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Crossing the Valley of Death: Exploring Commercialization of Food Startups in Switzerland

Master Thesis

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Zusammenfassung

In der aktuellen Literatur wird das Valley of Death als eine finanzielle Lücke zwischen Grundlagenforschung/Erfindung und der Kommerzialisierung eines Prozesses oder Produktes/Innovation beschrieben. Hohe Investitionskosten in den frühen Stadien eines Startups müssen abgedeckt werden. Startups und Unternehmen kämpfen, um diese Hürde erfolgreich zu überwinden, wobei die meisten diese Kluft nicht überleben. Die Existenz des Valley of Death im schweizerischen Lebensmittelsektor ist bis dato nicht empirisch nachgewiesen worden und es ist wenig bekannt darüber, wie man diese Herausforderung als Startup am besten meistert.

Das Ziel dieser Studie war es, die Existenz und Wirkung des Valley of Death auf Startups innerhalb des Schweizerischen Lebensmittelsektors zu erforschen und das Phänomen zu verstehen. Ein ganzheitliches Verständnis über dessen Dynamik soll geschaffen werden. Daher wurden total 25 Interviews mit Schweizer Food Startups (10), Mentoren (5), Investoren (5) und Transferbüros (5) durchgeführt. Die Daten beinhalten explorative Interviews mit individuellen Meinungen und persönlichen Werten. Die transkribierten Interviews wurden mit der MAXQDA Software analysiert. Für die Erstellung des Codesystems wurde die gemischte Methode angewendet.

Die Ergebnisse weisen darauf hin, dass das Valley of Death existiert. Persönlichkeitsmerkmale im Bereich der emotionalen Intelligenz sind weitgehend dafür verantwortlich, ob das Valley of Death erfolgreich passiert werden kann oder nicht. Innerhalb der emotionalen Intelligenz sind Motivation und Selbstregulierung der Unternehmer, die an einem Startup beteiligt sind die Haupttreiber. Darüber hinaus ist die Startupkultur in der Schweiz begrenzt. Neben dem Timing bleiben die Finanzen einen wichtigen Faktor, um das Valley of Death erfolgreich zu überwinden.

Auf der Grundlage der Ergebnisse wird ein alternativer Begriff – the Mountain of Death - für Schweizer Food Startups eingeführt. Es stellt einen alternativen Blick auf die gegenwärtigen Hürden dar, die ein Food Startup in der Schweiz zu meistern hat. Darüber hinaus werden Empfehlungen, wie ein Food Startups am besten mit diesen Hürden im Valley of Death/Mountain of Death umgehen zusammenfassend in einer Richtlinie dargestellt. Obwohl dieses Phänomen nach wie vor ein komplexes Thema ist und weitere Untersuchungen nötig sind, sollte die Anwendung der erstellten Richtlinie die Auswirkungen auf Food Startups minimieren, so dass vielversprechende Ideen zu rentablen, kommerziellen Anwendungen wachsen können.

Abstract

In the present literature, the Valley of Death is described as a financial gap between basic research/invention and the commercialization of a process or product/innovation. Negative cash flow in the early stages of a startup needs to be covered. Startups and companies struggle to successfully overcome this hurdle whereby most do not get out of this chasm alive. Existence of the Valley of Death within the Swiss food sector has not yet been proved empirically. In case of existence, little is known how to overcome this challenge as a startup.

The aim of this study was to assess the existence and effect of the Valley of Death on startups within the Swiss food sector in order to better understand the conditions underpinning when going through the Valley of Death. A holistic understanding about its dynamics is created. Therefore, a total of 25 interviews with Swiss food startups (10), mentors (5), investors (5) and transfer offices (5) were executed. Data include explorative interviews with individual opinions and personal values, for which no standardized questionnaire currently exists. Transcribed interviews were analyzed with the MAXQDA software. For the code creation process, the mixed method was applied.

The results indicate the existence of the Valley of Death in the Swiss food startup sector. Personality characteristics in terms of emotional intelligence are largely responsible for successfully or non-successfully passing the Valley of Death. Within emotional intelligence, motivation and self-regulation of the entrepreneurs involved in a startup are key drivers. Moreover, the startup culture in Switzerland is limited, inhibiting progress of food startups. Besides timing, finances remain to be a crucial factor in successfully overcoming the Valley of Death.

Based on the results, a new term – the Mountain of Death – for Swiss food startups was introduced. It represents an alternative view of the current hurdles a food startup faces in Switzerland. Additionally, recommendations about how food startups best deal with several bottlenecks within the Valley of Death/Mountain of Death phase are extracted and summarized within a guideline. Although this phenomenon remains to be a complex issue and is subject to further investigations, the application of the created guideline should minimize the impact on food startups so that promising ideas are turned into profitable, commercial applications.

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List of abbreviations

The following abbreviations are used in this Master Thesis:

CEO	Chief Executive Officer
CHF	Swiss Francs
CMO	Chief Marketing Officer
CPO	Chief Product Officer
CTI	Commission for Technology and Innovation
EI	Emotional Intelligence
ETH	Swiss Federal Institute of Technology in Zürich
GDP	Gross Domestic Product
Inc.	Incorporation
IP	Intellectual Property
MBA	Master of Business Administration
MoD	Mountain of Death
NZZ	Neue Zürcher Zeitung
R&D	Research and Development
SNSF	Swiss National Science Foundation
SRF	Schweizer Radio und Fernsehen
US\$	United States Dollar
USP	Unique Selling Proposition
VoD	Valley of Death
ZHAW	Zurich University of Applied Science

1 Introduction

Startups disrupt and challenge existing businesses, create new jobs and increase the country's competitiveness and economic growth (Audretsch, Keilbach, and Lehnmann 2006). They are rated as a driving force for a country. At present, there are more entrepreneurs operating than at any previous time in history (Ries 2011).

However, startups are faced with the grim reality that transforming scientific research into commercial products or processes remains highly complex (Adams 2012, Auerswald and Branscomb 2003, Björk 2005). During this period, survival rate of startups decreases (Ries 2011). This nebulous gap is called the Valley of Death (VoD) and was first introduced by Bruce Merrifield (1995) to describe the challenges transferring solutions to agricultural challenges to third world countries.

Presently, the VoD is mostly associated with a gap in funding between research and successful innovation since the commercialization phase is cost-intensive (Hudson and Khazragui 2013, Savaneviciene, Venckuviene, and Girdauskiene 2015, Vonmont 2014, Williams 2004). Depending on the industry sector, various other obstacles may lead to this chasm (Adams 2012, Rencher 2012). According to Miller et al. (2013), there is no single VoD that all businesses must cross. In the pharma and bio medicine sector, the VoD has been broadly discussed in the literature. However, empirical data and the understanding of the VoD within the food sector is diffuse and limited. This critical area has not been adequately analyzed yet.

This Master's Thesis shall be a vital contribution to the thorough understanding of the implementation of new ideas and technologies into commercialization within the food startup sector in Switzerland. Explorative interviews are carried out mainly with food entrepreneurs, but also with investors, mentors and transfer offices striving for a more holistic view of the VoD. Contributions are aimed at future entrepreneurs, to responsible authorities and universities which teach entrepreneurial skills and technology transfer offices to fully unveil the economic potential of Switzerland within the food sector.

1.1 Research Question

This Master's Thesis investigates the following main research question:

How does the Valley of Death affect food startups in Switzerland and how do they deal with it?

1. How does the valley of death phase look like for food startups?
2. What are the main factors and actors within the valley of death of food startups?
3. How are they interrelated to each other?
4. How does the valley of death positively and negatively affect food startups?
5. Which strategies do food startups use in order to deal with the valley of death?
6. How can food startups get prepared for the valley of death?

1.2 Structure of the Thesis

This thesis starts with an introduction about the project, where the research gap, current state of research and the research questions are outlined. Chapter two demonstrates the framework conditions of Switzerland and provides information about the present Swiss startup culture. The concept of the VoD is underpinned in chapter three. The methodological approach is presented in chapter four. For validating the findings, qualitative content analysis is used. After transcribing, analyzing, and evaluating the interviews, the generated data provided answers for the posed research questions and its hypothesis. Results are shown in chapter five followed by a discussion and concluding remarks on the research and the method applied.

2 Context

2.1 Framework Conditions of Switzerland

For the eighth consecutive year, Switzerland is rated as the most competitive country in the world in terms of labor market efficiency, technological readiness, business sophistication and innovation (Schwab 2016). According to the European Patent Office, 891.6 patent applications per million inhabitants were filed in 2016 – also ranked on the first place (EPO 2016). The Gross Domestic Product (GDP) was US Dollar (US\$) 78'812 per capita in 2016 which is more than twice of the European average of US\$ 35'632 per capita (World Bank 2016a).

Switzerland's reputation for quality and academic excellence is exemplary. In general, its innovation ecosystem is fertile which attracts best talents and labor force from all over the world. Many multinationals which are headquartered in Switzerland are often leaders in their sector (Schwab 2016). In the fourth quarter of 2016, the share of unemployment was 4.9%; far below the European zone¹ (9.7%) (Lässig Bondallaz and Murier 2016).

The persistent inflation is perceived as a weakness for companies (Schwab 2016). When doing business in Switzerland, tax regulations and rates, inefficient government bureaucracy, restrictive labor regulations, inadequately educated workforce, and insufficient capacity to innovate are called as the biggest obstacles. Besides having these drawbacks, Switzerland still remains a strong and competitive business location (World Economic Forum 2016).

Growth rate of the Swiss population was little more than 1% over the last decade. In 2015, a total of 8.3 million people lived in Switzerland of which 24% were foreigners; a rather high share compared to the neighboring countries. 74% of the population lived in the cities. Due to the low birth rate, decreasing death rate and increasing life expectancy, demographic ageing is happening in Switzerland (Kucera and Krummenacher 2016). Although among Europe, Switzerland is a high-income country, 7% of the Swiss population were affected by income poverty in 2015 (BFS 2017a).

Switzerland's political system is based on federalism and direct democracy of which freedom of choice and self-determination are two main anchor points. The confederation, the cantons and the communes share the power (Crevoisier 2016). According to the index of political stability² (-2.5 weak; 2.5 strong), the average value from 2005 to 2015 was 1.3; besides Luxembourg and Finland the highest value within the European zone (World Bank 2016b).

¹ Includes 19 of 28 European Union member states which use Euros as its sole, legal currency.

² Measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional violent means, including politically-motivated violence and terrorism.

2.2 Swiss Food Sector

The food industry is located downstream to the agricultural sector (1st sector) and upstream to the retail and wholesale sector (3rd sector). Besides supply reliability, the Swiss food sector plays a crucial economic role for Switzerland. According to the Agricultural Report of 2016, gross self-sufficiency rate³ for food in Switzerland was 60%. This value has been stable over the last ten years. Around 40% of the total amount of calories consumed in Switzerland were imported (BWL 2016).

In 2015, the Swiss food sector generated a gross value added of Swiss francs (CHF) 11 billion and employed 74'400 people (Christen et al. 2017). Among the 500 biggest companies in Switzerland, 25 food companies are located. Nestlé S.A. (5), Barry Callebaut AG (35), and Aryzta AG (51) are rated as the top three Swiss food companies in 2016 (Bisnode 2017).

Demand in food products reacts comparably little on economic cycles. Growth is based on an increase in population and purchase power. The Swiss food industry is domestically orientated rather than on exports. Exports count for around 25% of the total revenue (Christen et al. 2017). In 2016, for an amount of CHF 9.8 billion food and luxury food products were imported and for CHF 8.1 billion exported – both mainly from and to European countries. Both import and export have been constantly increasing within the last twenty years in terms of worth and quantity (BFS 2017b). Meat and bakery products – the biggest two shares within the food sector – strongly focus on the domestic market. One third of the cheese products are being exported. The chocolate and refreshing drinks sector exports around 50% of its products. Baby food, sugar and coffee producers earn significantly more than half of their sales in the export. Most exported Swiss food products belong to the high-quality, premium sector in order to successfully rival against international competitors (Christen et al. 2017).

In Switzerland, the food industry is heavily regulated by protective tariffs (e.g. meat and cereal products). For intermediate agricultural goods, high tariff trading barriers exist which generate subsequent costs for the food industry. Commodity prices are, however, an important and partly highly volatile cost factor for non-tariff segments. Protectionism is, in certain segments, a reason why in spite of high production costs, three quarters of the food consumed in Switzerland is produced locally (Christen et al. 2017). At the same time, Swiss consumers are willing to pay a little bit extra for authentic, locally produced food products (e.g. cheese) (Feige et al. 2017).

³ Self-sufficiency rate is defined as the ratio of domestic production to the total domestic consumption. A distinction is made between gross self-sufficiency rate and net self-sufficiency rate, in which the fact that part of domestic production is based on imported feed is taken into account.

The Swiss food retail business is strongly dominated by two companies: Migros and Coop (Christen et al. 2017). They share almost 90% of the market. That leads to dependencies in terms of sales and investments for food producers (Leinert, Brand, and Duma 2016). According to Breitenstein, Voigt, and Schneider (2014), 76% of the requested food producers within their study rated its negotiation position towards Coop and Migros as “weak” or “extremely weak”. In Europe, this oligopoly within the food retail business is unique (Leinert et al. 2016).

As a result of the continued strengthening of the Swiss franc in recent years, shopping tourism and the import of foreign products has increased. In addition, the marketing of food products with the label “Made in Switzerland” was subject to stricter criteria within the framework of the latest debate about the Swissness legislation (BWL 2015).

The Swiss food market is broadly saturated and characterized by predatory competition. Expenses for food products in percentage of the average income of a household have been constantly decreasing in recent years. Price level for food and beverages are largely unchanged whereas on producer level, price level is declining (Leinert et al. 2016). Therefore, the largest growth potential is recognized abroad (besides in the US and EU also in emerging countries). For example, food companies such as Emmi, Hochdorf and Bell strongly focus on export (Thoma and Kohli 2017). However, specific consumer trends show a slight growth in specific niches such as convenience, sustainability, regional origin and health in Switzerland (Christen et al. 2017).

In 2016, the association Quality Strategy within the Swiss agriculture and food industry sector was founded. Major food companies and retail businesses from the entire food supply chain such as Migros, Coop, Fenaco or Agroscope are partner of this program. The association stands for and promotes sustainably produced, animal-friendly and high-quality food products (Girardin 2017).

2.3 Entrepreneurial Ecosystem of Switzerland

Figure 1 outlines the economy profile of Switzerland in terms of entrepreneurial behavior and attitudes from 2016 according to the global entrepreneurship monitor (Expert Ratings: 1 = highly insufficient, 5 = highly sufficient). The physical infrastructure in terms of land, space, transportation, utilities, etc., still affordable for small or growing companies, has been rated among the best of all 65 assessed countries (Baldegger et al. 2016).

Within the Swiss culture, entrepreneurial thinking is greatly missing. A high aversion towards risk and a constant fear of failure are ambiguous indicators for entrepreneurial behavior in Switzerland. Only 38.9% of the surveyed Swiss people see entrepreneurship as a good career choice (Baldegger et al. 2016). Additionally, Swiss education does not give enough attention

towards self-confidence, creativity and personal initiatives which are reflected in the low ratings of entrepreneurial education in Figure 1.

Besides that, funding opportunities for startups are limited. Although the general financing situation is good, little money flows into startups. According to the Swiss Venture Capital Report 2017, there is a lack of venture capital in Switzerland but is likely to increase with the maturing startup ecosystem.

Public interest about entrepreneurship in Switzerland is increasing. Several media stations, such as the “Neue Zürcher Zeitung” (NZZ) or Swiss radio and TV stations “Schweizer Radio und Fernsehen” (SRF), continuously broadcast news and publish articles about the Swiss startup scene (Bühler 2017, Fritsche 2017, Müller 2016, Müller 2017).

Numerous startup programs, impact hubs, networks, and competitions such as Kickstart Accelerator⁴, Venture Kick⁵ or Foodways⁶, but also government entrepreneurship program such as Commission for Technology and Innovation (CTI) exist where startups can challenge and improve their business ideas. Programs, competitions, etc. most suitable for Swiss food startups are listed in Appendix D (non-exhaustive list).

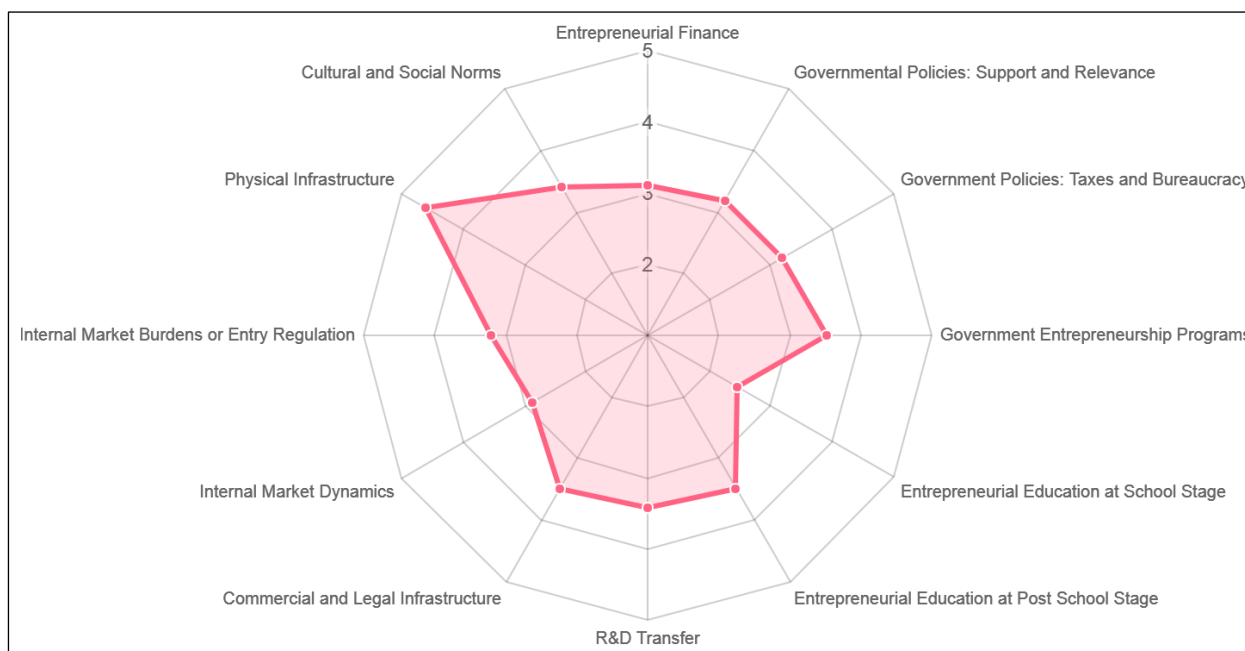


Figure 1: Entrepreneurial Behavior and Attitudes of Switzerland - 1 = highly insufficient, 5 = highly sufficient (Baldegger et al. 2016)

⁴ 11 – week acceleration program – www.kickstart-accelerator.com

⁵ Financial support program (pre-seed capital) – www.venturekick.ch

⁶ Support Program explicitly for food startups – www.foodways.ch

3 Theory

3.1 Valley of Death

The VoD is a phenomenon and a great challenge for companies known across several industries because most early startup companies tend to fail. Various definitions exist which are explained and formulated rather openly and imprecisely within the literature. Generally speaking, it is a misallocation or lack of financial, technological or managerial resources between the period of basic research/invention and applied research/innovation (Girdauskiene, Venckuviene, and Savaneviciene 2015, Hartley and Medlock 2013, Hudson and Khazragui 2013, Markham et al. 2010, Osawa and Miyazaki 2016). It is the gap which separates the world of academia from the world of industry since each of them operates in vastly different spheres (Björk 2005).

The VoD primarily refers to a gap in financing between basic research to a commercial product or industrial process. Thus, the product or process could possibly fail to reach the market (Beard et al. 2009, Björk 2005, Bessiere et al. 2014, Davis 2017, Hudson and Khazragui 2013, Lux and Rorke 1991, Murphy 2003, Osborne 2008, Rencher 2012, Savaneviciene, Venckuviene, and Girdauskiene 2015, Vonmont 2014).

The most critical point within the commercialization process is seen when there is no longer access to national or public funding and when the private sector (e.g. investors) acts reluctantly. Then the state of commercialization is too advanced and the risk the private sector would have to take is too high because the process or product has not yet been implemented. The private sector seeks for proof-of-concept data prior to commit themselves (Guertin 2016). Thus, the company is not able to advance from the demonstration phase through the commercialization phase (Frank et al. 1996, Miller et al. 2013).

Moore (1991) uses the terminology “*Crossing the Chasm*” for the VoD and rates this occasion mainly as a liquidity challenge based on which numerous startups or companies linger and die within the chasm. Auerswald and Branscomb (2003) describe this obstacle as the “*Darwinian Sea*”, referring to the “big fish” and “little fish” where survival rate for the “little fish” (besides financing) is based on creativity, agility, and persistence. Hence, it is a natural selection where only the most viable ideas survive (Girdauskiene et al. 2015).

In the pharmaceutical and biotech industry, the VoD is perceived as the critical period between preclinical validation and clinical evaluation. Besides academic funding, they consider the complex regulatory requirements and the lack of protection as a bottleneck (Baumann and Overgaard 2016, Butler 2008, Gladwin and O`Donnell 2014, Frederickson 2011, Hudson and

Khazragui 2013, Meslin, Blasimme, and Cambon-Thomsen 2013, Moran 2007, Osborne 2008, Seibel 2010, Yu 2016).

Björk (2005) states that when bridging the VoD, and to move a project from one side to the other, it needs to be done from both sides. Consequently, researcher do not only need to know how the industry works, but practitioners need to know how science works additionally. According to Mimura, Cheng, and Penhoet (2011) and Rencher (2012), creativity, flexibility and carefulness are required. As stated above, lack in finances must not be the only reason startups or companies get stuck in the VoD. Key actors and factors are presented in depth in chapter 3.3.

Yet no definition of the VoD provides a mechanism which clearly explains the VoD within the food sector. The way Beard et al. (2009) defines the VoD is most likely adaptable to the food sector. Their definition is proposed for this research project:

“The road between a discovery generated from basic research to a commercial product or process is long and, according to some, rife with significant roadblocks. Innovators and investors alike routinely claim that a ‘funding gap’ or ‘Valley of Death’ exists between basic research and commercialization of a new product.”

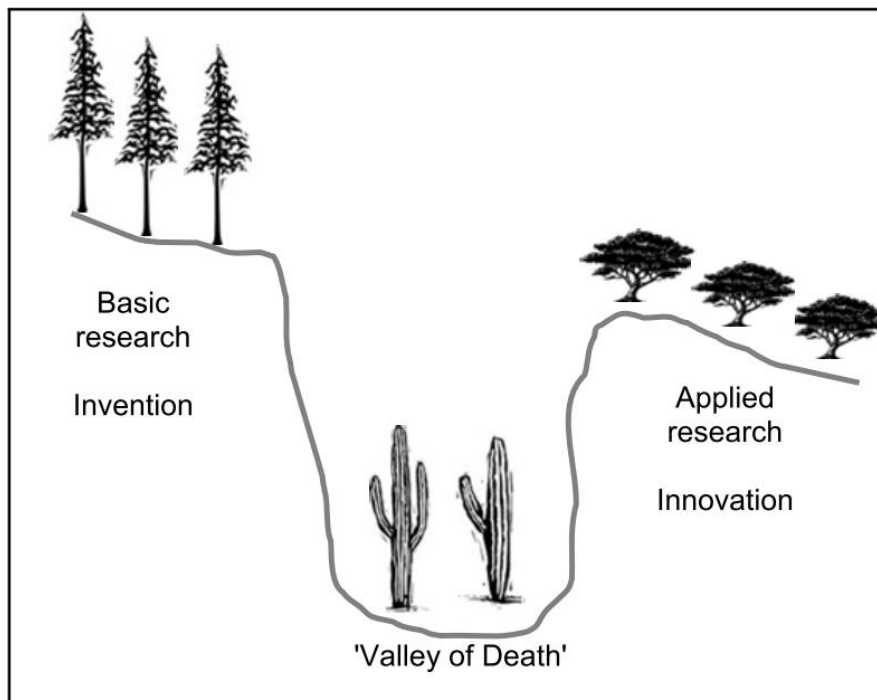


Figure 2: Graphic representation of the Valley of Death (Beard et al. 2009)

Despite the definition being from a financial perspective, it states that other obstacles exist in an economic investigation. A highly complex situation is defined straightforward though not too narrow as seen in Figure 2.

3.2 Food Startups

According to the current state of research, there is no common definition for the term “startup”. Eric Ries (2011), author of *“The Lean Startup”*, states that *“A startup is a human institution designed to create a new product or service under conditions of extreme uncertainty”*. Neil Blumenthal (2013), cofounder of Warby Parkes, defines a startup as followed: *“A startup is a company where the solution is not obvious and success is not guaranteed”*. When most research is made on startups, the time period of the initial five years is taken into account (Hartl 2002).

3.3 Actors and Factors

An overview of the main actors and factors which are directly linked to the VoD is presented in Table 1 and Table 2. They are ordered according to how frequently they are mentioned in the literature.

Table 1: Key Actors of the Valley of Death

Actors	Description	References
Government (policy makers)	<p>In some areas, translational research is highly regulated representing a great obstacle for commercialization of research. Thus, volatility of regulations poses another challenge.</p> <p>Therefore, the government should act as a facilitator and set the regulations to avoid the emergence of the VoD of enterprises. In addition, government funding is to be taken not only on basic research, but also on its commercialization.</p>	<p>(Asheim et al. 2003, Baumann and Overgaard 2016, Beard et al. 2009, Bessiere et al. 2014, Etzkowitz and Leydesdorff 2000, Frank et al. 1996, Hudson and Khazragui 2013, Miller et al. 2013, Toedtling and Tripl 2005)</p>
Research Institute	<p>The literature states that some research institutes are not able to identify valuable innovations from their research since they are mostly driven by fundamental research and teaching. Numerous inventions remain unexploited. Its role does not end with the conduction of fundamental research.</p>	<p>(Asheim et al. 2003, Etzkowitz and Leydesdorff 2000, Sam Saguy 2011, Toedtling and Tripl 2005, Williams 2004)</p>
Entrepreneur/Project manager	<p>Success in business is highly correlated to its entrepreneurs. Some papers state, that entrepreneurs are closer to artists than any other career. A significant number of incremental steps are needed in order to perform successfully as a startup (see chapter 3.3, - Entrepreneurial skills/mindset).</p>	<p>(Blank 2011 and 2014, Frank et al. 1996, Hudson and Khazragui 2013, Rai et al. 2008, Reed 2011)</p>

<p>Investor</p>	<p>Long-term, stable investors who have financial capital and key relationships to confer legitimacy on startups need to be identified. Additionally, it is beneficial when they also possess expertise in the field they invest (see chapter 3.3, Table 2 – Access to Capital).</p>	<p>(Frank et al. 1996, Hudson and Khazragui 2013, Rai et al. 2008, Reed 2011, Rencher 2012)</p>
<p>Industry</p>	<p>Depending on the sector, suitable industry partners are supportive in order to overcome the VoD. Literature suggests more industrial involvement of startups and becoming proactive in sharing expertise at Universities.</p>	<p>(Etzkowitz and Leydesdorff 2000, Sam Saguy 2011, Toedtling and Tripl 2005, Asheim et al. 2003)</p>
<p>Market/Customer</p>	<p>The literature states that startups need to be resistant within an uncertain market and adapt to changing priorities and requirements of the customer. An early orientation on customer needs is vital.</p>	<p>(Frank et al. 1996, Miller et al. 2013, Ries 2011)</p>

Table 2: Key Factors of the Valley of Death

Factors	Description	References
Access to Capital	<p>A lack in capital either in terms of public (e.g. government) or private funding (e.g. investors), is highly associated with the VoD. In some areas, a scarcity of funds is a fact. Sometimes the market does not provide an incentive for investing into a certain product or service.</p> <p>Once the product or technology has been successfully demonstrated, public funding ends abruptly. Investors are not willing to make risky investments yet due to limited commercialization experiences. Usually entrepreneurs have little money and few resources, leaving promising products or technologies to linger and die within the VoD. Alternative sources of financing must be identified.</p>	<p>(Beard et al. 2009, Björk 2005, Bessiere et al. 2014, Davis 2017, Frank et al. 1996, Frederickson 2011, Guertin 2016, Hudson and Khazragui 2013, Lux and Rorke 1991, Miller et al. 2013, Murphy 2003, Osborne 2008, Rencher 2012, Savaneviciene, Venckuviene, and Girdauskiene 2015, Vonmont 2014, Williams 2004)</p>
Collaboration	<p>Proactive collaborations, finding suitable partners and building relationships mainly between companies and universities or government agencies have been identified as crucial factors when traversing the VoD. Thereby collective pool of resources and skills gets created and the best talents from all sectors can be brought together to address common remediation solutions. However, strong collaborations are still far from perfect due to a lack of coordination and commercialization process are lengthy and uncertain. When companies and research center cooperate, different views clash together. Whereas universities rather invest into fundamental research (driven by the pursuit of basic research, knowledge dissemination and publica-</p>	<p>(Asheim et al. 2003, Etzkowitz and Leydesdorff 2000, Frank et al. 1996, Hudson and Khazragui 2013, Ries 2011, Sam Saguy 2011, Savaneviciene et al. 2015, Schicker et al. 2011, Toedtling and Tripl 2005, Williams 2004)</p>

	<p>tions), the industry mainly focuses on applied research (driven by profit maximization, increasing market share). Moreover, food companies act reluctantly since they would have to share their intellectual properties (IP) and expertise. Cost-shared risk model or leveraged partnerships may encourage collaborations and thus facilitate commercialization processes (see factor Access to Capital).</p>	
<p>Entrepreneurial skills/mindset</p>	<p>The following terms are used in the literature when discussing VoD and entrepreneurial orientation: optimism, enthusiasm, commitment, irrational passion, determination, focus, resilience, perseverance, agility, creativity, leadership skills, and transparency.</p> <p>For entrepreneurs, culture of failure needs to be set. Opportunities need to be identified and tested. However, some entrepreneurs tend to focus on perfecting their product or technology while neglecting business development knowledge. In some cases, a lack in market understanding and entrepreneurial management is identified.</p>	<p>(Bessiere et al. 2014, Blank 2011, Frank et al. 1996, Fredrickson 2011, Girdauskiene et al. 2015, Hudson and Khazragui 2013, Ries 2011, Schicker et al. 2011)</p>
<p>IP regulations</p>	<p>A product or technology may get undermined when there is a lack of protection. When the holder of a patent is willing to sue potential intruders, only then the patent as a protection of property is valuable.</p>	<p>(Adams 2012, Hudson and Khazragui 2013, Rai et al. 2008, Seibel 2010, Williams 2004)</p>
<p>Innovative idea</p>	<p>Not having a strong business case in terms of insufficient performance of the product or technology is another hindrance. Thus, it is crucial to have an innovative idea, a clear business model, and a well-thought-out execution plan.</p>	<p>(Frank et al. 1996, Markham et al. 2010, Rai et al. 2008, Williams 2004)</p>

Team	The team and its constellation play a key role when traversing the VoD. Strength and weaknesses of every member should be recognized and the skills acquired must be cumulative (knowledge in research, management, commercial and marketing). Individual workload needs to be regulated.	(Bessiere et al. 2014, Frank et al. 1996, Schicker et al. 2011)
Communication	Profound dialogue with all stakeholders during collaboration projects is crucial within the team.	(Björk 2005, Butler 2008, Adams 2012, Markham et al. 2004)
Startup Culture	Certain papers have outlined that there is a lack of transfer offices and spin-off culture. Thus, startup classes at universities where entrepreneurial thinking gets taught is recommended.	(Sam Saguy 2011, Schicker et al. 2011)
Support Mechanisms	Access to services, trainings, coaches, and networks for a startup are rated as favorable to survive the VoD. Support programs designed to operate in a long term are of great benefit.	(Bessiere et al. 2014)

3.4 Emotional Intelligence

Emotional Intelligence (EI) describes the personal and social competences of how an entrepreneur manages himself and his relationships. According to Goleman (1998), EI plays a key role in entrepreneurship. Previous studies have shown that positive emotions may increase entrepreneurial creativity. Being passionate about the startup affects growth through a common vision (Baron 2008, Baum and Locke 2004). EI is structured into five main sectors: Self-Awareness, Self-Regulation, Motivation, Empathy, and Social Skills. The emotional competence framework as listed below is based on studies from Goleman (1998).

Self-Awareness – Knowing one's internal states, preferences, resources, and intuitions

- **Emotional awareness:** Recognizing one's emotions and their effects
- **Accurate self-assessment:** Knowing one's strengths and limits
- **Self-confidence:** A strong sense of one's self-worth and capabilities

Self-Regulation – Managing one's internal states, impulses, and resources

- **Self-Control:** Keeping disruptive emotions and impulses in check
- **Trustworthiness:** Maintaining standards of honesty and integrity
- **Conscientiousness:** Taking responsibility for personal performance
- **Adaptability:** Flexibility in handling change
- **Innovation:** Being comfortable with novel ideas approaches, and new information

Motivation – Emotional tendencies that guide or facilitate reaching goals

- **Achievement drive:** Striving to improve or meet a standard of excellence
- **Commitment:** Aligning with the goals of the group or organization
- **Initiative:** Readiness to act on opportunities
- **Optimism:** Persistence in pursuing goals despite obstacles and setbacks

Empathy – Awareness of others' feelings, needs, and concerns

- **Understanding others:** Sensing others' feelings and perspectives, and taking an active interest in their concerns
- **Developing others:** Sensing others' development needs and bolstering their abilities
- **Service orientation:** Anticipating, recognizing, and meeting customers' needs
- **Leveraging diversity:** Cultivating opportunities through different kinds of people
- **Political awareness:** Reading a group's emotional currents and power relationships

Social Skills – Adeptness at inducing desirable responses in others

- **Influence:** Wielding effective tactics for persuasion
- **Communication:** Listening openly and sending convincing messages
- **Conflict management:** Negotiating and resolving disagreements
- **Leadership:** Inspiring and guiding individuals and groups
- **Change catalyst:** Initiating or managing change
- **Building bonds:** Nurturing instrumental relationships
- **Collaboration and cooperation:** Working with others toward shared goals
- **Team capabilities:** Creating group synergy in pursuing collective goals

3.5 Hypotheses

Based on the current literature, the following hypotheses according to the hermeneutic approach were proposed to answer the research question:

1. The VoD inevitably exists for every food startup in Switzerland.
2. As a food startup, strong collaboration and exchange with the government and the industry is needed in order to survive the VoD.
3. The duration of the VoD varies mostly depending on access to capital and having the right team.
4. Timing in respect of market maturity and customer readiness is a main factor for being successful as a food startup.
5. The VoD has a positive effect on the performance of a food startup and strengthens commitment and determination of an entrepreneur.
6. Resilience has a positive impact on the innovation capacity and competitiveness within a food startup.
7. Success as a startup strongly depends upon personality characteristics of the entrepreneurs.
8. The Swiss food startup ecosystem does not grasp its full potential.

4 Methodology

4.1 Research Design

Figure 3 outlines the theoretical setup of this thesis. First a systematic literature review about the VoD is done to understand the current state of research and additionally to identify research gaps. Interview guidelines for food startups, investors, mentors, and transfer offices are developed and interviewees are defined. Data is collected through explorative interviews. Illuminating the VoD within the food sector from four different angles (food startup, mentors, investors, and transfer offices) increases the chance of producing results which are close to reality. This explorative approach captures as much information as possible. Key actors and factors of the VoD which were not initially addressed within the interviews can possibly be found. A more holistic understanding of the VoD within the food sector is aimed.

Results are reflected with existing literature and a guideline about “How to withstand the VoD as a food startup” gets created. The results of the food startups serve as the basis. External views from investors, mentors and transfer offices function as complementary information and may unveil perception gaps. The focus of the qualitative analysis will be placed on what has been said and potentially what has not been said according to the defined code system (see chapter 4.7.2).

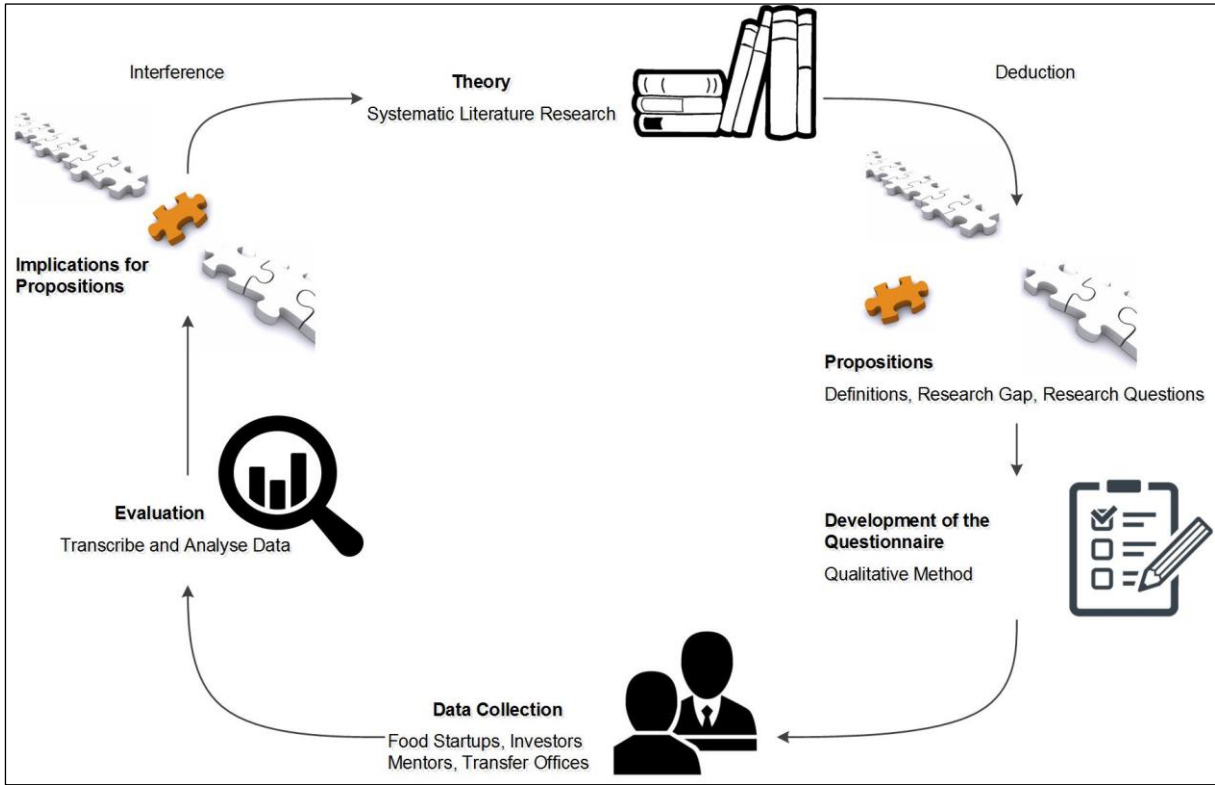


Figure 3: Research Design Master Thesis Meinrad Koch

4.2 Evaluation of the term “Valley of Death”

As represented in chapter 3.1, various definitions exist for the VoD. All definitions were rated in order to find the most suitable definition and to ensure conformity with this research project. This evaluation process is based on the dissertation of Hoppe (2004) and they were rated according to the following criteria:

1. Process understanding

The definition should be understood as a process or period. A VoD can only exist when innovation is perceived as a sequential process (Beard et al. 2009).

2. Theoretical understanding

The VoD should be defined as precise as possible but not too narrow to keep the flexibility within the interpretation of the results. It also should largely reflect the current scientific understanding of the VoD. It should not be solely based upon a lack of finances.

3. Practical understanding

The definition should be as closely adaptable to the food industry as possible and should conform to its practical understanding.

Table 4 in Appendix E summarizes the current scientific understanding of the VoD among various industry sectors. They were rated and ordered alphabetically according to its references. The chosen definition is portrayed in chapter 3.1.

4.3 Criteria – Sample Selection

Based on the definition in chapter 3.2, food startups were selected according to the following criteria:

- Either technology- or knowledge based which either produce, preserve, prepare, trade, or sell food directly or indirectly
- Innovative scalable business model, business model in progress
- Operate under extreme uncertainty
- Based in Switzerland
- No older than five years – founded after 2010
- Is either a stock company, a limited liability company or an individual enterprise

The main criteria for the identification of the investors, mentors and transfer offices was having a broad experience within the field of food and beverage.

4.4 Interviewees

Food Startups

- | | |
|----------------------|---|
| 1. Matthias Grawehr | Co-Founder and former CEO – Essento Food AG |
| 2. Seri Wada | Founder and CEO – Seri Backhandwerk |
| 3. Aron Kenessey | Co-Founder and CPO – Faitron Incorporation (Inc.) |
| 4. FS_04 | Anonymous |
| 5. Adrian Hirt | Founder and CEO – Alpenhirt GmbH |
| 6. José Amado-Blanco | Co-Founder and CMO – Yamo AG |
| 7. Rafael Waber | Co-Founder and CEO – SwissShrimp AG |
| 8. Yvonne Störzer | Founder and CEO – Tu-(Dir)-Gutes GmbH |
| 9. Paolo Del Ponte | Co-Founder – Project Aqua |
| 10. Max Gianotti | Co-Founder and CEO – The Fish Market |

Investors

- | | |
|------------------------|--|
| 1. Dr. Daniel M. Boehi | Foodpreneur and Founder – The Founder Institute |
| 2. I_02 | Anonymous |
| 3. Eric Gisiger | Managing Partner – Helvetica Capital AG |
| 4. Dr. Pascale Vonmont | Director – Gebert Rüt Foundation |
| 5. Ralph Huggel | Senior Advisor Food & Beverage – Invision Private Equity |

Mentors

- | | |
|--------------------------|--|
| 1. Roland Laux | Founder and CEO – UNICO-first AG |
| 2. Jörg Brun | Founder and CEO – Brandline Consumer Goods AG |
| 3. Jan Fülcher | Founder and Director – SWISS ICT Investors Club |
| 4. Andreas Emmendoerffer | Commission for Technology and Innovation (CTI) Coach
Phalcon Consulting |
| 5. Christian Hirsig | Founder and Director – Swisspreneur |

Transfer Offices

- | | |
|------------------------------|--|
| 1. Prof. Michael Kleinert | President – Swiss Food Research |
| 2. Dr. Frank Burose | Director – Kompetenznetzwerk Ernährungswirtschaft |
| 3. Prof Dr. Roman Boutellier | Vice president – Swiss Federal Institute of Technology
(ETH) Zürich |
| 4. Mario Jenni | CEO – Bio-Technopark Schlieren-Zürich |
| 5. Meiert J. Grootes | Co-Founder – Agro Food Innovation Park Frauenfeld |

The aforementioned lists represent ten food startups and five investors, mentors and transfer offices selected as interviewees for this thesis. The sample size for this research project is 25. The food startup selection is based upon previous research where numerous competitions, support programs along with startup incubators, accelerators and co-workings spaces nationwide have been combed and filtered in accordance with the proposed criteria (see chapter 3.2). The entire list (List Interviewees) can be found on the CD (list is not exhaustive).

4.5 Interview Guideline

Interview guidelines were developed based on the research gap and the hypothesis and structured into content aspects, maintenance questions and concrete inquiries. The “Do’s and Don’t’s” list according to Kruse (2015) for the development was taken into account for the interview guidelines. The list can be found in the Appendix F.

Questions were created as openly as possible and as structured as necessary to the posed hypothesis. The problem-focused interview model according to Witzel (2000) was applied. This approach requires that the researcher is aware of his prejudices and previous understandings in order to ensure confirmability, dependability, and credibility of the research. Those attributes are stated as scientific quality criteria for qualitative research (Kuckartz 2016). Quality of the data is fixed during the data generation process (Helfferrich 2009).

During the interviews, the interview guideline served as a reminder and ensured comparability of the various interviews. The interview guideline accompanies the conversation process in the background. It can fully be focused on the verbal conversation. Interview guidelines are found in Appendix G.

4.6 Interviews

A short introduction of the researcher and the field of research was made. In order to have a low-threshold communication the interviews were held within the mother tongue language of the interviewee (Swiss German, German or English). It was important to create an open space atmosphere and trust for the interviewee to gain as much information as possible. During the dialogue, the interviewee could express and state his thoughts about the VoD. Speaking time of the interviewees was enlarged. The goal was to get as close to maximum objectivity and openness as possible. For the optimization of the understanding comprehension questions were added to the conversation.

Interviews took place in different locations such as coffee shops, restaurants, impact hubs, offices, and break rooms as seen in Figure 4. Due to time restrictions of the interviewees, two interviews were held on the phone.

All interviews were recorded with the app “Sprachmemos” and automatically backed up. Audio records offer accuracy and a relaxed interview because no notes were taken. Due to the interviews being recorded, there is a risk posed of uncertainty and distortion of the interview since being recorded is possibly intimidating (Kruse 2015).

Since data included sensitive information, interviewees were asked if they wish to be anonymous. As a result, two out of twenty-five interviewees were given nicknames. Demanding a written declaration of consent was deliberately left out. Due to time constraints, no postscripts were created.



Figure 4: Different Interview Locations: 1 = Max Gianotti - The Fish Market in Schaffhausen, 2 = Mario Jenni – CEO at Bio Technopark in Schlieren, 3 = Seri Wada - Seri Backhandwerk at Impact Hub in Zürich

4.7 Qualitative Analysis

4.7.1 Transcription

Interviews were transcribed by using the transcription software f4 as represented in Figure 5. F4 software simplifies the transcription process. During the transcription process first suggestions for evaluation, specific characteristics and complex interrelationships were commented.

A loss in information through the transcription process is inevitable. Each transcript has to be seen as a construct which does not represent a genuine image of the conversation (Kruse 2015). In order to create a uniform writing style the interviews were transcribed according to the transcription rules of Dresing and Pehl (2015). Small talk at the beginning and at the end of the interview and non-specific statements were not transcribed. The rules and all transcribed interviews including further information about the interviewees are found on the CD (Interview Transcript Document).

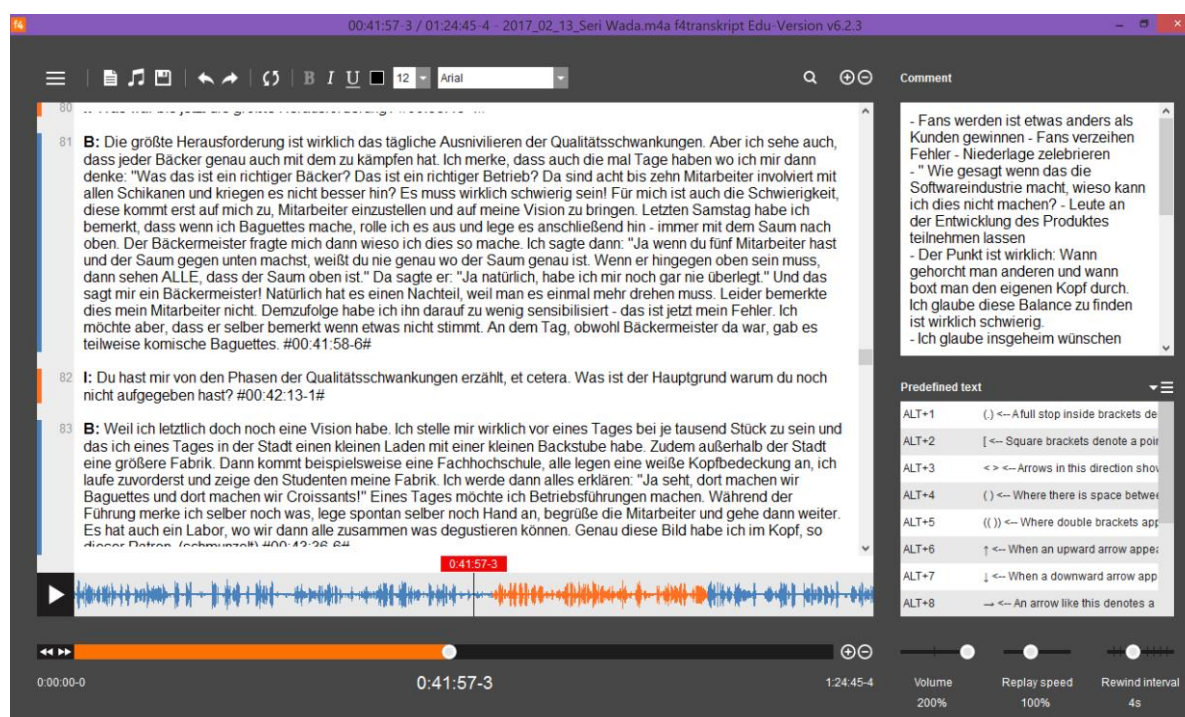


Figure 5: f4 Transcription Program

4.7.2 Development of the Code System

The code system was deductively developed based on the research questions and its hypothesis but expanded inductively during the coding process. A multi-stage procedure coding process was applied. This mixed approach of the code creation process is based on the theory of Gläser and Laudel (2010). Within the first phase, interviews were coded along the deductively defined codes. In the second phase, codes are further developed, modified, and specified in

accordance with the development of new codes and subcodes leading to reduced complexity and increased explanatory power of the data. According to Kuckartz (2016), the in-depth examination of the material leads to further codes and subcodes. Therefore, theoretical sensibility and creativity is needed (Kuckartz 2016). During this process, the model of EI based on the theory of Goleman (1998) was integrated into the code system (see chapter 3.4).

The code system serves as a search grid in which data is scanned and categorized. Each code is unique and serves as an anchor point for the analysis. The complete code system is seen in Table 3. The numbers in the brackets next to the codes refer to the hypotheses. Detailed information about the definition of the codes are found in Appendix H.

Table 3: Code System

Codes	Subcodes
VoD Existence/Experience [1,5]	
Collaboration and Exchange [2]	
	Industry Government Universities Startup Programs/Exhibitions
Duration VoD [3]	
	Team Access to Capital Lean
Timing/Strategy [4]	
	Customer Readiness Market Maturity
Personality Characteristics [7]	
	Professional Intelligence [5,6]
	Emotional Intelligence Self-awareness Self-regulation [5,6] Motivation [5,6] Empathy Social Skills
	Color Animal
Swiss Food Startup Ecosystem [8]	
	Entrepreneurship Mentality Regulations/Startup Support Natural limitations Duopoly Entrepreneurship at Universities Network/Test Lab Margin Food Law Wealth/Economic circumstances
Luck [4]	
Mentor	

4.7.3 Analysis

MAXQDA Software was utilized for analysis and visualization of the data gathered. Its reference manual is located on the CD. Figure 6 visualizes the classic MAXQDA layout including the elements „Document Browser“, „Document System“, and the „Code System“. Data was imported into the Document System and assorted according to the interview groups defined (see chapter 4.4). Interviews were coded based on the Code System located in the left corner with its color accordingly. Irrelevant text passages remained uncoded. In case of doubt, an overall assessment of the text had been taken into account whether a text passage is coded or not. Because overlapping codings can occur, the size of the coded segment has been tailored so that the coded text segment is still comprehensible outside of its context. Numbers next to the Document System and the Code System display how many codings a document or a code includes respectively.

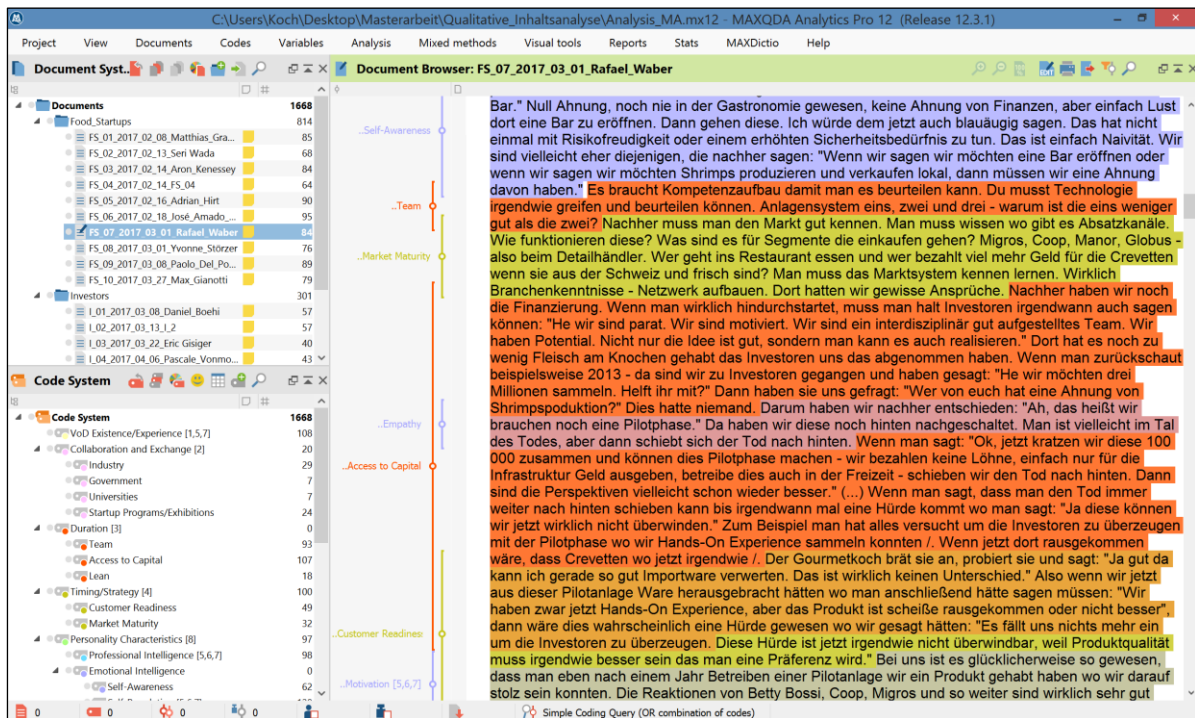


Figure 6: Classic MAXQDA Layout – Section of the coded material

In the next phase, a summary grid was created as pictured in Figure 7. Code segments of the same code of each document can be headed and compared at once. A permutation of all interviews according to the defined code system was designed. Based on that, a summary of each code within each document was created. Within the MAXQDA software a connection gets created between the summaries and the original data automatically allowing a feasible way to understand the results. The latest version of the MAXQDA-project file is stored on the CD. Based on the summaries of the summary grid, the hypotheses were answered and discussed. During this process, its structure followed according to the codes and subcodes.

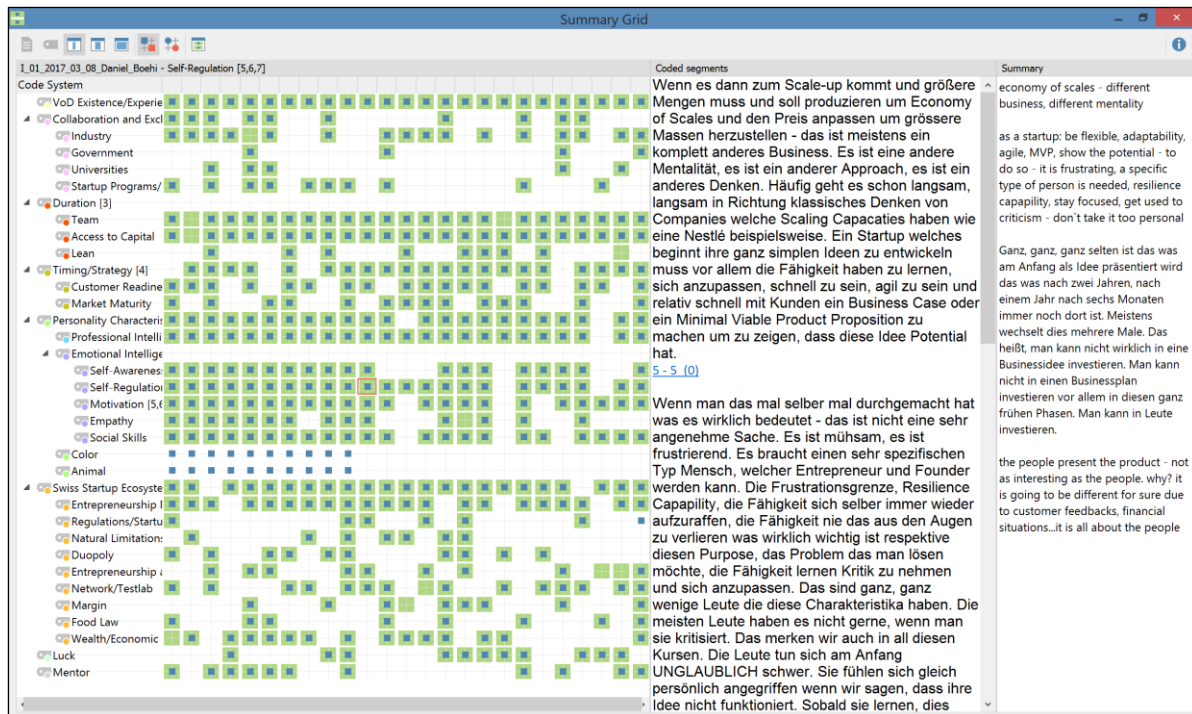


Figure 7: MAXQDA Summary Grid

4.7.4 Visualization

Document portraits – case-oriented visualizations were used to create a picture of all coded segments and its frequencies within a document. When codes have various and meaningful colors, the maximum out of the visualization is realized (Kruse 2015). Text passages which are not coded are not presented. The document portrait takes the size of the coded segments into account, weighs the color according to the size of the segment and divides it into 1'200 little squares (VERBI 2017). All document portraits sorted by colors are found on the CD and its summaries are represented in chapter 5.1 and 5.6.

The code co-occurrence model was used to create an overview of all codes, subcodes and its interconnections. It represents all overlapping codes where line width reflects frequencies (VERBI 2017). The model is shown in chapter 5.11.

5 Results

5.1 Document Portraits

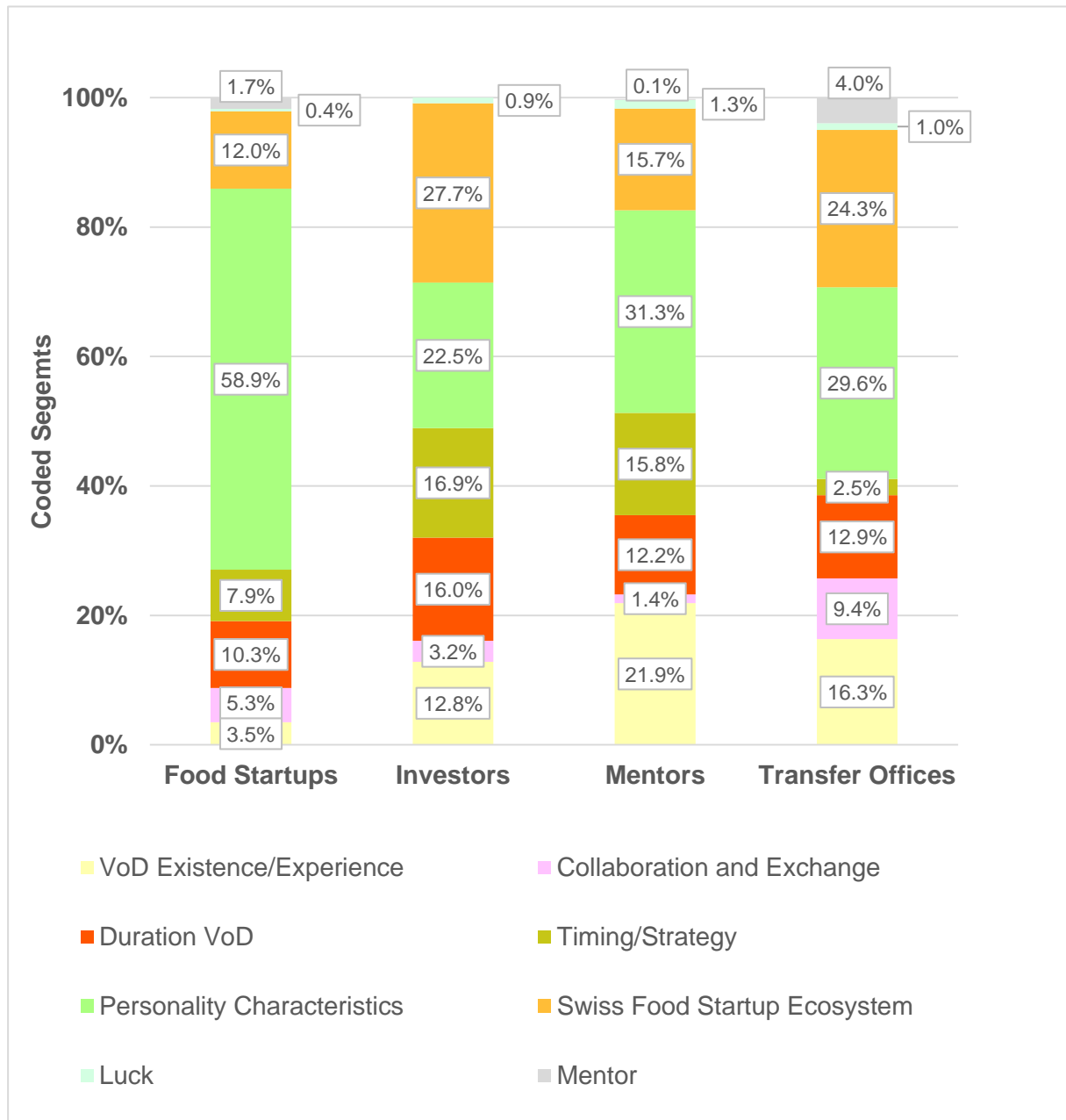


Figure 8: Document Portraits

Figure 8 is a visual representation of the coded segments of all documents taken together within their groups: food startups, investors, mentors and transfer offices. The topics “Personal Characteristics” and “Swiss Food Startup Ecosystem” dominated the exploratory discussion on the VoD. All document portraits of each interview are found on the CD.

5.2 Existence of the Valley of Death

H₁: The valley of death inevitably exists for every food startup in Switzerland.

When starting a new business, food entrepreneurs start with a high level of enthusiasm. They do not clearly realize the occurrence of the VoD until they experience it themselves; though numerous ups and downs monthly, weekly, or daily are mentioned. How the VoD is perceived, varies greatly but for most entrepreneurs it is recognized as an intermediate stop, a layover or as a continuous roller coaster ride. Mentors and investors interpret it as a dead end, a jungle, a mountain of death (MoD) or as a bicycle race up the mountains. To actually quit the business is rarely seen as an option for an entrepreneur.

„Now, I know where my problems and risks are. The ones heading towards me I don't know yet and the ones I passed I'm going to rate differently because I know whether I failed or succeeded upon them” (Del Ponte, Project Aqua, March 8th, 2017).

All interviewed investors as well as the mentors and transfer offices agreed that the VoD exists in the food startup sector. The clear majority also notes that it is not only a financial issue and that the extent can be drastically reduced by a thorough planning. Accurate planning is seen as a major challenge. Since hardly any plan can be executed a hundred percent due to various reasons, the VoD inevitably exists.

Multiple times it has been referred to a poor business case or its poor execution. A fundamental disagreement exists upon the definition of the VoD and whether entrepreneurs know exactly when they are in or out of the VoD. There is a smooth transition in being in or out of the VoD. Every case is completely different and has its own unique VoD. Thus, it outlines the difficulties of handling or getting prepared for the VoD.

„I can describe to you the valley of death a hundred times and more. It is just like having a kid to whom you say: “Be careful! The stove is hot when the water boils,” not until the kid realizes the stove is actually hot when he puts a finger on top of the stove” (Grootes, Agro Food Innovation Park, March 28th, 2017).

One mentor mentioned that the VoD can also be actively created or manipulated when creating a need by your customer but not delivering the product on time to the retailers. For detailed information see page 364 in the interview transcript document. Additionally, entrepreneurs should be mentally prepared for it. According to a transfer office, the existence of the VoD has been overrated. One mentor mentioned that the VoD hardly exists when relationship to customers is built up previous to entrepreneurial activities.

“I believe that when you do your homework, the valley of death does not exist” (Gisiger, Investor, March 22nd 2017).

“Even within the food sector – depending upon the business model – the valley of death varies greatly” (Huggel, Investor, April 11th 2017).

Whether the VoD exists or not was discussed ambiguously. Results though indicate that the VoD also exists within the food startup sector in Switzerland.

5.3 Collaboration and Exchange

H₂ = As a food startup, strong collaboration and exchange with the government and the industry is needed in order to survive the valley of death.

In general, food startups state the importance of networking, especially at the very beginning of their business. The business idea needs to be spread and continuously challenged. Some food startups talk about the challenge of finding the balance between obeying or reacting to critical feedback and following one's own intuition. Entrepreneurs reported that it can get to a point where they need to retreat from constant exchanges and networking. At the end, every case is unique and every single entrepreneur is responsible for the decisions reached.

Food startups which have collaboration projects with the industry or the university benefit from them greatly. Collaboration projects with the industry are perceived as a solution where everyone benefits since big food companies seek food innovation which they sometimes do not have themselves. They are stuck in their own structures also because they mostly have long decision-making routes. Food startups benefit from their network, infrastructure, and distribution channels. Since most food startups have high fixed costs (e.g. machines, stocks), partnerships with existing food companies are beneficial to keep them low. Despite that, mentors, and transfer offices alert food startups of the risk that big food companies may take advantage of them in terms of inferior contracts. Few interviewees stated the importance of collaborating with the government such as through the CTI. However, its administrative part is seen as an obstacle for food startups by some mentors and transfer offices.

Most of the surveyed food startups entered into some startup competitions, programs or participated in food exhibitions such as Kickstart Accelerator, Venture Kick, or Slow Food Market⁷. Depending on where you stand within the supply chain as a food startup, food startups notably benefit from networking and fine-tuning their business cases. Despite that, one transfer office stated that there are too many startup programs and competitions. Although some food

⁷ Food trade show where locally produced foods are presented – www.slowfoodmarket.ch

startups which are not economically viable are sustained. Overall, collaboration and exchange rather increases the survival rate of food startups.

„I have the impression that we do not bother startups at all, but rather artificially trying to keep them alive. Instead we would better tell them: „Ok. Obviously, your plans are not working at all. Stop it right there and start with something new.“ We don't have the guts to encourage entrepreneurs to quit and initialize a fresh restart“ (Boutellier, ETH, March 21st, 2017).

5.4 Duration of the Valley of Death

H₃ = The duration of the valley of death varies mostly depending on access to capital and having the right team.

In the perspective of food startups, having the right people in the team is a vital part for being entrepreneurially successful. It is a challenge to find like-minded people and to bring everyone onto the same vision. Hardly any entrepreneur would start a business on his own. Though two interviewed entrepreneurs started on their own, one of them would do it again since the entrepreneur had been fooled in the past. The other one would not since the entrepreneur experienced the level of drive you have within a startup team.

Most entrepreneurs would start with a team of three people to avoid stalemate situations. Competencies within the team should be supplementary and the tasks separated clearly based on entrepreneurs' strengths. It was mentioned that being in a love relationship with your business partner or team member increases its complexity. Therefore, having a clear structure of the tasks is even more important.

Team conflicts are recognized as a worst-case scenario from all interviewees. Disputes should be solved at first. In case of occurrence, transparent and open communication while reflecting each other's behavior on its field of duty respectfully without questioning its competences is necessary. How to act as a team in occurrence of conflicts should be regulated in advance. A strong team will also be able to be doing something completely different a year later. Thus, agility and flexibility as a team are keys to success. The importance of the team and its constellation was additionally noticed by investors, mentors, and transfer offices. It was rated as the biggest challenge and that it is more important than the business idea itself.

„The business idea will never be identical to what was presented two years ago. Changes occur. Thus, you cannot invest in business ideas. You have to invest in entrepreneurs“ (Boehi, Investor, March 8th, 2017).

"Rather have an A team with a B business idea, than a B team with an A business idea. This means that a super team can also make it with a non-revolutionary technology, whereas a bad team possibly fails with the best technology" (Jenni, Biotechnopark Schlieren, March 28th, 2017).

Investors, mentors, and transfer offices also agreed that the team competences must be complementary. Ideally, a startup team consists of two to four people with specific strength (technical background, finances, marketing, and strategy). If personal characters are too similar, rivalry can occur that can lead to a team collapse. Transfer offices mention that young entrepreneurs, usually people who recently graduated from university, are technologically skilled but lack the two skills urgently needed, business expertise and market insights.

Finances are inevitably linked to the VoD. All interviewed groups see liquidity shortage as a limiting factor. It can be fatal for food startups. At an early stage, most food startups practice bootstrapping and borrow money from family and friends. Decreasing personal expenditures is necessary. Entrepreneurs keep control over their business focus on building relations with customers rather than with investors. Most investors and mentors recommended the practice of bootstrapping. Most food startups won money from competitions and startup contests or successfully launched a crowdfunding campaign.

Food startups struggle to find suitable investors. Investors who are not only return-on-investment-orientated but rather think entrepreneurially and have some expertise in the field invested are scarce. Since investments in food have tight margins and, depending upon the business model, have high fixed costs (e.g. production plant, storage, etc.), investors tend to be rather reluctant even though there is plenty money around. Additionally, the production of food is mostly tied to geographical locations during the development process. Creating a complete new process within the food sector is usually highly resource-intensive in terms of time and money. Some entrepreneurs argued that investors are simply too risk-averse, whereas investors rather see a lack in strong cases within the food startup scene. Additionally, for a solid business case the money needed, especially seed money is easily accessible in Switzerland according to investors. It becomes less accessible in the range of two to fifty million Swiss francs. Within this spectrum, Swiss venture capitalists and private equity companies are reluctant to give money.

Depending on how the business is set up, it makes sense to get a foreign investor on board. Transfer offices mention that food startups do not address investors adequately. Depending on the level of innovation, it can be rather difficult to get funded due to missing pertinent experiences and empirical values. According to a mentor, people tend to become creative when

there is a shortage of money. If there is abundance of money available, it may not be used efficiently anymore by the startups.

„It is important that a startup – it is cruel but very important – has just enough money that it can barely survive and does not have the chance to throw the money out of the window. If a startup has the opportunity to do so, it will. This is not expedient” (Fülscher, Mentor, March 30th, 2017).

Finances are a constant issue for startups. Evidences on team, and access to capital confirm hypothesis number three.

5.5 Effect of timing

H₄ = Timing in respect of market maturity and customer readiness is a main factor for being successful as a food startup.

For most interviewees, timing is seen as a tricky element that all startups face. It can be influenced but not fully controlled. Though the significance of having a strategic business plan is mentioned, it needs to be kept as flexible as possible.

„Mostly, the business plan gets written at a point where you know little about the business yet. Then frustration arises when reality is not congruent with the business plan. Thus, pressure increases” (Hirsig, Mentor, April 12th, 2017).

Most business plans are set too optimistically. However, it is crucial to get money from investors. Investors and mentors recommend having different variations of a business plan (Plan A and B or to have an optimistic, a pragmatic and pessimistic version) and to include the VoD within the planning. Mistakes and failure are part of the game. A minority of entrepreneurs stated that it is not necessary to have a plan B but to rather be flexible since changes are happening day by day.

“The better you plan, the less deep you get into the valley of death” (Huggel, Investor, April 11th 2017).

Almost all surveyed food startups started their entrepreneurial activities with a profound market research and answered the following questions to get the instinct of their markets:

1. Unique Selling Propositions (USP)?
2. Is there a market?
3. How does the market function?
4. Who are my competitors?
5. Who are my customers?

In terms of customer readiness, most entrepreneurs recommend getting early on the market as possible, to get feedback and hands-on experience through real-life tests from potential customers especially before doing financial investments. The business model needs to be validated. The product itself does not have to be perfect from the very beginning. Once a product is on the market, it can be further developed and fine-tuned in accordance with the customers' feedback.

„A lot of people tell me: „Hey Seri, it is dangerous to go on the market with a half-hearted, imperfect product.” Excuse me? The software industry does this the exact same way! They just go onto the market with any product and then there will be updates, updates, updates” (Wada, Seri Backhandwerk, February 13th, 2017).

Little is known if a product or service is going to be successful until it gets tested on the market. When reacting to potential customers' feedbacks, caution is required since customers do not always say what they think. It was stated that it should not be listened to one customer but to the main customer. In doing so, it can be evaluated if the product or service is something worthwhile or not. Mentors and investors commented that it is not worthwhile to be the first one on the market anymore. Being second means that the one who is first on the market can be observed and the mistakes he is doing can be avoided. Hence, he can be passed in the final straight.

„There comes your customer and says: „Your ice tea is too sweet. Put less sugar in it!” But was that feedback really from a main customer? Then you start to adjust your product and it fails because that was not a main customer's feedback. I have seen that a lot! People say that only four percent of your customer give you a feedback. 96 percent don't say anything at all. If you react to those four percent, you may disappoint 96 percent of your customer and thus possibly destroys your market” (Brun, Mentor, February 28th, 2017).

Having Switzerland as the sole market can be difficult especially when producing for the niche market. Depending upon the business model, it may make sense to set the business globally upfront. It needs to be dealt with a numerous countries, different cultures and multiple regulations.

According to investors and transfer offices, Swiss entrepreneurs tend to over-engineer their products before they test it on the market. A hundred percent quality for a prototype is not seen as a prototype anymore but as a serial product. Subsequently, a product or technology is created which is looking for a market that possibly does not exist yet.

Besides professional skills, there is one immutable factor which should not be underestimated. Some call it luck, some call it momentum, serendipity, or karma. Most of the surveyed people argue that entrepreneurship is not based on luck but a determinant of entrepreneurial success. Luck is often referred to timing – to be at the right time at the right place.

„You can have broad experiences, nor be exceptionally good, but luck simply plays a role as well“ (Del Ponte, Project Aqua, March 8th, 2017).

Most of the interviewees evaluated access to the market as the biggest challenge for a startup. Consequently, hypothesis number four is accepted.

5.6 Personality Characteristics

H₇ = Success as a startup strongly depends upon personality characteristics of the entrepreneur.

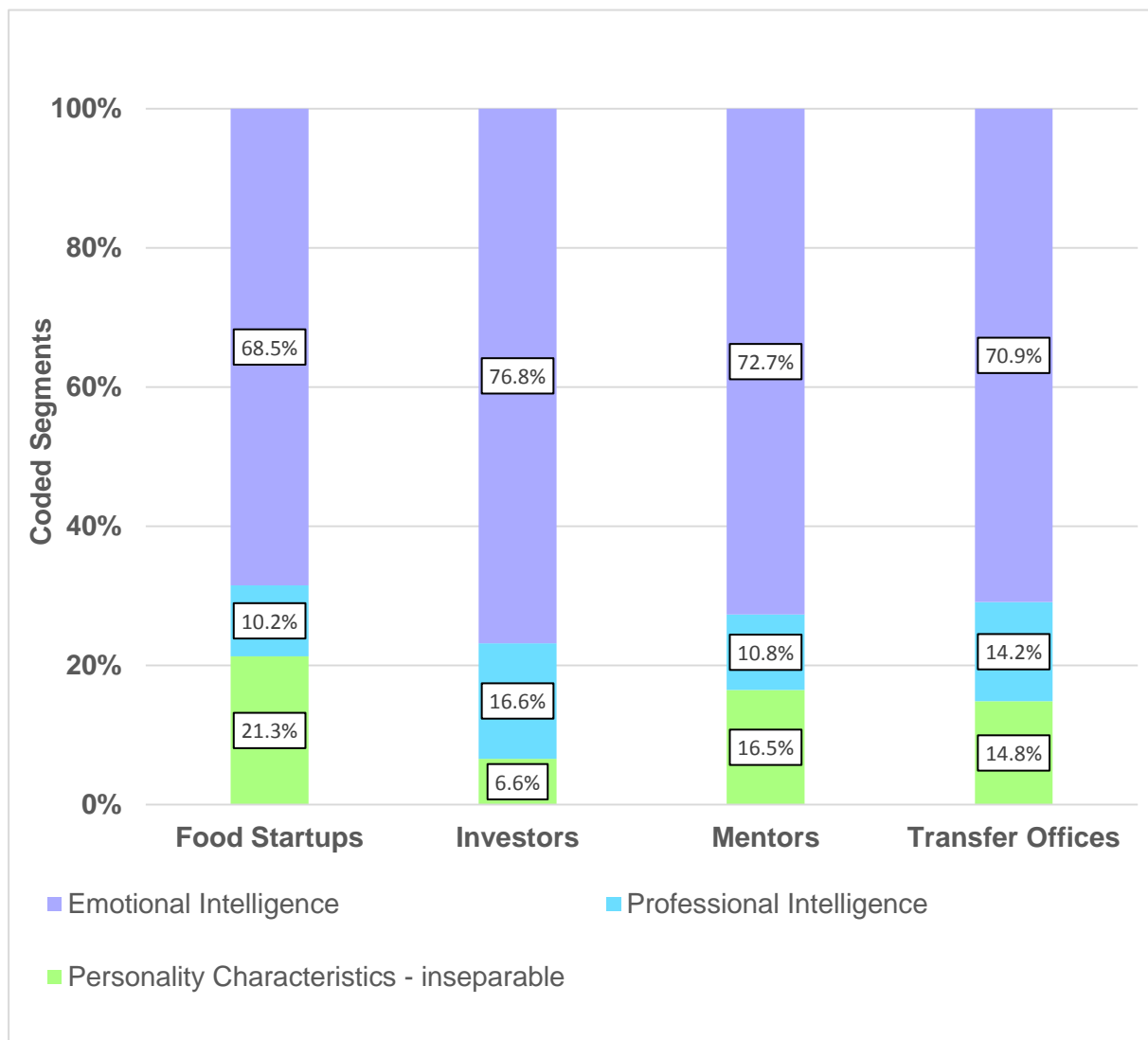


Figure 9: Document Portrait - Personal Characteristics

Figure 9 represents all segments which were coded with the code personal characteristics. It shows that when talking about personal characteristics the topic EI highly dominated the discussion. When talking about personality characteristics (Personality Characteristics – inseparable), three major attitudes were recognized:

ABILITY TO WAIVE: All surveyed startups and a greater part of mentors, investors and transfer offices agreed that as a successful entrepreneur, the willingness to work a lot and the eagerness to take over responsibility is vital. An entrepreneur gains high, personal fulfilment out of his entrepreneurial activities. An entrepreneur constantly needs to ask himself how much he is willing to waive monetarily (e.g. to invest just as much as you are ready to lose), socially (e.g. family and friends) and psychologically (e.g. accept the fact that no matter how hard you try you might fail). Thus, a moderate lifestyle (e.g. less vacations, having cheap apartment, etc.) at an early stage is recommended.

„According to my opinion, it is crucial to invest only as much as you are ready to lose monetarily, socially and psychologically” (Del Ponte, Project Aqua, March 8th, 2017).

RELATIONSHIP TO RISK: Readiness to take calculated risks consciously and dealing with complete uncertainty are crucial. Entrepreneurs state that some risks taken had not been known in advance thus they cannot be evaluated. For most entrepreneurs, risk and uncertainty is correlated to having fun. There is a general understanding that at the beginning, more entrepreneurial risk can be taken because there is less to lose.

„Yes, I do think an open risk culture is missing. But if someone is letting three businesses down the drain whereby he learnt nothing at all is not unbelievably great either” (Vonmont, Gebert RUF Stiftung, April 6th, 2017).

THINK BIG: Entrepreneurs and mentors mentioned we raised to not think over the midfield. It needs to be gone out of the comfort zone and existing conventions must be broken. Hence the way an entrepreneurs' mind is set can be a decisive factor for being successful.

„Your thinking is decisive in which direction you will go to. If you constantly think within the middle field and set the goals accordingly, you will never be able to go beyond that” (Hirt, Alpenhirt, February 16th, 2017).

5.6.1 Professional Intelligence

Entrepreneurs reported that advices for being entrepreneurially successful are abundantly available. The challenge is to plan carefully, to stay focused and keep executing according to the defined mission, although the circumstances are constantly changing. Mentors and transfer

offices observe that entrepreneurs mostly plan too optimistically (also see chapter 5.2). Execution takes commonly longer than expected. Hence, flexibility is required. Lateral entrants within the food business seek for professional advice. It is challenging for them to know which one to listen to (also see chapter 5.3).

„For me, it is very challenging whether to listen to professional advices or not. If I listened to professional advices only, products would get created which are already exist. I don't want that!” (Wada – lateral entrant, Seri Backhandwerk, February 13th, 2017).

5.6.2 Emotional Intelligence

SELF-AWARENESS: Entrepreneurs state the importance of noticing one's emotions and their effects towards potential suppliers or customers. It is crucial to know one's strength and limits not only from a professional perspective, but also from an emotional one as well to divide the tasks among the team accordingly (also see chapter 5.4). If certain competences are not represented, they can be sourced and added to complete the team. Not knowing one's limits can possibly lead to burnout.

“During my previous activities in the food industry, I met different people with various personal characteristics. There were people literally burning for innovating new products. At a certain point, they were completely burnt out. They do that at the expense of their health. You really have to be careful!” (Kleinert, Swiss Food Research, February 7th 2017).

In the entrepreneurship world, high self-confidence plays a key role. At first, an entrepreneur strongly needs to believe in himself. A couple of entrepreneurs gained self-confidence or realized their capabilities during travels abroad which they had done previous to their entrepreneurial activities. Throughout entrepreneurial activities, self-confidence gets increased.

“To me the biggest challenge within this valley of death phase is to not lose self-confidence” (Huggel, Investor, April 11th 2017).

According to most entrepreneurs, they work with their heart and listen to their body wisely. With accumulating entrepreneurial experiences, gut feelings can grow stronger. Doubting about something and ignoring gut feelings can bring entrepreneurship at peril. For decision-making processes, gut feelings are recommended to be considered along with the facts.

„The biggest mistakes I made was when, although my gut feelings said No, the other entrepreneurs persuaded me in taking part in projects” (Grootes, Agro Food Innovation Park, March 28th, 2017).

SELF-REGULATION: When knowing one's emotions, it is also beneficial to accept and to know how to handle them as an entrepreneur. Anxiety, stress, and pressure is the main cause of bursting emotions. Entrepreneurs state one should accept rather than suppress one's emotions. A high frustration tolerance is needed when dealing with negative, destructive feedbacks. These emotions can lead to an emotional storm. Some entrepreneurs ignore them, some regulate their emotions through meditation or sports and some even use them as a source of motivation. Others have a blind conviction. They can prove critics to be wrong.

„It is all a question of your energy flow. In everything you find something positive and negative. I just keep a certain distance to the negative stuff. Why should I ever deal with that?“ (Hirt, Alpenhirt, February 16th, 2017).

„I'm angry, I scream, I throw something at someone within my area and say: "I'm going to throw everything onto the street and I will put all that crap on fire. The entire packaging, other materials – just everything! I am not a complete moron!" (Anonymous, Food Startup, February 14th, 2017).

According to many interviewees, an entrepreneur also needs to cultivate internal honesty and integrity. When reflecting entrepreneurial activities, emotions are recommended to be kept out. Entrepreneurs need to be flexible in handling change since entrepreneurship hardly ever goes according to plan (also see chapter 5.2). Many of the interviewees mentioned that adaptability and being comfortable with novel ideas, approaches and procedures are crucial.

MOTIVATION: Most entrepreneurs' motivation to actively take part within a startup is based on a strong desire for independence and freedom. The problem drives them, not the solution. Even though most work 24 hours, 7 days a week and hardly go on vacations, their lives have become more inspiring and exhilarating since they can live their dreams. Some investors and transfer offices state that gaining entrepreneurial experience beats every Masters in Business Administration (MBA) course. Having a flexible time schedule is also greatly appreciated by entrepreneurs.

Business opportunities are to be recognized and tested. When the general standard of commitment is high, it can quickly be tested whether the idea has potential or not. In other respects, directions can be changed quickly. Some entrepreneurs stated that it is crucial to divide the shares of the business equally to the workload every individual puts into the project. Otherwise, motivation and team vitality may get out of balance. Investors confirmed the huge workload but also stated that it is crucial since it is a criterion for investors to get funded.

„If you have the chance to do what you like most, you should do it. It is incredibly fulfilling even though you can't afford some consumer goods anymore. The things I cannot do

that often anymore such as travelling or going out gets more than over-compensated when being self-employed” (Wada, Seri Backhandwerk, February 13th, 2017).

“You just continue. You must keep on going. If you give up somewhere in between, you will never know how it turned out. Just keep on going!” (Kenessey, Faitron, February 14th, 2017).

Despite this, a minority of the interviewees recommended to steadily get into entrepreneurial activities. When having another job, less financial pressure is recognized, possibly leading to increased motivation. Mentors and transfer offices state that a constant positive strive for excellence is necessary despite having setbacks.

EMPATHY: To meet customers' needs, it is vital to recognize their concerns through sensing their feelings and perspectives and thus react to their feedbacks. The same applies when seeking for investors.

„Patience, feedback and listening a lot. In fact, when I met the restaurants, I was there to learn and trying to understand what their headache is“ (Gianotti, The Fish Market, March 27th, 2017).

Openness and transparency towards customers are greatly appreciated. For example, if a product cannot be delivered on time it needs to be explained to the customer. Since most customers do not give feedback it is crucial to react to those main customers' feedback, otherwise it might lead to bankruptcy (also see chapter 5.5).

SOCIAL SKILLS: The ability to send convincing messages towards the customers, investors or media plays a vital part in entrepreneurship. Some interviewees also refer to sending persuasive messages as storytelling or self-marketing. Thereby, honesty, transparency, authenticity and to tell “your own story” are key factors. Some food startup often use social media and post both successful stories and failures which the audience perceives positively. Mistakes are rather getting celebrated. In return, customers offer suggestions for improvement. Another startup consciously uses a specific color (e.g. for clothes, wallet, hat, shoes, and glasses) as a persuasion tactic to influence people and to create a recognition factor within the startup scene.

“Nowadays you can sell anything! You just need to bring up enough energy for it and believe into your product. That's it!” (Anonymous, Food Startup, February 14th, 2017).

When conflicts arise, it is crucial to address them as soon as possible. It needs to be listened carefully and then discussed respectfully – not emotionally but objectively (see also chapter 5.4). It is the CEOs' leadership capability skills which inspires team members with passion and excitement to create synergies that brings everyone on board; an encouraging team spirit is vital.

An important key factor for entrepreneurial success is to address disputes objectively and as soon as they occur: "See, those are the facts. Here we have a disagreement. How can we solve that best?" (Waber, SwissShrimps, March 1st, 2017).

When a startup has reached a certain size, circa 200 – 300 employees, the entrepreneur might not be the right person to run the startup anymore since a different approach of leadership is needed. Generally, to be successful as an entrepreneur, a specific profile is needed. It is stated that the humans behind the startups are the most influential, but the least controllable factor when building a startup. Ergo, hypothesis number seven is accepted.

5.7 Effect of the VoD on the Performance, Commitment and Determination

H₅ = The VoD has a positive effect on the performance of a food startup and strengthens commitment and determination of an entrepreneur.

If an entrepreneur is consciously aware of the fact that plans might not work out successfully the first time, he gets out of the VoD being psychologically stronger than before. Some entrepreneurs draw strength from its experience when they look back and reflect the struggles they had already gone through. It has sharpened their business idea and increased their innovation power. A minority of entrepreneurs did underestimate the difficulty of being an entrepreneur and would, in retrospect, become active in a different sector within the food chain due to regulatory issues. Others do not want to experience it again and have become prejudiced against future entrepreneurial activities.

"Realistically, it is to be expected that not everything works perfectly from the very beginning though you can get out of the valley of death quite strengthened. If you haven't had such an experience over a long period of time, it might affect you even harder" (Burose, Kompetenznetzwerk Ernährungswirtschaft, February 9th, 2017).

„Experiences with the valley of death rather give you even more speed! Besides that, I need to get that money back which I lost within the valley of death!" (Anonymous, Food Startup, February 14th, 2017).

When several years of research were put into the project, an entrepreneur reacts negatively in the midst, of the VoD especially when being an entrepreneur for this project had been its life-

mission of work. From the mentors' perspectives, the experience of having gone through a VoD is rated positively. It is the art of not falling into frustration and sadness but to accept it, grow upon it and keep moving forward when getting into the VoD. If a startup has gone through the VoD as a team, it bonds entrepreneurs together.

“Depending upon how you got out of the valley of death, it is either perceived as a test which you passed successfully or it is a difficult fate of which you just managed to escape from and which you never ever want to experience it again” (Huggel, Investor, April 11th, 2017).

Hypothesis number five cannot be rejected nor can it be accepted due to limited evidence and contradictory results. Whether the experience with the VoD has a positive or a negative effect on the performance of the startup depends strongly upon the entrepreneurs' attitude and the intensity of experience they were exposed to. However, the following quotes indicate that the effect of the VoD on the performance, commitment and determination is rather positive.

“I believe that as an entrepreneur you have to get to know what it means to work 24/7 without having money at all. You have to go through that process and learn how to withstand that situation” (Hirt, Alpenhirt, February 16th 2017).

“Out of every failure or mistake, you can learn something and do it better next time” (Jenni, Biotechnopark Schlieren, March 28th 2017).

“Within the valley of death phase, your idea or business model is being sharpened. It makes you stronger. I perceive it as a rather positive effect” (Emmendoerffer, Mentor, April 6th 2017).

“Being exposed to the valley of death either welds people more together, or there will be a reorganization of the entire team” (Grootes, Agro Food Innovation Park, March 28th 2017).

5.8 Effect of Resilience on Innovation Capacity and Competitiveness

H₆ = Resilience has a positive impact on the innovation capacity and competitiveness within a food startup.

When entrepreneurs move from an idea to an innovation, resilience, also referred to as persistence or perseverance, is essential to keep the startup alive. The more disruptive or newer an innovation is, the more resilience is needed. Resilience is highly correlated with the ability to constantly deal with pressure. When it gets tough, entrepreneurs need to figure out why it

stagnates and possess the persistence or stamina to get through the combat. Many entrepreneurs perceive pressure as eustress (pressure that mobilizes to action) rather than distress (negative stress). The more entrepreneurs love their job, stress is perceived positively. A minority of entrepreneurs argued that obstacles and setbacks are appealing. It keeps them trying harder.

Mentors state that an entrepreneur either is resilient or not. Resilience cannot be trained. Surpassing obstacles qualifies an entrepreneur to meet the next challenge. However, according to most entrepreneurs, resilient characteristics can positively be changed within the VoD-phase. Some entrepreneurs consider their relationship to their startups even closer than the ones to their family and friends – the startup is their identity. Constantly dealing with failure and to quickly recover are crucial parts for being a successful entrepreneur. Mentors and investors stated that in case of failure, “lessons learned” must be identified to avoid making the same mistakes twice. Thus, it is a constant learning process. The act of failure is also a matter of perception. Entrepreneurs and investors rate failure as learnings. Additionally, setting milestones, reflecting entrepreneurial activities, and then deciding to possibly stop the business is seen as a sober assessment of the situation rather than as a failure. “Zombie-existence” of a startup requires a lot of personal energy and learning efficiency is very limited.

*„You really become successful when „lessons learned“ are taken out of your mistakes“
(Anonymous, Investor, April 13th, 2017).*

Thus, there has been limited evidence to accept or reject hypothesis number six. Present data showed a tendency that resilience has a rather positive effect on innovation capacity and competitiveness.

5.9 Swiss Framework Conditions

H₈ = The Swiss food startup ecosystem does not grasp its full potential.

Prerequisites to develop food products in Switzerland are considered to be good. International food giants (e.g. Nestlé, Bühler) but also universities (e.g. Swiss Federal Institute of Technology – ETH, Zürich and Zurich University of Applied Science – ZHAW) and leading food research centers (e.g. Agroscope, Swiss Food Research) are situated in Switzerland. Swiss people have a high standard of living and are mostly willing to test new products. Switzerland is largely seen as a good test market. Because of the prosperity and the dual education system, Switzerland has almost full-employment rate. Consequently, no one is forced to become an entrepreneur since legal minimum wages are standardized. Having a decent living without being an entrepreneur is possible.

Mentors and transfer offices stated that within the past decades, the food sector has become more complex, unstable and the speed of changes is constantly increasing. The initial hurdle to enter the food sector has become higher on every level (e.g. regulatory changes, new allergens – clinical trials, supply chain management, quality management, and traceability). Simultaneously, from a consumer's perspective, affinity for food has also increased. To launch a food startup in Switzerland has its advantages and disadvantages. It is rated as a rather good place to fail since the social security system in Switzerland is well-advanced.

„We are in Switzerland. In case of failure, what could possibly happen? How can you not give it a try?“ (Amado-Blanco, Yamo, February 18th, 2017).

Except for food startups, all interviewed people recognized a lack of strong and solid food startup cases. It is rather a groove for optimizing existing products and processes than investing into disruptive innovations. Hence, the Swiss food startup scene is not visible and role models are missing.

5.9.1 Entrepreneurship Mentality

Swiss entrepreneurship culture is characterized by a high drive for quality products, understatement, preserving traditions and the need of assurance not only from an entrepreneur's, but also from a venture capitalist's perspective. Swiss people struggle to get out of their comfort zones, not at least because of their high standard of living.

„Innovation gets foreclosed with existing thinking patterns and habits. Only then when the action is happening somewhere else it gets chased“ (Boehi, Investor March 8th, 2017).

Additionally, mentality of failure is not well elaborated in Switzerland. There is the constant pressure of succeeding from the very beginning. Hence, low acceptance of mistakes inhibits innovation drastically. Swiss entrepreneurs are rather cautious and risk averse compared to Silicon Valley entrepreneurs. The food sector in Switzerland is perceived as conservative.

“We save money. Then it becomes better, but economic circumstances are changing because of our savings. Again, we need to save even more money so that it gets better. However, this is worse for the economy and there you go down the drain. At the end, you have saved so much money that no employees are left and thus you need to fore-close your business. That's the Swiss culture. But, it should be the other way around” (Brun, Mentor, February 28th, 2017).

Mentors and transfer offices argued that entrepreneurship has now changed from a complicated to a complex world. It will be different tomorrow than today. Thinking about how to set up the business internationally is vital to be competitive. Thus, isolation is not a solution and new skills are to be taught - agility and a rather integrated approach is needed.

„Without denying our roots, we need to build up new skill set which are completely diametrical to what our ancestors taught us” (Hirsig, Mentor, April 12th, 2017).

5.9.2 Obstacles

Few startups, investors and transfer offices mentioned poor conditions for startups in terms of taxes and unemployment insurances (Schwab 2016, World Economic Forum 2016). Startup supply through several startup programs (e.g. Venture Kick, Venture Lab⁸, Kickstart Accelerator) is existing but could, according to food startups and investors further extended.

The food law, for example, can be another obstacle when for example the food which gets produced is not officially recognized as food yet or if it does not meet its conditions. Three surveyed food startups had to deal with it and mentioned its tedious and time-consuming work.

Since food is based on living organisms and has an expiration date, it needs to be dealt with biological alterations such as bacterial growth, spore formation and the growth of mold fungus. Depending upon how the business model is rolled out, there is another constant, hardly manageable risk: Weather conditions and pests. A cold front, a heat wave or an infestation of certain insects can lead to crop failure and basically torpedo the entire business.

⁸ National startup training program – www.venturelab.ch

Another hindrance for food startups in Switzerland is the two biggest grocery stores named Migros and Coop. Their overwhelming power in market share, price and distribution makes it even tougher to bring in change and to survive as a startup in the Swiss food market. Cooperation's are also rated as challenging.

5.9.3 Entrepreneurship at Universities

Half of the interviewees stated that education in Switzerland is not focused on being creative and entrepreneurially active. Educational standards are high but universities should also give the tools to transform the inspiration gained from universities into something tangible. Being an entrepreneur should be actively demonstrated as an alternative carrier path by the universities. Focus should be switched from gathering to executing knowledge to set a fertile ground for entrepreneurship.

„There is way too much importance attached to gaining knowledge rather than on executing knowledge. Nowadays I can google everything. I don't need to know everything anymore. I just need to know where picking it up and connecting the dots” (Grootes, Agro Food Innovation Park, March 28th, 2017).

Transfer offices mentioned that entrepreneurs coming directly from universities are skilled in technologies, but often lack in business expertise (also see chapter 5.4). Hurdles are also determined within the administration at the universities. Competences in commercialization are limited. Knowledge transfers from universities to startups are rather complicated and demand too much time.

5.9.4 Swiss Food Entrepreneurship Lab

The networking process in Switzerland within the startup scene is increasing. Latest example: Digital Switzerland – a cross-industry association where the country's position as a digital hub gets strengthened. Despite that, the food sector in Switzerland is struggling. Some food startups, but also investors, transfer offices and mentors wish to have an increased exchange within the food sector, for example, through a “Swiss Food Entrepreneurship Lab”. Besides access to investors, mentors and coaches, this food competence center should allow access to specific food knowledge and machines in order to produce first samples or to prototype products and processes. Thereby, barriers for a startup accessing the universities' facilities, but also to the industry should be lowered.

„Lots of things are just there. You just need to link the right people together at the right time. Literally, it is a constant puzzle” (Burose, Kompetenznetzwerk Ernährungswirtschaft, February 9th, 2017).

A greater part of the interviewees wished to have a more vivid, courageous, and crazier food startup scene in Switzerland. Thus, there is a noticeable tendency that the Swiss food startup scene has great potential which still needs to be unveiled.

5.10 Mentor

Most food startups mentioned the importance of having a mentor or a coach, a mentor who asks questions, reflects the work, criticizes and challenges the startup and its entrepreneurs constantly. Discussing certain topics without the guidance of an external person are tricky especially when entrepreneurs are simultaneously part of the discussed issue. Additionally, it is beneficial especially when dealing with stalemate situations (also see chapter 5.4).

“Always surround yourself with people that criticize you. Walk away from the people who always say: “Oh you are great and you are perfect!” There is nothing perfect in this world” (Gianotti, The Fish Market, March 27th, 2017).

For transfer offices and mentors, it is the challenge to lead the startups subconsciously. Entrepreneurs need to be kept on the ground when they skyrocket and motivated when they are facing difficult times. Entrepreneurs need to learn to manage their risks and expectations. For mentors, it is about finding the balance between telling the truth about entrepreneurship while not demoralizing the entrepreneurs to influence outcomes positively.

5.11 Overview Results

Figure 10 on the next page displays the coded data segments with overlapping codes as a code co-occurrence model. Codes which are connected to each other with a line overlap at some point within the transcribed, coded interviews. A minimum quantity of intersections of ten was defined. The model serves as a basis for the discussions of the results.

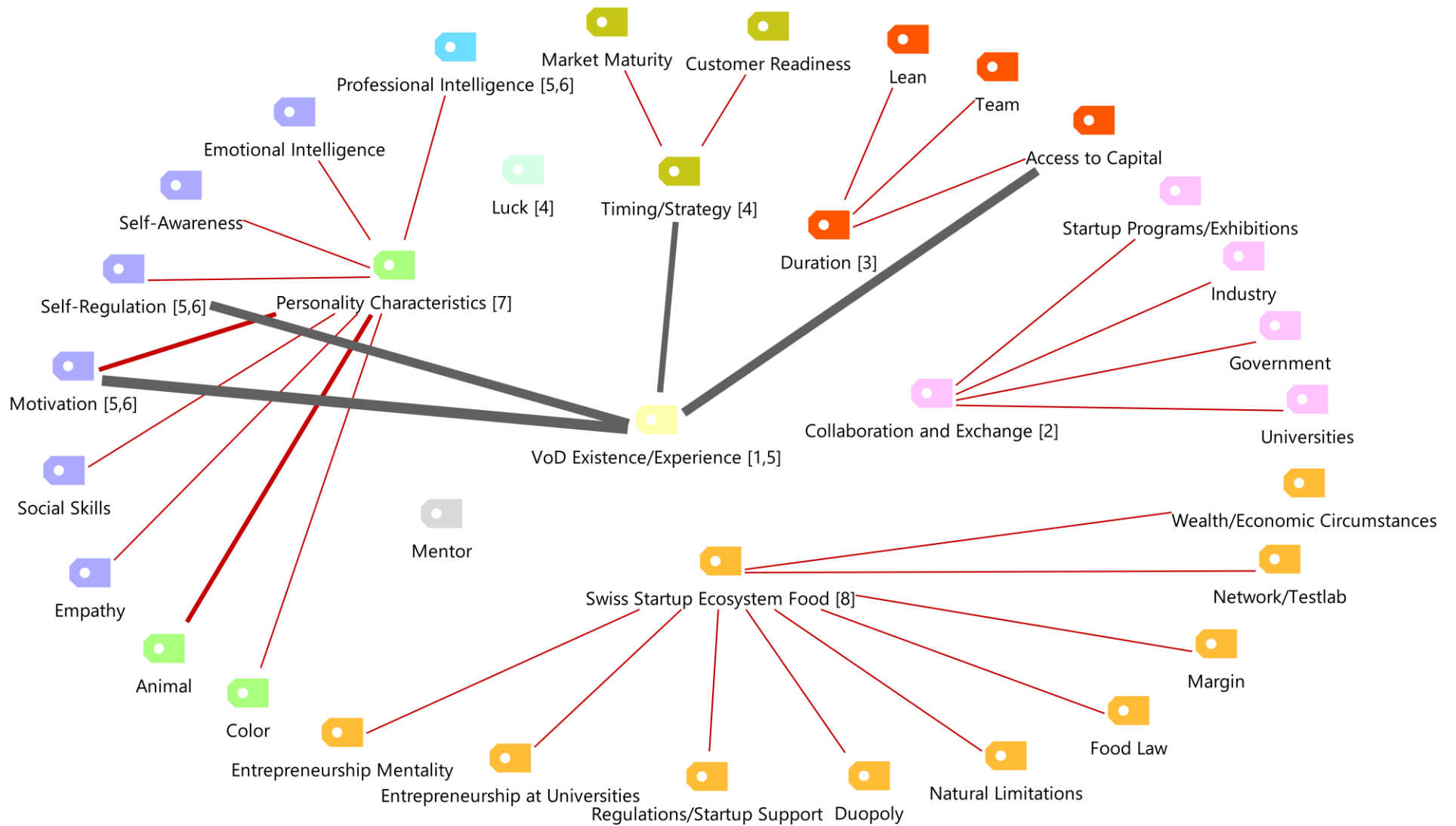


Figure 10: Code Co-Occurrence Model – Valley of Death

6 Discussion

At the beginning of a project, it is mostly about research and developing a feasible concept or product whereas towards the end, it is about getting other people to accept the idea or product. Because most food startups do not, or have built upon previous basic research, they are in the VoD ever since their entrepreneurial activities. It was observed that food entrepreneurs are not fully aware of the VoD phenomenon and thus do not know when they have crossed the line. Borders between being in or out of the VoD are diffuse and opaque. VoD is not only a place where ideas and innovations dwell and die, but also a productive tool for identifying critical areas within the development process. Tasks which are not well understood are addressed and challenged. According to Markham et al. (2010) a company should understand the dynamics of the VoD in order to make resources available to master the front end of product development. As represented in 5.11, this study has identified three major factors: EI (Motivation, Self-Regulation), Access to Capital and Timing.

6.1 Be an Entrepreneur – Emotional Intelligence

Except in the discussion with investors, the topic “Personality Characteristics” dominated the discussions as seen in Figure 8. An entrepreneur’s conviction to make a difference is largely led by his emotional tendencies which guides or facilitates them through this chaotic chasm to reach their goals. When being emotionally fully present at work, entrepreneurs perform at their best because they are fully attentive and completely involved into the task. Presence begins with self-awareness (Goleman 1998).

Figure 9 outlines the percentage distribution of “Personality Characteristics” where EI with an average of 72% coded segments highly dominated the discussion within all groups. Thereby, motivation and self-regulation are absolute key as represented in Figure 10. Generally speaking about personality characteristics, entrepreneurs need to manage their risks and expectations and have a visionary plan. There is the art of setting risky, but manageable challenges. In accordance, high achievement drive leads to an improvement in performance (Goleman 1998).

As the results indicated in chapter 5.5 and 5.6.2, entrepreneurs need to get out and talk to their customers to develop a product that suits best with their needs. Listening and sympathizing with the customers' point of view increases success rate. Empathy is required to read customers need and for financing rounds (Goleman 1998). Expectations of investors need to be met in order to successfully gathering money from them.

6.1.1 Motivation

According to Rosenzweig (2014), entrepreneurs must be a bit nutty. Even though most entrepreneurs are aware of the hazardous journey, results showed that it is the thrill or the flow that entrepreneurs enjoy and moves them to do their best when starting a new business. Entrepreneurs constantly seek out exhilarating challenges. In the very heart of every entrepreneur lies the seed that wants to make their startup flourish. Motivation somehow is built in. For most entrepreneurs, work equals to effort, satisfaction, and relaxation simultaneously. They are being continuously stimulated through their entrepreneurial activities. Most drawbacks fade into the background when having the chance of freedom. However, freedom within entrepreneurship is ambiguously discussed in the literature. In spite of having a flexible time schedule, entrepreneurs are strongly dictated by their customers and investors (Christensen 1997, Goleman 1998).

Baum and Locke (2004) stated within their research that entrepreneurs' motivation is a reliable predictor of subsequent venture growth. Throughout the many conversations, intrinsic motivation was noticed as very powerful. Although rewards would be greater somewhere else, entrepreneurs feel much better when they can do what they have most passion for.

The tension to be overly optimistic is closely related to the VoD as the results outline in 5.11. When goals are set too optimistically and high at risk, it may lead to high performance. However, when risks are set too idealistically, or based on assumptions that no longer hold true, overconfidence can be harmful and may lead to a disaster (Audia, Pino G.; Locke, Edwin A.; Smith 2000, Knight, Durham, and Locke 2001). Nonetheless, entrepreneurs need to push themselves and operate from optimism and hope of success than from fear of failure. Optimistic entrepreneurs regard setbacks as something which they can still influence, rather than as a personal flaw or deficiency. They assess failures and take out the learnings to make sure the problem will not crop up again. Optimism helps entrepreneurs recover from failure.

Making sacrifices to meet companies' goals are greatly based upon commitment – another important component when talking about motivation (see chapter 5.7). During the conversations with entrepreneurs, it was recognized that they actively seek out opportunities to fulfill the startups vision. They go the extra mile. Commitment was possibly high since most entrepreneurs are shareholders of their startups and not simply employees. This statement is also supported by the theory of Goleman (1998) which says that the personal goals and those of the startup must be equivalent. The startup must be given high priority. Otherwise it will lack resources and will have little chance of success.

6.1.2 Self-Regulation

For an entrepreneur, numerous challenges and hindrances need to be passed in order to become successful. Ries (2011) stated that for every success, lots of failures are needed. Since entrepreneurs mostly operate under pressure and high uncertainty, it is crucial to know how to handle one's emotions and inner feelings, especially when dealing with customers' feedbacks. It makes it more challenging since everyone is preoccupied with emotionally driven thoughts. Entrepreneurial activity suffers when impulsively reacting under pressure. Therefore most entrepreneurs, according to Goleman (1998) and the results, have periodical relaxation methods (e.g. sports, meditation, etc.) which makes them less easily provoked.

On the other hand, Goleman (1998) also pictured that within a team, controlled outbursts can be motivating. Energy can then be used for future challenges rather than for constantly holding one's emotions back (see chapter 5.6.2 – Self-Regulation). During the interviews it was also noticed that fear and sadness can possibly become a source of connectedness, creativity, and motivation. This perception gets underlined within the theory of Goleman (1998).

According to Rosenzweig (2014), it is the adaptability, the willingness to keep going, to improvise and just keep fixing what is broken which makes an entrepreneur successful. In order to withstand and succeed in a complex environment, resilience is needed not only as an entrepreneur, but also as a team (Rhee and White 2007, Richtnér and Södergren 2008). Hamel and Välikangas (2003) talk about strategic resilience: *“the ability to dynamically reinvent business models and strategies as circumstances change, to continuously anticipate and adjust to changes that threaten their core earning power – and to change before the need becomes desperately obvious”*.

During the interviews, it was noted that the more entrepreneurs loved what they did, the more resilient they became. Goleman (1998) stated that once an entrepreneur has evaluated the steps to reach the goals, it is just perseverance that leads them to the desired goal. Resilient people already start inhibiting distress during a stressful task which increases success rate.

6.1.3 Emotional Intelligence in the Future

Entrepreneurs are greatly shaped by their EI (Cross and Travaglione 2003, Goleman 1998). Results showed that motivation and self-regulation in terms of adaptability, commitment, resilience and being optimistic are great contributors to overcome the VoD. The EI's relevance has also been recognized by the World Economic Forum. According to their report „The Future of Jobs“ (2016), EI, not featured in the top ten today, is rated among the top ten skills needed in 2020 in order to meet future job requirements.

6.2 Access to Capital

Previous studies and the results of this thesis (see chapter 5.4) confirm that a lack of capital is closely related to the VoD (e.g. Beard et al. 2009, Björk 2005, Bessiere et al. 2014, Davis 2017, Frank et al. 1996, Frederickson 2011, Guertin 2016, Rencher 2012, Vonmont 2014, Williams 2004). According to the Swiss Venture Capital Report 2017, a financial valley is visible between CHF 2 – 20 million as outlined in Figure 11. Within this range, venture capital is particularly scarce. Figure 11 represents the distribution of the financing rounds from 2012 to 2016 of Switzerland by a total of 339 transactions, though it is not known how many transactions belong to food startups. In spite of having an increasing trend in venture capital, Switzerland is still in its infancy. Besides this financial loophole, most foreign investors are active within this range (Kyora and Heimann 2017). Hence, there is the risk that profits and eventual concrete products or technologies are moved abroad.

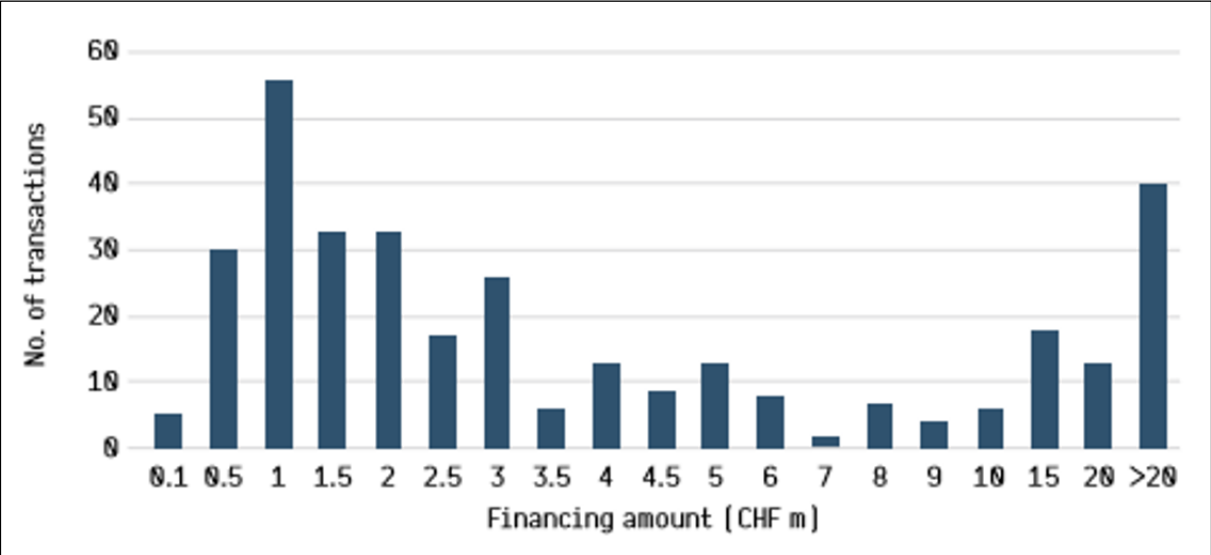


Figure 11: Distribution of financing rounds, 2012 – 2016 (Kyora and Heimann 2017)

Experts also discuss the possibility to turn pension funds into venture capital. Although some pension funds already act as venture capitalists (e.g. Retraites Populaire in Vaud), they react shyly due to the posed risk. From the pension’s perspective, it is in addition an evaluation problem since investors and entrepreneurs have to pay wealth taxes on virtual values (Kyora and Heimann 2017).

The Swiss Government has recognized the limited venture capital availability for startups and now reacts on it. A new initiative called the Swiss Entrepreneurs Foundation, which supports Swiss startups, is being created. The foundation is headed by the Swiss Economics Minister and has an overall target of CHF 500 million of which CHF 300 million have already been gathered. Apart from closing the financial gap between CHF 2 – 20 million and to stop young entrepreneurs fleeing abroad, the foundations' aim is to connect and support entrepreneurs

with coaches and investors and to bring entrepreneurial concerns into politics (e.g. regulations). Swiss Entrepreneurs Foundation is expected to be operational from 2018. (Bühler 2017).

Besides that, the Swiss National Science Foundation (SNSF) and the CTI recently introduced a joint program named BRIDGE. The program aims to foster economic and societal potential of scientific research in offering funding opportunities at the intersection of fundamental research and science-based innovation. This program offers an approach towards increased cooperation between universities, research institutes, and universities of applied sciences (Achter et al. 2017).

Spending the money wisely is just as important as raising money. Numerous food startups fight hard for being liquid. According to Murphy (2003), having a capital-intense business model (mostly technology based) is more prone to end up in the VoD compared to less capital-intense models. In order to avoid dependencies, Rosenzweig (2014) recommends using multiple sources of funds. It is a challenge to find investors who base their investment on the company's probability of success than on personal preferences. There are investors who are profit-orientated and invest only in startups where they expect to generate the highest return on investments. Addressing investors and venture capitalists successfully is closely related to EI. Investors' perspective must be taken into account (Empathy) and it is crucial to listen openly and to send convincing messages (Social Skills) when doing investment rounds especially within the food sector since margins are mostly tight. Within the data, some interviewees referred to them as storytelling. This remark gets acknowledged within the theory of Goleman (1998).

However, it is not only about raising money. It is about raising intelligent money which means that young startups need to be coached so that the money is spent wisely. Besides the technological knowledge, investors need to be familiar with its market. Most investors are focused on profitability rather than on venture growth. Experienced investors within the food sector are rare and urgently needed.

Financial comparison of the Swiss startup scene with the Silicon Valley must be treated with due caution: Funds were already founded in the 1970s and since then, the know-how has been constantly built up. In Switzerland however, the first venture capital companies appeared in the early 1990s. Therefore, it is a matter of limited experience of how to deal with financing startups rather than that a lack of money (Kyora and Heimann 2017).

6.3 Timing/Strategy

In his book “Left Brain, Right Stuff – How Leaders Make Winning Decisions”, Phil Rosenzweig (2014) questions the perception of success and failure within entrepreneurship. Defining success as selling shares through initial public offering, success rate would be less than one percent. Otherwise, if success means closing the business with no debt, success rate is as high as 92 percent. The fact that most businesses close within five years cannot be taken as a verification that most new businesses fail (Headd 2003). Failure should, though it causes emotional pain, be understood as a part of a healthy process of innovation and value creation. As some mentors recommended, so does the literature: It should be planned for failure (Christensen 1997, Rosenzweig 2014). Iterative learning via incremental steps is the nutrient for every innovation (Christensen 1997).

The more disruptive an innovation is, the more it has to be seen as a marketing challenge rather than a technology challenge. Additionally, markets which do not exist cannot be analyzed. When investors require data (e.g. quantification of the market and revenues) which are not visible or do not exist yet, startups might get paralyzed. As the results of chapter 5.5 presented, flexible planning is required to surmount this hurdle (Christensen 1997). However, potential customer or consumer groups still can be characterized.

Startups depend upon their customers, not just on their investors. The pace of progress of the startup and its products may not be congruent with the demand of the market. Therefore it is crucial to be as close to the customers’ needs as possible to alter the product and adapt the business model in a way that would have been unimaginable at the starting point (see chapter 5.5). This justification gets underpinned within the management book of Christensen (1997). He describes that customers should hardly be led towards an innovation they do not need. Products should be developed from the very beginning in accordance with its usefulness to the customers. This allows better versions of the products to be given continuously. According to a study carried out by Bill Gross, timing accounts for 42% of the difference between success and failure after team and execution as coming second (Gross 2015).

6.4 Switzerland – the place to be for food startups?

Switzerland is a prosperous place for invention but yet still struggles to be an attractive place for food startups. However, first indications though prove an advancement in terms of venture capital (see chapter 6.2). Until recently, Zurich has been ranked 7th place for startups to settle – finally placing within the top ten cities worldwide according to the Startup Cities Index 2017 (Küçükdere 2017). 85 cities around the globe were ranked by five main factors: startup ecosystem, salary, social security & benefits, cost of living and quality of living. In terms of quality of living and social security, Zurich has performed particularly well. Despite the relatively high cost of living, Zurich is one of the world's most attractive place for startup employees but not for startups. What remains to be difficult in Switzerland is to set up a startup culture. Results in chapter 5.9.1 validated results of previous investigations as seen in chapter 2.3. Entrepreneurial thinking in Switzerland is greatly missing.

Startups are designed to fail (Rosenzweig 2014). Within a capitalistic system, it is the survival of the fittest. However, the Swiss culture does not accept failure. When mistakes occur, everyone points the finger at entrepreneurs, who are then branded loser (Bühler 2017). What US citizens see as optimism can simply be seen as being arrogant in Europe (Goleman 1998).

Global entrepreneurship monitor confirms the inefficiencies of entrepreneurial education at school and post school stage in Switzerland as seen in chapter 2.3 (Baldegger et al. 2016). Empirical values of a pedagogical and contemporary entrepreneurship education programs are limited (Honig 2004). Entrepreneurship must be demonstrated as an alternative career path already at an early stage in schools. Within that, entrepreneurship education, emotional intelligence and how to deal with ambiguity and uncertainty, should be adequately addressed to fully exploit the entrepreneurial potential.

Another hindrance in the Swiss startup world is wealth taxes. The fact that startups pay wealth taxes on “virtual values”, not on the last round of financing, increases the cost of expanding a new business while still having a negative cash flow. However, the Zurich tax authorities announced at the end of 2016 that they will no longer take financing rounds into account during the startup phase⁹ (Kyora and Heimann 2017).

When trying to make the Swiss startup ecosystem more attractive, the Swiss government could take Canada as a pioneer example. In case foreign entrepreneurs want to create a startup in Canada, they can apply for a startup visa. In doing so, the following criteria need to be fulfilled:

⁹ According to the Zurich tax authority, the startup phase is a fixed period of three, (or in respect of biotech and medtech companies five) years after setting up a startup.

speak a local language, have a solid education background, be able to finance an independent life, raise at least CHF 57'000.- (75'000 Canadian Dollars) from Canadian investors (Services 2016). Thereby best talents are attracted where they face non-bureaucratic support. A corresponding proposal submitted by Ruedi Noser to increase Switzerland's attractiveness as a place for startups was denied by the Swiss parliament in summer 2017 (Parlamentsdienste 2017a). Another parliamentary proposal which should ease the taxation of capital gain for startup employees when a startup is being sold was recently rejected (Parlamentsdienste 2017b). Regulatory hurdles are too high in Switzerland and thus discourage business activities.

Generally, innovation in the food sector becomes more complex and the source of innovation gets increasingly diffuse (e.g. Big data, 3D-Printer, Internet of Things, Industry 4.0) (Leinert et al. 2016, Saguy 2016). Therefore, and since the Swiss food industry is rather conservative, creating a Swiss Food Entrepreneurship Lab as described in chapter 5.9.4 seems to be a reasonable approach. By connecting all actors within the food sector and making a substantial effort to develop this food hub, innovative solutions to new challenges can be created. Within the startup food sector, Switzerland could take the lead since several international food companies are headquartered in Switzerland. Additionally, food startups can benefit from Switzerland's excellent reputation in terms of quality, security and discretion when being internationally active. However, the overwhelming market power of Migros and Coop can either be beneficial (e.g. usage of their machines and distribution channels) or devastating (e.g. startups are snapped up by them) for a food startup (see chapter 2.2 and 5.9.2).

6.5 Mountain of Death

Based on the analyzed data and the external perception, the VoD can also be perceived as a mountain of death – a bicycle race up the mountains as illustrated in Figure 12. Since most food startups' business model are based on previously carried out research, they already start within the valley. This metaphor seems to be more appropriate for Swiss food startups.

Finances in terms of acquiring money (e.g. investment rounds) and keeping the startup liquid remain to be crucial, as well as timing, which refers to market acceptance and customer readiness. But most decisively, it is about the entrepreneurs who take the bicycle race up the MoD whether being entrepreneurially successful or not as broadly discussed in chapter 6.1.

Though entrepreneurs plan their trip from the idea of a product until its implementation thoroughly, the trip remains as a dangerous undertaking (e.g. regulatory issues). Entrepreneurs know little how far it is to get to the top nor do they know whether they get back from that trip unharmed. Unforeseen hurdles are numerous. When reaching the top, entrepreneurs enjoy riding downhill because then it can be harvested for what they have so much suffered for. However, entrepreneurs unexpectedly need to get back up again or take a detour to reach the next mountain. They do not know how many mountains, cliffs or chasms are ahead nor how many detours they need to take in order to get to the destination. It is a continuous process. Much is about learning from many failures and ultimately achieving defined goals through perseverance.

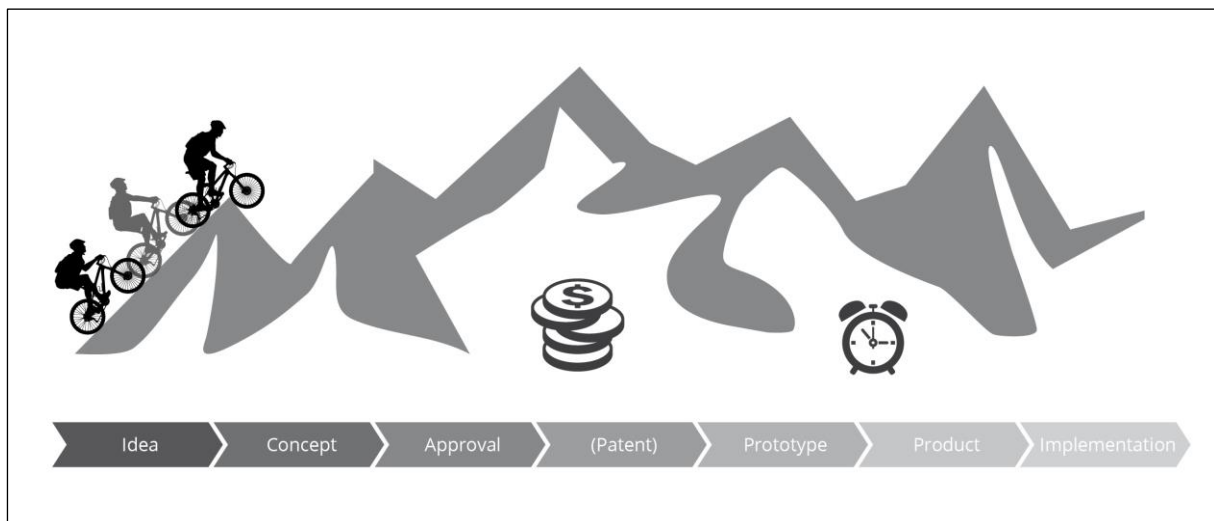


Figure 12: Visualization of the Mountain of Death

6.6 Discussion of the Methodology

Ever since studies have been made with qualitative research methods, there has been criticism on the validity of its research praxis. Therefore, it is advisable to always reflect qualitative social research since it is always exposed to selectivity and subjectivity. Epistemology is additionally linked to the epochal, sociological and biographical embeddedness of the researcher (Kruse 2015).

According to Witzel (2000), the methodological approach based on the problem-focused interview model is rated as an appropriate approach for this field of study. The explorative approach was of great value. Posing open questions lead to the possibility that the researcher can put the answers into the context to understand why interviewees responded accordingly. The same approach would be chosen in a future research project. However, when applying a different methodological approach, a various perspective on the data might be created and unveils further insights.

The identification of the interview partners was a challenge. Some food startups, investors, mentors, and transfer offices needed to be convinced to participate within this study since, in their perspective, no direct benefit is recognized. The small number of interviewees by investors, mentors and transfer offices possibly lead to biased results. Additionally, interviews took place in different locations and dates. Other external influences may have had an impact on the results (i.e. the interview dress appearance) (Kruse 2015).

The expertise of the interview partners especially investors, mentors and transfer offices was high and questions were answered as precise as possible. However, some answers were contradictory among the food startups limited knowledge about the VoD. Confidentiality was crucial to establish trust. This did not always work out.

Two interviews were held on the phone which made it difficult to build confidence. As a result, the interviews were shorter compared to the face-to-face interviews. It can be argued whether the relevant information is still being said within twenty minutes or that the longer the interview takes, the more important information comes to light. This aspect needs to be considered when comparing document portraits. Further interviews should be carried out to decrease distortion.

Although the transcription process was tedious and time-consuming and the literature warns of operational blindness, it generates a closer connection to the data and a broader contextual knowledge gets created. Since it is also possible to transcribe with the MAXQDA software, the f4 software would be redundant within a future research project. It was proven that the MAXQDA software is a manual-friendly tool for qualitative data analysis.

7 Guideline

Extracted from the results and observations of the discussions, the following guideline was developed. These suggestions should help food startups to withstand the VoD/MoD in Switzerland.

1. **Check your Entrepreneurial Skills ahead:** Analyze your personal character in terms of emotional intelligence before you take off. Most importantly: Intrinsic motivation, appetite for risk taking, adaptability, resilience, problem solving ability.
2. **Second Job:** Keep your previous job or have a working spouse and work in the evenings and on the weekends on your startup until you get first revenues. However, it takes more time and when poorly managed, the startup and your job are at risk. Your expectations need to be straight.
3. **Team Constellation:** Treat all team members equally. Make sure that the competences are complementary, and all tasks are clearly structured (technical background, finances, marketing, and strategy). Create a strong team spirit.
4. **Bootstrapping:** Practice bootstrapping if possible and keep control over your business. That allows you to focus on building relationships with your customers rather than with your investors.
5. **Contests, Grants, and Crowdfunding:** Apply for contests or business grants to challenge and spread your idea. Getting money through launching a crowdfunding campaign is another viable option.
6. **Test your Product:** Do not over-engineer your product. Go to the market, validate your business model, and further fine-tune your product in accordance with your customers.
7. **Business Plan:** Plan your business thoroughly, though keep your business plans flexible. Focus on execution (e.g. lean management) and accept mistakes and uncertainties.
8. **Mentor:** Get a coach who has broad expertise within your field to reflect and challenge your idea constantly, to allow access to his network and to deal with stalemate situations.
9. **Cooperation:** Cooperate with the industry. Benefit from their infrastructure, network, and distribution channels. Be careful – you do not want to get bamboozled.

8 Conclusion and Outlook

Although the results of this study indicate the existence of the VoD and a more sophisticated understanding within the food sector was created, the VoD remains to be a highly complex phenomenon and poses many more questions. To which extent the VoD effects a startup strongly depends upon the business model and the entrepreneurs' perception.

Nonetheless, the findings revealed that, besides access to capital and timing, EI (in particular motivation and self-regulation) does play a key role when dealing with the VoD. Determination of success of any food startup is execution, adaptability and intrinsic motivation. Yet there is no superhighway or a fast lane to easily surpass the VoD or MoD. Ensuring maximum survival rate for a food startup, the guideline was created. It should serve as a creator of awareness when becoming entrepreneurially active within the food field in Switzerland.

The food industry in Switzerland has yet to experience great startup successes. Currently, investors shy away and act rather reluctantly. Successful startups should then serve as catalysts; encouraging and attracting new startups and investors for becoming entrepreneurially active.

Throughout the study, a great amount of data was gathered. This could possibly serve as a basis for further investigations to better understand the interrelationships of the different actors and factors and the dynamics of the Swiss food startup scene. Further investigations within a next step can be focused on the main factors (EI) of the VoD/MoD elaborated within this study to validate these findings and create a more holistic understanding.

Switzerland's startup scene is in motion. Politicians are engaged in removing barriers and reducing risks to create a more vibrant and healthy startup ecosystem. If the Swiss food industry is to remain competitive in the global marketplace, educational, regulatory, and financial actions must be further implemented. A change of mentality is urgently needed so that ideas can come to fruition. Because uncertainty and the pace of change is ever increasing (e.g. Big data, Internet of Things), bridging the VoD or getting up the MoD for food startups has and will continue to be challenging. Thus, paradigm shifts in academia, in politics and the food industry is required to exploit the enormous potential of Switzerland and to meet tomorrow's innovation challenges.

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Appendix A: Assignment paper

Zürcher Hochschule
für Angewandte Wissenschaften



**Life Sciences und
Facility Management**
Stabsbereich Studium

N-FO-Aufgabenstellung für die Masterarbeit

Allgemeine Informationen					
Name StudentIn	Meinrad Koch				
Studienbeginn	FS 2015				
Pensum	<input type="checkbox"/> Vollzeit <input checked="" type="checkbox"/> Teilzeit				
Vertiefung in	<input checked="" type="checkbox"/> V1: Food and Beverage Innovation <input type="checkbox"/> V2: Pharmaceutical Biotechnology <input type="checkbox"/> V3: Chemistry for the Life Sciences <input type="checkbox"/> V4: Natural Resource Sciences <input type="checkbox"/> V5: Applied Computational Life Sciences				
Institut / Arbeitsort	N / ILGI				
Titel der Masterarbeit	Crossing the valley of death: Exploring commercialization of food startups in Switzerland				
Fachstelle/-gruppe	Center for Ingredient and Beverage Research + Center for Innovation & Entrepreneurship				
Vertraulich	Vertrauliche Aufbewahrung/Korrektur <input type="checkbox"/> ja <input checked="" type="checkbox"/> nein Geheimhaltungsvereinbarung <input type="checkbox"/> ja <input checked="" type="checkbox"/> nein Poster vertraulich* <input type="checkbox"/> ja <input checked="" type="checkbox"/> nein *Sofern das Poster nicht vertraulich ist, wird es an Ihrer Diplomfeier aufgehängt.				
Beginn der Masterarbeit	August 2016				
Abgabetermin Masterarbeit	KW 7 <input type="checkbox"/> / KW 35 <input checked="" type="checkbox"/> , Jahr: 2017 Freitag um 12:00 Uhr (Studiensekretariat Campus Grüental) <i>Achtung: der Abgabetermin kann nur in begründeten Fällen verschoben werden. Die Verlängerung muss mit einem schriftlichen Antrag bei der Studiengangleitung eingehen und von dieser bewilligt werden. Es können Kosten bis zu einer Semestergebühr erhoben werden (vgl. Weisungen zur Masterarbeit W235-12).</i>				
KorrektorInnen	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center; vertical-align: top;">1.</td> <td style="padding-left: 10px;"> Zürcher Hochschule für Angewandte Wissenschaften Name: Prof. Dr. Tilo Hühn Adresse: <input checked="" type="checkbox"/> Grüental <input type="checkbox"/> Reidbach Postfach, 8820 Wädenswil Tel.Nr.: 058 934 57 05 E-Mail: tilo.huehn@zhaw.ch </td> </tr> <tr> <td style="text-align: center; vertical-align: top;">2.</td> <td style="padding-left: 10px;"> Name: Prof. Dr. Adrian W. Müller Adresse: Stadthausstrasse 14, 8400 Winterthur Tel.Nr.: 058 934 62 77 E-Mail: adrian.mueller@zhaw.ch </td> </tr> </table>	1.	Zürcher Hochschule für Angewandte Wissenschaften Name: Prof. Dr. Tilo Hühn Adresse: <input checked="" type="checkbox"/> Grüental <input type="checkbox"/> Reidbach Postfach, 8820 Wädenswil Tel.Nr.: 058 934 57 05 E-Mail: tilo.huehn@zhaw.ch	2.	Name: Prof. Dr. Adrian W. Müller Adresse: Stadthausstrasse 14, 8400 Winterthur Tel.Nr.: 058 934 62 77 E-Mail: adrian.mueller@zhaw.ch
1.	Zürcher Hochschule für Angewandte Wissenschaften Name: Prof. Dr. Tilo Hühn Adresse: <input checked="" type="checkbox"/> Grüental <input type="checkbox"/> Reidbach Postfach, 8820 Wädenswil Tel.Nr.: 058 934 57 05 E-Mail: tilo.huehn@zhaw.ch				
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N-FO-Aufgabenstellung für die Masterarbeit

Zürcher Hochschule
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Life Sciences und
Facility Management

Stabsbereich Studium

Entschädigung des 2. Korrektors, falls ex- tern	<input type="checkbox"/> ja <input checked="" type="checkbox"/> nein
Aufgabenstellung	
Aufgabenstellung • Ausgangslage • Zielsetzung (z.B. ge- plante Experimente, Untersuchungen) • Ausstattung	<p>The Valley of Death – the gap between the development of a new technology and its successful commercialization has been well explored in many industries not yet in the food industry. There is limited understanding about the key actors and factors and in terms of how the valley of death influences food startups. Based on this fact, the key question of this Master Thesis is formulated:</p> <p>How does the valley of death affect food startups in Switzerland and how do they deal with it?</p> <p>Research will be focused on food startups based in Switzerland within the food sector. Plan as followed:</p> <p>1. Systematic Literature Review -Understand "Valley of Death" in a comprehensive way -Define valley of death, invention, startup, food sector -Creation of the questionnaire</p> <p>2. Carrying out interactive face-to-face interviews -Food startups -Transfer offices -Investors -Coaches/Food Experts</p> <p>3. Interpretation of the results -Transcribing and content analysis</p>
Bemerkungen (z.B. notwendige An- schaffungen, Budget- plan, zusätzliche Rah- menbedingungen)	
Allgemeine Bedingungen	

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N-FO-Aufgabenstellung für die Masterarbeit



Life Sciences und
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Stabsbereich Studium

Formale Anforderungen	Zusätzlich zur schriftlichen Abfassung gelten gemäss <i>Weisungen zur Masterarbeit (W235-12)</i> folgende Anforderungen: <ul style="list-style-type: none"> • Poster: als Alternative (mit den Korrektoren schriftlich vereinbaren) kann auch eine Website oder Publikation erstellt werden. • Mündliche Prüfung in Form einer Präsentation der Arbeit in einem Kolloquium oder vor einem Gremium der beteiligten Partner: - das Format wird durch die Korrektor/innen festgelegt; - die Prüfung soll innert 6 resp. 8 Wochen (12.10. resp. 12.04.) erfolgen; - die mündliche Prüfung wird nicht gewichtet und nicht benotet, sie wird mit „erfüllt“ / „nicht erfüllt“ bewertet.
Wichtige Hinweise und Richtlinien	Das Dokument Anleitung für die Abfassung von Semester-, Bachelor- und Masterarbeiten (W235-08) muss gelesen werden. Die Weisungen zur Masterarbeit (W235-12) müssen erfüllt werden. (vgl. www.lsfm.zhaw.ch/wichtige-dokumente) Plagiate verstossen gegen die Urheberrechte. Eine Verletzung dieser Rechte wird gemäss der Rahmenprüfungsordnung für Bachelor- und Masterstudiengänge an der Zürcher Hochschule für Angewandte Wissenschaften vom 29. Januar 2008 in § 39 geregelt.
Abgabetermin Note	Jeweils 6 Wochen (FS) resp. 8 Wochen (HS) nach der effektiven Abgabe der Masterarbeit; wenn termingerecht an das Studiensekretariat Master abgegeben gilt 12.10. (FS) / 12.04. (HS)

Die Aufgabenstellung ist jeweils zwei Wochen vor Semesterbeginn, in welchem die Masterarbeit abgegeben wird, an das Studiensekretariat einzureichen.

Unterschrift Korrektorin 1 	Unterschrift Studentin
Ort, Datum <u>Wädenswil, 7.2.17</u>	Ort, Datum <u>Wädenswil, 6.2.17</u>

(ersetzt Vorgängerdokument F235-02)

Ertassverantwortliche/-r	Leiter/in Stabsbereich Studium	Ablageort	2.05.00 Erlasse Lehre Studium
Beschlussinstanz	Leiter/in Stab	Publikationsort	Public

Appendix B : Declarations

Zürcher Hochschule
für Angewandte Wissenschaften



**Life Sciences und
Facility Management**

Stabsbereich Studium

Erklärung betreffend das selbstständige Verfassen einer Masterarbeit im Departement Life Sciences und Facility Management

Mit der Abgabe dieser Masterarbeit versichert der/die Studierende, dass er/sie die Arbeit selbständig und ohne fremde Hilfe verfasst hat.

Der/die unterzeichnende Studierende erklärt, dass alle verwendeten Quellen (auch Internetseiten) im Text oder Anhang korrekt ausgewiesen sind, d.h. dass die Masterarbeit keine Plagiate enthält, also keine Teile, die teilweise oder vollständig aus einem fremden Text oder einer fremden Arbeit unter Vorgabe der eigenen Urheberschaft bzw. ohne Quellenangabe übernommen worden sind.

Bei Verfehlungen aller Art treten Paragraph 39 und Paragraph 40 der Rahmenprüfungsordnung für die Bachelor- und Masterstudiengänge an der Zürcher Hochschule für Angewandte Wissenschaften vom 29. Januar 2008 sowie die Bestimmungen der Disziplinarmaßnahmen der Hochschulordnung in Kraft.

Ort, Datum:

Unterschrift:

.....

.....

Erklärung betreffend Einwilligung zur elektronischen Veröffentlichung einer Masterarbeit auf der ZHAW Digitalcollection

Ich erkläre mich damit einverstanden, dass meine Arbeit elektronisch gespeichert und in der ZHAW Digitalcollection der ZHAW Hochschulbibliothek öffentlich zugänglich gemacht wird. Das Recht, die Arbeit an anderer Stelle zu veröffentlichen, wird durch diese Erklärung grundsätzlich nicht berührt. Ich bin damit einverstanden, dass die Arbeit, namentlich zum Zweck der Archivierung, in andere Dateiformate konvertiert oder anderweitig technisch verändert wird.

Ich versichere, dass der Veröffentlichung der Arbeit keine Rechte Dritter, insbesondere in Bezug auf im Werk enthaltenen Abbildungen, entgegenstehen.

Ort, Datum:

Unterschrift:

.....

.....

Titel der Arbeit:

Name der/des Studierenden:

Name der/des 1. Korrigierenden:

Welche Schlagwörter schlagen Sie für die öffentliche online Suche vor?

.....

.....

.....


Das Original dieses Formulars ist bei der ZHAW-Version aller abgegebenen Masterarbeiten im Anhang mit Original-Unterschriften und -Datum (keine Kopie) einzufügen.

Appendix C: Poster

Crossing the Valley of Death: Exploring Commercialization of Food Startups in Switzerland

Master Thesis – Meinrad Koch

Zürcher Hochschule
für Angewandte Wissenschaften



Life Sciences und
Facility Management
ILGI Institut für Lebensmittel-
und Getränkeinnovation

Introduction

The Valley of Death is known as the financial gap between basic research/invention and applied research/innovation. However, there is limited understanding on how to overcome the valley of death for food startups. The objective was to evaluate how food startups in Switzerland are affected by this chasm and how they deal with it.

Material & Method

In total, 25 explorative interviews with Swiss food startups (10), mentors (5), investors (5) and transfer offices (5) were carried out. For the analyzation of the transcribed interviews, the MAXQDA software was used.

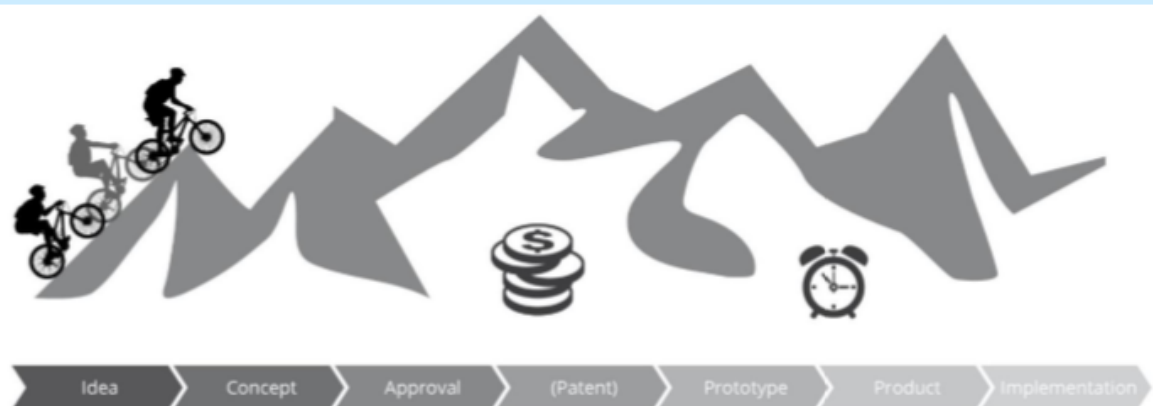
Results

The topic personal characteristics of the entrepreneurs highly dominated the discussion followed by the Swiss startup ecosystem, finances and timing. Within personal characteristics, emotional intelligence in terms of motivation and self-regulation play a crucial role not only as an individual, but also as a team. Additionally, the startup culture is not well elaborated in Switzerland which inhibits startups to flourish. It is recommended to practice bootstrapping as long as possible so that it can be focussed on building relationships with the customer rather than with the investors. Products should be tested as quick as possible and fine-tuned in accordance with the customer.

Conclusion

To be a successful entrepreneur within the Swiss food sector, the following skills are needed: Intrinsic motivation, appetite for risk taking, adaptability, resilience and problem solving ability.

Mountain of Death



Idea Concept Approval (Patent) Prototype Product Implementation

Figure 1: Illustration – Mountain of Death

Based on the analyzed data as seen in Figure 1, the Mountain of Death for Swiss food startups was introduced. Although Timing and Finances remain to be key elements in overcoming this chasm, it is about the entrepreneurs taking on that burden and whether or not it gets passed successfully. Unforeseen hurdles are numerous and the journey from the idea to the implementation of the product can be unclear.

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Appendix D: Programs, Competitions, etc. most suitable for food startups

Non-exhaustive list

Startup Programs

- Kickstart Accelerator: 11 – week acceleration program – www.kickstart-accelerator.com
- Venture Kick – financial support program (pre-seed capital) – www.venturekick.ch
- Foodways – Support Program explicitly for food startups - <http://www.foodways.ch/angebot/>
- Venture Lab – www.venturelab.ch
- CTI – Startup – www.ctistartup.ch
- Climate-KIC – www.climate-kic.org/start-ups

Competitions

- Heuberger Winterthur Jungunternehmerpreis – www.jungunternehmer-preis.ch
- W.A. de Vigier Preis – www.devigier.ch
- Swiss Economic Award – www.swisseconomic.ch
- Swiss Technology Award – www.swiss-innovation.com
- Jungunternehmerpreis – www.jungunternehmerpreis.ch
- Mass Challenge Switzerland – www.masschallenge.org
- Digital Food Award - <http://www.gourmesse.ch/digital-food-award/>

Hubs

- Innovation and Entrepreneurship Lab – <https://www.ethz.ch/en/industry-and-society/entrepreneurship/ielab.html>
- Bio-Technopark Schlieren – www.bio-technopark.ch
- Impact Hub Zürich – www.zurich.impacthub.ch

Networks

- Swiss Food Research – National thematic network – www.swissfoodresearch.ch
- Kompetenznetzwerk Ernährungswirtschaft – www.ernaehrungswirtschaft.ch
- World Food System – www.worldfoodsystem.ethz.ch
- Foodward – The Food Business Academy Switzerland – www.foodward.ch
- Food+ – Network for Innovations – www.foodplus.ch
- Swiss Technology Transfer Association – www.switt.ch

Exhibitions

- Slow Food Market – Food trade show where locally produced foods are presented – www.slowfoodmarket.ch

Appendix E: Definitions Valley of Death

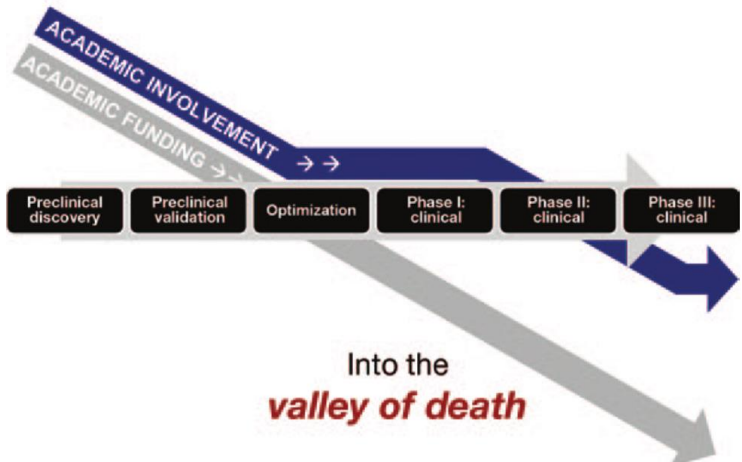
Table 4: Definitions Valley of Death, ordered alphabetically – Chosen definition highlighted in yellow

References	Field of Study	Description/Definition	Criteria		
			1	2	3
(Adams 2012)	Pharmaceutical industry Anticancer drug development	<i>“The Valley of Death in anticancer drug development is a highly complex problem with numerous driving forces. Reported factors: lack of efficacy and safety, lack of financial resources, lack of human resources, lack of required research structure, lack of support expertise, communication, design of clinical trials, health care culture, lack of incentives in academia, profit structure in industry, focus on high risk diseases, focus on technology, choice of drug type, lack of predictive discovery models, lack of predictive development models, adverse regulatory environment, intellectual property issues, aggressive pricing may create barriers to reimbursement, lack of innovation, feasibility and cost of manufacture and development, commercial issues.”</i>	(+)	+	-
(Auerswald and Branscomb 2003)	General	<i>“The imagery of the Valley of Death (which connotes Death Valley in Nevada, USA) suggests a barren territory when, in reality, between the stable shores of the S&T enterprise and the business and finance enterprise is a sea of life and death of business and technical ideas, of “big fish” and “little fish” contending, with survival going to the creative, the agile, the persistent. Thus, we propose an alternative image: the “Darwinian Sea.” (...) we identified the challenges of the “Darwinian Sea” in the following: 1. Differing motivations from research, 2. Dis-juncture between technologist and business manager, 3. Sources of financing, 4. Enabling infrastructure.”</i>	(+)	+	(+)

<p>(Beard et al. 2009)</p>	<p>General</p>	<p><i>“The road between a discovery generated from basic research to a commercial product or process is long and, according to some, rife with significant roadblocks. Innovators and investors alike routinely claim that a ‘funding gap’ or ‘Valley of Death’ exists between basic research and commercialization of a new product.”</i></p>	<p>(+)</p>	<p>+</p>	<p>+</p>

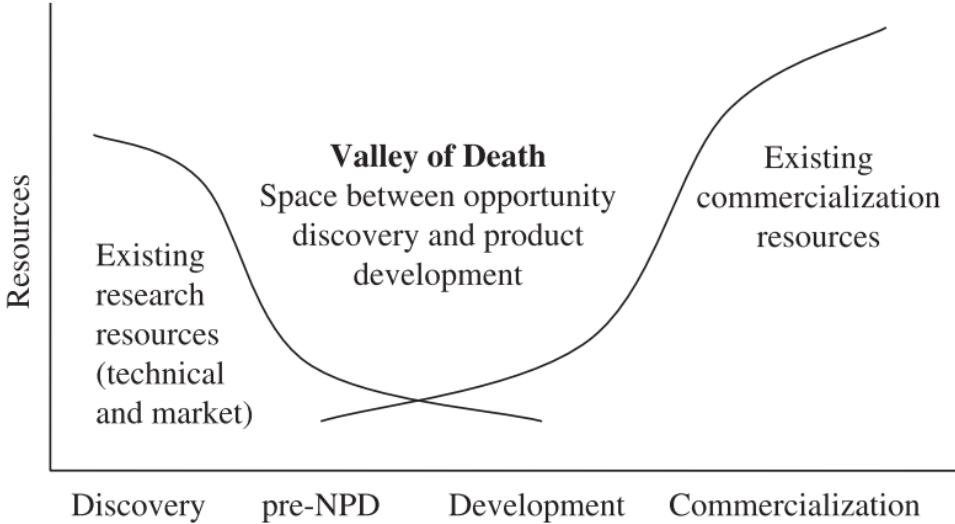
(Björk 2005)	Sustainable forestry	<p><i>“The Valley of Death is the sometimes-deep gorge separating the world of research and the world of trade and industry. This valley is the place—the graveyard, so to speak— where many interesting research results end up, unable to cross from one world to another. It is a great challenge to overcome the Valley of Death. To succeed you need to build the bridge not only from one side of the valley, but from both sides at the same time. This means there are two aspects of the challenge—not only must the researchers understand the needs of the practitioners, but the practitioners also have to understand the way science works. The second aspect (i.e., understanding the way science works) is a pedagogic challenge. And the first aspect (i.e., understanding the needs of the practitioners) is a challenge that is countercurrent to the whole qualification system of the scientific community.”</i></p>	+	(+) (+)	
(Butler 2008)	Pharmaceutical industry Drug discovery	<p><i>“Government agencies, such as the National Institutes of Health, and industry insiders, have also recognized that one of the most serious pitfalls involves the difficulty of moving across the so-called “valley of death” that separates upstream research on promising genes, proteins, and biological pathways from downstream drug candidates. For example, an upstream finding that a given protein is differentially expressed in individuals with a particular disease may suggest that the protein merits further investigation. However, much more work (especially medicinal chemistry) is necessary to determine how good a target the protein really is and whether a marketable drug candidate that affects the activity of the protein is likely to be developed.”</i></p>	+	(+) (+)	-

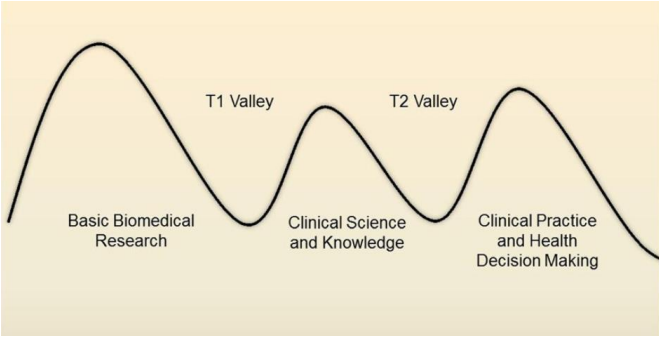
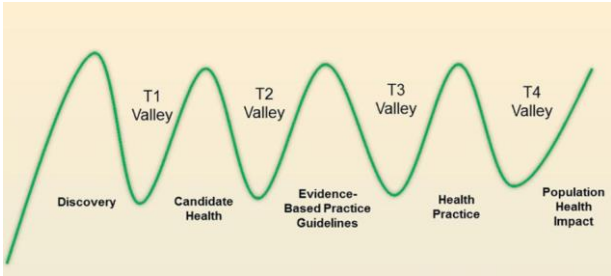
<p>(Davis 2017)</p>	<p>Center for Entrepreneurship</p>		<p>(+)</p>	<p>-</p>	<p>+</p>
<p>(Frank et al. 1996)</p>	<p>Environmental and pharmaceutical industry</p>	<p><i>“The "valley of death" is a concept used to refer to the situation in which a technology (for purposes of this research paper, technology includes new drugs) fails to reach the market because of an inability to advance from the technology's demonstration phase through the commercialization phase. The valley of death occurs when the developer of a particular technology has successfully demonstrated the efficacy of the technology but is unable to obtain financing for the scale-up and manufacturing process. At this point, the government considers the technology too "applied" to continue to provide funding, since the government's role is to fund more basic research, yet the private sector does not want to invest capital because the technology has not yet been implemented.”</i></p>	<p>+</p>	<p>(+)</p>	<p>(+)</p>

<p>Frederickson (2011)</p>	<p>Pharmaceutical industry</p> <p>Development of complex biological therapies</p>	<p><i>“The valley of death refers to the critical period between preclinical validation and clinical evaluation of CBTs, as a result of the drop-off in academic funding and the complex regulatory requirements.”</i></p> 	<p>(+)</p>	<p>(+)</p>	<p>-</p>
<p>(Girdauskiene et al. 2015)</p>	<p>Social Sci-ences</p>	<p><i>“The most often cited gap that young entrepreneurs face in the initial discourse is named the valley of death. Although it sounds horrible (“Valley of Death”), one can find the positive angle/perspective in this phenomena, for instance natural selection, where only the viable ideas survive. But on the other hand, the proper assistance (financial technological and managerial can help to overcome the “Valley of Death.”</i></p>	<p>+</p>	<p>(+)</p>	<p>(+)</p>
<p>(Gladwin and O`Donnell 2014)</p>	<p>Pharmaceutical industry</p>	<p><i>“The divide between basic discovery and clinical application, which is largely defined by the T1 domain (T1 translates basic “bench” science to early mechanistic studies in patients (1), and evolving definitions of T2 through T4, which encompass Phase I–IV trials, comparative</i></p>	<p>+</p>	<p>(+)</p>	<p>-</p>

		<i>effectiveness studies, and population-level outcomes. Before), has been appropriately termed the Valley of Death."</i>			
(Hartley and Medlock 2013)	Energy Technologies	<i>"(...), either explicitly or implicitly, that the valley of death reflects a misallocation of resources."</i>	-	(+)	(-)
(Hindshaw and Gruin 2017)	Leadership		(+)	-	(+)
Hudson and Khazragui (2013)	Pharmaceutical industry Drug discovery	<i>"The phase between research and successful innovation is known as the valley of death. Increasingly, researchers from the pharmaceutical industry and academia are working together, often encouraged by governments, to cross this 'valley' as they seek to bring basic research to the market. This is consistent with newer models of innovation policy that stress interaction between the different agents across the innovation process."</i>	+	(+)	(+)

<p>(Lux and Rorke 1991)</p>	<p>Inventions & Innovation Program</p>		<p>(+)</p>	<p>-</p>	<p>+</p>
<p>(Markham et al. 2010)</p>	<p>Product Innovation</p>	<p><i>“(…) as a discrete segment of development between research and product development. The Valley of Death is used as a metaphor to describe the relative lack of resources and expertise in this area of development. The metaphor suggests that there are relative more resources on one side of the valley in the form of research expertise and on the other side by commercialization expertise and resources. Within this valley a set of interlocking roles are examined that move projects from one side to the other.”</i></p>	<p>(+)</p>	<p>(+)</p>	<p>(+)</p>

					
<p>(Meslin, Blasimme, and Cambon-Thomsen 2013)</p>	<p>Clinical and Translational Medicine</p>	<p><i>“(…) by focusing attention on the bottlenecks that constitute the so-called “valley of death”, a place in which promising basic research findings go that fail to make their way into (or out of) clinical trials and therefore never have a chance to develop into therapies for patients. But progress in translational medicine is also shaped by science policy (…) We believe that science policy faces its own valley of death, but that comparatively little attention has been given to understanding it in the era of globalized, translational science. We here address the analogy between translational research and science policy development: the detrimental effect of inadequate science policy on translational science and: possible ways of improving the science policy process.”</i></p>	<p>(+)</p>	<p>(+)</p>	<p>-</p>

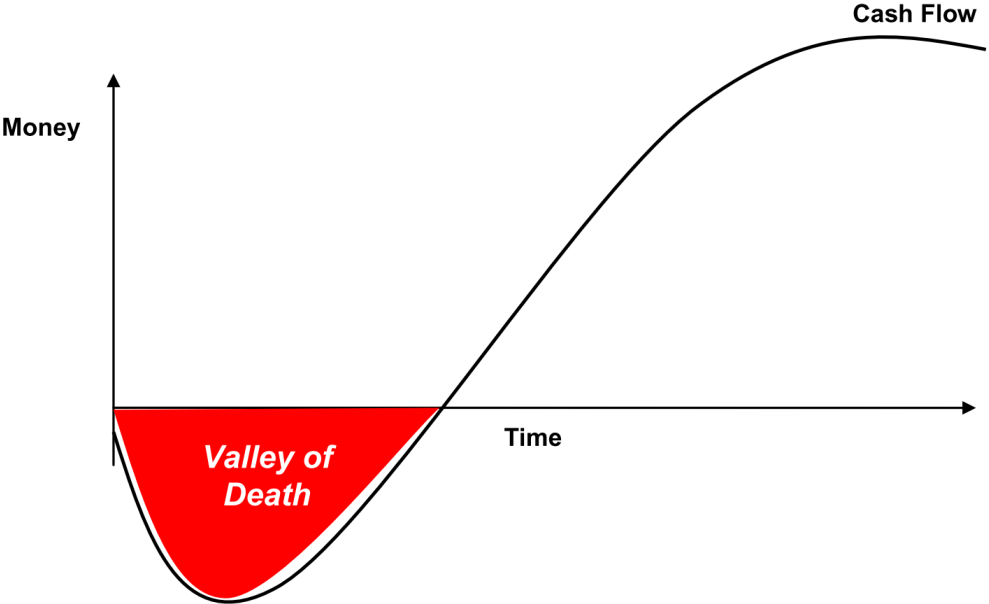
		 <p data-bbox="869 592 1666 619"><i>“Translational valleys from basic research to clinical practice.”</i></p>  <p data-bbox="891 979 1644 1007"><i>“Translational valleys from discovery to population health.”</i></p>			
<p>(Miller et al. 2013)</p>	<p>Science and Technology</p>	<p><i>“The valley of death describes the point where a business, often a technology based business, has a working prototype for a product or service that has not yet been developed enough to earn money through commercial sales. The company needs to find sufficient money to develop the prototype until it can generate sufficient cash, through sales to customers that would allow it to be self-sufficient and grow. Growing companies will generate both jobs and wealth, a key objective for any government.”</i></p>	<p>(+)</p>	<p>-</p>	<p>(+)</p>

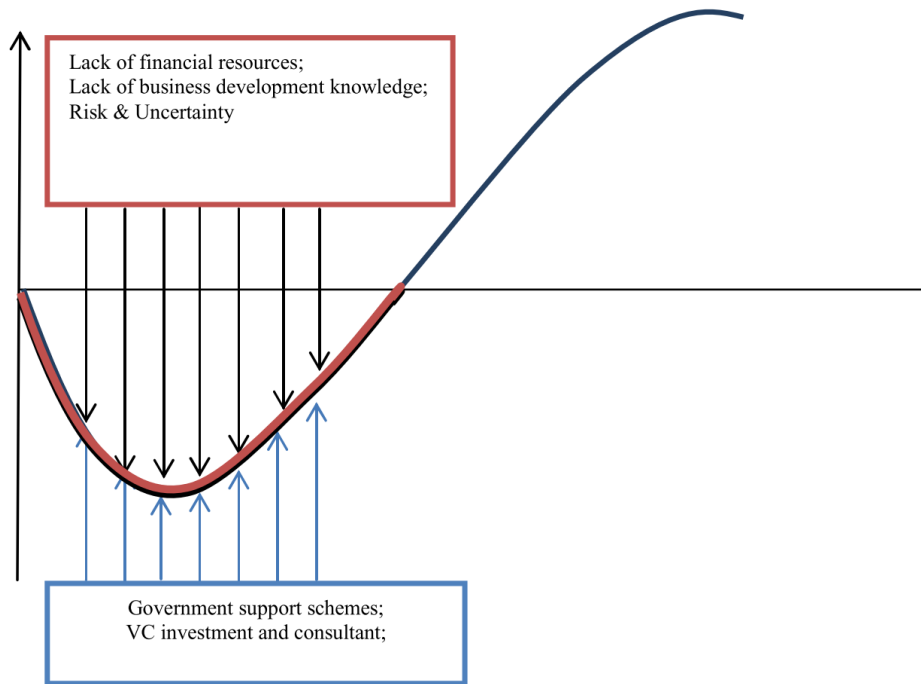
<p>(Mimura, Cheng, and Penhoet 2011)</p>	<p>Law Science and Policy</p>	<p><i>UC Berkley's work with innovative IP management and collaboration models through SRLP helps bridge financial gaps to deployment of new technologies, with socially- and environmentally-desirable impacts. In certain fields, such gaps are particularly wide, reflecting, for example, long research and development (R&D) timelines, substantial required investments, and regulatory hurdles prior to commercialization. Crossing such "Valleys of Death" requires creatively and carefully combining inputs, outputs, components, and participants.</i></p>	<p>(+)</p>	<p>-</p>	<p>(+)</p>
<p>(Moore 1991)</p>	<p>High-Tech Companies</p>	<p><i>"And when the hockey stick scenario does not come true, and the mortgage comes due, the founder's equity gets radically diluted, things fall apart, and the company dies in the chasm. (...) Now, the venture community has long been aware of this problem. Cynics in high tech believe they count on it—that's how the "vulture capitalists" take over the company from the unwitting entrepreneur. But the truth is, such a strategy is a lose/lose proposition, and most investors know it. They may call it "the valley of death" instead of the chasm, but they know it is there." All they have to do is look at their own portfolios. The question now becomes, if we have the chasm model to work with, what can we do differently? This question really breaks into two parts—one directed to the financial communities that provide the sources of capital, and the other to the high-tech executives who provide the sources of management.</i></p>	<p>(+)</p>	<p>(+)</p>	<p>(+)</p>

		<p style="text-align: center;">The Competitive-Positioning Compass</p>			
(Moran 2007)	Pharmaceutical and Biotech Industry	<p><i>The technology transfer gap has always been with us, but in drug discover it has widened to forma a valley of death between the traditional finishing point of research supported by an academic grant, and the sort of programs industry is interested in licensing or venture capitalists are prepared to back through a startup.”</i></p>	(+)	-	(+)

<p>(Murphy 2003)</p>	<p>National Renewable Energy Laboratory</p>		<p>+</p>	<p>-</p>	<p>(+)</p>
<p>(Osawa and Miyazaki 2016)</p>	<p>Technology Innovation</p>	<p><i>"(...) we consider the "valley of death" as the gap between product launch and when the business becomes success."</i></p>	<p>+</p>	<p>(+)</p>	<p>(+)</p>

<p>(Osborne 2008)</p>	<p>Pharmaceutical Industry Drugs</p>	<p><i>“Institute (NCI) has named the first recipients of a new award designed to help companies developing promising cancer therapies and technologies overcome the so-called ‘valley of death’. The phase II Bridge Awards are intended for small businesses that might need extra support to plug the gap between early-stage funding—typically provided by National Institutes of Health grants—and the later stages when financing depends on capital supplied by investors.”</i></p>	<p>+</p>	<p>-</p>	<p>-</p>
<p>(Rencher 2012)</p>	<p>Anthropology</p>	<p><i>“The Valley of Death is the time between starting a business and finding a sustainable, reliable and scalable business model. During that time, the business is typically not</i></p>	<p>+</p>	<p>-</p>	<p>+</p>

		<p>generating enough revenue to cover its costs. Because it is not generating revenue, it is unlikely to attract significant investment. Most startups do not make it out of the Valley of Death. Almost none make it out with their business concepts unaltered. Business concepts change based on feedback from customers, resource constraints and other human dynamics.”</p> 			
<p>(Savaneviciene et al. 2015)</p>	<p>General</p>	<p>“The indicated “valley of death” means the shortage of financial resource as well as business development knowledge are among the key ones.”</p>	<p>(+)</p>	<p>+</p>	<p>(+)</p>

					
<p>Seibel (2010, 14)</p>	<p>Pharmaceutical industry Biomedical drug discovery</p>	<p><i>“Typically, one enters the valley of death when you have developed a working medical instrument in academia for proof-of-concept, but there are no viable commercial applications on the horizon. Academic projects are often started to improve medical care while reducing costs to society, but those goals must change to the singular goal of profit when a technology goes to industry. Thus, many technologies are never licensed to industry after success in academia, thereby falling into this valley of death. Reasons may be the lack of protection of intellectual property, that the new technology cannot be manufactured at a low enough cost, or withstand the rigors of the hospital environment. (...) When the patents and know-how from</i></p>	<p>(+)</p>	<p>(+)</p>	<p>-</p>

		<p><i>academia are licensed to industry, the perception is that the valley of death has been crossed. However, in our case, this is far from reality.”</i></p>			
<p>(Vonmont 2014)</p>	<p>Life Science</p>	<p>The diagram illustrates the 'Valley of Death' in the life science innovation process. It plots Development Risk (top curve) and Market/Acceptance Risk (bottom curve) against time. The area between these curves is labeled 'AVAILABLE RESOURCES'. A shaded area at the bottom, where resources are low and risks are high, is labeled 'VALLEY OF DEATH'. The process is divided into two main sections: 'TRANSFER PHASES' (top) and 'FINANCIAL PHASES' (bottom). TRANSFER PHASES: Patent Project, PUBLIC PRESENTATION, PROTOTYPE PILOT STUDY, PRODUCT, IMPLEMENTATION EFFECT. FINANCIAL PHASES: PRESEED FUND, SEED FUND, KTI FUNDING, VENTURE CAPITAL. Other labels on the left: IDEA, CONCEPT, SCIENTIFIC PRESENTATION, PUBLIC RESEARCH FUND, FUNDS FROM BUSINESS/INDUSTRY.</p>	<p>+</p>	<p>(+)</p>	<p>+</p>

(Yu 2016)	Drug Discovery	<p><i>“The current drug discovery and development process is stalling the translation of basic science into lifesaving products. Known as the ‘Valley of Death’, the traditional technology transfer model fails to bridge the gap between early-stage discoveries and preclinical research to advance innovations beyond the discovery phase. In addition, the stigma associated with ‘commercialization’ detracts from the importance of efficient translation of basic research.”</i></p>	(+)	(+)	-
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Ratings: + = fulfilled, (+) = partially fulfilled, - = not fulfilled, Reference: Own representation based on (Hoppe 2004)

Appendix F: Do's and Dont's for the Interview Guideline

Table 5: Do's and Dont's for the Interview Guideline (Kruse 2015)

DO'S	DONT'S
<ul style="list-style-type: none"> • textgenerierende Fragen, z. B.: „Beschreiben Sie doch mal ...“ • aufrechterhaltende Fragen, z. B.: „Fällt Ihnen sonst noch was hierzu ein?“; „Wie ging es weiter?“ 	<ul style="list-style-type: none"> • geschlossene Fragen: „Waren Sie damit zufrieden oder unzufrieden?“ → besser: „Wie fanden Sie das?“ – „Wie zufrieden waren Sie damit?“ • Ja-Nein-Fragen: „Haben Sie die Stelle dann angenommen?“ → besser: „Wie ging das dann weiter mit dem Stellenangebot?“
<ul style="list-style-type: none"> • prozessorientierte Fragen: „Wie kam es eigentlich, dass...?“ 	<ul style="list-style-type: none"> • Begründungen abfragen: „Warum haben sie das gemacht?“ → besser: „Und wie kam es dazu, dass...“
<ul style="list-style-type: none"> • offene Fragen: dabei die eigenen Konzepte in der Frage reflektieren! • provokative Fragen: wenn überhaupt nur sparsam, gezielt und überlegt einsetzen, erst gegen Ende oder bei stockender Interviewdynamik 	<ul style="list-style-type: none"> • suggestive und wertende Fragen, z. B.: „Sie sind ja in der Türkei eher traditionell aufgewachsen – wie war das für Sie nach der Migration...?“
<ul style="list-style-type: none"> • kurze, verständliche Fragen 	<ul style="list-style-type: none"> • komplizierte Fragen, Fragereihungen
<ul style="list-style-type: none"> • konkreter Erzählgegenstand 	<ul style="list-style-type: none"> • hypothetische Fragen, z. B. „Sie gewinnen 5 Mio. Euro im Lotto – was machen Sie damit?“
<ul style="list-style-type: none"> • beantwortbare Fragen! (z. B. nicht: „Wo sehen Sie sich in 5 Jahren?“ – Diese Frage kann nicht sinnvoll inhaltlich beantwortet werden, da kein Mensch Hellseher/in ist. Man erhebt damit lediglich eine Reaktion, wie mit dieser unmöglichen Frage <i>umgegangen</i> wird (was auch spannend ist!). 	<ul style="list-style-type: none"> • Fragen, die die Kenntnis des/der Befragten übersteigen, z. B. „Was hat Ihr Chef darüber gedacht?“, → wenn, dann <i>zirkulär formulieren</i> („Was meinen Sie wohl, wie Ihr Chef darüber nachdenkt?“) • Hauptforschungsfrage direkt und abstraktiv stellen, z. B.: „Welches Vaterchaftskonzept haben Sie?“
<ul style="list-style-type: none"> • ‚weiche‘ Fragen, z. B.: „Erzählen Sie mir doch bitte mal, welche Erfahrungen Sie so mit Einkaufen im Internet bisher gemacht haben...“ → Abtönungspartikel: doch, mal, so, eigentlich 	<ul style="list-style-type: none"> • Fragen in Schriftsprache bzw. ‚wie aus der Pistole geschossen‘ Verben jedoch nicht in Konjunktivform, da dies ‚Fluchträume‘ ermöglicht!
<ul style="list-style-type: none"> • Faktenabfragen gehören ans Ende des Interviews 	<ul style="list-style-type: none"> • zu frühe Faktenfragen ruinieren den selbstläufigen Kommunikationsprozess
<ul style="list-style-type: none"> • die Befragten haben soweit wie möglich monologisches Rederecht bzw. innerhalb der Fokussierung auf Themengebiete müssen die dazu korrespondierenden Fragen so offen wie möglich gestellt werden, um innerhalb der Fokussierung Offenheit zu ermöglichen. 	<ul style="list-style-type: none"> • zu frühe exmanente Strukturierung

Appendix G: Interview Guideline

Einführung

Einschwingphase: Smalltalk über meine Masterarbeit – offene und freundliche Atmosphäre herstellen

Im Rahmen meiner aktuell laufenden Masterarbeit befasse ich mich mit dem „Valley of Death“ und dessen Auswirkungen auf Schweizer Food Startups. Nebst Gespräche mit Schweizer Food Startups sind Gespräche mit Coaches, Food Mentoren, Investoren und Experten geplant.

Mich interessiert vor allem den Effekt, welches das Valley of Death auf ein Food Startup hat respektive wie sie mit dem umgehen. An dieser Stelle ein recht herzliches Dankeschön für Ihre Bereitschaft am Interview teilzunehmen.

„Das ist jetzt ein bisschen ungewöhnlich, aber es ist für mich dann ein gutes Interview, wenn ich möglichst wenig fragen muss. Also wundere dich nicht, wenn ich nicht viel frage. Je weniger ich fragen muss, desto besser ist es für mich. Egal was sie mir erzählen es ist wertvoll für meine Arbeit.“

Das Interview dauert ca. 90 Minuten und ich werde es aufnehmen, um es später auswerten zu können.

Aufnehmen ok für Sie?

iPhone auf Flugmodus stellen

iPhone – Aufnahme-App einschalten

Herzlichen Dank für Ihre Zustimmung. Für die Masterarbeit werde ich die Resultate zusammenfassen. Das Resultat ist das, was ich draus interpretiere. Falls ich Zitate von Ihnen verwende, werde ich diese Ihnen zukommen lassen.

Ok für Sie? Fragen/Unklarheiten?

Start Interview – gehalten jeweils in der Muttersprache der befragten Person (Schweizerdeutsch, Hochdeutsch, Englisch)

- *Allgemein: exploratives Vorgehen – Redezeit der befragten Person maximieren.*
- *Nicht das Interview zu führen, sondern sich im Interview führen zu lassen.*
- *Modus des Erfragens, nicht im Modus des Abfragens oder des Ausfragens*

Aufrechterhaltungsfragen

- Gibt es sonst noch etwas?
- Und sonst?
- Und weiter? Und dann?
- Können Sie das genauer beschreiben?
- Fällt Ihnen sonst noch was hierzu ein?
- Wie ging es weiter?
- Haben Sie ein Beispiel dafür damit ich mir das konkreter vorstellen kann?
- Was meinen Sie damit? Wie meinen Sie das?
- Wie war das mit..., das interessiert mich besonders, können wir darauf zurückkommen?
- Sie wirken zurückhaltend, ich bin nicht sicher, ob das mit dem Thema zusammenhängt, können Sie etwas dazu sagen?

Thema Durststrecke

- Was bringen Sie mit „Durststrecke“ gedanklich noch in Verbindung?
- Was geht Ihnen beim Thema „Durststrecke“ durch den Kopf?
- Welche Bedeutung hat die Durststrecke für Sie?

Interview Food Startup

1. Sie machen....was zeichnet eure Idee/Business aus?
2. Vitalitätskurve ihres Startups – Wendepunkt – hier liegt mein Interesse
3. Durststecken erlebt? Bedeutung? nächstes Beispiel Weitere? Gedanklich in Verbindung?
4. Hauptantreiber selbstständig zu machen? Grösster Hemmfaktor - früher selbständig zu machen?
5. Unterstützung während der Gründungsphase?
6. Welche andere Unterstützung wäre nützlich gewesen?
7. Was ist für Sie Erfolg Unternehmen? Wann dies erreicht? Was zeichnet erfolgr. Startup aus?
8. Umgang mit Reaktionen aus dem Umfeld („Das funktioniert nie im Leben“)?
9. Grösste Herausforderung bis jetzt?
10. Wie haben Sie diesen Weg persönlich erlebt? (+/-) Resultat? Wie hat sich das nach aussen gezeigt? Strategie geändert?
11. Hauptgrund, nicht aufgegeben, immer noch an das Produkt/Idee glauben? Was hat Ihnen geholfen, das VoD durchzustehen? Sind Sie noch drin? Wenn ja wo stehen sie?
12. Erfahrung mit dem VoD - Auswirkung auf die Innovationskraft Unternehmens?
13. Aus Ihrer Sicht - VoD Food Bereich vermieden werden? Wenn ja, wie? Wenn nein, wieso nicht?
14. Umgang mit Unsicherheit/Diffusen um?
15. Startups an die Wand gefahren? Falls ja – folgende Frage: Als Sie realisierten, dass ihr Startup an die Wand fährt – persönliche Reaktion? Wie sich dabei gefühlt?
16. Reaktion Umfeld? Ihre Reaktion auf die Reaktionen des Umfelds?
17. Wann ist Scheitern gut?
18. Versetzen Sie sich zurück in die Gründungssituation. Bild? Farbe? Tier?
19. Wie denken Sie hat sich ihr Verständnis der Rolle als Unternehmer verändert Vergleich Zeitpunkt der Gründung mit jetzt (Immer noch die gleichen Tiere, Farben, etc.)?
20. Im Nachhinein alleine/mit einem/mehreren Partnern gründen? Wieso?
21. Persönlich vernetzt in der Schweizer Food Startup Szene? Benefit?
22. Hauptgrund warum so viele Startups an die Wand gefahren werden?
23. Was zeichnet für Sie ein erfolgreiches Startup aus?
24. Übers Ganze gesehen: Was ist die größte Herausforderung bei der Führung eines Startups?
25. Wie schätzen Sie das Schweizer Startup Ökosystem ein? Vor-, Nachteile?
26. Stand Unternehmermentalität von Herr/Frau Schweizer ein Startup in der Schweiz zu gründen?
27. Wunsch für die Schweizer Food Startupszene? Tipp für zukünftige Food Entrepreneure?
28. Durststrecke wie hat sich das ausgedrückt? Existenzielle Themen?

Interview Mentoren

1. Was zeichnet für Sie ein erfolgreiches Schweizer Food Startup aus?
2. Wie werden sie auf zukünftig erfolgreiche Startups aufmerksam?
3. Welches ihre Faktoren um zu sagen – „Ok in dieses Startup investiere ich.“?
4. Inwiefern spielt das Bauchgefühl eine Rolle? Worauf achten Sie?
5. Vitalitätskurve ihres Startups – Wendepunkt – hier liegt mein Interesse
6. Durststecken erlebt? Bedeutung? nächstes Beispiel Weitere? Gedanklich in Verbindung?

7. Hauptgrund warum so viele Startups an die Wand gefahren werden?
8. Kennen Sie Konzepte/Rezepte welche erfolgsversprechend sind, mit welchen (Sie oder jemand anders) aber trotzdem gescheitert sind?
9. Übers Ganze gesehen: Grösste Herausforderung bei der Führung eines Startups?

10. In der Literatur wird das VoD folgendermassen beschrieben: kurze Erklärung VoD auch so in der Food Branche? Falls nein, wieso nicht? Was unterscheidet sich?
11. Wie lange bis ein neues Produkt/Service/Prozess in der Food-Branche erfolgreich positioniert?
12. Könnte aus Ihrer Sicht das VoD vermieden werden? Wenn ja, wie? Wenn nein, wieso nicht?
13. As a food startup, strong collaboration and exchange with the government and the industry is needed in order to survive the VoD. – Wie stehen Sie zu dieser Behauptung?

14. Was ist für Sie Erfolg? Wie wissen Sie wann Sie dies erreicht haben? Unternehmerisch gesehen?
15. Wie gehen Sie allgemein mit Unsicherheit/Diffusen um? Beherrschen Sie Unsicherheit?
16. Umgang mit folgenden Reaktionen: („Das funktioniert nie im Leben“)?
17. Eric Ries, Autor vom Bestseller „The Lean Startup“ sagt, dass jeder Erfolg viele Misserfolge hinter sich hat. Können Sie dem in Ihrem Fall zustimmen? Wie sehen diesbezüglich Ihre Erfahrungen aus?
18. Auswirkung gemachte Erfahrung mit Misserfolg auf die Innovationskraft des Unternehmens aus? Positive Auswirkungen?

19. Wie schätzen Sie das Schweizer Startup Ökosystem ein? Vorteile? Nachteile?
20. Unternehmermentalität von Herr und Frau Schweizer ein Startup in der Schweiz zu gründen?
21. Wunsch für Schweizer Food Startupszene? Tipp für zukünftige Entrepreneurere?

Interview Investoren

1. Was zeichnet für Sie ein erfolgreiches Schweizer Food Startup aus?
2. Wie werden sie als Investor auf zukünftig erfolgreiche Startups aufmerksam?
3. Welches Sind Ihre Faktoren um zu sagen – „Ok in dieses Startup investiere ich.“?
4. Inwiefern spielt das Bauchgefühl eine Rolle? Worauf achten Sie?
5. Vitalitätskurve ihres Startups – Wendepunkt – hier liegt mein Interesse
6. Durststecken erlebt? Bedeutung? nächstes Beispiel Weitere? Gedanklich in Verbindung?

7. Investment auch in Startups, welche Vergangenheit gescheitert sind? Falls ja, warum? Falls nein, warum nicht?
8. Schon in Startups investiert, welche anschließend gescheitert sind? Hauptgrund fürs Scheitern?
9. Was ist aus Ihrer Sicht der Hauptgrund warum so viele Startups an die Wand gefahren werden?
10. Kennen Sie Konzepte/Rezepte welche erfolgsversprechend sind, mit welchen (Sie oder jemand anders) aber trotzdem gescheitert sind?
11. Übers Ganze gesehen: Was ist die größte Herausforderung bei der Führung eines Startups?

12. Trifft dieses VoD auch auf die Food Branche respektive auf ihr Business zu? Falls nein, wieso nicht? Was unterscheidet sich?
13. Wie lange denken Sie braucht es bis ein neues Produkt/Service/Prozess in der Food-Branche erfolgreich positioniert wurde?
14. Könnte aus Ihrer Sicht das VoD vermieden werden? Wenn ja, wie? Wenn nein, wieso nicht?
15. As a food startup, strong collaboration and exchange with the government and the industry is needed in order to survive the VoD. – Wie stehen Sie zu dieser Behauptung?

16. Was ist Erfolg? Wann erreicht? Unternehmerisch gesehen?
17. Umgang mit Unsicherheit/Diffusen? Beherrschen Sie Unsicherheit?
18. Umgang mit Reaktionen („Das funktioniert nie im Leben“)?
19. Eric Ries, Autor vom Bestseller „The Lean Startup“ sagt, dass jeder Erfolg viele Misserfolge hinter sich hat. Können Sie dem in Ihrem Fall zustimmen? Wie sehen diesbezüglich Ihre Erfahrungen aus?
20. Erfahrung mit Misserfolg Auswirkung auf die Innovationskraft des Unternehmens (+/-)?

21. Einschätzung Schweizer Startup Ökosystem? Vorteile? Nachteile?
22. Unternehmermentalität von Herr/Frau Schweizer ein Startup in der Schweiz zu gründen?
23. Wunsch für die Schweizer Food Startupszene? Tipp für zukünftige Entrepreneurere?

Interview Transfer Offices

1. Was zeichnet für Sie ein erfolgreiches Schweizer Food Startup aus?
2. Wie werden auf zukünftig erfolgreiche Startups/Akteure aufmerksam?
3. Welche Faktoren um zu sagen – „Ok in dieses Startup investiere ich.“ (Aufnahme Inkubator/Accelerator)?
4. Inwiefern spielt das Bauchgefühl eine Rolle? Worauf achten Sie?
5. Vitalitätskurve ihres Startups – Wendepunkt – hier liegt mein Interesse
6. Durststecken erlebt? Bedeutung? nächstes Beispiel Weitere? Gedanklich in Verbindung?

7. Schon in Startups investiert, welche in der Vergangenheit auch schon ein- oder mehrere Male gescheitert sind? Falls ja, warum? Falls nein, warum nicht? Hauptgrund fürs Scheitern?
8. Welche Ressourcen stellen Sie für Entrepreneurure im Food Bereich zur Verfügung? Netzwerk, Infrastruktur, finanzielle Unterstützung...
9. Welche bereitgestellten Ressourcen werden von den Food Startups am häufigsten benützt?
10. Welche Ressourcen bieten Sie an bei welchen Sie wünschen, dass Sie öfters von Food Startups genützt werden sollten?

11. Kennen Sie Konzepte/Rezepte welche erfolgsversprechend sind, mit welchen (Sie oder jemand anders) aber trotzdem gescheitert sind?
12. Übers Ganze gesehen: Was ist die größte Herausforderung bei der Führung eines Startups? Gibt es Durststrecken in einem Startup?

13. In der Literatur wird das VoD folgendermassen beschrieben: - Grafik zeigen VoD auch auf die Food Branche? Falls nein, wieso nicht? Was unterscheidet sich? Durststrecke Externe Sicht als Präsident von Swiss Food Research?
14. Zeit bis ein neues Produkt/Service/Prozess in der Food-Branche erfolgreich positioniert wurde?
15. Könnte aus Ihrer Sicht das VoD vermieden werden? Wenn ja, wie? Wenn nein, wieso nicht?
16. As a food startup, strong collaboration and exchange with the government and the industry is needed in order to survive the VoD. – Wie stehen Sie zu dieser Behauptung?

17. Was ist für Sie Erfolg? Wie wissen Sie wann Sie dies erreicht haben? Unternehmerisch gesehen?
18. Wie gehen Sie allgemein mit Unsicherheit/Diffusen um? Unsicherheit?
19. Umgang mit Reaktionen („Das funktioniert nie im Leben“)?
20. Eric Ries, Autor vom Bestseller „The Lean Startup“ sagt, dass jeder Erfolg viele Misserfolge hinter sich hat. Können Sie dem in Ihrem Fall zustimmen? Ihre Erfahrungen aus?
21. Auswirkung gemachte Erfahrung mit Misserfolg auf die Innovationskraft des Startups (+/-)?
22. Einschätzung Schweizer Startup Ökosystem? Vorteile? Nachteile?
23. Unternehmermentalität von Herr/Frau Schweizer ein Startup in der Schweiz zu gründen?
24. Wunsch für die Schweizer Food Startupszene? Tipp für zukünftige Entrepreneurure?

Nach dem Interview

Geschenkübergabe ZHAW Wein, Dank und Verabschiedung

Interview sofort auf Dropbox laden - Backup

Dankesmail an die befragte Person – Vernetzung auf LinkedIn

Vor dem Interview: Vorbereitung/Mitnehmen für jedes Interview

- Wein von der ZHAW – als Dankesgeschenk
- Zwei iPhones (ein Notfall-iPhone) mit aufgeladenem Akku und genügend Speicherplatz
- Interviewleitfaden ausgedruckt
- Grafik „Valley of Death“
- Block und Schreibmaterial
- Sich über die zu befragende Person informieren

Appendix H: Code System – Definition and Examples

Table 6: Code System - Definition and Examples

Code System	# Memo	Definition	Beispiele - es wird codiert, wenn folgende Wörter fallen
VoD Existence/Experience [1,5,7]	108	Persönliche Erlebnis mit dem VoD. Wie haben sie es wahrgenommen, eher im allgemeinem Stil, Kommt es vor? Existenz? Wie fühlten sie sich dabei? Learnings, Effect	rauf, runter, ups downs, Rollercoaster, Todestal, tote Strecken, Hürdenlauf, Tal der Tränen, Loch, über den Graben, Todeszone, Talsohle, Loch, Wüste, Berg, Bergpreis, es ist ein Spiel, es ist eine Frage der Perspektive
Collaboration and Exchange [2]	20	Beschrieb des Austausches und der Zusammenarbeit allg.	Partner, Netzwerk
Industry	29	Beschr/Aust./Zus. mit der Industrie	Industriepartner, Projektpartner
Government	7	Beschr/Aust./Zus. mit der Regierung	Regierung, Recht, KTI, Swiss Food Research
Universities	7	Beschr/Aust./Zus. mit der Uni/Fachh. etc.	Uni, Agroscope, ETH, FH
Startup Programs/Exhibitions	24	Teilnahme an Startupprogrammen, Förderprogramme, Wettbewerbe, Workshops, Ausstellungen	Kickstart Accelerator, IFJ, Venture Kick, Climate KIC, Euphoria, Slow-Food,
Duration VoD [3]	0		
Team	93	Teamkonstellation, klare Rollenverteilung	Teamzusammensetzung, die richtigen Leute finden, das nötige Know-how abgedeckt, alle Kompetenzen vorhanden? alleine oder im Team gründen, Leute mit null Businesserfahrungen, Wertevorstellungen, Vesting Clauses
Access to Capital	107	Zugang zu Geld, Investoren	Geld, Investoren, richtige Menge - nicht zuviel und nicht zu wenig, Liquiditätsprobleme
Lean	18		Bootstrapping, Lifestylebusiness (wir machen es nebenbei)

Timing/Strategy [4]	100	Als Unternehmen möglichst schnell das Produkt testen, Strategie	Gesellschaftsvertrag, Strategie, Proof of Concept, Update, Update, Update, klare USPs vom Businessmodell her, starker Case, Case zu wenig stark? Geschäftsmodell? Hohe Anfangsinvestitionskosten, kapitalintensiv, VoD im Businessplan einplanen, Businessplan in Varianten skizzieren, - man überschätzt sich, richtigen Moment kommen, Standort
Customer Readiness	49	Konsument parat	Konsumententests, Resonanz erzeugen, Konsumenten als Fan sehen, On Target, unterschiedliche Konsumenten, Marketing, Feedback einholen, will es genauso, Konsument = kritischste Faktor - er macht nicht immer das was er sagt - Selbstdarstellung, Individualisierung, Produkt Kundennutzen generieren
Market Maturity	32	Markt da	kleinen Schweizer Heimmarkt, was gibt es schon alles? Konkurrenzprodukte? Nische? man lernt erst am Markt, Marktdurchdringung
Personality Characteristics [8]	97	Persönliche Merkmale	Wieviel bist du bereit zu investieren/verzichten? Monetär (Lohnverzicht/Minilohn/Konsum runterfahren), sozial (offener Umgang mit Partner/Partnerin) und psychologisch (wissen das es scheitern kann)? Lebensstandard runtersetzen, Glücklich wenn du dich entschieden hast, Verständnis von der Rolle als Unternehmer, ein Macher sein, Verantwortung/Führung übernehmen, Marktlücken entdecken/Konventionen hinterfragen und brechen, Work-Life Balance - Ist es Arbeit? Ist es Freizeit? Selbstaufgabe, Identifikation, Es ist ein Spiel, Pokern - all in, Was ist für uns Risiko? Was ist das Schlimmste was passieren kann? Völlige Unsicherheit, man kann nicht alles steuern - Umfeld ist zu komplex - Komponente Mensch/die richtige Person, umgebe dich mit Leuten welche dich kritisieren oder das Gleiche machen wie du, Innovator sein

Professional Intelligence [5,6,7]	98	Rationale Entscheidungen, Beruflicher Hintergrund oder Quereinsteiger	Lehre aus dem Scheitern ziehen, den gleichen Fehler nicht zweimal machen, Quereinsteiger, Ziel, Fokus/Priorität der Firma, auch mal Nein sagen, Mission - Was, Wie? Zeitmanagement, Planung, Milestones - dann wieder reflektieren/hinterfragen, Wie mache ich ein Scale up?, Pilotphase, jeder macht das wo er am besten kann, fehlendes Know-how einholen, Risikomanagement, Schlussstrich ziehen, Entscheide fällen
Emotional Intelligence	0	How we manage ourselves and our relationships	Based on the theory of Daniel Goleman (Goleman, 1998)
Self-Awareness	62	Knowing one`s internal states, preferences, resources, intuitions: Emotional awareness, Accurate self-assessment, Self-confidence	Wenn scheitern dann richtig scheitern, Balance finden - Mut vs. Naivität, Selbstvertrauen, Bauchgefühl, Angst, Psyche, mentale Stärke, keine Angst vor dem Scheitern haben, eigenen Stärken und Schwächen kennen, auf sich selber hören, Burnout, sich überschätzen
Self-Regulation [5,6,7]	128	Managing one`s internal states, impulses, and resources: Self-Control. Trustworthiness, Conscientiousness, Adaptability, Innovation	Teilzeitjob suchen wenn Startup nicht läuft, Kritik annehmen können, negative Kritik wegstecken, Balance finden - kritisches Feedback eingehen/Rat von Fachleuten vs. destruktives Feedback wegstecken/wann höre ich auf mich selber, sich nicht beirren lassen, aus positivem und negativem Energie schöpfen, Flexibilität, Agilität, es geht nie nach Plan, Deal with Failure, Umfallen-Aufstehen-Weitermachen, Umgang mit Misserfolgen, aus Misserfolgen lernen, Misserfolge/Fehler wegstecken, Frustrationspotential, Misserfolg = Learnings, Stress, positiver Stress, Druck, Emotionen zulassen, eine Frage des Energieflusses, Umgang mit dem Diffusen, Integrität, strikt zu dir selber, sich selber später nicht reuig sein, Wie stehe ich da wenn es schief geht?, daily learning and recalibrating, ständiges Lernen

Motivation [5,6,7]	211	Emotional tendencies that guide or facilitate reaching goals: Achievement drive, Commitment, Initiative, Optimism	Freiheit/Verantwortung übernehmen/Dazulernen/Neugierde als Motivation, Reifeprozess, neue Herausforderung, Motivation, 100% Commitment, Optimismus, Energie, Selbstvertrauen, daran glauben, hinter der Philosophie stehen, Warum mache ich es? sinnvolle Arbeit, Arbeit = Ausgleich, Sinnstiftung, etwas verändern können, wahre Probleme sehen, Traum, Vision, Perfektion, Inspiration, Jobberfüllung - überkompensiert den Verzicht auf Ferien, Ausgang etc., it pays off the hard work, Chance sehen und zupacken, das Startup als dein Baby sehen, Ziele genug hoch ansetzen, love the problem not the solution, das Ungewisse/Risiko liebend, Bereitschaft extrem viel zu arbeiten, Durchhaltewillen, Drive, Ausdauer, widerstandsfähig, Resilienz, einen langen Schnauf haben
Empathy	28	Awareness of others 'feelings, needs, and concerns: Understanding others, developing others, Service orientation, Leveraging diversity, Political awareness	Sich bescheidener geben als nötig, transparent gegenüber den Kunden, Kunde zuhören, verstehen und dessen Wünsche erfüllen - Zielsegment?, den Kunden befriedigen, Umgang mit Investoren und Geldgeber - diese überzeugen
Social Skills	118	Adeptness at inducing desirable responses in others: Influence, Communication, Conflict management, Leadership, Change catalyst, Building bonds, Collaboration and cooperation, Team capabilities	Zusammen schauen wie weiter, Balance finden - wann weiter vernetzen vs. wann selber weitergehen, Medien/Social Media gekonnt füttern, ehrliche Kommunikation gegenüber Kunden, Storytelling = daran glauben, (niemand möchte hören wie schlecht alles ist - Aufbruchstimmung), Leute begeistern können, Marketing (Neid, Eifersucht), die richtigen Schritte einleiten, Konflikte sofort und sachlich ansprechen, lieber A Team mit B Idee als umgekehrt, verschiedene Akteure miteinander verbinden, Leadership, Bermuda Dreieck, einen Cut machen, Change Management, Kommunikation - Puzzle zusammensetzen
Color	10	Farbe	individuell
Animal	12	Tier	individuell

Swiss Food Startup Ecosystem [9]	57	Vorhanden? Ist es sichtbar? Wird es wahrgenommen	Access to capital, branchenübergreifend, Big Data, Digital Switzerland, Swissness
Entrepreneurship Mentality	62	natürliche Limitationen	Internet vs. Freshness, Ablaufdatum, Saisonalität, Wetter, Qualitätsschwankungen der Rohwaren
Regulations/Startup Support	7	Community bilden, Umwelt für Startups bauen, Testlab - Ort zum experimentieren	Investoren (Seed Fund), Mentoren Startups, Hochschulen - alle zusammenbringen, Portal, Technikum, Gastroküche, Versuchchsbäckstube
Natural Limitations	8	Migros, Coop	Konzentrierte Macht, fördert Innovation nicht, extremer Preisdruck
Duopoly	21	Geringe Marge	Fleisch - extremer Preiszerfall in den letzten 50 Jahren
Entrepreneurship at Universities	19	Lebensmittelrecht	Mindestwerte, Verbote, Reglemente
Network/Testlab	26	Wohlstand, ökonomische Umstände	Wohlstandsgesellschaft, Easy Life, Get out of the Comfort zone, Wohlstand, zu Beginn
Margin	11		erlaubt Fehler zu machen, Fehlerkultur, zurückhaltend, konservativ, mehr Mut, Risiko eingehen, reglementierende Haltung, traditionell, Ethik, Abschottung durch bestehende Denkmuster, Sicherheitsbedenken, mehr Kreativität, experimentieren, entscheidungsfreudig, keine Schuldigen suchen, Mentalität in der Foodbranche, positiver Groove, Entrepreneurship Groove, auf Fragen aus
Food Law	20	Unterricht im Entrepreneurshipbereich	studentische Projekte weiterziehen, fördern, Fach an der Uni "Wie werde ich Unternehmer?"
Wealth/Economic Circumstances	32	Rechtliche Fragen	Verträge, Rechtsformen, Markenschutz
Luck	19		Momentum, zur richtigen Zeit am richtigen Ort, Zeitgeist, Karma, Momentum, Schicksal
Mentor	28	Mentor, Coach	Reflektion
Total coded segments	1668		

Appendix I: Events attended for this Master Thesis

20. September 2016	Vortrag: Startup Finanzierung, Schlieren
24. Oktober 2016	Kickstart Accelerator Event, Zürich http://kickstart-accelerator.com/startups/#food
November 2016	Givaudon Informationsanlass, Winterthur
14. November 2016	Startup Day, Zurich http://www.startupday.ch/de/programm/zuerich/
18. November 2016	Fuckup Nights Zurich https://zurich.impacthub.ch/event/fuckup-night/
19. November 2016	Slow Food Market Zurich
21. November 2016	Vortrag: Erfolgs-/Leidensweg eines Startups: Revolutionen brauchen Mut und Durchhaltewillen http://www.ifj.ch/index.cfm?CFID=542667487&CFTOKEN=47317416&page=129080&event_id=4850
29. November 2016	Craft Beer auf Erfolgskurs http://www.ifj.ch/index.cfm?page=129080&event_id=4995
13. Dezember 2016	Fuckup Night Zürich
07. Juni 2017	Kurs: Emotional Intelligence: Your key to success http://www.ijz-schlieren.ch/kurse-events/emotional-intelligence-your-key-to-success

Appendix J: How I landed in the VoD



Figure 13: Portrait Meinrad Koch, 2017

The more my understanding of the VoD increased throughout this study, the better I was able to understand and accept my separation (October 2016) from the food startup EntoLog. It calmed me down and broadened my understanding of how entrepreneurship works. In retrospect, I suddenly realized that my personal EI throughout my entrepreneurial activities, but in particular during the separation process, has been broadly tested. Besides dealing with regulatory issues within EntoLog, personal disagreements were the main source of conflict. That is not funny. Raking in the VoD is exhausting! The fact that we won some startup prizes and got lauded in the press made it even harder to accept the situation. My emotions got heavily drained.

However, I tried to understand the situation and therefore attended the conflict management course at the ETH. But for EntoLog, the cat was already out of the bag. Finally, I could close that chapter, imbibe the learnings the conflict taught me, and revitalize the positive experiences whenever I think about EntoLog. I feel privileged to have had the chance to make such a great experience and I am grateful to the people who pushed me in doing so.

Reflecting my research, I feel like I have grown not only intellectually but also emotionally throughout this project. The many conversations I had were so inspiring and I have the impression that my entrepreneurial past had a positive influence into the quality of the data. I basically got a vaccination against the VoD. I am looking forward to further entrepreneurial activities.