Introduction

SMART entrepreneurship: Managing the uncertainties and risks associated with starting up a new venture

The thing most start-uppers have in common is that they are venturing into new territory. Most often the venture team has no experience in launching and running a business of the same type they are involved in and they rarely know precisely how the market will react to their products and services. On top, sometimes, the market, the buyers, don't what to think of the offering either, because they have never seen it before.

The lack of experience on the one hand and market uncertainty on the other creates an extreme form of uncertainty that is a stable condition for entrepreneurs, no matter the context they operate in. The uncertainty applies to traditional business start-ups, to social entrepreneurial ventures and also to corporate entrepreneurs (intrapreneurs) engaged in what we refer to as radical innovation projects.

Entrepreneurial management, therefore, is best understood as the management of the uncertainty and risk associated with these types of projects. This book is no exception. The ambition is to provide an introduction to entrepreneurial management theories and techniques and illustrate them using practical examples in order to enhance what they can teach us.

The book contains nine chapters: eight are short and crisp and one is a bit longer and more theoretical. Impatient readers can jump right to Chapter 2. In Chapter 1, the "big hairy" academic one, an overview of entrepreneurial management theory is given. In Chapter 2 the SMART entrepreneurial approach is introduced and in the successive chapters each step in the process will be analysed. Chapter 3 is about opportunity identification,

Chapter 4 about conceptualization and idea evaluation, Chapter 5 about validation, Chapter 6 deals with resource co-optation and bootstrapping and Chapter 7 deals with business planning and third-party funding of the venture. Chapter 8 deals with managing the growing venture and Chapter 9 discusses some of the practical arrangements that usually need to be undertaken by the entrepreneurs at each stage of the project.

1 Entrepreneurial Management Theory: What the Academics say

Research into entrepreneurship has been occupied with different aspects of the pheneomen. Economists such as Schumpeter (1934), Kirzner (1973) and the various research teams behind the Global Entrepreneurship Monitor (GEM, 1999-2012), have been occupied with the study of the relationship between entrepreneurship and economic efficiency. Management scholars, on the other hand, have been approaching the field from two distinct angles and have created two distinct schools of thought. One school of thought views entrepreneurship as a *phase* of organizational development. According to this "organizational development" approach, firms start small and entrepreneurial research is the study of how these small enterprises are managed and grown. Research in this tradition defines the concept of entrepreneurship on the basis of the *object* which is being managed: a start-up, a Small and Medium Sized Entreprise (SME), a family owned SME or a small non-profit organization. The *tools*, *methods* and *best practices* that are identified to support the growth of these entities in terms of more revenues and a higher level of profitability are the same tools and methods taught, used and recommended for established "non-entrepreneurial" firms. They include:

1. Strategy and Plans: Business Planning, Marketing Planning and Succession Planning.
2. Organisation: Better and clearer corporate governance systems, clearer definition of managerial roles and responsibilities, professional management, entry requirements and family pacts (for Family Owned Business-FOB).
3. Systems: Efficiency and detail in accounting, IT, Human Resources (HR) etc.

In this tradition, the distinctiveness of entrepreneurship is more about what is being managed, than how it is managed.

In contrast to this school of thought, which, by the way, dominates most business school *courses* on the subject, we have a tradition that associates entrepreneurship not with a specific context (start-up, SME, FOB, non-profit), but with a distinct way of *managing*. I refer to this school of thought as the "Entrepreneurial Management" school. Within this tradition, entrepreneurship is a distinctive way of *managing* something. It's a distinct way to make decisions, to allocate resources and to organize.

Research in this area has come a long way. From some early conceptual ideas developed at the beginning of the 1980s, a substantial body of scientific research based on how expert and successful entrepreneurs think and make decisions and on how companies that are successful and efficient in growing new business are managed now exists. This body of knowledge allows us to create a clear identikit or DNA of what it means to manage something in an "entrepreneurial" way.

1 Early conceptualization of entrepreneurial management: Howard Stevenson at Harvard Business School

The first attempts at conceptualizing entrepreneurship as a "management approach" can be traced back to the early 1980s when Harvard Business School (HBS) Dean John MacArthur asked Howard Stevenson to return to HBS and take charge of the entrepreneurship activities. When Stevenson returned he felt that a "systematic and academic approach" was needed,[1] and with a small group of faculty members he developed a "theory" that defined entrepreneurship on the basis of five distinct behaviors:[2]

1. The tendency to seek out opportunities.
2. A willingness to act quickly in the light of an opportunity.
3. Multistaged commitment of the resources at hand.

[1] For a summary description of the history of entrepreneurship at HBS see http://www.hbs.edu/entrepreneurship/newbusiness/history.html and for a full review: J. Cruikshank (2005), «Shaping the Waves – A History of Entrepreneurship at Harvard Business School», *HBS Press*.

[2] *Ivi*, pp. 225-26.

4. Skilful use of leased and/or temporary resources.
5. An interest in building a network rather than a hierarchy.

In a classic working paper from 1983,[3] Stevenson contrast this entrepreneurial approach to a more traditional, administrative, approach referred to as a "trustee" approach. Six behavioral/decision making dimensions are identified where entrepreneurial management differs from trustee/administration. The first of these dimensions is referred to as "Strategic Orientation". In a modern take, this dimension refers to how companies and managers drive value creation. In an administrative domain, value is created through a better and more efficient management of existing resources. Many of the tools and approaches used in the administrative domain are the ones that are normally taught in MBA programmes: 1) Information and accounting systems that allow managers to identify where costs are incurred so a cost-benefit analysis can be performed. 2) Organisational Design (OD) and Organizational Behaviour (OB) tools that are meant to allow for a more efficient organization of human resources. 3) Operations and supplychain tools that allow for an efficient use of logistics and production resources. 4) Planning tools that allow for efficiency in time-allocation of resources. Management way of creating economic value is to use these tools to get more output from the existing resource base *without* increasing the cost. It's an efficiency based driven value creation. In contrast to an efficiency-based value creation drive, Stevenson identifies an "opportunity-driven" orientation. Firms and managers that have this approach seek to create economic value through the pursuit of new business opportunities, entering into new markets and launching new products. In real life these two value-creation schemes obviously co-exist. Companies like to look for both new revenue streams while paying attention to efficiency at the same time but Stevensons; point is that a continuum between the two approaches exists and that some managers and firms are more on the opportunity-driven side than others; and what characterizes the entrepreneurial manager and the entrepreneurial firm is precisely a bias toward value creation through opportunity pursuit.

The second and third dimension identified by Stevenson regard the way in which resource allocation decisions are taken, and the way in which re-

[3] H.H. Stevenson (1983), «A Perspective on Entrepreneurship», *Harvard Business School Working Paper*, 9-384-131.

sources are allocated through the early development stages of the project. All economic activity requires an allocation/commitment of resources. In the administrative domain the decision making process is long and based on many stages of approval. In a large multi-business firm that wishes to enter into a new market the process typically starts with a memo describing the idea, then a person is asked to write a business plan and a small budget for market research might need to be approved. A finished business plan is discussed and approved, and then perhaps a budget is defined that will require additional approval. If the decision is strategic the move might even require HQ approval. In other words it is a multistage process with a relatively long duration. But once the final decision is made, a full budget is typically allocated.

In contrast to this type of resource commitment decision process, the entrepreneurial approach is faster, less planned and more intuitive. A less analytical, more intuitive and faster process of course increases the risk of making mistakes, so to compensate for a riskier decision making process, entrepreneurial management is characterized by a different type of resource allocation, namely in small portions so as to minimize the financial exposure in each phase. This entrepreneurial way of allocating resources is found in most entrepreneurial finance situations. Venture Capited seed-funds use mile-stone financing and are actually fairly parsimonious in the allocation process; the absolute minimum amount of money is allocated to reach the next proof-of-concept stage, and this is exactly the same mindset and managerial approach that Stevenson identifies as distinctive in this domain.

This combination of quick decision making and propensity towards action rather than analysis and a prudent and parsimonious resource deployment strategy which is typical for entrepreneurial management has been analysed from a risk management perspective by Dickson and Giglierano.[4] According to these authors there are two different types of business risks: Sinking the Boat and Missing the Boat. The first type, Sinking the Boat, is the risk associated with launching a venture and not getting the expected returns. This type of risk can be reduced with planning time. If the venture team writes a business plan, conducts a market research survey, does pilot tests and so on, the risk of throwing good money after a bad project is reduced. But, often in business there is another risk. This risk, which Dickson

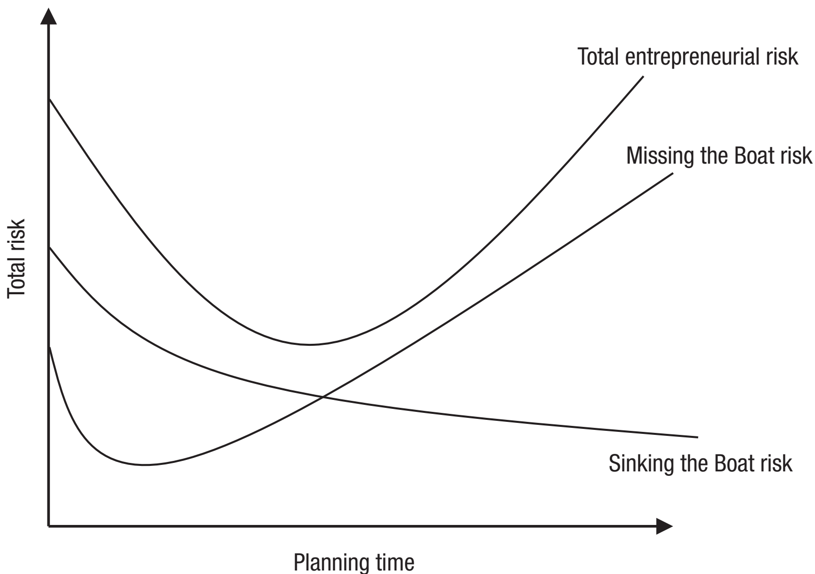
[4] P.R. Dickson, J.J. Giglierano (1986), «Missing the Boat and Sinking the Boat: A Conceptual Model of Entrepreneurial Risk», *Journal of Marketing*, 50, pp. 58-70.

and Giglierano refer to as Missing the Boat, stems from the fact that most business ventures have a narrow opportunity window. If a new project is not launched in a timely manner, competitors might launch earlier or market conditions might change, thereby altering the conditions for adequate returns. This type of risk is NOT reduced with planning time, it increases.

As indicated in Figure 1, the combination of the two types of risk constitutes what is referred to as total risk. From this perspective, the entrepreneurial decision making process and resource deployment strategy can be explained as a risk management approach. The speed and action propensity is explained by the clear perception of a Missing the Boat risk, whereas the parsimonious resource deployment strategy is a way to manage the Sinking the Boat risk.

A projection of this approach to decision making in a typical large administrative firm would highlight that managers in these firms weigh the Sinking the Boat risk as more important than Missing the Boat and therefore engage in more detailed and longer planning activities to reduce this type of risk.

Figure 1 The entrepreneurial perception of risk



Source: Dickson, P.A., Giglierano, J.J. (1986), «Missing the Boat: A Conceptual Model of Entrepeneurial Risk», *Journal of Marketing*, p. 64.

The fourth and fifth distinctive characteristics of an entrepreneurial management approach as originally defined by Stevenson regard a certain flexibility with regard to the resources employment necessary to launch and run the venture. In a combination of necessity and choice, the entrepreneurial manager acquires and/or uses resources that are not necessarily owned. The control of these resources can be obtained through temporary use (borrowing), rent or frequently through bartering and partnering. The result of this process is that entrepreneurial projects and ventures are managed as networks rather than a hierarchy. In the administrative domain these resource acquisition and employment solutions are rare. As a result of possibility and choice, administrative firms prefer higher levels of ownership and direct control of resources. The preferred organizational choice is therefore typically a simple buyer-supplier relationship for sourced inputs and ownership of resources.[5]

As an example of flexible, networked resource acquisition in new venture management, consider a young MBA start-up entrepreneur about to launch a fashion blog/e-commerce/portal/community. Our young entrepreneur knows that traffic is key so a decent budget for site design, Search Engine Optimization (SEO), ads, banner exchange, landing pages and so on is needed – at least 100.000. The traditional, "administrative", approach, would favour control and ownership and therefore acquire the traffic for cash through different types of supplier contracts. Partly because of necessity, partly because of a different mindset, our young fashion entrepreneur scrambles together a network of partners where most of the exchanges are dealt with in kind or equity: 1) to build up the website our entrepreneur uses her network to get hold of a IT professional in Bangalore with whom an agreement to built the website in exchange for a small equity share and some profitsharing is made. 2) Through another contact an exchange agreement with a national newspaper looking to strengthen its fashion contents/community is set up. Under the agreement the newspaper will advertise the portal but integrate the blog and comments on their own site for free. Similar in-kind deals are struck for merchandising and commerce. The portal is set up strongly and powerful by without the

[5] See for example H.H. Stevenson, D.E. Gumbert (1985, March), «The Heart of Entrepreneurship», *Harvard Business Review*, 63(2): 85-94 and J. Starr, I.C. MacMillan (1990), «Resource Cooptation via Social Contracting: Resource Acquisition Strategies for New Ventures», *Strategic Management Journal*, 11, pp. 79-92.

use of a lot of cash, but by giving up some equity and control (strategic control).

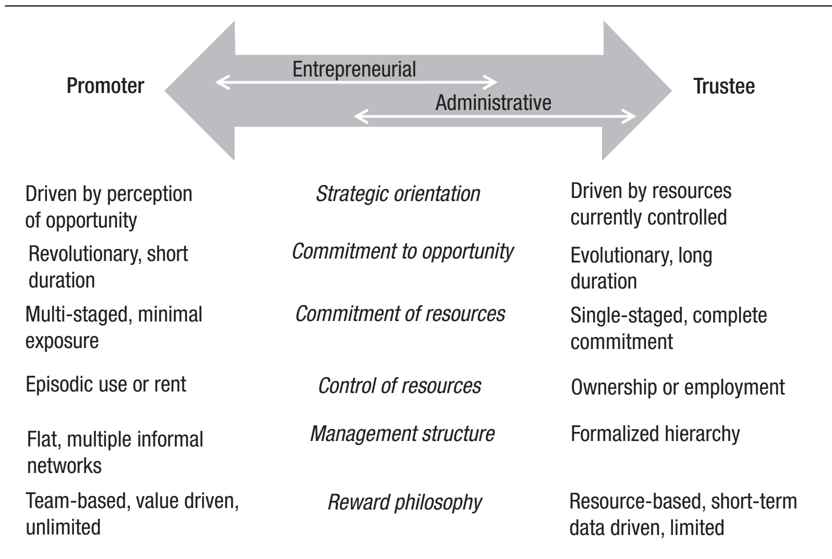
This type of resource acquisition/resource pool setup is typical for entrepreneurial managers because it allows a distribution and reduction of risk, without compromising the quality of the deployed resources, and therefore ensures start-up speed.

Consider, in contrast, a new venture project launched within an existing administrative organization: a top ranked, prestigious, European business school. The executive education market in Europe is a stagnant mature market, in which growth has to come from expanding into new segments. Geographical expansion is an obvious option. In China for example there is a growing market for executive training. It is becoming expensive for foreign companies to have a lot of ex-pat managers, so local Chinese managers are replacing the ex-pats. These local managers do not always share or possess the management approaches favoured by foreign companies, for example in the area of HR, so there is a market opportunity for business schools to train managers locally in China. Our European Business School has spotted this, but fails to penetrate the market because of lack of contacts and appropriate marketing approaches. Almost by accident the European Business School is contacted by a headhunter firm that has placed hundreds of locals managers in foreign firms, and therefore knows who they are and knows the firms well. The headhunter sees an opportunity for a partnership to design and launch training courses with the Business School: resources and skills are complementary – a win-win situation. Unfortunately for both partners, the Business School wants control. The school's marketing department refuses any talk about co-branding but is willing to pay for the contacts. The Chinese headhunter is not interested in becoming a database company, however, and refuses. No business is done. Instead the business school invests millions in setting up a stand-alone, mono-branded campus in Shanghai. Verdict for returns is still out, but the risk profile is high.

The two examples illustrate the difference in resource acquisition and marshalling approach between what we have called entrepreneurial and administrative management.

Stevenson's framework is summarized in Figure 2.

Figure 2 Differences between administrative and entrepreneurial management



Source: Stevenson, H., «A Perspective on Entrepreneurships», Harvard Business School Working Paper, 9-384-131

2 Beyond the early conceptualization efforts: Operationalization and empirical evidence

The early conceptualization efforts undertaken by Stevenson in the area of defining entrepreneurial management as a unique management approach has been the starting point for a number of more "scientifically" oriented studies. Researchers such as Covin, Slevin, Dess, Lumpkin, Wiklund, Davidsson and Brown have all constructed valid and operational scales for the five dimensions and investigated various relationship between entrepreneurial strategy making and firm performance.[6] The crucial find-

[6] T. Brown, P. Davidsson, J. Wiklund (2001), «An Operationalization of Stevenson's Conceptualization of Entrepreneurship as Opportunity-based Firm Behavior», *Strategic Management Journal*, 22(10), pp. 953-968.

J.G. Covin, D.P. Slevin (1986), «The Development and Testing of an Organizational-level Entrepreneurship Scale», in R. Ronstadt, J.A. Hornaday, R. Peterson and K.H. Vesper (Eds.), *Frontiers of Entrepreneurship Research*, Babson College, Wellesley, MA., pp. 628-639.

G.G. Dess, G.T. Lumpkin, J.G. Covin (1997), «Entrepreneurial Strategy Making

ings of these studies are not so much the performance relationships, which are difficult to interpret because the investigated organisations of course need to manage both entrepreneurial ventures and on-going concerns, but the fact that research has shown that the entrepreneurial management schemes are empirically consistent and observable.

In a similar fashion to the early entrepreneurial management scholars mentioned above, a group of researchers around Darden Business Schools including Saras Sarasvathy, in the early 2000s began to re-brand and re-investigate the entrepreneneurial management approach. Looking at how expert entrepreneurs make business decisions, Sarasvathy has identified a decision-making scheme referred to as "Effectuation". This way of analyzing a business problem and making decisions differs from traditional managerial decision making schemes, referred to as "Causation", in the same way as Stevenson's promoter orientation differs from an administrative approach.

Sarasvathy identifies five decision making principles that characterize entrepreneurial decision making and contraposes these principles to traditional managerial/"causal" principles.[7] The principles are depicted in Table 1.

Table 1 The five effectuation principles

Effectuation Principles	Causation Principles
Bird-in-hand principle *(Start with who you are, what you know, and whom you know)*	Start with pre-set goals
Affordable loss principle *(Invest what you can afford to lose – extreme case $0)*	Make decisions based on expected return
Crazy quilt principle *(Build a network of self-selected stakeholders)*	Build a firm-specific strategy based on competitive analysis
Lemonade principle *(Embrace and leverage surprises)*	Avoid surprises
Pilot-in-the-plane principle *(The future comes from what people do)*	Look for inevitable trends /search & select strategies

Source: Sarasvathy S. (2008), *Effectuation: Elements of Entrepreneurial Expertise*, Cheltenham, Edward Elgar Publishing.

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and Firm Performance: Tests of Contingency and Configurational Models», *Strategic Management Journal*, 18(9), pp. 677-695.

[7] S. Sarasvathy (2008), *Effectuation: Elements of Entrepreneurial Expertise*, Edward Elgar Publishing, p. 15.

As in the case of Stevenson's principles, Sarasvathy indicates that effectuation is a kind of heuristic decision making system or dominant logic rather than precise rules.

The first of the principles, bird-in-hand principle, describes two things. The first is that entrepreneurs are means driven rather than goal driven. Entrepreneurs tend to develop and change project development goals as functions of the means available. Means can be financial and human resources, but also, for example, customers and revenues. A consequence of a means driven approach is that goals for entrepreneurial managed projects can and often do change over time. If a customer from an unplanned or unforeseen target segment shows up, entrepreneurial managers could decide to change strategy overnight to get some early customers and fast sales. This is a management approach which is in contrast to a lot of the logics taught in business schools. In business schools, both in strategy and marketing, managers are told that sticking to a strategy is useful and that business decisions should not be based on marketing research with limited population data. Business schools often preach that two birds in the bush are better than one in the hand and that firms should plan to go for them. Entrepreneurs think differently.

The second principle, affordable loss, has been identified by Sarasvathy by looking at how entrepreneurs and entrepreneurial managers make investment decisions. Expert entrepreneurs who are used to launching projects with high levels of uncertainty tend to disregard or underweight classical Return On Investment (ROI), Net Present Value (NPV) and Discouted Cash Flow (DCF) calculations and instead focus on the amount of money they are willing to risk on a specific project. If the amount is 0, expert entrepreneurs boot-strap and lean-start-up their projects.

The application of these two principles to a Corporate Entrepreneurship (CE) context goes hand in hand with the considerations presented above when discussing Stevensons analysis of opportunity commitment and resource deployment, namely an entrepreneurial approval and financing model which is based less on research and business plans and more on results and milestones.

The third principle Sarasvathy identifies in her research of how expert entrepreneurs manage projects under uncertainty regards the business models used for rolling out the business. According to Sarasvathy, entrepreneurs like to spread the risk and speed-up roll out by creating partnerships. These partnerships provide, complementary resources, often in kind, and motivated individuals, because the selection process is broad,

open and based on self-selection as opposed to a hierarchical partner-search and procurement process. The principle could be relevant in a CE context when it comes both to staffing of development projects and the business and partnership models open to corporate entrepreneurs. The crazy-quilt principle identified by Sarasvathy is more elaborate and "modern", but resonates perfectly with Stevenson's observations regarding the non-ownership, rent, loose partnerships and a flat networked organizational structure that characterize an entrepreneurial orientation.

Sarasvathy identifies two additional principles that have more to do with the entrepreneur's mindset and beliefs than with business decision making: Though the two are of course correlated, the lemonade and pilot-in-the-plane principles say more about how expert entrepreneurs think and react in certain contexts than the way they take strategic decisions and design business models. The first of the two principles, the lemonade principle's describes the optimism, creativity and resourcefulness with which expert entrepreneurs are able to transform an apparent problem or threat into an opportunity. A known example of an entrepreneur with this attitude is Ikea's founder Ingvar Kamprad, who responded to the hostile reaction of existing Swedish furniture makers that prohibited him from selling to customers at tradefairs, showing prices and sourcing from existing suppliers, by developing a viable business model that not only overcame the constraints, but turned them into a unique business model with competitive advantages. Expert entrepreneurs tend not to be scared of the "unexpected" but embrace it and work it to their advantage. The second of the two last principles, pilot-in-the-plane, has to do with the fact (or belief) that markets can be created and that they are not necessarily "found". It's a consolidated understanding in entrepreneurship research that the initial business idea is less important for final success than team, effort and execution. This is because a good team (skilled, motivated, creative) can make a business out of almost anything, if buyers can be convinced of the value in the offering. One of the most successful corporate entrepreneurs and innovators of recent times, Steve Jobs, is quoted many times for being sceptic vis-à-vis market research because customers don't really know what they want before it's shown to them.[8] This is in line with experience from start-up entrepreneurship, where launching radically new concepts is com-

[8] W. Isaacson (2011), *Steve Jobs*, Simon & Schuster.

mon and an illustration of how demand for a specific product or service can be created and is not necessarily found.[9]

3 Managing uncertainty and risk: an integrative approach

The uncertainty characterizing the environment in which most start-ups have to operate necessitates a learning approach rather than a knowing approach. Most start-ups senter into markets in which they have never operated before and with products/services they have never produced or delivered. This double uncertainty, uncertainty as to how the market, the customers/users, will react to the product, and how much and how they will pay for the services, and uncertainty regarding the business system, the: design of the product/service, the User Interface (UI), the User Experience (UX), the logistics and the partners and so on, creates major uncertainties, because there is no or very little prior experience and knowledge.

In Figure 3 the type of uncertainty and risk depending on the venture teams previous experience with the product/market is indicated.

In the lower left quadrant in the uncertainty matrix, the management team actually knows how to run the business, because they have been doing it for years. This is the case of most existing companies that manage-existing products/services. In this context there might be uncertainties, but managers know what they are and can plan around them. Use of plans and predictive information is effective in this context. But as we move away from the space where the management team have experience and knowledge, uncertainty and risk increase, and without knowledge about the market and the production planning is difficult. Entrepreneurs don't know what they don't know, so-called unknown unknowns or Knightian uncertainty, and in this, the extreme but not uncommon situation of start-up entrepreneurs, management need to adopt a learning approach because the knowledge about how to make plans is not there.

Such a "learning" approach is exactly what authors Steve Blank and Eric Ries are advocating in their books.[10]

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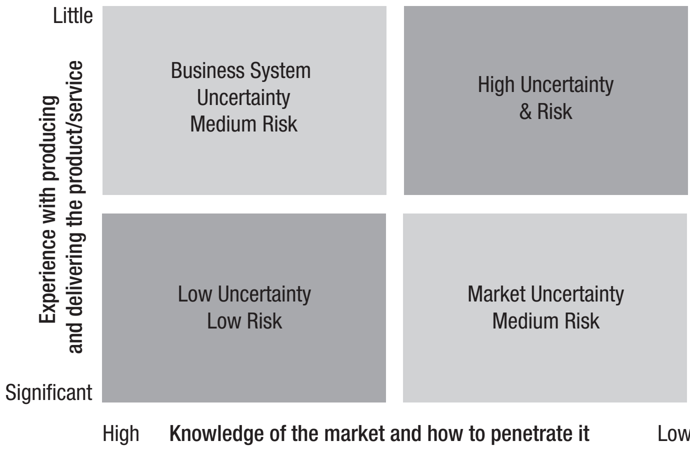
[9] Crazy products such as the "Pet Rock" (http://en.wikipedia.org/wiki/Pet_rock) or the "Dining in the Dark" restaurant service first launched in Cologne in 2002, but now a worldwide phenomenon, would never have been launched by identifying existing demand preferences.

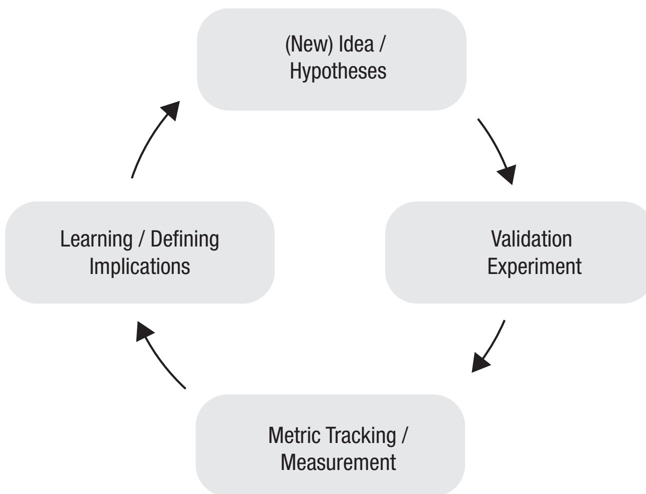
[10] S. Blank (2013), *The Four Steps to the Epiphany: Successful for Products than Win*, K&S Ranch; E. Ries (2008), *The Lean Startup*, Currency.

Figure 3 Linking knowledge and experience to uncertainty and risk



In lean start-up risk generated by uncertainty is managed through "iterations" of a so-called build-measure-learn process, which can also be seen as a learning-by-doing "learning loop". In Figure 4 the lean start-up logic is depicted using an adapted terminology.

Figure 4 Lean start-up learning loop



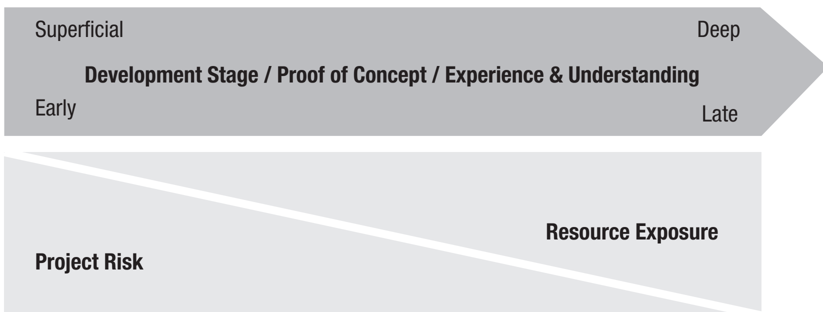
Start-ups and development projects managed using a lean start-up methodology start with developing an idea or a concept on paper. Then, because nobody really knows whether the idea is good or whether the concept will work, it is tested. The testing of ideas and hypotheses, in our terminology referred to as validation, can be of any aspect of the idea; the technology, the market, the marketing, the partners, the logistics: anything. The important thing is that the learning associated with the iterations exposes the start-up to as little financial risk as possible.

This principle, which in financial terms is often described as drip financing or milestone financing, is essential in managing the financial risk for projects characterized by a lot of uncertainty. In other words, the exposure in resource and financial terms should follow the risk profile of the project. This concept is presented in Figure 5, where the risk and uncertainty associated with a project are linked to the development stage and the understanding the venture team has of the business, and where the deployment of resources follows the risk profile.

This introduction might come across as a bit "philosophical", but it is essential for understanding why start-ups and other projects characterized by a lot of uncertainty need to be managed in a special way. In the next chapter, some of the tools that developers can use to manage the process correctly are described.

A modern approach to managing a start-up must take into consideration the uncertainty and risk associated with doing something new, and integrate mitigation tools in the management process. In Figure 1 of

Figure 5 Linking project development stage to project risk and resource exposure



Chapter 2 an overview of such an approach is depicted. Inspired by the different elements, the "method" is referred to as SMART entrepreneurial management. As will be clear from the description, the method is mainly based on tools that have already been developed, tested and described in other contexts and by other authors. The ambition has not been to develop a completely new framework, but put together in a concrete and practical way a complete description of useful start-up tools.