, which the companies are now pursuing are looking at new customers and increasing market share but also looking new market approach with more productised products and services. Companies understand their innovation work in very holistic way from product improvements and new features to new products and services as well for example spin-offs and IPR. Typically for smaller companies they have specific and well communicated innovation target and their organisational culture and practices support renewal and innovation very well.

The small companies use iteration and experimentation approach in their innovation work. They use validated learning, Scrum and use cases in developing new products and services.

Organisational learning the companies support with following means:

- internal meetings to share information and knowledge
- training to share information and knowledge
- intranet to share information and build common understanding
- sharing knowledge and working in iteration to keep up state of the art and new development.

4.2 START UP PRACTICES (EIT ICT LAB STUDY)

Start-up companies are very focused on developing their solution and bringing it to the market. These companies had very practical approach on the business development and activities that aim to commercialize the innovation. The key issues that they told in the interviews were:

- Aim to find a viable business model
- Getting out of the building to get the feedback and test the product-market fit early
- Building customer relationships, which requires a lot of commitment and effort
- Getting access to private funding to enable the development of the solution and scaling the business

The main methods used by the start-up were business model design and lean start-up methods. Most of the start-ups had very iterative innovation process. However, they didn't think it as an innovation process, but process of getting the solution to the market and getting traction for the solution. Many of the start-ups were very familiar with various

'start-up metrics' such as conversion rate, referral rate, cost per subscriber, average revenue per user, churn rate, monthly active users, etc., which are often also interest of private investors.

4.3 MATURE ORGANISATION INNOVATION AND INNOVATION PROCESS (D1.1 SURVEY)

Mature Accelerate consortium companies see innovation mainly from practical point of view – something what is need in product and service development and also way to improve also operational efficiency. Some companies emphasize that innovation is their corporate value and or way to renew business.

The most relevant drivers to innovation companies listed new customer, new markets (geographical and customer sector) and increasing market share. Some companies are also looking new market approaches.

The mature companies innovation and development results are following:

- implementation of new technology (5/6)
- new software products (4/6)
- new improvements to existing physical products (4/6)
- project delivery (4/6)
- new business models (4/6)
- new operational practices and processes (4/6)
- new ideas (4/6)
- new concepts (4/6)
- new IPR (4/6)
- new features to software products (3/6)
- new physical products(3/6)
- new services (3/6)
- new features to existing services (3/6)

The mature companies have succeeded very different way in their communication of innovation target. Answers varied a lot from 10% to 100%. Instead, the companies' organisational culture and practices support renewal and innovation mainly rather well.

Almost the all mature organisations use validated learning and experimentation approaches. Many of them use also Scrum, use cases and STOF in developing new products.

Organisational learning the companies support with following means:

- internal meetings to share information and knowledge (6/6)
- workshops to share and crate ne knowledge (5/6)
- databases and information systems to capture and store information (5/6)
- intranet to share information and build common understanding (5/6)
- project lesson learned to learn from success and failures (4/6)
- training to share information and knowledge (4/6)
- expert group to share and create knowledge (3/6)
- development group to create new knowledge (3/6)
- expert catalogue to help to find experts (2/6)
- job rotation to transfer tacit knowledge to other (1/6)
- incentive system to motivate employees to share information (1/6)
- coach network
- internal crowdsourcing system
- management initiatives and encouragement

4.4 METHODOLOGIES IN USE AND UNDER DEVELOPMENT

D3.0 and D3.1 have consolidated the knowledge gathered from the use cases at the moment. Following with the four-phase methodological framework proposed by the project, all the methodologies and tools applied by the use cases have been reported according to the phase to which it is providing support.

Table 12. Summary of methodologies used in use cases. (Data from D3.1, and status reports)

	Methods and tools in use	**Normally in use at the moment**	**New**	**Plan to develop further**	**Internal /own use**	**Product/ service to sell**
Frame the opportunity - Methodologies	Company-wide ground-up ideation	x			x	
	Requirements Workshops	x			x	
	User interviews	x			x	
	Use case definition	x			x	
	Idea template		x		x	
	Screening team practice	x			x	
	Focused ideation campaigns and competitions	x			x	
	Publishing best ideas through intranet	x			x	
	Success stories through intranet	x			x	
	Market research	x			x	
	Eight I's of infinite innovation		x		x	
	Business Model Innovation	x			x	
	User Driven Innovation	x			x	
	Design Thinking	x			x	
	Nine roles of innovation	x			x	
	IC Innovation Model	x			x	
	RUP model	x			x	
Frame the opportunity - Tools	Atlassian Confluence	x			x	
	Internal Kickstarter for idea collection and collaboration		x		x	
	Innovation tutorial		x		x	
	Conception package		x		x	
	Jira as idea management tool		x		x	
	Innovation spaces		x		x	
	Demo proposal template		x		x	
	Stand-up ideation meetings	x			x	
	Business model canvas	x			x	
	DeckMind		x	x	x	x
	Welodias		x	x	x	x
	CogniStreamer Innovation Portal		x	x		x
	Innowave		x	x	x	x
Frame the solution - Methodologies	Internal crowdsourcing		x		x	
	Iterative development of process/methods	x			x	
	Collaboration actively via personal and company wide networks	x			x	
	Retrospectives of use cases	x			x	
	Coaching practice		x		x	
	Matching experts with the same profile and provision of mentorship	x			x	
	Market research	x			x	
	Nine roles of innovation		x		x	
	Business Model Innovation	x			x	
	User Driven Innovation	x			x	
	Design Thinking	x			x	
	Crossing the chasm	x			x	
	Open innovation	x			x	
	IC Innovation Model	x			x	

	Agile methodology	x			x	
	Validated Learning process		x			x
	External first –thinking to release early and validate with downloads/ (un)installs		x		x	
	Lead user communities		x			x
	Consumer-designer sparring session		x			x
	Business Model Canvas	x			x	
	eMarketing	x			x	
	Eight I's of infinite innovations	x			x	
	SCRUM model	x			x	
Frame the solution - Tools	Google Play		x		x	
	Social Media	x	x		x	
	PR packaging	x			x	
	Business model canvas	x			x	
	Light weight web cam to support demo creation		x		x	
	Demo proposal template		x	x	x	
	CogniStreamer XL (proprietary)		x	x		x
	Numble Bee		x	x		x
	Open Nebula		x		x	
	Canvanizer	x			x	
Frame the market - Methodologies	User Driven Innovation	x			x	
	Design Thinking	x			x	
	Business Plan Canvas	x			x	
	Customer feedback	x			x	
	Concepts are evaluated by an expert jury assigned by challenge sponsor	x			x	
	Measuring closing the loop metrics (i.e. click throughs)	x				x
	Business model innovation		x		x	
	Eight I's of infinite innovations	x			x	
	Open Innovation	x			x	
	Lean start-up methodology	x			x	
	Agile model	x			x	
	Kickstarter (internal)		x		x	
	Google play with the special test-marketing brand exploiting social media		x		x	
	Disruptive innovation	x			x	
	Lean start-up methodology	x			x	
	Testing initial interest in a potential product or concept.	x			x	
	Monadic testing method	x			x	
	Discrete choice testing method as compared to another option	x			x	
	Social media innovation	x			x	
Frame the market - Tools	Customer portal		x	x		x
	Welodias		x	x		x
	Numble Bee		x	x		x
	Open Nebula		x		x	
	Canvanizer	x				
	SlapOS		x	x		x
	WordPress	x			x	
	Big data platform	x			x	
Frame the resources - Methodologies	Lean start-up to apply knowledge and new trends fast to the innovation process.	x			x	
	Business model innovation	x			x	
	Communication analysis methodology	x			x	
	IC Innovation Model	x			x	
	Growth hacking platform		x	x		x
	Waterfall model - method can be used for easy planning of activities and allocation of resources	x			x	
Frame the resources	TWITTERBOT/Den Bot		x		x	x
	Big data platform		x			

4.5 ACCELERATION SERVICES

4.5.1 Study on acceleration service providers

Going-to-market service providers can be classified based on their main service concepts into three categories: (Adapted from infoDEV, 19.3.2012, 77p.):

- Hand-holders address the challenges entrepreneurs face in developing their entrepreneurial capacities in large
- Network boosters bring entrepreneurs, investors, volunteers, and service providers together and help them to provide added value to each other‘s businesses.
- Seed capital providers provide seed investment capital, combined with short or long-term support.

Table 13 summarizes the classification of the service providers.

Table 13. Classification of acceleration service providers.

Item	Hand-holders	Network boosters	Seed capital providers
Service focus	Business development services (training, mentoring)	Access to business networks	Access to business finance
Funding	Donor, government, University	Foundations, commercial	Commercial
Typical outreach	10-20 companies per year	100-300 business per network	15-30 per season
Typical main revenue model	Sponsorships, additional consultancy projects	Sponsors, membership fees	Admission fee, equity (5-15%), royalty on sales

Main notifications of this survey are the following:

- There is a great number and variety of services and service providers only in Finland
- Due to high number of service providers, the offer of the current service providers have overlap
- Field of services is fragmented and it is difficult to get a good understanding of available services
- Services may be digital, vertically focused, corporate level, regional, founder centric, etc.
- In Finland It was found one digital web based service that supports companies in going-to-market
- Services do not cover validated learning type of approach
- Services only slightly tackles issue of localisation of a product by using their connections to R&D centres

5. NEEDS FOR METHODOLOGIES FOR ACCELERATION

Based on the analysis of characterization of the use cases according to D3.0 the following general needs have been identified:
1 Assessing market potential and create the landscape for a product or service.
2 Generate leads through social media.
3 Involving stakeholders to accelerate the go-to-market process.
4 Following a methodology for start-ups acceleration in order to progress more quickly
5 Find new internal start-ups for new business
6 Improving the innovation potential of the companies
7 Transfer of R&D results or innovative formal/regular training projects from university to industry and society.

5.1 LESSON LEARNT FROM THE USE CASES

First we summarise general lesson learnt from use cases (summarized in D3.1,) which are not depending on separate phase or task:

- first concept quickly and start iterating
- management commitment
- people involving, culture is changed one person at a time
- importance of communication
- strength ties between companies and universities and other research groups
- user driven innovation methodologies keeps the creative process active and reinforces teamwork
- KISS principle
- use normal office tools -> 1-2 PowerPoint slides
- choose simple tools (low training costs and short time to adopt)
- utilise same template to outlining/concepting and for management decision
- no tool solves a problem alone, supportive methods are necessity
- common spaces or platforms, which support multiple users contribution
- flexible solution platform to fit many problems, targets, internal and external working methods
- there are a limited number of qualified personnel
- need for acceleration knowledge
- need to reuse various components
- business insight very important – to find viable opportunities need to know business extremely well
- outside of the box thinking
- get input from all employees to turn opportunities to new solutions
- management tools for enrolment, ideation, selection, communication and moderation
- utilising crowdsourcing
- tools need guide to use e.g. “Tool x for dummies”

Next we put together lesson learnt from use cases. Following are the lessons learnt (D3.1) generalised from specific tools to concern tasks where these tools and methods are utilised. In deliverable 3.1 these lessons learnt are originally reported by methods and tools.

Developing innovation culture

- Coach & expert network a good way of involving people

Motivating employees to innovate

- Good examples (published in company intra) encourage new ideas to arrive
- Focused idea competitions are a good boost
- No ideas are rejected, creates safe environment for ideation

Idea generation

- Simple idea submission form makes it easy to get started
- functional innovation spaces, which support new and old way of working
- experimentation and development as an ideation method

Idea capturing

- Experiment multiple approaches for idea collection

Commenting and idea co-developing

- Growing and coaching ideas gives better results (than traditional go/no-go), safe environment for ideation
- idea enrichment

Idea concretization

- light demo method give freedom and help to set constraints (budget, time frame, resources)
- idea visualizing
- need to serve a basis of decision
- business-driven
- describe idea, budget, time frame, needed resources 2 slides template for management decision

Idea management

- Regular review of ideas is a must, keeps culture alive
- As open as possible, keeps culture alive

Concept building

- focused workshop with right people produced business model on 2 hours using business modeling method
- business modeling method is good method to balance if idea is mainly technical
- business model canvas – practical and fast: project canvas to the white board, use post its, take a picture, share
- business model canvas accelerate the definition of business plan
- business model canvas process help communication and sharing business plans among participants
- user driven methodologies accelerate the conceptualization

Solution building

- user driven methodologies accelerate the conceptualization

5.2 START-UP NEEDS

5.2.1 Survey for start-ups (Slush 2014)

The interviewees of the survey considered it easy to identify and show the phase in which they currently are with the acceleration services. However, it should be noted that it is possible that the scaling phase is over-represented as interviewees may have seen it also signalling the maturity of the company, and hence it does not necessarily mean that the companies had hundreds or thousands of companies as users/clients (though one company did have 70,000 users and one 500,000 users).

- In idea phase: 1 company (2.5 percent)
- In MVP phase: 6 companies (15 percent)
- In validated MVP phase: 11 companies (28 percent)
- In scaling phase: 55 companies (55 percent)

Problems experienced with acceleration

In total, 40 problems with acceleration were mentioned. This reflects the fact that the interviewees were asked to describe a problem (one problem). As can be seen from table 10, the most frequently mentioned problems were related to:

- Funding or financing: 13 mentions (33 percent)
- Networking: 5 mentions (13 percent)

Table 14. What kinds of problems have start-ups experienced? (funding in italics, networking with *)

Phase	Problems with acceleration
IDEA	*Problems with funding (ELY has been behind in responding to applications)*
MVP	*Financing to get into production* *Financing for start-ups* *Difficulties in getting the right Finnish angel investor* Do not know the big global players* No marketing skills Business understanding (founders have technical background) Finding viable business model Figuring out the money flow Creating the trust Finding the product/market fit. What do people want to pay for. Getting out of the office early enough Only 1 IT guy which is restricting the implementation
Validated MVP	*Funding challenge* *Financing for R&D* *Funding is a challenge* Contacting and networking are challenging* ”R&D work was done for too long in Finland” Sales metrics are missing Go-to-market support is missing Support for sales and marketing How to get the free.model to work Difficulties in explaining the pivots to investors Getting the credibility Sales take a lot of time (50 percent of CEO time) Standardization of processes The roles/responsibilities of people
Scaling	*It is difficult to find funders* *New funding required continuously– take a lot of CEO time* *Investment rounds in Europe tend to be small* *Funding* *Funding* *Long payment periods (Cash flow)* Getting into US distributor networks* Not enough time for networking* Scaling requires a lot of contacting and networks* Suprisingly many engineering problems in the platform Internalization problems, though using recruitment and fairs How to find problems that are homogenic enough? Human resources– hiring challenges

Support for acceleration received

17 companies (44 percent) did not identify any individuals/organizations that had supported them and 3 companies (8 percent) stated that they had not received any support.

In total, 25 support givers were named by the interviewees. The identified support givers were divided into three categories:
General:

- Investors
- Investment bankers
- Lawyers3 x board
- 2 x advisors
- Coaches

General support in Finland:

- TE-keskus (Public employment and business services in Finland)
- Tekes loan
- Tekes

Specific programs and instruments:

- AppCampus in Lappeenranta
- Aalto Start-ups
- Aalto University Program
- Veture Venture Accelerator
- TEKES Young Innovative Companies
- Tekes VIGO
- Start-up Sauna
- Reaktor Polte
- Starttaamo incubator
- Nokia Bridge
- EIT ICT Labs
- Aalto Centre of Entrepreneurship

Needs for start-up acceleration

In total, 51 needs were mentioned, answering what interviewees think would be beneficial for start-up acceleration in general. As can be seen from table x, the most frequently mentioned problems were related to:

- Funding or financing: 21 mentions (41 percent)
- Networking: mentions (13 percent)

Discussion

SLUSH was considered as a fruitful place to meet a significant number of start-ups and get their perspectives about the acceleration activities. As SLUSH is very much a pitching event, the tone of the event is not concentrating on problems, which might also have a bearing in the interviews.

Four things that can be highlighted from the interviews:

1. Funding/financing is a major concern at all phases of the acceleration process. Interestingly, very seldom the interviewees explained why they need the funding (how the money would be used). When asked, many interviewees explained that they just need the funding and that they know themselves what to do with it—maybe they were being careful and did not want to share this.
2. The interviewees did not highlight the role of support given by stakeholders and other related individuals/organizations/entities. 3 companies even stated that they had not received any support! Still, a large number of Finnish stakeholders and support instruments were identified.

3. Building international contacts for sales and marketing to enable and speed up the go-to market process and the global diffusion of innovation seem to be another key concern. Interestingly, especially the companies who were at the later stages of the acceleration process were emphasizing the need for networking and the value of networks.
4. The words "customer" or "user" were seldom mentioned in the interviews. It is rather surprising, as in theory, all phases are very much interrelated with customers/clients/users. A few companies mentioned the need to get outside the office, the need to go to clients earlier—and maybe the customer was included in the problems and needs identified with networks. Or maybe it was due to the fact that the companies were high-tech start-ups and oftentimes the people manning the booth (and hence being interviewed) were people with technical background.

Table 15. What would be beneficial for start-up acceleration.

Phase	Needs for acceleration
IDEA	*Money for the first proto so that could pilot with customers*
MVP	*Seed funding to support expanding sales activities* *Investments so can grow* Partners are important* Mentors are important At office alone is depressing How to explain the value proposition as there are no similar products?
Validated MVP	*Getting Tekes funding requires too much preplanning* *3 x Funding* *Money to grow, Money* *Financing for getting the business started in the US* *Money as operations cannot be only in Finland* *Financing* Distribution partners* Better networks for acceleration* More interactions with the unborn companies– that are still very much in the ideation phase* Mentors Role models Support for strategy and growth Benchmarking info Internalinazation information How to move from direct sales to online sales
Scaling	*5 x Funding, Extra funding* *Funding for international growth* *Financing for B2B international growth* *Both public and private funding* Service provider to make appointments (networking with customers). Nice, if you would have same type of companies around you, e.g. to conquer new markets (spiritual support)* Common place to network* Travelling together* Good networks* Proper networks that can open doors* Large international networks* Networks/contacts to scale the service* Networks for International growth* Opening doors* Better networks and mentors for acceleration* Networks for getting new clients* Good consultants Strategic advice Needs to grow marketing team Support for hiring for business functions Digital start-up service platform Legal counsil services

5.2.2 Start-up development needs (D1.1 survey)

Although innovation culture and practices support well innovation work in the smaller firms of Accelerate consortium, in the D1.1. survey they pointed out following development needs: eliminate unnecessary rush and routines, understand failures as learning opportunities, team based flexible organisation and encourage employees to continuous learning and personnel development.

The SME/start-up companies in Accelerate consortium have agreed that they have needed practices and tools for the four acceleration phases. For frame the solution they have found practices which support well concept creation, evaluation and concept development (75%). They have also found and exploited rather well practices and tools for frame the opportunity (65%). These practices and tools help them to capture and store ideas as well shape ideas into high-value concepts. Also they have practices for frame the market, which support concept testing and validation and involving external competences to that (60%). For the fourth phase – frame the resources - they need more practices and tools to support product-, channel and business development (47%).

Following are listed development need by phases:

- Frame the opportunity
    - involving end-users in idea generation and evaluation
    - adequate amount of radically new ideas with great business potential
    - commenting and idea co-developing
    - Idea concretization to help valuation of business potential
    - fast experimentation
    - a way to check quickly with a larger group of customers whether something has market value (added to list need)
- Frame the solution
    - developing radically new (from current business view point) concepts
    - building a compelling value proposition
    - involving end-users in concept development
    - fast experimentation
    - involving end-users in concept valuation
    - involving customers in concept valuation
    - seeking new business ecosystem partners
    - concept valuation
    - shortening learning cycles (number of pivots made)
    - quicker building of MVP's (added to list need)
- Frame the market
    - using validated learning practices
    - collecting user data and analysing it
    - feature management of minimum viable products
    - fast identification of market
    - creating business model
    - engaging customer for learning process
    - engaging end-user for learning process
    - identifying funding sources and receiving funding
    - quicker building of MVP’s (added to list need)
- Frame the resources
    - building distribution channels
    - marketing
    - branding
    - ensuring ability to serve customer
    - managing growth
    - cost controlling
    - way to scale without external investment (added to list need)

5.3 MATURE ORGANISATION NEEDS

5.3.1 Most important development needs (D1.1 survey)

The mature organisations consider their organisational culture and practices supports rather well renewal and innovation. Although they find many development targets to improve these even better. In the following is listed a ranking of the development targets:

- Employees are motivated and committed (5/6)
- Employees are encountered to come up with new ideas (5/6)
- Space for experimentation (4/6)
- Flat, team based and flexible organisation (4/6)
- Employees are encouraged to continuous learning and personnel development (4/6)
- The aim is to recruit employees with diverse training and experience (4/6)
- Idea time to elaborate on new ideas (4/6)
- Unnecessary rush and routines will be eliminated (3/6)
- Failures are seen as learning opportunities for the organisation (2/6)
- Renewal through innovation is a corporate value (3/6)
- Everyone has a role in innovation process (3/6)
- Debate culture (3/6)
- Incentives for innovation are conductive to group work (2/6)
- Trust and openness (2/6)
- Light weight processes (added to list need)
- Safe and supportive forum to submit and grow ideas (added to list need)
- number of new initiatives (added to list need)

The big companies in Accelerate consortium have agreed partly that they have needed practices and tools for the four acceleration phases. The need for new practices and tools varied only little between different phases (49-54%).

Following are listed the development needs by phases (i.e. how many of the big companies agree with the development need):

- Frame the opportunity
    - involving end-users in idea generation and evaluation (5/6)
    - adequate amount of radically new ideas with great business potential (5/6)
    - Idea concretization to help valuation of business potential (4/6)
    - fast experimentation (4/6)
    - commenting and idea co-developing (3/6)
    - open and easy assessable idea management system (3/6)
    - fast and transparent feedback (3/6)
    - Ideas are too radical from current business view point (2/6)
    - adequate amount of new ideas (2/6)
    - idea portfolio management (2/6)
    - dashboards to track also experimentation phase (added to list need)
- Frame the solution
    - involving end-users in concept valuation (6/6)
    - fast experimentation (5/6)
    - involving customers in concept valuation (5/6)
    - developing radically new (from current business view point) concepts (4/6)
    - fast internal feed-back (4/6)
    - building a compelling value proposition (4/6)
    - seeking new business ecosystem partners (4/6)
    - shortening learning cycles (number of pivots made) (4/6)

  - concept concretization to help valuation of business potential (4/6)
  - involving end-users in concept development (3/6)
  - concept valuation (1/6)
  - more people for innovation (=management sponsorship) (added to list need)
  - suitable tools for co-development with customers or partners to create use case and evaluate together business potential (added to list need)
- Frame the market
  - collecting user data and analysing it (6/6)
  - fast identification of market (5/6)
  - using validated learning practices (4/6)
  - engaging customer for learning process (5/6)
  - engaging end-user for learning process (5/6)
  - creating business model (4/6)
  - knowing the global market and their legislation (4/6)
  - feature management of minimum viable products (3/6)
  - identifying funding sources and receiving funding (2/6)
  - run-time intelligence (added to list need)
  - cultural change: external first (added to list need)
  - sharing platforms and common channel between company and external (added to list need)
  - suitable tools for co-development with customers or partners to create use case and evaluate together business potential (added to list need)
- Frame the resources
  - building distribution channels (4/6)
  - marketing (4/6)
  - branding (3/6)
  - exploiting direct connections to users (5/6)
  - exploiting business ecosystem (5/6)
  - utilising social media (3/6)
  - ensuring ability to serve customer (4/6)
  - managing growth (2/6)
  - cost controlling (2/6)
  - BtoB business specific adaptations (added to list need)
  - media visibility, conversion rate (added to list need)
  - customer portal (added to list need)
  - suitable tools for co-development with customers or partners to create use case and evaluate together business potential (added to list need)

5.4 SUMMARY OF NEEDS

Based on the surveys presented in previous sections, all methodologies in all phases should promote following general needs:

- fast creation of first concept ****
- iteration cycles****
- management commitment****
- cultural change by involving people****
- communication****
- easy to access and simple use – utilising basic general software tools if possible (office, project management, web page software) - ****
- low training cost and short time to adopt****
- network collaboration****
- user involvement****
- visualisation****

- same documentation template in all phases (development and management decision)[****]
- tools need supportive methods[****]
- multiple users[****]
- limited number of qualifies people[****]
- lack of acceleration knowledge – methodologies should facilitate process[****]
- outside the box thinking[****]
- business insight[****]
- ownership[****]

The amount of * indicates in which survey the point was mentioned:
*) D1.1 survey
**) SLUSH survey
***) D3.0
****) D3.1
*****) status reports

Next five tables (16-20) summarise the development needs to methods and tools (from status reports, D3.0, D3.1 and surveys). The needs are collected to the table by tasks and their relevance to start-ups and mature companies is assessed.

Below are some points to explain the information on the tables:

- Development needs – summary of need from status reports, surveys and deliverables 3.0 and 3.1
- Important points – from innovation literature and **lesson learned (bold)**
- Methods/practices, tools – from innovation literature, **reported use in consortium (bold)**

Table 16. Development needs by tasks in the area of innovation culture and organisational learning (Relevance: 3= highly relevant, 2=2 relevant, 1= not so relevant).

Tasks	Important points	Methods/practices	Tools	Development needs	Relevance	
					Start-up	Mature company
Communicating vision	Inspiring vision	Vision building, storytelling		Motivating and committing employees*, renewal through innovation as a corporate value*	1	2*
Managing innovation work	Strong leadership	Inspiring vision, organisation structure, innovation management system, continuous innovation, **pet projects**			1	3
Strategy thinking	Participative	Strategy workshops, bottom-up strategy process, innovation strategy	Innovation strategy framework, opportunity mapping		1	2
Motivating employees to innovate	Innovation as everyone task, **safe environment*** **	Idea time, space for experimentation, innovation roles, innovation agent network, **focused innovation campaign, focused innovation competition, publishing best ideas, sharing success stories, Eight I's of infinite innovation,**	Suggestion box, idea management system	Employees an encountered to come up with new ideas*, idea time to elaborate on new ideas*	1	2
Work arrangement	Avoiding rush, teams	Task descriptions, flexible processes, flat organisation structure, team based organisation		Spaces serve both existing and new ways of working****, flat and team based and flexible organisation*, eliminating unnecessary rush and routines*	1*	2*
Developing innovation culture	Trust, openness, **learning from mistakes**	Group work incentives, debate, internal entrepreneurship, **sharing success stories, Nine innovation roles, IC innovation model**	Innovation culture evaluation, innovation self-assessment, **innovation tutorial, concepting package**	Seeing failures as learning opportunities*, flat and team base organisation*, recruiting employees with diverse training and experience*, increase employees motivation and commitment*, increase trust and openness*, improving the innovation potential of the companies***, improving acceleration competence****, space for experimentation*, everyone has a role in innovation process*, debate culture*, more people for innovation* , getting out of the office early enough**,	1*	3*
Supporting organisational learning	Learning, knowledge creation, capturing, storing, sharing , overlapping information	Knowledge sharing workshops, training, job rotation, project lesson learned, information sharing meetings, development group working, expert groups, standard operational procedures, tandem learning- apprentice model, **RUP Model, retrospectives of use cases, coaching practice**	Expert catalogue, knowledge database, intranet, blog, wiki, discussion forum, internal crowdsourcing system	Employees are encouraged to continuous learning and personnel development*, recruiting employees with diverse training and experience*	2*	3*

Table 17. Development needs by tasks in the framing the opportunity phase (Relevance: 3= highly relevant, 2=2 relevant, 1= not so relevant).

Tasks	Important points	Methods/practices	Tools	Practical development needs	Relevance	
					Start-up	Mature company
Technology foresight	Opportunities, threats	Technology road mapping, **research project network**	Technology roadmap	Problems with funding**	1	2
Market foresight	Opportunities, threats	Market road mapping, competitor intelligence	Market roadmap		2	2
Customer understanding	Future opportunities and needs	User experience, collecting, customer user data, customer intelligence, **market research, user driven innovation**	CRM, **customer journey**	Figuring out the product/market fit: what do people want to pay for**	2	3
Idea generation	Vision, amount & quality, participative, fast feedback	Involving end-users, involving customer, lead user, hackathon, codefest, brainstorming, ideation workshops, team work, **innovation space**, **company-wide ground-up ideation, focused innovation campaign, focused innovation competition, business model innovation, design thinking, growth hacking**	Internal ideation platform/system, external ideation platform/system, feedback system, complaint management system, **CogniStreamer Innovation Portal**	Involving end-users in idea generation*, adequate amount of radically new ideas with great business potential*, transfer of R&D results from university (to industry and society)***, challenge with real goal and or difficult questions****, encourage out of the box thinking****, create emotional commitment****, new ideas from employees*,	1*	2*
Idea capturing	Internal, external, **simple idea submission***, multiple approaches***	Idea portfolio management,	Idea management system**, Atlassian Confluence, Atlassian Jira, Idea template, Welodias, internal kickstarter**		1	2
Commenting and idea co-developing (Idea enrichment)	**Openness***, experimentation**	Idea portfolio management, **Screening team practice, innovation space**	Idea management system, internal ideation platform/system, external ideation platform/system, **Atlassian Confluence, Atlassian Jira, DeckMind**	At the office alone is lonely**, dashboard to track also experimentation*, encouraging honest feedback****, fast experimentation*, commenting and idea co-development*	2*	3*
Idea storing and sharing	Systematic, easy	Idea portfolio management	**Atlassian Confluence, Atlassian Jira**	Mentors are important**, idea sharing & feedback tool*	1	2
Idea concretization	Visualization		**Idea visualization tool**	Idea concretization to help valuation of business potential*, limited resources: “only 1 IT guy”**	3*	3*

Idea evaluation		Idea portfolio management	**CogniStreamer XL**	Involving end-users in idea evaluation*, idea concretization to help valuation of business potential*, tools for business potential understanding*, value analysis that are fast and easy to use*, way to check quickly with a larger group of customers whether has market value*, understanding too radical from current business view point ideas*	3*	2*
Idea management	Transparency, reuse, **regular review*** **	Idea portfolio management, **screening team practice**		As open as possible****,open and assessable idea management system*	1	2*

Table 18. Development needs by tasks in the framing the solution phase (Relevance: 3= highly relevant, 2=2 relevant, 1= not so relevant).

Tasks	Important points	Methods/practices	Tools	Development needs	Relevance	
					Start-up	Mature company
User need	**Collaboration *** **	**Requirements workshop, user interviews, market research, crossing the chasm, open innovation, external first thinking, direct market connection, social media, scrum,**		Find relevant users to test***, rewarding****	3	3
Concept team formation		**Coaching practice, Welodias, nine innovation roles**		Limited business understanding**, limited marketing skills**	3	2
Concept building	Several/parallel concept,	End-user involvement, customer involvement, value creation with customer, holistic product/solution (physical product, software, services), BOS blue ocean strategy, SDL service dominant logic, **business model canvas, applied Google 5-day sprint, concept building process, customer journey, concept building process, use case definition, business model innovation, design thinking, agile development, development as an ideation method**	**Business model canvas**, **value proposition**, value innovation strategy canvas, BOS 4 actions framework, **concepting package,**	Developing radically new (from current business view point) concepts*, building a compelling value proposition*, quicker building of MVP's*, more people for innovation (=management sponsorship)*, find new internal start-ups for new business****, document value proposition in the end-user understandable format****, enrolling experts ****, groups with very technical skills and/or low multidisciplinary skills****, involving end-users in concept development*,	3*	3*
Internal feed-back to concept		**Small iteration**, **internal crowdsourcing**			1	2
External feed-back to concept		**User driven innovation, external first thinking, direct market connection, engagement experiment,**		Tools co-development with customer and partners to create use case and evaluate together business potential*, involving end-users in concept valuation	3*	2*
Concept concretization	Business potential, **visualisation* ****	Cross-functional teams, MVP minimum viable product, executive champion,	**CogniStreamer Innovation Portal, Idea visualization tool**	Concepts concretization to help valuation of business potential*, progress more quickly (using start-up methodology)***, suitable tools for co-development with customer or partners to create use case and evaluate*	3*	3*
Concept experimentation	Short learning cycles, **visualisation* **, dialogue*****	Strong team leadership, **validated learning,** pivots, iteration cycles, user data analysis, **external first thinking, eMarketing, Twitter marketing**	**Webpage mock-up**	Value proposition documented in the end-user understandable format ****, fast experimentation*, shortening learning cycles*	3*	3
Concept valuation		**Customer feedback gathering, expert jury assignment**	**CogniStreamer XL**	Figuring viable business model**, involving end-users and customers in concept valuation*, value analysis that are fast and easy to use*	3*	2*

Exploring ecosystem		**Research project network**		Partners are important**, methods for seeking new ecosystem partners*	2*	2*
Concept management	Non-hierarchical, involvement, openness	Portfolio management,		Utilising same templates than development****,	1	2

Table 19. Development needs by tasks in the framing the market phase (Relevance: 3= highly relevant, 2=2 relevant, 1= not so relevant).

Tasks	Important	Methods/practices	Tools	Development needs	Relevance	
					Start-up	Mature company
Identification market sectors	Also noncustomers	BOS blue ocean strategy, user experience, customer understanding, **target group thinking, disruptive innovation**	BOS 3 tiers of non-customers	Fast identification of market*, create the landscape for product or service***	2	2
Market potential assessment		**Test marketing brand**	**Internal kickstarter**	Do not know the big global players**, assessing market potential***	3	3
Customer value assessment		**User driven innovation, agile development, lean start-up, open innovation, user data analysis, direct exploration, monadic testing, discrete choice testing, social media**		Figuring the money flow**	2	3
Receiving funding				Challenges in getting funding**, difficult to explain the pivots to investors**, getting the credibility**, identification funding sources and receiving funding*	3	2*
External valuation of concept		MVP, **Eight I's of infinite innovation, lean start-up**	user data analysis	Creating the trust**, sales take a lot of time**, collecting user data and analysis it*, tools co-development with customer and partners to create use case and evaluate together business potential*, sharing platform and common channel between company and externals*, cultural change: external first*	3*	2*
Feature management	Added value, user experience			Feature management of minimum viable products*	2*	2
Experimentation		Cross-functional teams, strong team leadership, **separate experiment brand, design thinking**		Using validated learning g practices*, engaging customer and end-users for learning process*, generate leads through social media***	3*	3
Functionality design		**design thinking**		Quicker building of MVP's*	2	2
Adaptation to global market				Go-to-market support is missing**	2	2
Ecosystem building				Contacting and networking are hard work**, sharing platforms and common channel between company and external*	2	2*
Business model building		Value proposition, **business model canvas**	**Business model template, business model canvas**	Business model creation*	3*	3

Table 20. Development needs by tasks in the framing the resources phase (Relevance: 3= highly relevant, 2=2 relevant, 1= not so relevant).

Tasks	Important points	Methods/practices	Tools	Development needs	Relevance 3= highly relevant 2= relevant 1= not so relevant	
					Start-up	Mature company
Solution building		**RAD-model**		Funding is a challenge**, surprisingly many engineering problems**, funding is a challenge**, customer portal*, exploiting direct contacts to users*, quicker building of MVP's*, suitable tools for co-development with customers or partners to create use case and evaluate together business potential*	3*	3*
Distribution channels building				Getting into US distributor networks**, building distribution channel*	3*	3*
Marketing solution		**eMarketing**		Marketing*, utilising social media*, cover all channels****, draw attention very often****	2*	2*
Branding solution		**Communication analysis, Twitter marketing**		Media visibility*, branding*, conversion rate	2*	2*
Scaling planning		Resource planning cross-functional teams		Scaling requires a lot of contacting and networks**, challenges with hiring**, way to scale without external investment*, ensuring ability to serve customer*, managing growth*	3	2
Exploiting business ecosystem				Exploiting business ecosystem*	3	2*

*) D1.1 survey
**) SLUSH survey
***) D3.0
****) D3.1
*****) status reports

6. SUMMARY

This final chapter contains summary of development needs for acceleration in the different phases, and short conclusions from the state-of-the-art chapters. Firstly, we define innovation as an organisational learning process, which produces utility and success and also future development potential. From the broad and fragmented innovation literature we outline innovation generator factors for organisations. We consider that mainly the same identified innovation generation factors are also relevant in the acceleration of innovation. We define acceleration as a combination of means: processes, tools and methods, which help companies go faster to the right markets.

Acceleration is not a common term. However, there is increasing activity in blog discussions and practical business literature in the area of start-up and start-up like approaches. In addition, there are several interesting discussions, which concern entrepreneurship mind-set in marketing, branding and business modelling and further emphasise meaning of organisational learning g and experimentation. Ries (2011) stresses also these same features in his the lean start-up concept.

Our Accelerate project's own iterative acceleration learning cycle adopts many elements from Ries's lean start-up concept e.g. iterative experimentation, minimum viable product and validated learning practices. Furthermore, the iterative acceleration learning cycle emphasizes customer understanding and organisational culture, which support innovations. The latter is especially important in large mature organisations, where structural inertia present challenges to being dynamic, flexible and innovative. Nevertheless, our aim is to build a general concept to support the acceleration of innovation. The new concept is planned to fit all ICT intensive companies, of all sizes and at all times in their lifecycle.

Figure 17 presents the development needs for acceleration methodologies. Needs of different kind of companies are indicated in with different colours.

The "state of the practices" and the "needs for methodologies" chapters provide the Accelerate project methodology development and research needs by listing development needs and requirements. According to the Slush survey, start-ups do not actively search for new tools or methods, but in addition to funding, they are looking for personnel level networking and practices to co-operate with customers. Large, mature companies need methods to overcome structural inertia and reduce rush and hurry. Common challenges for both company types bring iterative experimentation practices and end-user/user/customer involvement, although bigger companies have already actively utilised some methods for user involvement. An ever existing paradox is that small and young companies have ideas, entrepreneurship attitude and are hungry for success. In comparison, large companies have monetary and other resources, knowledge and networks.

There also seems to be the need for methods, which guide companies to do "right" things even if all users do not have necessary knowledge and are also working well in situation where all are not expert of both business and technical issues. Another group of needed tools are tools for analysing large amounts of data, for example user data. Generally, organisations value simple tried and tested tools and also familiar software-based tools. When new tools and methods are to be implemented, there is a need for guidebooks and consulting services to facilitate this implementation. Also methods, which do not need more than one expert, are desired. A very popular tool mentioned in the study is the Osterwalder's business model canvas that facilitates team work and speeds up business model building with a very simple and visual one page template.

Especially in larger companies, there seems to be huge knowledge and possibilities to utilise more foresight, market and competitor insight and customer understanding related data to input to opportunity mapping and building new

solution hypothesis. Additionally there is need in large companies to combine their resources to achieve advantages which normally smaller and younger companies have i.e. flexibility and enthusiasm.

In general the needs for acceleration methodologies depend on the phase the company is in and on its size, and these differences but also the possible overlap should be taken into account when providing acceleration methodologies to companies.

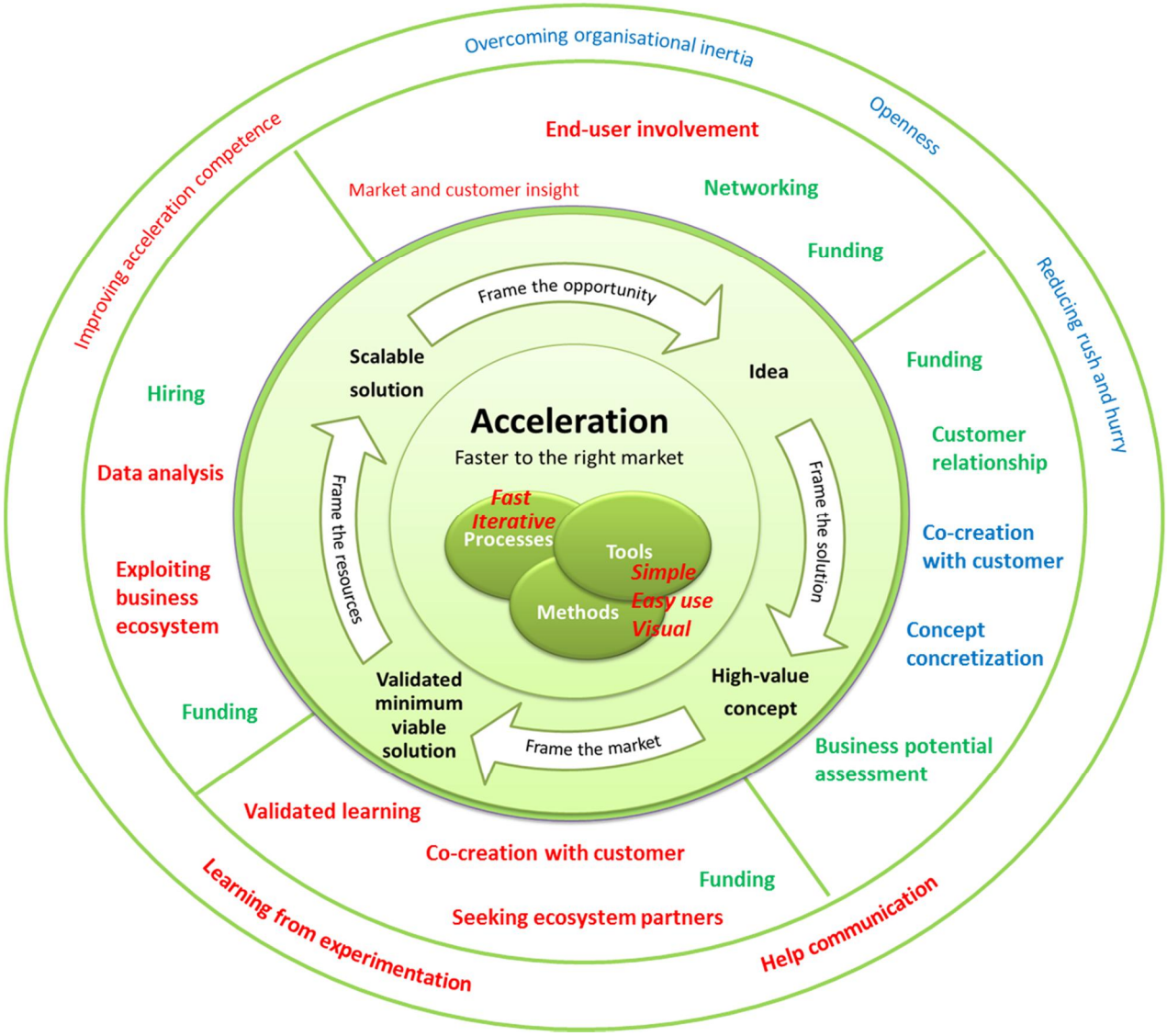

Figure 17. Development needs for acceleration methodologies (green – start-up needs, blue mature companied needs, red both).

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ANNEX 1: TOOLS AND METHODS

T=tool, M=method
(company who use tool or method)

Agile development (M)
Agile (software) development methods are used to evolve solution through collaboration between cross-functional teams. Typical for it are adaptive planning, evolutionary-iterative development, early delivery, continuous improvement, flexible response to change. (Planet Media, Beia)

Alexa Rank (T)
(Beia)

App Annie (T)
Tool for keyword optimization for Google Play. (F-Secure)
http://www.appannie.com

Applied Google 5-day sprint
Adopting and tailoring the phases and good practices (F-Secure)

Atlassian Confluence (T)
for idea collection and collaboration tool (F-Secure)

Atlassian Jira (T)
Idea collection and collaboration tool. Originally a bug tracking and project tracking tool for software development (Elektrobit)

Big data platform (T)
(Tobacos)

Bing Webmaster Tools (T)
(Beia)

Business model innovation, BMI (M)
Clayton Christensen described with Mark Johnson and Henning Kagerman the term business model innovation. Customer value proposition (CVP), profit formula, key resources, key processes. (Mondragon)
Johnson, M.W., Christensen, C.M., Kagerman, H. 2008. Reinventing Your Business Model. Harvard Business Review, December. Pp 50-59.

Business model template (T)
DVF-driven process: Desirable, Viable & Feasible (F-Secure)

Business model canvas (T, M)
Alexander Osterwalder introduced tool for describing, analyzing, and designing business models. (Elektrobit, Aptual)
http://www.businessmodelgeneration.com/canvas/bmc
Osterwalder A, Pigneur Y, Smith A + 470 practitioners. 2010. Business Model Generation

Canvanizer (T)
Cloud tool collection. (Mondragon)

Coaching practice (M)
Coaching practice to ensure learning and engagement of new actors. (Elektrobit)

CogniStreamer Innovation Portal (T)
Collaborative spaces for designers. Review tool for customer company jury. (CogniStreamer)

CogniStreamer XL (T)
Exchange between lead-users and designers, commenting, voting, Q&A sessions. (CogniStreamer)

Communication analysis (M)
(Planet Media)

Company-wide ground-up ideation (M)
(F-Secure)

Concept building process (M)
A collection of good practices. Google inspired problem solving process included Applying Google's five-day sprint, customer journey, … (F-Secure)

Concepting package (T)
A set of templates guiding concept creation (F-Secure)

Concepting workshop method (M)
One-day workshop for creating fast concept proposals (F-Secure)

Consumer –designer sparring sessions (M)
(Cognistreamer)

Crossing the chasm (M)
Geoffrey Moore's model based on diffusion of innovation theory. Five main segments of technology adoption lifecycle: innovators, early adopters, early majority, laggards. (Planet Media)
Moore (1991, 1999, 2014) Crossing the Chasm: Marketing and selling high-tech products to mainstream customers.

Customer feedback gathering (M)
(Aptual)

Customer journey (M)
Searching and collecting good practices for it (F-Secure)

Customer portal (T)
(ACC Global)

DeckMind (T)
Collaborative opportunity refinement tool. Cloud service. (Aptual)
http://invite.deckmind.com/

Den Bot (T, M)
Tool for creat fully automated Twitter precence (Sirris)

Design thinking (M)
A process for problem solving: define, research, ideation, prototype, choose, implement, learn. (Mondragon, Elektrobit)

Development as an ideation method (M)
(F-Secure)

Direct exploration (M)
Testing to gauge a sample's expectations, attitudes, and initial interest in a potential product or concept. (Beia)

Discrete choise testing (M)

In discrete choice testing all choices are presented at once, and respondents might be asked questions regarding different aspects of each concept as compared to another option. (Beia)

Dispruptive innovation (M)
Clayton Christensen describes disruptive innovation with Michael Raynor as a process by wich a product or service takes root initially in simple applications at the bottom of market and then relentlessly moves up market, eventually displacing established competitors. (Planet Media)
Christensen C, Raynor M. 2003. The Innovator's Solution: Creating and Sustaining Successful Growth
http://www.claytonchristensen.com/key-concepts/

Eight I's of infinite innovation (T)
Braden Kelley's guiding framework to continuous learning process. Eight I's: inspiration, investigation, ideation, iteration, identification, implementation, illumination, installation. (Sivsa, Planet Media)
Kelley B. 2010. Stoking Your Innovation Bonfire: A Roadmap to a Sustainable Culture of Ingenuity and Purpose.
http://www.innovationexcellence.com/blog/2012/08/26/eight-is-of-infinite-innovation/
http://bradenkelley.com/Eight-Is-of-Infinite-Innovation.pdf

eMarketing (M)
Online marketing (Mondragon)

Engagement experiment (M)
(Sirris)

Exalead (T)
Search engine SDK (Beia)

Expert jury assignment (M)
(Cognistreamer)

External first thinking (M)
Releasing new product (concepts) early and validate with down-loads/installs. (F-Secure)

Focused innovation campaign (M)
Searching new ideas through internal and or external innovation campaign focused to the specific topic or challenge(Elektrobit)

Focused innovation competition (M)
Searching new ideas through internal and or external innovation competition focused to the specific topic or challenge (Elektrobit)

Grat process modeller (T)

Google analytics (T)
(Beia)

Google play (T)
(F-Secure)

Great Process Modeller (T)

Growth hacking (M)
Marketing technique, which uses creativity, analytical thinking, and social metrics to sell products and gain exposure. (F-Secure)

Growth hacking platform (M)
(Sirris)

IC innovation model, ICIM (M)
(Planet Media)

Idea template (T)
Template to capture ideas. (Elektrobit)

Idea visualization tool (T)
When an idea has been generated, it is useful to make a demo and visualize the idea by using video solutions. A lightweight USB video camera is easy to take anywhere and create idea visualizations with your laptop. (Elektrobit)

Innovation space (M)
Space, where teams have ideation meetings and contribute to ideation culture. (Elektrobit)

Innovation tutorial (T)
Definitions, learnings, strategy guidance and good practices (F-Secure)

Innowawe (T)
Idea management system. Open source cloud service.(Mondragon)
http://innoweb.mondragon.edu/innoweb/

Instagram (T)
(F-Secure)

Internal crowdsourcing (M)
(F-Secure)

Internal kickstarter (T)
(F-Secure)

Lean start-up (M)
Eric Ries promoted Lean start-up method to fast iterative experimentation. (Planet Media)
Ries E. 2011. The lean start-up. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.
http://theleanstartup.com/principles

Lead user communities(M) (Cognistreamer)

Light demo method (M)
(Electrobit)

Market reseach (M)
(Sirris)

Media Tags (T)
(Beia)

Monadic testing (M)
Monadic testing is a technique used in marketing research in which consumers are presented with a product to test on its own, rather than being asked to compare it with a competing product. (Beia)

MyBoard -app (T)
Coaching tool for start.up teams. Mobile application. (Zenjoy)

Nine innovation roles (M)
Braden Kelley's 9 innovation roles: revolutionare, conscribt, connector, artist, customer champion, troubleshooter, judge, magic maker, evangelist. (Planet Media, Sivsa)
Kelley B. 2010. Stoking Your Innovation Bonfire: A Roadmap to a Sustainable Culture of Ingenuity and Purpose.

http://www.innovationexcellence.com/blog/2012/05/02/the-nine-innovation-roles/

Nimble bee (T)
(Gognistreamer)

Open innovation (M)
Henry Chesbrough promoted method to use external sources of innovation and also internal innovations. Open innovation is often used as synonym to all kind networked innovation approaches. (Planet Media, Inno-W)
Chesbrough H. Open Innovation: The new imperative for creating and profiting from technology.

Open Nebula (T)
(Sivsa)

Owela (T)
Owela is an online platform for open innovation and co-design with users, customers, developers and other stakeholders. It provides tools for understanding users' needs and experiences as well as designing new products and services together. (VTT)
http://owela.fi/?lang=en

Pet projects (M)
Management practices and metrics to follow up of pet projects (F-Secure)

Pinterest (T)
(Beia)

PR packaging (T)
(F-Secure)

PressKit (T)
(F-Secure)

Publishing best ideas (M)
(Elektrobit)

RAD-model (M)
Rapid application development model – incremental: business modeling, data modeling, process modeling, application generation,testing and turnover. (Beia)

Research project network (M)
Collaborating actively via personal and company wide networks to recognize new and useful actors and sharing results. (Elektrobit)

Requirements workshop (M)
(AAC Global)

Retrospectives of use cases (M)
Retrospective workshops for learning. (Elektrobit)

RUP model (M)
The Rational Unified Process - an iterative software process framework created by Rational Software Corporation.
(BEIA)

Screening team practice (M)
A group of experts gather together every 2 weeks to review new ideas. The goal of the screening is not to make go/no-go decisions but rather guide and boost ideas to grow them and scale them. Depending on the type of the idea, the idea is forwarded to appropriate path in the innovation process. (Elektrobit)

Scrum (M)
An iterative and incremental agile software development framework. (Beia)

Separate experiment brand (M)
DF-Data Oy for external validation (F-Secure)

Sharing success stories (M)
(Elektrobit)

SlapOs (T)
Tool for hosting and developing new tools. (Vifib, Beia)

Small iteration (M)
Using several small iterations in the development of processes/methods to ensure short feedback loop and fast learning. (Elektrobit)

Social media (M)
Different kind of web tools for sharing, networking, streaming: Twitter, LinkedIn, Facebook, Instagram, Yuotube, Blogs.. (Sivsa, F-Secure, Beia)

Target group thinking (M)
Personas and their role in the product acceleration (F-Secure)

Test marketing brand (M)
Testing the market potential in Google Play with the special test marketing brand (F-Secure)

Tumbir & Imgur (T)
(F-Secure)

Twitterbot (T)
(Sirris)

Twitter marketing (T)
(F-Secure)

Use case definition (M)
(AAC Global)

User driven innovation (M)
(Mondragon, Elektrobit)

User interviews (M)
(AAC Global)

V-model (M)
(Beia)

Validated learning (M)
Eric Ries promoted Lean start-up method to fast iterative experimentation. Validating a business model consists of rapidly iterating between experiments, data collection, and informed decision making. (Beia)
Ries E. 2011. The lean start-up. How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.
http://theleanstartup.com/principles

Waterfall model (M)
(Beia)

Webpage mock up (M)
Building webpage mock-up with real marketing message. Value proposition documented in the end-user understandable format. (F-Secure)

Welodias (T)
Idea capturing tool. (Inno-W)
http://welodias.com

WordPress (T)
(Beia)

Yahoo Tools (T)
(Beia)

Yoast Wordpress (T)
(Beia)

Some other useful tools:

- Start-up tools by Steve Blank http://steveblank.com/tools-and-blogs-for-entrepreneurs/#startup-tools
- Playbook for strategic foresight & innovation http://innovation.io/playbook/
- Blue ocean strategy – value innovation tools http://www.blueoceanstrategy.com/concepts/bos-tools/value-innovation/
- EFP foresight methods http://www.foresight-platform.eu/community/forlearn/how-to-do-foresight/methods/

ANNEX 2: D 1.1 SURVEY QUESTIONNAIRE

Current state of the practice & needs for methodologies

The survey is designed to contribute to the deliverable D1.1. (Current state of art and practice, industrial needs for methodologies) of WP1 in Accelerate project.

Name of the company _____

Your responsibility/functionality area in the company
( ) General management
( ) R & D
( ) Marketing
( ) Other

What is your company's main market?
( ) Mainly business to customer (BtoC)
( ) Mainly business to business (BtoB)
( ) Both BtoB and BtoC

Which is your company's marketing approach?
( ) Horizontal (meeting a common need of a wide range of industries)
( ) Vertical (meeting various needs of a particular industry)

What kind of changes is your company actively pursuing?
[ ] Looking at new customers
[ ] Increasing market share
[ ] Looking at new markets (geographical)
[ ] Looking at new markets (customer sectors)
[ ] Looking at new market approach e.g. BtoB -> BtoC
[ ] Servitization
[ ] Other, please specify _____

What are your company's innovation outcomes?
[ ] New physical products
[ ] New improvements to existing physical products
[ ] New software products
[ ] New features to software products
[ ] New services
[ ] New improvements or features to existing services
[ ] Project delivery
[ ] New business models
[ ] Spin-offs
[ ] New operational practices and processes in your company
[ ] Implementation of new technology in your company
[ ] New ideas
[ ] New concepts
[ ] New IPR
[ ] Other, please specify _____

Which one of the following models and approaches describes your company's innovation and development process?
[ ] Validated learning process (iteration of experiments, data collection, information decision making)
[ ] State-gate process (scoping, business case building, development, testing & validation, launch, post-launch review)
[ ] Scrum process (pregame phase, development phase (sprint), postgame phase)
[ ] Use and business case analysis
[ ] STOF business modelling (quick scan, evaluation with critical success factors, specification of critical design issues, robustness check, viable and feasible business model design)
[ ] FLIRT model of crowdsourcing
[ ] Experimentation
[ ] Other, please specify _____

Innovation culture

How do you see innovation and its significance in your company? Please, choose the most suitable interpretation for you from the following claims.
( ) Innovation is a keystone of my company's succeeds.
( ) Innovation is a corporate value.
( ) Innovation is a way to renew business.
( ) Innovation is something that we need in product and or service development.
( ) Innovation is an organisational learning process, which aim is to improve offering and operational efficiency.
( ) Other, please specify _____

Values scale sliderbar questions

Please, respond to the presented claims by sliding the bar to the appropriate location on the scale.
0= I disagree completely
100= I agree completely

Your company has specific innovation targets and these are well communicated in the organisation.

0 **100**
_____

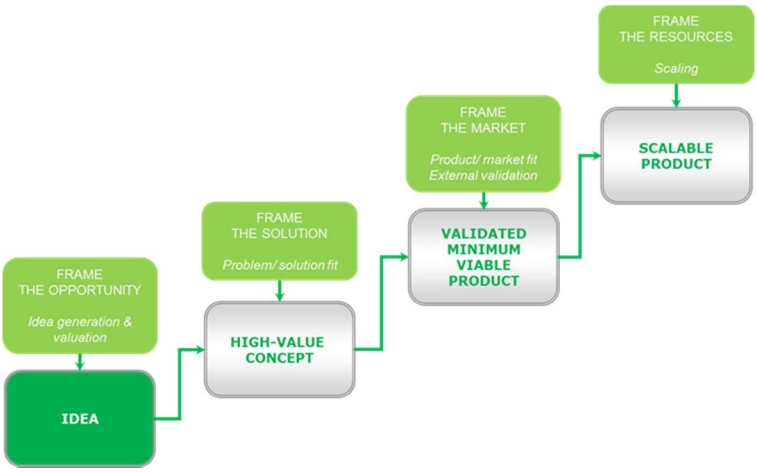
Your company's organisational culture and practices support renewal and new innovation development.

0 **100**
_____

What are the most important development targets in your company's innovation culture?
[ ] Renewal through innovation is a corporate value
[ ] Employees are encountered to come up with new ideas
[ ] Overlapping and conflicting information is produced, tolerated and leveraged
[ ] Unnecessary rush and routines will be eliminated
[ ] Failures are seen as learning opportunities for the organisation
[ ] Flat, team based and flexible organisation
[ ] Incentives for innovation are conducive to group work
[ ] Employees are encouraged to continuous learning and personnel development
[ ] The aim is to recruit employees with diverse training and experience
[ ] Everyone has a role in innovation process
[ ] Space for experimentation
[ ] Trust and openness
[ ] Idea time to elaborate on new ideas
[ ] Debate culture
[ ] Employees are motivated and committed
[ ] Other, please specify _____
[ ] Other, please specify _____

Which practices are used in your company to support organisational learning?
[ ] Internal meetings to share information and knowledge
[ ] Workshops to share and create new knowledge
[ ] Project lessons learned to learn from success and failures
[ ] Job rotation to transfer tacit knowledge to other tasks and contexts
[ ] Training to share information and knowledge
[ ] Expert group to share and create knowledge
[ ] Development group to create new knowledge
[ ] Databases and information systems to capture and store information
[ ] Intranet to share information and build common understanding
[ ] Incentive system to motivate employees to share information
[ ] Expert catalogue to help to find experts (tacit knowledge)
[ ] Other, please specify _____
[ ] Other, please specify _____
[ ] Other, please specify _____

How does your company boost learning process for innovation?
_____
_____



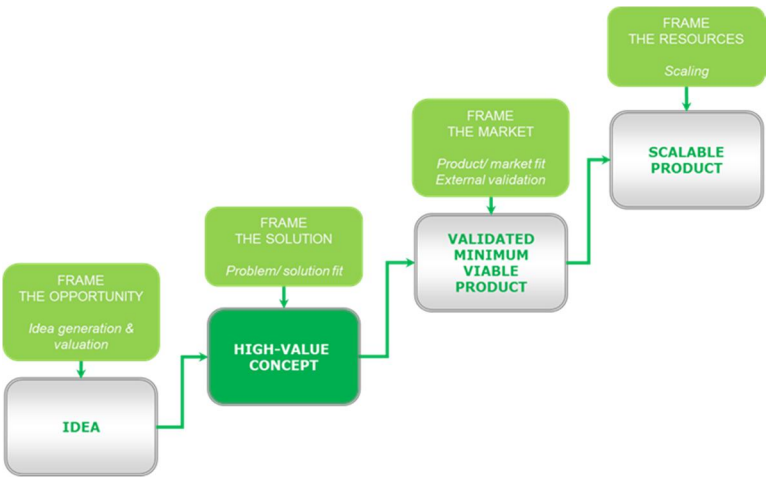
Idea
Idea generation and valuation practices

Your company has idea generation and valuation practices and tools, which support well capturing and storing ideas as well shaping them into high-value concepts.
0= I disagree completely
100= I agree completely

0 **100**
_____

What are the most important development targets for your company's idea capturing, storing and sharing?
[ ] Adequate amount of new ideas
[ ] Adequate amount of radically new ideas with great business potential
[ ] Ideas are too radical from current business view point
[ ] Open and easy assessable idea management system
[ ] Fast and transparent feed-back
[ ] Commenting and idea co-developing
[ ] Idea concretization to help valuation of business potential
[ ] Fast experimentation
[ ] Idea portfolio management
[ ] Involving end-users in idea generation and evaluation
[ ] Other, please specify _____
[ ] Other, please specify _____

Which practices and tools (new to your company) do/would you need in your company to support idea generation and valuation?
_____
_____



High-value concept
Minimum viable product

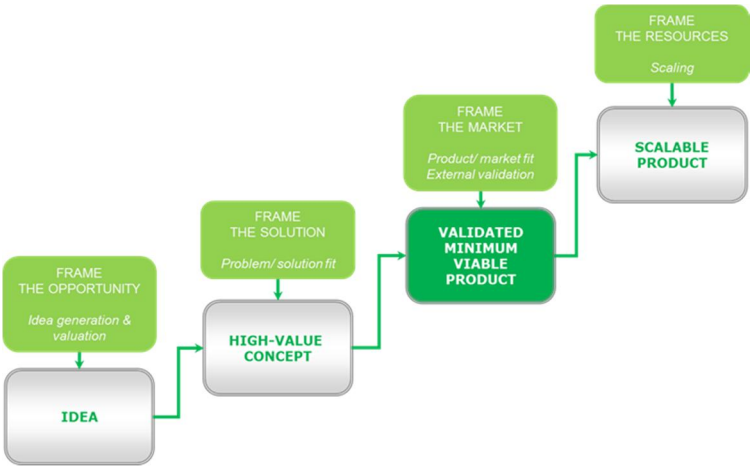
Your company has concept creation, evaluation and development practices and tools, which support creating high-value concepts.
0= I disagree completely
100= I agree completely

0 **100**

_____

What are the most important development targets for your company's concept creation, evaluation and development?
[ ] Developing radically new (from current business view point) concepts
[ ] Fast internal feed-back
[ ] Building a compelling value proposition
[ ] Fast experimentation
[ ] Involving customers in concept development
[ ] Involving customers in concept valuation
[ ] Involving end-users in concept development
[ ] Involving end-users in concept valuation
[ ] Seeking new business ecosystem partners
[ ] Concept concretization to help valuation of business potential
[ ] Concept valuation
[ ] Shortening learning cycles (number of pivots made)
[ ] Other, please specify _____
[ ] Other, please specify _____
[ ] Other, please specify _____

Which practices and tools (new to your company) do/would you need in your company to support creating a high value concept?
_____
_____



Validated minimum viable product
External validation

Your company has concept testing and development practices and tools, which support involving and including external competences for market fit validation

0= I disagree completely
100= I agree completely

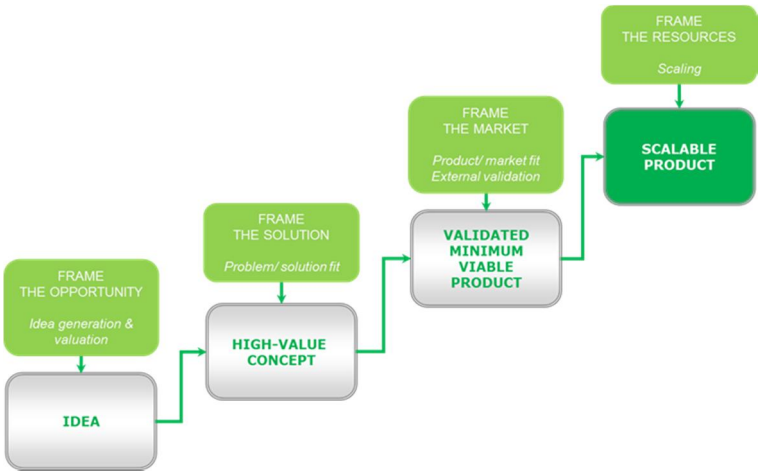
0 **100**

_____

What are the most important development targets for your company in external validation (of MVP)?
[ ] Collecting user data and analyzing it
[ ] Using validated learning practices

[ ] Feature management of minimum viable products
[ ] Fast identification of market
[ ] Identifying funding sources and receiving funding
[ ] Knowing the global market and their legislation
[ ] Creating business model
[ ] Engaging customer for learning process
[ ] Engahing end-user for learning process
[ ] Other, please specify _____
[ ] Other, please specify _____
[ ] Other, please specify _____

Which practices and tools (new to your company) do/would you need in your company to support external validation?
_____
_____



Scalable product
Scaling

Your company has product-, channel- and business development, which support ensuring resources needed for scaling

0= I disagree completely
100= I agree completely

0 **100**
_____

What are the most important development targets for your company in scaling phase?
[ ] Building distribution channels
[ ] Marketing
[ ] Branding
[ ] Exploiting direct connections to users
[ ] Ensuring ability to serve customer
[ ] Exploiting business ecosystem
[ ] Utilising social media
[ ] Managing growth
[ ] Cost controlling
[ ] Other, please specify _____
[ ] Other, please specify _____
[ ] Other, please specify _____

Which practices and tools (new to your company) do/would you need in your company to support scaling phase?
_____
_____

ANNEX 3: SUMMARY OF FINNISH ACCELERATION SERVICE PROVIDERS

Service provider		Main services							Expensis
Name	Location	Funding	Opportunity evaluation			Networking	Biz planning	Training Coaching	
			Markets	Customers	Product				
Reaktori Polte		x							NA
VTT Ventures		x						x	NA
First round	Riihimäki	x	(co-ordinates funding applications)					x	Free
Aalto-Start-up Center						x	x	x	Free
Mobile Monday						x			Free
Enterprise Europe Network		(services are provided by other organisations)				x			Based on services
EIT ICT Labs		(ICT innovation based co-operation consortium)				x			?
Njetworking		(offers office space)				x			NA
Finnode		(operates throug its member organisastions)				x			NA
Viexpo						x		x	?
Spinno	Helsinki					x		x	Free
Fiban		(Network of Seed capital providers)				x			Free/low cost events
Soprano									
NewCo Factory			x	x	x			x	max 400€/month
Startup Sauna			x	x	x	x	x	x	Free / accepted
Soprano			x	x	?	x	x	x	Based on services
Business Oulu						x		x	Free
Turku Science Park	Turku							x	Free(?)
My Enterprise Finlan	Online							x	Free
ELY-Centers									
Kauppakamarit									
Demola	Oulu/Tampere							x	Free
Forum Virium								x	665€ +VAT/day

ANNEX 4: EU ACCELERATORS

1. Voice

VOICE is a virtual business incubator for startups. Its uniqueness is that it is globally accessible around the clock, open to anyone with an interesting idea, unlimited in space, open and practically boundless in providing services, information and practical guidance, in contrast to the traditional – physical – incubators.

The VOICE Accelerator will create an online, open and collaborative innovation ecosystem where individual users and entrepreneurs can (among others):

- meet;
- co-create ideas and prototypes;
- utilize a wisdom-sharing community;
- assess the value of any given project idea and/or prototype;
- find collaborators;
- find business partners;
- share connections;
- share insights about business and technical aspects;
- share knowledge on start-up related topics;
- access online tools and content and educational material;
- find access to capital.

VOICE's thematic focus is software and IT services in the following application areas: Online applications, Mobile applications, Open data applications, Social Network application, Games. VOICE aspires to build the world's open, collaborative hub for crowd-sourced technology entrepreneurs and crowd-ventures.

2. Seedcamp

Seedcamp is Europe's leading pre-seed and seed stage acceleration programme. At Seedcamp they don't just provide a building, they provide the building blocks for growth. When a company joins Seedcamp they get access to a level of support that money can't buy, at any valuation. All this is done through Seedcamp Academy both at the Product-Market fit and Traction stages and continuing as startups navigate Growth and Scale.

Academy is the intelligent and specialized platform to provide the user with the techniques, tools, and education to grow at supersonic speed. Instead of cramming in all the lessons within a 3 month window when the user are still defining what his startup does, Seedcamp spread the Academy Days throughout the year as. Seedcamp Academy is there to support the startups from Day 1 and beyond. This accelerator is focused on the four most common areas of difficulty startups tend to face across each of the stages:

- Product Development & Design;
- Marketing & Distribution;
- Building a Network;
- Company Building & Fundraising.

3. Startupbootcamp Spain

Startupbootcamp is a 3 month acceleration program that focuses on exposing and connecting startups to his expanding community of top-level mentors and advisors. At the end of the program, startups get a chance to pitch to top angel investors and venture capitalists for funding at the Investors' Demo Day. Startupbootcamp runs accelerator programs throughout the year in different cities across Europe, and with a different focus in each. Some of the programs are open to all type of applications, whereas his vertical program in Dublin/London focuses on Digital Health, and the program in Copenhagen focuses on Mobile.

This programs are:

- **Startupbootcamp FinTech Singapore** is the accelerator focused on financial innovation, providing funding, mentorship, office space in the heart of London & Singapore and access to a global network of investors and VCs, for up to 10 selected FinTech startups.
- **Startupbootcamp Smart City & Living** will innovate the Smart City & Living ecosystem by providing the most promising startups in the "Smart City & Living space".
- **Startupbootcamp Smart Materials is Europe's** first business accelerator for materials. The program is designed for startups that have a market-ready application in: Smart Packaging, Building and Construction, Light Weight Vehicles, Electronic Equipment, Energy Storage, 3D-Printing, Biomedical Materials, or other polymeric materials.
- **Startupbootcamp Internet of Things & Data** is the leading global startup accelerator with a focus on Internet of Things & Smart Data delivering unparalleled support, mentorship, and connections to world class startups building disruptive solutions with connected devices and the immense associated data these machines create.
- **Startupbootcamp E- & Mcommerce** is the leading accelerator of Europe and is organizing a new vertical program focused on internet and mobile (E&M) commerce.
- **Startupbootcamp HighTechXL** is the business high tech accelerator in Europe.
- **Startupbootcamp Smart Transportation & Energy** is the leading global startup accelerator with a focus on Smart Transportation & Energy - The Connected and Efficient Mobility of People and Goods.
- **Startupbootcamp FinTech London** is the leading accelerator focused on financial innovation, providing funding, mentorship, office space in the heart of London and access to a global network of investors and VCs, for up to 10 selected FinTech startups.
- **Startupbootcamp Mobile** is the world's leading accelerator program focusing on mobile technologies, devices & solutions. This accelerator is a full-time, intensive program. It often involves working late into the night and weekends.
- **Startupbootcamp Istanbul** is a mentor-driven program that provides a massive amount of support and connections to accelerate a startup's growth.
- **Startupbootcamp Israel** is a mentor-driven program that provides a massive amount of support and connections to accelerate a startup's growth.

4. Openfund

Openfund is an accelerator from Greece that is in partnership with pioneering technology companies taking advantage of software, mobile platforms and the web. The Openfund is set up with a clear objective: to provide entrepreneurs with everything required to create and grow a successful technology company. The benefits that this accelerator brings to the companies are:

- assists entrepreneurs in structuring applications, improving value proposition and receiving guidance through their initial steps;
- world-class mentors consult with entrepreneurs on a broad range of issues, ranging from technology to business development to marketing to legal and accounting;
- Openfund's network essentially brings entrepreneurs a few connections away from those who matter for their business;
- Openfund aims to make fundraising simpler for its successful portfolio companies.

5. NDRC LaunchPad

NDRC LaunchPad is Ireland's first and leading digital accelerator, specifically designed to enable entrepreneurial teams to transform solid ideas into commercially viable startups. NDRC LaunchPad is tailored to companies who are developing a digital business model innovation. They are domain agnostic, but their focus is on ventures with a beating digital heart. They invest in the gap between sound concept and seed-investable venture. NDRC LaunchPad provides emerging startup promoters with:

- unparallelled expertise across relevant disciplines with hands-on mentoring to guide development;
- 12 weeks working alongside a broad spectrum of start-ups, innovators and investors;
- weekly workshops and networking with acknowledged thought leaders;
- micro-seed investment of up to €20k per venture;

- the opportunity to pitch to investors at the end of year Lift Off event.

6. StartUp Romania

Startup Romania is a new incubator model that aims to support and develop Romanian start-ups using both classical model of business incubators and a preincubation system inspired by specific business accelerators. StartUp Romania team consists of investors, mentors, successful entrepreneurs, professional and personal development specialists, and experts in the financial, legal, human resources, branding and strategy.

Romania StartUp program aimed at young people aged between 18 and 35 who have a business idea, and institutions, organizations and experienced business people willing to support and invest time and capital in a new business concept.

7. Startup Quest

Startup Quest is an accelerator that offers:

- **Entrepreneurial eLearning:** Video-based tutorials walking the user through the business startup processs step-by-step with real-world advice and interviews from successful serial entrepreneurs.
- **Online Mentorship:** Access to some of the world's best entrepreneurs. Through the Clarity.fm the users can reach individuals like Eric Reiss, Ash Maurya and even Mark Cuban.
- **Resources, Discounts, & Perks:** Startup Quest give to the user the best resources for startups and small businesses. Through his Rewardli platform, the user will get hundreds of dollars off on the service providers the user need to succeed in business.
- **Legal & Financial Contracts**: Save hundreds to thousands of dollars on attorneys and account fees. That money should be going to developing the product, not legal or financial professionals.
- **Members' Only Community:** The user need feedback and support from other like-minded individuals. Forums, Comment threads, and Google Hangouts will accomplish that for the user.
- **Weekly Help Webinars:** Startup Quest offers weekly group mentorship sessions where he help the members with whatever problems they are facing in their business building process. They also periodically invite guest experts for Q&A.

8. Startup Europe's Accelerator Assembly

Startup Europe's Accelerator Assembly is the network for startup accelerator programmes in Europe. This is an industry-led network, delivered by Bethnal Green Ventures, Seedcamp, Seed-DB and Startup Weekend, with the support of Nesta, How to Web and Techstars London, that connects accelerators, entrepreneurs and policy makers, in order to strengthen the support offered to web startups across Europe. It does this by:

- creating an online community to share learning and best practices;
- gathering research and evidence to improve the knowledge on accelerators and web startups in Europe;
- bringing the accelerator community together with events and workshops;
- supporting accelerators to connect with policy makers and participate in future EU policy to improve the environment for web entrepreneurship in Europe.

9. Y Combinator

Y Combinator provides seed funding for startups. Seed funding is the earliest stage of venture funding. At Y Combinator, the main goal is to get the user through the first phase (get the user to the point where they've built something impressive enough to raise money on a larger scale). Then, the accelerator can introduce the user to later stage investors—or occasionally even acquirers. All venture investors supply some combination of money and help. In this case the money is by far the smaller component. In fact, many of the startups the accelerator fund don't need the money.

The most important thing Y Combinator do is work with startups on their ideas. They're spent a lot of time figuring out how to make things people want, so they can usually see fairly quickly the direction in which a small idea should be expanded, or the point at which to begin attacking a large but vague one. The second most important thing Y Combinator do is help founders deal with investors and acquirers. The team spend much more time teaching founders how to pitch their startups to investors, and how to close a deal once they've generated interest. In the second phase they supply not just advice but protection, potential investors are more likely to treat the user well if he come from YC.

10. Founder Institute

The Founder Institute is the world's largest entrepreneur training and startup launch program, helping aspiring founders across the globe build enduring technology companies. This is a four-month and part-time program where the user can "learn by doing" and launch a company through structured training courses, practical business-building assignments, and expert feedback. The Founder Institute's vision is to "Globalize Silicon Valley" and help entrepreneurs across the globe launch meaningful and enduring technology companies. The benefits that this accelerator brings are:

- **Flexibility** - Most incubators provide a small amount of money so that Founders can work on their company full time. As an early-stage accelerator, the Founder Institute takes a different approach. With the part-time and four month program, the users are not required to quit their day jobs, so they can begin building a business and test their startup ideas without putting their livelihood at risk.
- **Services and Scale** - Founder Institute leverage his global scale to secure free and discounted services from leading law firms, hosting companies, technology providers, and over 200 other vendors.

11. Wayra

With the financial backing of Telefónica, one of the biggest telco companies in the world, and with the support of a global network of mentors, investors and partners, Wayra accelerator program help the best entrepreneurs to grow and build successful businesses. Wayra accelerator offers:

- financial support;
- a unique workspace;
- shared knowledge and experience from mentors and partners;
- networking with a cohort of entrepreneurs;
- the chance to do business with millions of Telefónica customers around the world.

Wayra program is part of Telefónica Open Future, an open innovation platform that integrates all Telefónica Group's investment vehicles and initiatives to foster entrepreneurship and innovation globally. For that reason Wayra also help corporations and other organizations to innovate through start-ups.

12. Orange FAB (Orange)

Orange FAB is a 3-month acceleration program searching for startups with existing products who are looking for growth and distribution opportunities. This acceleration program offers:

- **Distribution**: Orange FAB is working with major brands to increase the user distribution opportunities;
- **Funding**: This program offer a 20,000+ investment in the user startup so he can execute and scale.
- **Office space**: Orange FAB offer to the user office space where he can learn with the finest mentors.

At Orange Fab, the team focus on distribution and growth opportunities. As such, she like to see a developed product (or a solid beta) backed by an awesome team. This program is looking for startups with both a great product and demonstrated traction - external funding, existing clients or revenues, media coverage or successful completion of another accelerator program. Categories of users in who is interested Orange FAB are: Big Data, Emerging Markets, Financial Services, Healthcare, Human Resources, Media & Entertainment, Mobile, Retail & E-commerce, Space, Cloud, Connected Objects, Consumer Internet, Drones & Robotics, Energy and Enterprise.

13. ProSiebenSat.1 Accelerator

ProSiebenSat.1 Accelerator is a 3-month accelerator program in Munich and Berlin to support start-ups, which runs twice a year. The program offers start-ups comprehensive support and provides entrepreneurs with a customized coaching concept. In addition, start-ups receive 25,000 EUR funding and office space. On Demo Day, which marks the conclusion of the program, participants present their company to selected investors and multipliers. This accelerator do not only invest in media start-ups. He invest across all industries and in both B2C and B2B businesses.

Typical industries are:

- media, entertainment;
- e-commerce;
- internet of things;
- smart home;
- Health;
- fin-tech.

14. Axel Springer Plug & Play Accelerator

Launched in 2013, the Axel Springer Plug and Play Accelerator is a Berlin-based accelerator looking for trail-blazing digital entrepreneurs. This is more than just an accelerator: he provide global opportunities from day one, through his international network in Europe and Silicon Valley. The acceleration program offers:

- Mentoring days with deep sessions meeting the experts of Online Marketing, Finance, Tech and more;
- Chance to choose from a great variety of weekly 2-3h workshops by highly-renowned orators talking in detail about themes like Online Marketing, Business Intelligence, First VC Contract and many more;
- Weekly speakers talking about rise and fall of multimillion Euro companies: lifetime stories;
- Chance to choose from a great variety of workshops like Online Marketing, Business Intelligence, First VC Contract and many more;
- Synergies to Axel Springer with access to intensive coaching by highly experienced internal experts;
- Events including pitch practicing, social events and lunches - Especially the onboarding week including introduction of the team, some special stuff etc.;
- Grow startups their own networks and build lasting business relationships;
- Expose startups to the fast moving Berlin and Silicon Valley venture ecosystems, broaden their mind and end up thinking bolder and bigger;
- Increase startups chances for follow-up funding on Demo Day pitching to prestigious local and international investors.

15. Bonnier's Accelerator

Bonnier Accelerator is a three-month program designed to help start-ups with digital media ideas to develop their ideas and business plan, in order to take the product to the market or to the next level. The Bonnier Accelerator program is an opportunity for the right people to turn an idea into reality and become a partner of a Bonnier company. In the program startups will get a mentor from within Bonnier to provide support and serve as a sounding board during the program. Startups will participate in six to eight joint sessions with the other Accelerator stars, in a program designed to inspire their and give great tools to develop their business.

16. Mediafax's M.incubator

M.incubator is a Mediafax Group project which aims to support Romanian startups. This accelerator offers:

- **Office space**: M.incubator offer to the user office space where he can learn with the finest mentors.
- **Marketing:** Mediafax is the first media network in Romania. His clients will be the startups clients.
- **Network:** the program provides for startups servers, hosting and software.
- **Funding:** every startup receives funding;
- **Solutions:** for every idea will be conduct a study in in order to find a potential market.

This accelerator is interested in:

- Services & Applications – mobile services and applications;
- E-Commerce – startups that have a great idea and want to sell it.
- Projects with original content.

17. Pearson's Catalyst for Education

Pearson Catalyst for Education is an open accelerator program that matches top talent within Pearson, and their companies, with up to 10 start-ups to deliver 3-month pilot programs that address specific business opportunities and challenges. This accelerator identify the most promising education startup companies that share Pearson's commitment to improving people's lives through learning. Through the opportunities and challenges for Catalyst in 2014 are:

- **Mobile Math Input** -build an easy to use solution which enables input of mathematical expressions on mobile devices using a stylus or finger, without requiring a specialized input pallet.
- **Indexing Training and Open Jobs**- create a solution which matches skills with future employment opportunities and validated by digital badges. The solution should be able to index skills, qualities, employers, and careers while introducing new ways of joining up all this information.
- **Data Visualization Solution** - create a tool to visualize and communicate data related to learners, specifically captured by teachers. This tool should support teachers and parents in assessing learner profiles and guide their educational decisions.
- **Enabling Data Driven Sales** - create a tool that enables Pearson's business units to make more data driven decisions when matching products to customers.

18. Startup Wise Guys

Wise Guys is an accelerator with a passion for early stage startups. His goal is to build a bridge of innovation connecting startups from around the world to markets and experts from the UK and the US. BusinessTech accelerator has a 3+1 month program sand is focused heavily on area specific for mentoring and partnering with large corporate networks.

Startup Wise Guys' BusinessTech accelerator is the first B2B focused accelerator in Europe. This accelerator offer seed investment, high valued mentors and a well established business network. BusinessTech links enterprises and startups by helping to build sustainable connections to large target markets and launch pilots with international companies. His key specialties are in payments, banking and security, reflecting expertise in the Estonian business landscape. In 2015-2016 program period, Startup Wise Guys is also part of CEED Tech consortium of five startup accelerators, operating in Central and Eastern Europe. Each acceleration cycle focuses on three key activities followed by an optional month to support startups transition to market:

- **Shape -** with the help of mentors and workshops, each team will work to work to understand the core of their idea as well as how to build a roadmap to reach their goals.
- **Build -** development of the startup product is the main focus during the program. The startups will communicate with potential customers, showcase the product, build it using lean methodology, and get feedback to understand if they are on the right track.
- **Sell -** the Startup Wise Guys program ends with Demo Days in Tallinn and London where each team presents their business proposition for angel investors and venture capitalists.
- **Follow-Up -** a month to transition out of the program, focuses on helping teams to enter their target markets, find an office space and work on coaching and building networks.

19. Ignite

Ignite is a UK's top pre-seed accelerator program that help entrepreneurs, developers and designers to grow. Based in Newcastle-upon-Tyne – a cosmopolitan city and one of the UK's strongest tech clusters outside the capital – and with operations in London and NYC, Ignite operates one of Europe's top accelerator programs as well as one of the largest venues dedicated to early-stage technology startups. This accelerator has a six months program and is focused on technology businesses that want to develop web and mobile applications or hardware solutions. The point of Ignite is to help startups to shape their business and find market fit.

20. Bethnal Green Ventures

Bethnal Green Ventures is an accelerator programme for people who want to change the world using technology. This accelerator invest in and support great teams with new ideas to help build solutions to social and environmental problems through an intensive three-month programme. This accelerator considers there's huge potential for the online world to radically improve things that really matter in the offline world: from how he provide health and social care to designing new forms of education, energy creation and employment. These ideas don't come from traditional companies, governments or charities, they start with smart, passionate, practical people. This acceleration program is focused on startups with great ideas: they might be software developers, designers or people with personal experience of something they want to change – from teachers and doctors, to patients and carers.

21. Fiware Accelerator

FIWARE is an accelerator that help entrepreneurs to capture the opportunities coming from a new wave of digitalization in multiple sectors by creating a sustainable global open innovation ecosystem where entrepreneurs, domain stakeholders and technology providers fulfil their needs.

The pillars of this accelerator are:

- **FIWARE**: the platform that brings an open set of simple yet powerful APIs making it easier to develop innovative applications.
- **FIWARE Lab**: the meeting point where entrepreneurs and domain stakeholders find each other and innovation takes place.
- **FIWARE Ops:** the set of tools that will ease FIWARE providers to set up and operate their own FIWARE instance.
- **FIWARE Acceleration Programme:** the fuel that ignites the creation of the FIWARE community.
- **FIWARE Mundus:** the path to a global Future Internet ecosystem. Mobilizing worldwide players and decision makers toward it.

FIWARE accelerator is different by:

- **Simple yet powerful APIs**: is built in a way that makes complex processes become simple, allowing to the user to speed up the development of his business.
- **A single meeting point for innovation**: FIWARE Lab is a genuine global point on the Internet where entrepreneurs and domain stakeholders can meet and boost innovation.

- **Multiple FIWARE providers**: FIWARE supports the existence of alternative FIWARE providers so that application and data can be ported to the environment operated by the FIWARE provider that the user trust more.