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Innovating User Value

The Interrelations of Business Model Innovation, Design (Thinking) and the Production of Meaning – A Status-quo of the Current State of Research

A thesis in (partial) fulfilment of the requirements for the degree M.A. of Arts

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Abstract

We live in a hyper-competitive world, where whole industries either shift towards services or become obsolete due to new market entrants, technologies or even social practices. A world, where permanent interactions with customers, fast time-to-market, and the ability to innovate »right« (e.g. the right thing or value) are the key to corporate success. On that score the business sphere isn't getting tired of emphasising the need for strategic innovation (which means »creating superior customer value«, business model innovations or even the disruption and creation of new markets).

This paper uncovers some of the often overlooked links of design (design thinking, design-driven innovation and service design) to strategic innovation through the lens of »customer value«. It will do so by …

1) Disenchanting the big corporate rhetoric on above claims by showing that prevailing and too one-sided understandings of strategy and innovation, rather reinforce than escape old industry paradigms.

2) Examining designs still undervalued contributions to strategy-making by approaching business challenges with a user/value-centric and radical service logic.

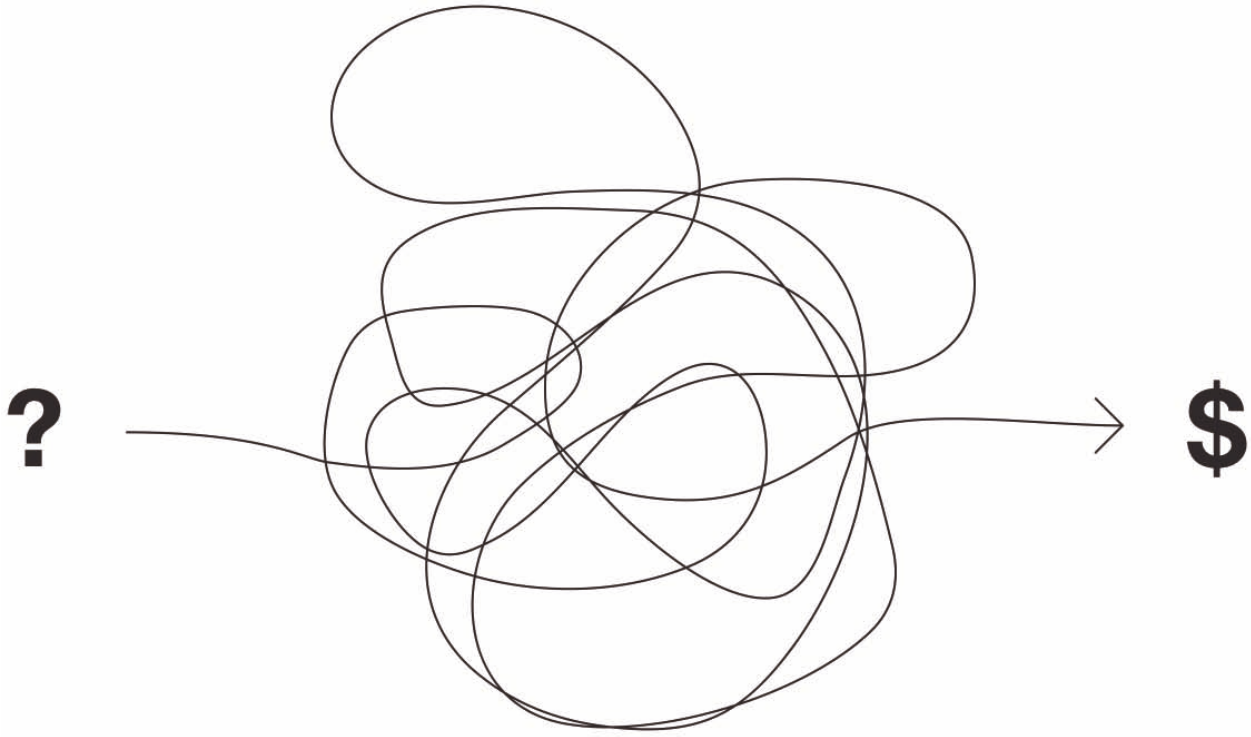
3) Showing that every dimension of strategic innovation culminates in the concept of perceived user value and meaning, which gets reviewed in detail (dimensions, forms, properties), especially with regards to constructing value propositions.

4) Arguing that the current service design and business model innovation discourses cannot be negotiated separately, as they may be good methodological complements.

So when speaking about the innovation of value for the customer, the paper argues, the above stated and seemingly separated fields intersect. Therefore their most apparent systemic connections and the facilitation of value creation by design are outlined and discussed.

Keywords

user experience, customer experience, customer experience management, value, value proposition, user value, perceived user value, customer value, value theory, value management, design, design management, design thinking, service design, design methods, service engineering, service innovation, service science, complex service systems, product-service systems, innovation, strategic innovation, innovation management, design-driven innovation, design innovation, disruption, disruptive innovation, disruptive technologies, blue ocean, planning, strategy, strategic planning, business model innovation, business model design, market definition, market creation, market disruption, market research, demand creation, customer creation, S-D logic, technological innovation



»Design Process« after Tim Brennan (~1990), engineer at Apple's Creative Services group (Source: Dubberly 2004)

Acknowledgements

John Lennon once said: *"Life is what happens while you're busy making other plans."* Well, this is absolutely true, especially for this thesis. The last year was one of the most exciting but also most debilitating periods of my life. Many unforeseen and sudden events thwarted my plans and devoured my time, so that in the end everything was about improvisation on all levels. Without the support of good friends and advisers I probably wouldn't have managed to finish this thesis in time, while still working for living *and* caring for projects like GlobalWasteIdeas.

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Preface

As long as I can think, I am likewise fascinated by arts and aesthetics, as well as (media) technology[1]. This preoccupation led not only to co-founding my company VISUALES® in 2000, but also to permanently being in-between things. When we started, I began as an interaction designer (IxD) and despite the steep technical and design learning curve back in these days, one topic soon became the dominant driving force of all my projects: the *holistic definition of user experiences* (UX) from a radical user-centric POV. Suddenly it wasn't just anymore about information architecture, usability and a compelling corporate design-conform interface. »Out of the blue« I was – or better our clients were – confronted with more fundamental conceptual questions on »brand positioning«, strategy and even the setup of business processes which automatically emerge, when crafting a digital strategy and advising clients on the opportunities of especially a new medium like the internet (back then usually in form of disintermediation and using the web as the main sales channel[2], introducing or improving CRM, optimizing offline experiences and services with the website as central touchpoint). Unfortunately most – but fortunately not all – clients weren't able to see those opportunities. They were resistant against advice and doubting »a digital native designer's« competence in telling them how to run or improve their business, especially as yet for most ideas no proof-of-concept or »first-mover examples« from the competition existed. Confronted with those bitter realities (and also lacking age, enough knowledge and vocabulary to assert myself against reservations of established decision makers), I chose to leave »design/development work« to my team and concentrated myself from then on only on providing the ground/strategy for good design and innovation. And even though we later developed holistic brand and communication strategies which enabled us to already »touch« some of our clients central business processes) with the knowledge we gained via interactions with their customers) we still were »just the designers«.

That was the final trigger for me in deciding to start studying again. I didn't wanted to content myself with just symbolic and communicative meaning-making as I wasn't allowed to apply higher orders (cf. p.53) of design approaches to those projects. And more importantly: I saw what impact design(ed) strategy solutions had unfolded if we – from every now and then – weren't restricted by »design prejudices«, the »fear of new outside-in power relations« with customers in the social web and »old strategic thinking«. These circumstances, and the fact that some of my last clients were rather technology-oriented German engineering companies which all had superior technology (or what they thought »innovation«), but no market share (as target groups just »didn't saw the value« in their offer) compared to their in technical terms inferior competitors, heavily influenced my background and led me to writing this thesis, as design and business are more interrelated with each other than many can imagine …

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[1] Although the latter couldn't fully develop until the first years after the German reunion, because computers were only available at school friend's places who had »Stasi-parents« and were able to afford/import western technology. ☺

[2] For instance it wasn't the norm in the early 2000's to sell »tangible« and extremely high investments like owner-occupied flats »just« via the internet. Therefore many of our clients from the real estate sector refused to invest respectively. Two clients did, both sold flats over the internet which refinanced the development costs of the, for those days sophisticated, websites, and one of them later won the German »Immobilien Award« for the best marketing strategy.

List of Abbreviations

BMI	Business Model Innovation
CEM	Customer Experience Management
CLV	Customer Lifetime Value
CRM	Customer Relationship Management
CX	Customer Experience
DT	Design Thinking
EVA	Economic Value Added
GD-logic	Goods-dominant Logic / Product-centered supplier logic
GDP	Gross Domestic Product
ICT	Information and Communications Technologies
ID	Industrial Design
IIT	Illinois Institute of Technology
IxD	Interaction Design
MIT	Massachusetts Institute of Technology
NPV	Net Present Value
NSD	New Service (Market) Development
POV	Point of View
PSS	Product-Service System
ROI	Return on Investment
SBU	Strategic Business Unit
SD	Service Design
SD-logic	Service-dominant Logic
UAN	Unique Activity Network
UCD	User-centered Design
UI	User Interface
UX	User Experience
UxD	User Experience Design
VC	Value for the Customer, (Preceived) Customer Value

Table of Contents

1 Introduction 11
1.1 Problem Statement 12
1.2 Research Objectives & Structure 14
2 The big Strive for Innovation – What's the Challenge? 16
2.1 The Strategy Dilemma 17
2.2 The Innovation Dilemma 22
2.3 Limitations of Current Innovation Perceptions and Practices 26
2.4 So, what is Strategic Innovation now? 29
2.5 Conclusion 31
3 Creating new Markets – Creating User Value? 32
4 Creating the User by Innovating User Value 37
4.1 The Value Construct 37
4.2 The Value Proposition Concept 46
5 The Role of Design in Innovation 50
5.1 Views on/Accounts of Design 50
5.2 The Intersections of Design and Management 54
5.2.1 Design Thinking 56
5.2.2 Design and Innovation: Design-driven Innovation? 67
5.2.3 Service Design 73
5.3 Conclusions 78
6 Business Model Innovation as Delivering User Value 81
6.1 What is a Business Model? 84
6.1.1 Business Models as Normative Representations 86
6.1.2 Business Models as Activity Systems 91
6.1.3 The Value Configuration Perspective 95
6.1.4 Business Model as Learning Systems 97
6.1.5 The Story Perspective on Business Models 98
6.2 Business Model Innovation and its Relation to Service Design 99
6.3 Conclusion 100
7 Innovation in the Services-Era – A Conclusion 104
8 Outlook 108
9 References 109
10 Appendix 119

Tables and Figures

Tables

Table 1: Some examples of innovative market disruptions (compiled by author) ... 25
Table 2: Principal forms and temporal types of value for the customer (VC) according to Woodall (2003) ... 43
Table 3: Red vs. blue ocean strategy (Source: Kim & Mauborgne 2005, p.18) and this thesis' contributions ... 107
Table 4: The ten schools of strategy (Mintzberg et al. 2001) ... 119
Table 5: Value perspectives over the customer experience (Source: Turnbull 2009, p.4) ... 122
Table 6: Some definitions of/approaches to »value proposition« (drawing on Ballantyne et al.'s (2011) six perspectives) ... 124
Table 7: Assymetries in business and design (Source: Liedtka & Ogilvie 2011, p. 12) ... 126
Table 8: Points of difference »traditional management practice vs. design practice« – a short account (adapted from Dunne & R. Martin 2006) 126
Table 9: Points of difference »traditional management practice vs. design practice« (adapted from Dunne & R. Martin 2006) ... 127
Table 10: Integrated service design process overview (Source: Dubberly & Evenson 2008a, p.7) ... 132

Figures

Figure 1: The three outcomes of strategic innovation (Source: Author, adapted from Sniukas 2010) ... 14
Figure 2: Ways to grow (Jacoby & Rodriguez 2007, p.12) and innovation outcomes (ibid, p. 14), cf. Brown (2009, p.161) ... 16
Figure 3: Incremental vs. radical and sustaining vs. disruptive innovation (Source: Author) ... 23
Figure 4: The Impact of Sustaining and Disruptive Technological Change (Source: © 1997 Harvard Business School Publishing → http://www.emeraldinsight.com/content_images/fig/0150250601001.png) ... 24
Figure 5: Transformative Business Disciplines (Peer Insight 2007, p.2) ... 27
Figure 6: Planning progression from inside-out to outside-in (Source: Keeley 2003) ... 28
Figure 7: Strategic innovation – A collection of definitions ... 30
Figure 8: Market vs. industry vs. business (unit) (Source: adapted from Liebl 2007) ... 33
Figure 9: Business Model Management with the hedgehog concept (Source: Adapted from von Rosing (2011) and Collins (2001)) ... 34
Figure 10: Two examples for famous market definitions (compiled by author) ... 35
Figure 11: A Preliminary model of value for the customer (Source: Woodall 2003, p.5) ... 39
Figure 12: Five primary VC forms (Source: Woodall 2003, p.7) ... 40
Figure 13: A longitudinal perspective on VC (Source: Woodall 2003, p.10) ... 42
Figure 14: Traditional approaches to user value (Source: Boztepe 2007, p.58) ... 44
Figure 15: A value-in-use creation model (Source: Grönroos 2011) ... 48
Figure 16: Six markets stakeholder model (Source: Ballantyne et al. 2011, p.206) ... 49
Figure 17: John Heskett's (2005) summarisation of design (Source: Hardt 2006) ... 51
Figure 18: The different/changing roles of the (industrial) designer: Anna Valtonen clearly shows the evolution of the design disciplines from graphic to industrial design and from interaction to environmental and strategy design (Source: Valtonen 2005, p.7; Valtonen 2007, p.86) ... 52
Figure 19: The four orders of design, adapted from Buchanan (2001) (Source: Wetter Edman 2011, p.27) ... 53
Figure 20: The design use maturity ladder (Source: adapted from SVID 2003) ... 54
Figure 21: Paradigmatic overlap of management, design and design management. (Source: Sanders 2008, p.39) ... 55
Figure 22: Venn diagram showing the three criteria for design outcomes representing the balance of the main constraints in design thinking and showing the intersections of the various disciplines that it links as well as some typical fields of application (Source: d.School Stanford, 2009) ... 56
Figure 23: A typical analysis-synthesis bridge model (cf. Dubberly et al. 2008; Dubberly 2004) ... 61
Figure 24: Design thinking as a learning process (Source: adapted from Beckman & Barry 2007, p.28) ... 62
Figure 25: Academic isolation vs. express test cycle (Source: Beckman & Barry 2007, p.49-50) ... 63
Figure 26: IDEO's Fulton Suri model and Vijay Kumars innovation model with its seven modes (Kumar 2009, p.95) in comparison (Sources: adapted from IDEO 2009; Kumar 2009) ... 64
Figure 27: Divergence and convergence in the design process after Bela H. Banathy (1996) (Source: Dubberly 2004, p.24) ... 64
Figure 28: The impact of a design strategy on the classic investment/return curve (Source: Owen 1998, p.3) ... 65
Figure 29: Conventional »black hole« investment vs. options oriented investment approaches (Source: McGrath 2010, p.256) ... 66
Figure 30: Three innovation strategies (Source: Verganti 2009, p.55) ... 67
Figure 31: User-centered design vs. user-driven innovation (Source: adapted from Verganti 2009) ... 69
Figure 32: Interpreters in a collective research laboratory (Source: Verganti 2009, p.12) ... 70
Figure 33: Three different models of innovation, driven by technology, business processes and design, and the points at which they intersect (Source: Kumar 2009, p.92) ... 72
Figure 34: Approaches to conceptualizing service design. (Kimbell 2011, p.45) ... 75
Figure 35: Services as a design triangle (Source: Dubberly & Evenson 2008a, p.3 after Gadrey 1996a) ... 76
Figure 36: The questions of service design research and practice as well as their discussed characteristics in the current literature (Source: Wetter Edman 2009, p.69) ... 77

Figure 37: The innovation radar – a benchmarking tool for relative strenghts and weaknesses of companies (Sawhney et al. 2006, pp.77, 80)..... 82
Figure 38: The ten types of innovation (Peer Insight 2007, p.6) by Larry Keeley (1999)..... 83
Figure 39: Differences between most and least successful service innovations (Peer Insight 2007, p.9)..... 83
Figure 40: From strategy to business models and onto tactics (Source: Casadesus-Masanell & Ricart 2010, p.U/D)..... 85
Figure 41: Components of a business model affinity diagram (Source: Shafer et al. 2005, p.202)..... 87
Figure 42: The business model canvas (Source: adapted from Osterwalder & Pigneur 2009)..... 88
Figure 43: Hamels business model conceptualisation (Source: Hamel 2002, p.94)..... 90
Figure 44: The activity system of the Apple iPod/iPhone/iTunes platform model (Source: Fraser 2007, p.72)..... 91
Figure 45: Elements of a business model (Source: Casadesus-Masanell & Joan E. Ricart 2007, p.3)..... 92
Figure 46: RyanAir's business model representation with its virtuous cycles (orange lines) (Sources: Casadesus-Masanell & Joan Enric Ricart 2010, p.199; Casadesus-Masanell & Joan E. Ricart 2011, p.105)..... 93
Figure 47: Value chain, value shop and value network (Source: Stabell & Fjeldstad 1998)..... 95
Figure 48: Open services value chain (Source: H. Chesbrough 2011, p.35)..... 96
Figure 49: (Source: Itami & Nishino 2010, p.365)..... 97
Figure 50: A typology of Services Innovation as seen by Irish Forfás (Source: CM International 2006, p.21)..... 99
Figure 51: The epicenters of business model innovation (Source: adapted from Osterwalder & Pigneur 2009)..... 101
Figure 52: Business model perspective on blue ocean strategy and the creation of new markets (adapted from Osterwalder & Pigneur 2009, p.228)..... 101
Figure 53: The forces influencing business model innovation (adapted from Osterwalder & Pigneur 2009, p.201)..... 102
Figure 54: Six characteristics of wicked problems (Source: Conklin 2009, p. 19)..... 119
Figure 55: Research streams on perceived value (Sánchez-Fernández & Iniesta-Bonillo 2007, p.430)..... 120
Figure 56: Benefits and sacrifices (Woodall 2003, p.14)..... 120
Figure 57: Sub-forms of value for the customer (VC) (Source: Woodall 2003, p.9)..... 121
Figure 58: Factors influencing consumers' valuation process (Source: Woodall 2003, p.15)..... 121
Figure 59: The ten (revised) foundational premises of a Service-Dominant Logic (Source: Adapted from Vargo & Lusch (2004a; 2004b; 2008))..... 122
Figure 60: Mc Kinsey & Co's value delivery system (Source: Lanning and Michaels 1988 as cited in Ballantyne et al. 2011, p.203)..... 123
Figure 61: The word »design« in english language use (Source: cited in orignal from Merriam-Webster Dictionary and Thesaurus 2011)..... 125
Figure 62: Correlation of (meta) design activities and average growth in turnover (Source: SVID 2003)..... 125
Figure 63: The design thinking process of the School of Design Thinking, HPI-Postsdam, 2011 (Source: Ibid)..... 128
Figure 64: Divergence and convergence in design processes: d.school Stanford's necktie flare model..... 129
Figure 65: The Kano model of customer satisfaction (Source: Yung-Hsin Chen & Chao-Ton Su 2006, p.596)..... 130
Figure 66: Map of design for services with related disciplines (Meroni & Sangiorgi 2011, p.215)..... 130
Figure 67: Service design definitions (all definitions cited in original from Stickdorn & Schneider 2011)..... 131
Figure 68: Integrated service design process (Source: Dubberly & Evenson 2008a, p.6)..... 132
Figure 69: Customer Discovery: Overview of the Process (Blank 2005, p.32)..... 133
Figure 70: The 12 dimensions of business innovation (Sawhney et al. 2006, p.78)..... 133
Figure 71: Taxonomies, typologies and ideal types (Source: Baden-Fuller & M. S. Morgan 2010, p.161)..... 135
Figure 72: Pricing Mechanisms (Osterwalder & Pigneur 2009, p.33)..... 135
Figure 73: The activity system of Southwest Airlines (Source: Porter 1996)..... 136
Figure 74: The cultural dynamics model (Source: Hatch 2004)..... 136
Figure 75: The strategy canvas of Cirque du Soleil (Source: Kim & Mauborgne 2005, p.40)..... 137
Figure 76: The application of the business model canvas to the blue ocean factors (Source: adapted from Osterwalder & Pigneur 2009, p.229)..... 137
Figure 77: Innovation process with seven modes (Kumar 2009, p.95)..... 138
Figure 78: »Innovation toolkit«: An exemplary set of methods and tools for the respective stage in the innovation process (Kumar 2009, p.95)..... 138
Figure 79: The buyer experience cycle (Source: Kim & Mauborgne 2005, p.123)..... 139
Figure 80: The buyer utility map (Kim & Mauborgne 2005, p.121)..... 139
Figure 81: Factors to consider when implementing BMI in organisations (Source: Osterwalder & Pigneur 2009, p.271, adapted from Jay R. Galbraith's (2001) five star model)..... 140

Infoboxes

Infobox 1: »Tame« vs. »wicked« problems..... 27
Infobox 2: Abell's three dimensions of a market (definition)..... 33
Infobox 3: Excursus on service-dominant logic (S-D logic)..... 46
Infobox 4: An account of »management-oriented« design thinking definitions..... 57
Infobox 5: A short description of the nine business model building blocks after Osterwalder et al. (2009)..... 89
Infobox 6: Some business model definitions (compiled by author)..... 134

1 Introduction

We live amidst exciting times. Our worlds historically handed down power relations change fundamentally. Continuous financial crises, natural and high-risk technology disasters, the web-organised struggles for freedom in the Arab and other parts of the world, as well as new economic realities based on hyper-competition and the rise of Asia or South-America are just a few examples. New political economies, also outside the often conjured up BRIC states, will soon be roused from their hibernation. Economies with natural resources, huge labour forces and the irrepressible drive to catch up to our living standards. Economies which have for the present »better starting situations« (inexpensive labour forces and access to own mineral wealth, no regulatory barriers, rising demand in unsaturated domestic markets, etc.) and less constraining path-dependencies. And finally economies which grow out of, or at least with, the advent of a digital age and the democratisation of knowledge.

The effects, such an turbulent environment will impose on our saturated western economic systems, have the potential to disrupt many established businesses or even whole industries. Leaving aside any environmental considerations[3], the immense wealth and knowledge we produced namely gave rise to the paradox situation that the success of our industries led to a commoditization of a broad range of products[4]. These disruptive forces may lead product-focused companies to, what D'Aveni (2010) and Chesbrough (2011) call, an ever-increasing »commodity trap«, which is represented by:

→ The fact, that useful *knowledge, information and technology are* already almost *ubiquitous* worldwide. This is especially true for manufacturing knowledge (as it was outsourced first) and business process proficiency.

→ The *ever increasing global competition*, which nurtures the permanent migration of manufacturing to areas with lower costs[5] than at sites before. This is one of the reasons leading to the high(er) growth rates in the developing countries, whereas in contrast *stagnation* is holding place *in most of our developed countries*.

→ To make things worse, the unsustainably high levels of debt of the advanced economies, which imply that former wealth and *growth has been financed by the poorer ones*.

→ And finally the self-imposed *predicament of hyper-competition*, leading to product cycles insanely turning faster and faster: *"New designs and new capabilities are emerging every four to six months, which means that even very successful, differentiated products quickly lose their luster. Competing on such time intervals is like the Red Queen in »Alice in Wonderland« where one must run as fast as one can simply to stay in place."* (ibid. 2011, p.10)

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[3] *I personally believe that the »success« of our western industrial model came at a cost and that the next »loan crises« will not concern financial markets anymore, but the loans we've taken from nature and our environment. But this isn't the topic of this thesis.*

[4] *Just think of »taken-for-granted« cars, entertainment equipment (e.g. radio sets or TV's) or even mobile phones.*

[5] *A recent example is the »life-cycle« of Nokia's production facility in Jucu, Romania. Built in 2008, as an escape to the former expensive German site, it will be shut down this year. So, just three years later, Nokia seems to be »forced to move on«.*

1.1 Problem Statement

> *"In highly uncertain, complex and fast-moving environments, strategies are as much about insight, rapid experimentation and evolutionary learning as they are about the traditional skills of planning and rock-ribbed execution."*

Rita McGrath (2010, p.248)

Along with these trends another development is on its way, the *shift towards services*. In western economics the bigger share on aggregated value added can already be attributed to it. The United Nations »World Investment Report« estimates that services account for more than 60% of gross domestic product (GDP) of thirty-five countries which are amongst the top forty economies in the OECD (2010). In some countries they have even risen up to more than 70%, while manufacturing slipped down to less than 20% of GDP (OECD 2000).

In Germany for instance 45% of the 1970's working force were employed in services. In 2009 this number already rose to 72%, while the proportion of the labour force in manufacturing dropped by 21% during that period of time. Today the German gross value added is obtained to 69% by services and ca. 30% by manufacturing industry (DeStatis 2009). That doesn't necessarily mean that less physical production is taking place, it rather shows that the biggest proportions of added value shifts, or better shall further shift, from just selling products to integrated service solutions. Notwithstanding their current economic problems, parts of the USA are still innovation-friendly environments which most successfully bear companies[6] who buck the trends described on p.11. Many of them have in common that they seem to owe their success to lining themselves up as services. To those role models (e.g. IBM, Apple, Google, etc.) it then is often referred to in business press articles, studies or management talks. In retrospective the business sphere talks about their *superior strategy*, or emphasises the *clever business model*, while others envy how they've changed *the rules of the market and created new »demand«*. Some try to copy their business logic, many fail, and in the end the call for also becoming more *»innovative«* or more *»service-oriented«* is gaining upper hand. Interestingly this call often goes hand in hand with a paradox, namely the phenomenon of *over innovation*. Also other, not so successful, companies innovate like crazy. Problem is, most »innovations« flop, as they are irrelevant in customer's eyes, or worse[7] no innovation at all (e.g. mere inventions or incremental improvements, cf. p.22 ff.). This aimless proceeding often rather bears witness to the lack of vision and inspiration on *what one should build or do next*, than on *how* to innovate (although this is also very important). Real visionary and value creating *smart innovation* (Herrmann & Moeller 2008) that finds resonance, acceptance *and* improves peoples lives is

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[6] *Just think of Google, Amazon, or Facebook. But also the »good old« IBM with its permanent business redefinitions, and – what shouldn't be missed, when talking about innovation – the unprecedented ecosystem of Apple, are leading edge examples. Newer and smaller entrants like Zappos, Threadless, or Zipcar are also getting ready to redefine what (product-) service systems mean. Despite a few examples like Spreadshirt, Xing or ResearchGATE which aren't mere copy cats of successful American internet business models (rather adaptions and co-evolutions of them), the German »Servicewüste« so far hasn't brought forth any comparable (service) innovations which are that groundbreaking.*

[7] *Here depending on the definition of innovation. See Chapter 2.2, p.22 for a short discussion addressing that topic.*

therefore, as often claimed (Kelley & Littman 2001; T. Brown 2009), what companies should strive for, but still rare (just think of our experiences with »financial innovations«). Some, like Business Week columnist Bruce Nussbaum, go even so far to state that (the current understanding of) innovation is dead and *transformation* is the key to creating future economic value (cf. B. Joseph Pine & James H. Gilmore 1999). For now I don't care about such semantic sophistries here, but I want to point to the fact that behind all these discussions a much deeper question is looming, a question that rarely, and if, often superficially, gets elucidated: The quest for *value*.

While business people and other rather logic- and reliability-oriented professions (e.g. engineers), when looking at above mentioned success stories, tend to speak in abstract terms about the clever *creation of new demand*, *strategy*, *market, technology*, or the *business model* and its *process architecture*, designers take a different approach. They pay respect to the great and seamless *user experience* (stories) a new product/service (combination) enables. Similar to the ordinary end user they pay attention to how convenient a system works and rejoice its »magic«, once they discovered how it improves or may help improving their lives. It is the *»great user value« behind the solution* (with its inherent value creation logic, which is based on deep user insights) that they would analyse and admire in retrospect.

To put it frankly, and a bit black and white, the former are exploitation-oriented experts and interested in maximising value for the company[8], while the latter are concerned with exploration and maximising value for the customer. Obviously both are interrelated[9]. So the – actually not so new, but existential – question is always: How can a sustainable equilibrium between both be achieved (Drucker 2007, Liedtka & Ogilvie 2011)?

And isn't the disruption of an existing, or the creation of a new market just the result of a newly created customer, which in turn required the discovery and design of new user value?

It therefore is not by chance that in the search for new answers to that, some farsighted businesses[10] have either discovered, or are reinforcing the integration of design approaches for their strategic innovation efforts[11]. However, design is still often misunderstood. And a lot of companies still don't see the relations between innovation as »value creation by design«, and strategy. So, in order to unfold it's full potential in terms of above stated value equilibrium, it still needs some clarification what exactly design's contributions are, how it relates to value and services and why both seem to be inevitably connected to strategic innovation. Or in other words, it needs some clarification in how far »design« may be able to help companies escaping those looming commodity traps.

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[8] Which in particular has been a wrong track with excessive shareholder value thinking as the uttermost important goal of strategizing. No one asked the »old-fashioned« question anymore, whether shareholder value isn't the natural effect/outcome of increased customer value. However, this fixation seems to change slowly, as even Jack Welch, former CEO of General Electric (GE) and one of the biggest proponents of this kind of thinking believes that shareholder value is always an outcome and not a strategy.

[9] Additionally and on a normative level both are usually also obliged to provide »value« to society.

[10] Examples are Steelcase, Procter & Gamble (P&G), GE, Mayo Clinics, Mattel, or Phillips, to name but a few.

[11] The success and growing media coverage of institutions like Stanford's and Potsdam's d.Schools, the IIT Institute of Design, or the design program at INSEAD, to name but a few, also show the still raising interest in design's value contributions.

1.2 Research Objectives & Structure

Against this background I want to perform an interdisciplinary »sweeping blow« that points to the often overlooked links to value creation by design, in the context of strategic innovation. A notion of innovation that is seen too narrow, isn't capable of delivering value configurations that maximise both, value for the customer and value for the company. Chapter 2 will therefore examine the partly paradigmatic problems which explain why supplier-minded companies may struggle in uncertain business environments and why they may also not be well prepared for the services economy. I will further show, that strategic innovation should usually strive for three outcomes: 1) An *increased value for the customer*, which implies the need to gain knowledge about *who* he is and *what* he values (in *which* context). 2) *New business models*, that is knowing *what* value to create and *how* to profitably deliver it. And eventually 3) the definition of *new markets*, being a function of answering *what* is being offered to *whom*. At best strategic innovation is a holistic re-definition to all these fundamental and interdependent questions.

Figure 1 displays them with some exemplary overlaps that already show that design (e.g. in terms of service design (thinking)) may be a mediator or facilitator for creating value on all those dimensions, especially in light of the to be criticised, lacklustered innovation approaches.

The three Outcomes of Strategic Innovation. A Re-definition of ...

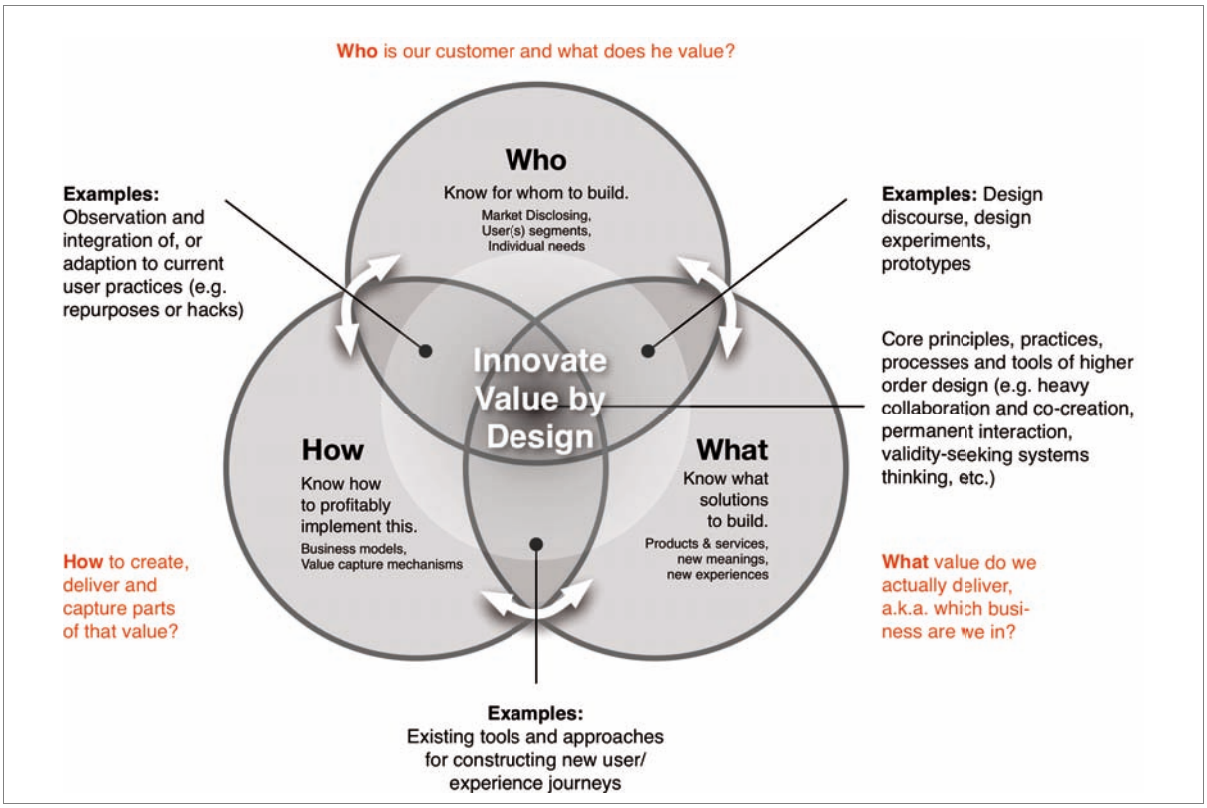

Figure 1: The three outcomes of strategic innovation (Source: Author, adapted from Sniukas 2010)

Furthermore I want to show that in the end every dimension of strategic innovation either culminates in the concept of user value, or needs to be informed by what actually constitutes the latter. On that score I will take a close look at what actually (customer) value means (Chapter 4) and how it relates to the redefinitions of markets, respectively the creation of new customers (Chapter 3). Chapter 5 will then outline a contemporary notion of design and show its value contributions to those dimensions in terms of its capability to not only uncover customer value, but also to redefine and create it in meaningful ways. Finally I'd like to examine in Chapter 6 how discovered/constructed value (propositions) have to be embedded into a business model in order to not only efficiently deliver the defined value, but also to capture some of it in terms of above mentioned equilibrium. In this discussion also the relations of (service) design and business model innovation shall become apparent.

I am aware that the various and interdisciplinary research areas (e.g. operations research, management, design, anthropology, etc.) I have to touch are huge and partly inconsistent in itself. Seldomly they base on common theories or empirical ground what limits this work's aspiration right from the beginning. My goal is therefore to rather open up the field with the help of a more general literature review and show apparent overlaps of previously isolated areas which need future research. This may also be typical for any research that is concerned with design as a meta-discipline, as it will always be concerned with »connecting floating fields« (Jonas 1999).

However, I will also show every now and then that the sometimes claimed »design will save the world« hype (cf. Peters 2005; Pink 2006, to name but a few) is perhaps slightly exaggerated. Design, especially in its strategic applications still has to learn as much from other disciplines as they can learn from design. A side-goal of this thesis from a designers POV therefore is also to carve out the dimensions and key factors one should consider when creating new user value with the intent to also capture some of it (Chapter 6).

2 The big Strive for Innovation – What's the Challenge?

Leaving any discussion of it aside, the growth paradigm still is the dominant driver of all our economic activity[12]. Although there are exciting examples of companies withdrawing themselves from growth pressure and staying profitable nonetheless, I assume in the following that every company needs, at least qualitative, growth. Consequently it has roughly two main options: *Merger and acquisitions* (M&A), a wave that significantly slowed down[13], or *organic growth*, whereby with organic I mean no artificial growth via creative accounting or »financial innovations« but traditional production or service business with »real value creation« for customers and society (cf. p.37).

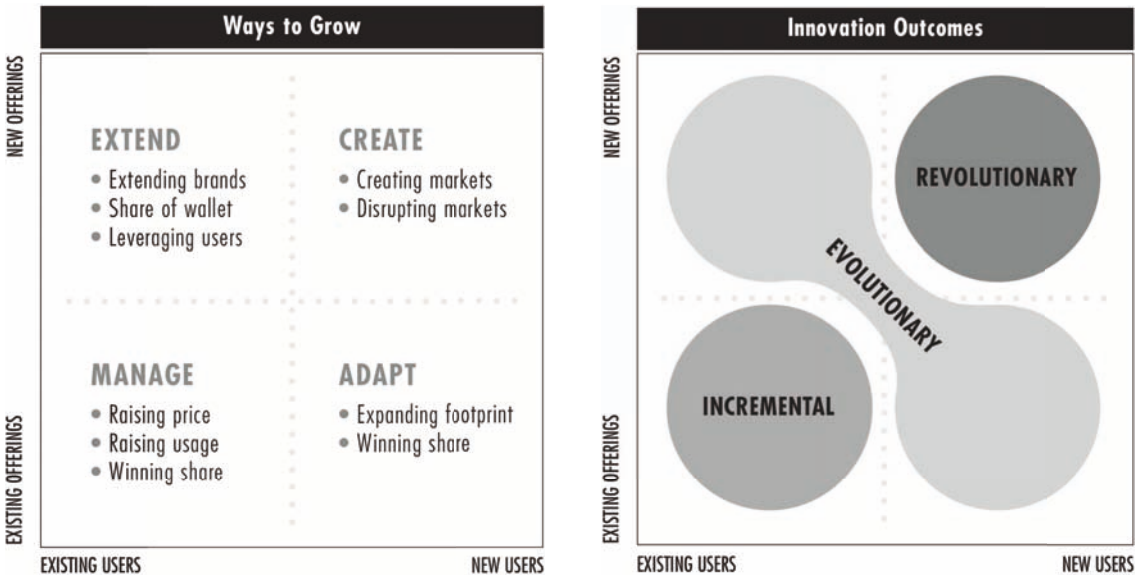

Figure 2: Ways to grow (Jacoby & Rodriguez 2007, p.12) and innovation outcomes (ibid, p. 14), cf. Brown (2009, p.161)

Within organic in turn again two options are apparent. The first is growth *within the given boundaries of a proven business concept* (industry). Here market shares stay the same or at least increase in *growing markets*, whereas they have to be evolutionary increased by *product or process innovation in mature environments* (cf. p.22 ff.) and usually at the expense of competitors' shares of the market. The second, and only left option for organic growth is to circumvent competition with new business concepts, that is *strategic innovation*.

[12] *Remark of the author: This doesn't reflect my personal opinion and is just an assumption for the typical line of reasoning in the business and economics literature and my following arguments which relate mainly to such sources.*

[13] *There are still M&A-intensive markets and industries (e.g. the pharmaceutical industry). However M&A as all-purpose weapon has lost its attractiveness which is also indicated through the inclining interest on the topic in the scientific discussion.*

In Jacoby & Rodriguez' (2007) »ways to grow« matrix[14] (Figure 2) this may be best represented by advanced evolutionary and – as this thesis will show – revolutionary combinations of new user(s) (value) and offerings. But what exactly is strategic innovation, or better what is strategic about it? And what does innovation mean anyway? Are there any problems with current perceptions on the topic? The following pages will try unclose the problem field and its interrelations in some detail.

2.1 The Strategy Dilemma

> *"We don't have a traditional strategy process, planning process like you'd find in traditional technical companies. It allows Google to innovate very, very quickly, which I think is a real strength of the company."*

Eric Schmidt, CEO of Google

Strategy as *"the science of planning and directing large-scale military operations, of manoeuvring forces into the most advantageous position prior to actual engagement with the enemy"* (Laird 2002; cf. von Clausewitz 2003; Tzu 1994) has age-old military roots and was mostly hierarchically perceived, having a highly vertical and time-bound structure. After an analysis of a situation at hand an »elite planning« team would decide on necessary courses of action, whereas the following implementation of the plan was considered to be a separate, discrete process. Over the course of time a tremendous and comprehensive amount of literature with theories on the definitions of strategy and planning accumulated (cf. Mintzberg et al.'s (2001) different accounts of strategic planning, p.119 in the appendix). Albeit there is broad agreement among most authors considering planning as an essential part of organisational strategy, the only key element in all definitions on the purpose of strategy that remained until today is the *strive for achieving competitive advantage*[15]. On that score also a business-side of strategic planning (and approaches of strategic management) originated, whereas the academic discourse started mainly in the early 1950s. The following account shall briefly touch several generations of strategic planning in extracts.

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[14] *Their matrix usually is used to asses a companies »innovation bias« as it makes clear how radical innovation efforts shall become. Depending on the growth intention of the firm it becomes clear what the expectations for results will be and how the innovation process will be approached. Whereas incremental innovations are brought forward by execution-focused people and processes (e.g. stage-gate flows which focus their research on understanding instead of exploration), any strive for revolutionary outcomes will require exploration-focused people and processes. Organic growth from evolutionary innovation however may well emerge from every quadrant. Therefore they conclude that one needs to be clear what exactly the internal understanding of innovation is, and how this bias may be reflected in currently approaching the latter. Without having defined that, they state, the innovation efforts are likely to fail: "Intent was different, process was different, and outcomes were different. Mismatching growth intent and capabilities is the breeding ground of failed innovation efforts. To maximize innovation effectiveness, understand your desired outcome and then match people, capabilities, and processes to the task at hand." (Jacoby & Rodriguez 2007, p.15)*

[15] *Marc Sniukas (2007) distilled the main themes throughout the strategy literature that show how competitive advantage can be achieved:*
1) Via differentiation and the acquisition of a unique market position relative to competitors – especially in customers perception and
2) by making explicit choices on how to align the companies resources and activities to each other and the needs of your customers
(cf. Porters (1996) notions of trade-offs and »strategic fit«).

In the 1950s the famous SWOT[16] analysis model dominated the strategic planning. During the 1960s qualitative and quantitative models of strategy like the GAP-analysis (Ansoff 1965) were in use. During that time also the well-known PIMS project started. Both, the 50s and the 60s are now known as the production/product-centered »sales era«. However authors like Levitt (1960) already criticised at that time, what he called a strategic (marketing) myopia, and demanded a »sales orientation« that would gain some influence in the following two decades. Later during the 1970s size, growth, and portfolio theory emerge and gain importance. Also the first consultant-based tools for strategizing are marketed, e.g. the B.C.G. Portfolio Analysis or McKinsey's 3x3 matrix. In the late 70s positioning theory (Ries & Trout 1979) got widespread attention and was practiced from then on. During the early 1980s, strategic segmentation (Abell 1980), the shareholder value model (Rappaport 1986), and Porters (1985) influential models (e.g. five forces with their emphasis on industry structure, value chain, generic strategies, »stuck in the middle« phenomenon, etc.) became the standard. The rest of the 80s was dominated by strategic intent and concepts like core competencies (Prahalad & Hamel 1990; 1994), i.e. resource-based view, as well as market-focused organizations. In the late 80s also notions like reengineering (Hammer & Champy 1993) and best practice strategies, better known as benchmarking (Dertouzos et al. 1989), led to an ever-increasing focus on industry and the activities of the competition as units of analysis. Between the 80s and 90s total quality management (TQM), continuous improvement (Kaizen), lean manufacturing or Six Sigma complemented the supplier-centered view on strategizing and led to the still ongoing efficiency movement. In the 1990s however the fast pace of increasing technological changes and diffusion as well as the new realities of the upcoming information age rendered many of the old theories and tools obsolete (Bettis & Hitt 1995). In this new environment the classical units of analysis like *strategic business unit* (SBU), *industry* (environment the SBU is competing in), and *corporation* (legal entity of the SBU) therefore are slowly losing their reliability (Bettis 1998, p.358 f.). Nevertheless they still dominate the strategic decision making in theory and practice although newer models of strategic analysis and planning, that emphasise a business transformation mindset, gained influence recently. The new models are now focused on organisational learning (Nonaka 1995, cf. design as learning process, p.62), organisational systems within (open) relationships and networks (e.g. strategic networks, value webs, value net, open innovation, etc.), flexibility, and the adaptability to change. In addition to such a strategic agility, »innovation« (as the capability to initiate change rather than being surprisingly hit by it) has become the new strategy paradigm which is being repeated countlessly by CEO's all over the world. A recent study by Boston Consulting (Andrew et al. 2010) underscores this trend. 72% of top management respondents saw (strategic) innovation as a top-three priority and a majority also plans to boost their spendings accordingly.

[16] *Also known as TOWS, SWOPT or WOTS-UP.*

Fair enough, but if strategic innovation shall be the new centerpiece of strategy why are there still problems that hinder companies to innovate at a large scale? Could it be that most of them are rooted in the historical ballast of how the majority of the corporate world still perceives strategy (and its dimensions *content*, *process* and *tools*[17])? This is what I want to touch shortly on the following pages by examining what actually is meant by innovation in terms of strategy and by assessing the problem with current perceptions. The short critique shall then lead to a definition of strategic innovation providing the basis for this work.

DOWNSIDES OF THE CURRENT CONTENT OF STRATEGY AND INNOVATION

> *[...] pursuing incremental improvements while rivals reinvent the industry is like fiddling while Rome burns.*

Gary Hamel (1996, p.69)

According to the above mentioned B.C.G. innovation study a growing percentage of companies again (or rather still) concentrate their efforts on minor changes to existing offerings or cost reductions for the latter (Andrew et al. 2010). This finding conforms with Sniukas (2007) critique that there is 1) a too strong focus on best practice and operational effectiveness[18] (resp. cost reduction) and 2) a tendency to peer hard at the competition by either imitating its moves, or by trying to find and hold *(the) one* strategic position. Both approaches aren't very strategic, let alone innovative.

Sure, cost reduction is important and needs to be done as integral part of management, but operational effectiveness alone isn't a strategy (Hamel 1998c). In the long run this focus leads to doing the same things as the competition, therefore failing to differentiate what in turn may lead to a rather reactive acting on the market, leaving oneself to the mercy of the game changing competitors or market entrants (Sniukas 2007). The most extreme scenario of such a development is well-known: The price as the last battle line.

But any focused »herding phenomenon« not only leads to excessive price and marketing wars that shall just protect and improve gained strategic positions among companies in a segment, it will also reinforce old industry practices and paradigms, therefore shifting attention from ways how to override them. This is also reflected in most current innovation practices, where (internal) process and incremental product innovations (often in the form of »feature disimprovements« with more of more) dominate, which reflects a typical inside-out strategy making attitude (c.f. technology fixation on p.22 ff.).

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[17] *According to de Wit & Meyer (2004) every strategic problem has three dimensions: the strategy* **process**, *the strategy* **content** *and the strategy* **context** *(for the present neglected), whereas every dimension features several issues which in turn are characterised by fundamental tensions or viewpoints (Sniukas 2007, p.10). A fourth practical dimension for examining strategy practice are strategy* **tools** *as proposed by Sniukas (2007).*

[18] *e.g. via reengineering, Six Sigma, ERP, operations research, and »scientific management«*

LIMITATIONS OF PROCESS

Similarly, current strategy and innovation practices are often criticised for their obsession with control. They are usually (and justifiably so) regarded as mere adaptions of last years plans or budgets instead of being the means for searching new business, innovation or differentiation opportunities. Again this is reflected in the process critique within two main themes indentified by Sniukas (2007, p. 18). Firstly, strategic planning seen as the above mentioned adaption of last year's plan with secondly, too formal and analytical planning processes whose standardisation levels leave no room for exploration and emergent innovation opportunities (Benner & M. L. Tushman 2003). The attempt to guide strategy (not to speak of innovation) by quantifiable and above all predictive analyses based on yesterday's data with models insufficiently representing reality has been described in detail by Martin (2004; 2009) and Moldoveanu (2009). Martin denominated it as the *»reliability bias«* of strategy making. Again it holds, planning and analysis are not strategy. Outcomes are rather incremental in improvement if not to say mediocre (compared to the offerings of game changing competitors).

Another problem concerns the form of strategy processes. They are often assumed to be linear (e.g. analysis, formulation, implementation, change). This thinking also diffuses to many approaches of structuring innovation, e.g. via rigid stage-gate processes[19]. Strategy-as-practice research (Whittington et al. 2006; Whittington 2006; Mintzberg et al. 2001; G. Johnson et al. 2007) however has shown that reality is more messy and chaotic, as a multitude of ways for strategising exists which are often not addressed properly with linear thinking (cf. »Table 4«, p. 119 showing the ten different approaches to strategy making undecked by Mintzberg et al.).

LIMITATIONS OF THE TOOLS

Hand in hand with the processes goes the tools, many of them mentioned already on the short timeline on p. 17. Most of them are custom-tailored to »maintain control of the environment« (Sniukas 2007, p.19 f.). Environment in that thinking usually means the existing market space (Kim & Mauborgne 2005). Mastering and controlling the existing however isn't the main task of fast paced management today. The opposite is true. The historic baggage of planning tools often hinders organisations to understand and react to the complexities of new real word dynamics.

The current perceptions of what »innovation« tools are and how they are used strategically goes in line with above mentioned myopia (e.g. the use of mere »creativity techniques as innovation methods«, stage-gate and similar process-frameworks, unstructured employee suggestion schemes, misapplied market research, etc.). Unfortunately I cannot elaborate this huge discussion in detail as it would go far beyond the scope of this work. Only this much can be said, they usually take an *inside-out perspective* and are considered as ends to itself, meaning that

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[19] *Especially practitioners like innovation consultant and Harvard Graduate School of Design program lecturer Idris Mootee often complain: "Because stage-gate does not pay attention to links between technology and business opportunities, projects are often little more than extensions of existing products. The corporation's development effort, lacking a strong connection to strategy, suffers from fragmentation and its resources are dissipated. It is limited by looking at a pre-defined market and is in nature market-driven and not market-driving. [...] When we apply innovation methodology we try to avoid any stage-gate approach and only bring them in later in the process." (Mootee 2008)*

certain »tools« are not regarded as flexible part of an overarching mindset but as »solutions« to marketplace problems or trends that need to be tackled or *reacted* to. Recent examples are misapplied crowdsourcing or open innovation approaches[20], where both weren't seen as a culturally anchored ways of collaborating in a network of stakeholders but rather applied as »trendy« tools in the hope for fast successes[21]. The same goes for design thinking. Although the methodology may also well be seen as a »powerful toolset« (Liedtka & Ogilvie 2011) it can't just be deployed in terms of a quick win. However, many organisations tried to use it in that way (Walters 2010; Walters 2011), what led to some disappointment and Bruce Nussbaum, one of its biggest proponents and disseminators, to even stating that the label's vigour is now already exhausted (Nussbaum 2011). It's real value contributions in terms of this treatment will be elaborated in some detail in Chapter 5.2.1.

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[20] Just think of the current hype on crowdsourcing design services (e.g. via Jovoto in Germany or 99Designs in the United States) or user-generated, »co-created« idea competitions, often initiated by marketing as a communication »tool« instead of being perceived as real R&D collaboration. Verganti (2009) comments on such phenomena as follows: "[Executives often ask:]'Why don't we launch a design competition? We could get tons of great ideas for free!' This shortcut is a trap. Companies end up spending their energy screening thousands of poor ideas that lie on the left side of the curve [normal distribution of high quality interpreters], lacking the ability to make sense of them and often missing the good ones – if they are ever submitted. If you were a talented interpreter, would you invest significant time and risk losing your interpretation among thousands of others by submitting it to a company that lacks interpretative abilities?" (p. 145 f., cf. Chapter 5.2.2)

[21] Examples for such failed experiments are Kraft's Vegemite iSnack2.0 naming, Skittles new »interactive website«, the recent MadMen casting call, Pepsi's refresh challenge for the Gulf of Mexico, or GAP's »logo relaunch disaster«. Fortunately there exists a myriad of really successful counterexamples of companies who applied them »right« and accordingly developed an outside-in mindset over time.

2.2 The Innovation Dilemma

> *"Innovation is invention that sells."*

Larry Leifer, *Director Stanford Center of Design Research*

Derived from this brief excursion to the historical path-dependencies of strategic thinking I will now turn to its consequences for the prevailing understanding of innovation. Although some limitations have already been mentioned in the previous Chapter it is important to highlight the most common strategy »traps« in innovation.

If one looks up »innovation« in a dictionary usually a short description like "*the introduction of something new*" or "*a new idea, method, or device: novelty*" (Merriam-Webster Dictionary and Thesaurus 2011) paraphrases the term. Well, in non-economic terms this may be right (although it is unclear then what would distinguish it from *invention*). In general management and innovation literature however it is mostly in accordance with Leifer's above stated notion, saying that not the invention itself represents the innovation, but only its combination with a following commercial success[22]. Bettina von Stamm (2003a; 2003b) summarised it to the handy formula »creativity (invention) + implementation = innovation«. Fortunately this view on innovation has diffused widely by now. Therefore successful companies try hard to steadily improve their *technology* on *product-* (in terms of creativity and invention), and *process-levels* (implementation and efficiency)[23]. Every improvement is then marketed aggressively against the improvements of the competition (implementation). In advertising these incremental progressions are also often labelled as »innovation«. Remains the question, how is it possible that 90% of new innovative offerings fail[24] (Peer Insight 2007, p.4), whereas most of the incremental improvements aren't even seen as innovations by its users?

Others however invent real (radical) breakthrough technologies, but when trying to find a market (implementation) they often also fail. Usually they concentrate their market development efforts on the wrong target segments as they come up with wrong assumptions who could use their technology and in what way those users would use the offer. They are restricted by their own way of thinking regarding possible applications and have an insufficient knowledge exchange within their customer and supplier relationships. These phenomena and

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[22] *Since years this notion and its implications is debated much, especially in Germany, which is doing lots of fundamental and basic research. The cause was the growing number of successful commercialisations of German inventions or patents by other countries like the United States, Japan, South Korea and recently also China, whereas the German intellectual originators just profited disproportionally low from the immense value creation their research enabled. Examples are: Andreas Pavel, who patented a portable cassette player in 1977, which was commercialised by Sony®. Also the now famous hybrid engine – first prominently pushed to the market by Toyota – has already been developed at RHTW Aachen in 1973. The most recent example that came to prominence just as to »tragical fame« is the MP3 codec, developed by Fraunhofer IIS, and successfully transferred to a product eco-system by Apple. Although Fraunhofer receives license fees for his IP, they are in no relation to the value Apple captured and still captures from its iPod, iPad and iPhone sales.*

[23] *E.g. line extensions or the modifications of existing product(s) platforms.*

[24] *The study by Peer Insight, an American innovation consultancy working for Fortune 100 companies also revealed that only 4% of innovation initiatives can meet their internally defined success criteria; a mere 8% of innovation projects usually will exceed their ROI hurdle rate and finally only 12% of R&D projects go beyond their cost of capital.*

how to overcome them have been discussed thoroughly in the recent open innovation discourse (cf. H. Chesbrough et al. 2006; Hippel 2006; H. W. Chesbrough & Appleyard 2007; Kaiser & Müller-Seitz 2008; Maria & Finotto 2008; Poetz & Prügl 2010; Fredberg et al. 2008). In both instances technological innovation, ergo new product development is erroneously equated with innovation.

The first mentioned year to year's evolutionary improvement is widely known as *incremental innovation*, and characterised by trying to meet given/market-researched user needs or demands in a short time (to market) with the goal to satisfy a given market (segment) in order to keep or expand its share. The technology breakthroughs are termed *radical innovation*[25]. Both poles refer to the technology base of innovation.

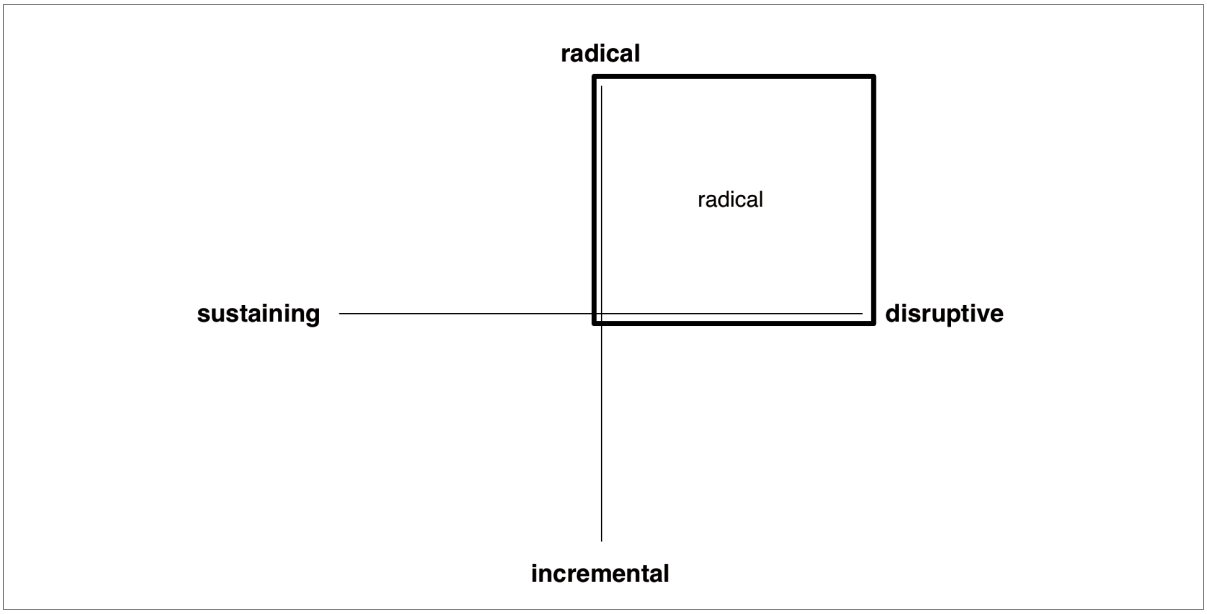

Figure 3: Incremental vs. radical and sustaining vs. disruptive innovation (Source: Author)

The term radical innovation however gets mixed-up often with the notion of *disruptive innovation*, whose counterpart is *sustaining innovation* which then ends up being confused with incremental. In reality the two are orthogonal axes (Figure 3), as sustaining vs. disruptive refers to a completely different theory, developed by Clayton Christensen (Christensen & Raynor 2003; Christensen 2004). It says that large, outstanding firms are regularly endangered to fail »by doing everything right«. The reason lies in the nature of the path-dependencies leaders of *sustaining technologies* face. They usually have to concentrate on satisfying the needs of the high end of their market. By improving its performance they can sell their products for higher margins to their best customers. Hereby the sustaining innovation doesn't have to be just incremental, it could also be a radical technology breakthrough (e.g. analog to digital, digital to optical in telecommunications) that enables the incumbent to sustain or extend its market share in its existing market boundaries.

[25] *Defined by the extent it is based on substantially new technology in relation to existing ones (Govindarajan & Kopalle 2004).*

Disruptive technologies however are *"innovations that result in worse product performance, at least in the near term"* (Christensen & Raynor 2003, p.15). In general they are also *"cheaper, simpler, smaller, and, frequently, more convenient to use."* (p. 15). The disruptive product may not be as good as existing products in the current market but it usually isn't intended to be sold to mainstream customers. As it is more affordable, it takes root in the undemanding portions of the market. From the low end it then slowly progresses[26] until it catches up with the needs of mainstream customers (Figure 4): *"I call [it] disruptive innovation not because it's a breakthrough from a technological sense, but instead of sustaining the trajectory of improvement that has been established in a market, it disrupts it and redefines it by bringing to the market something that is simpler"* (Christensen 2004).

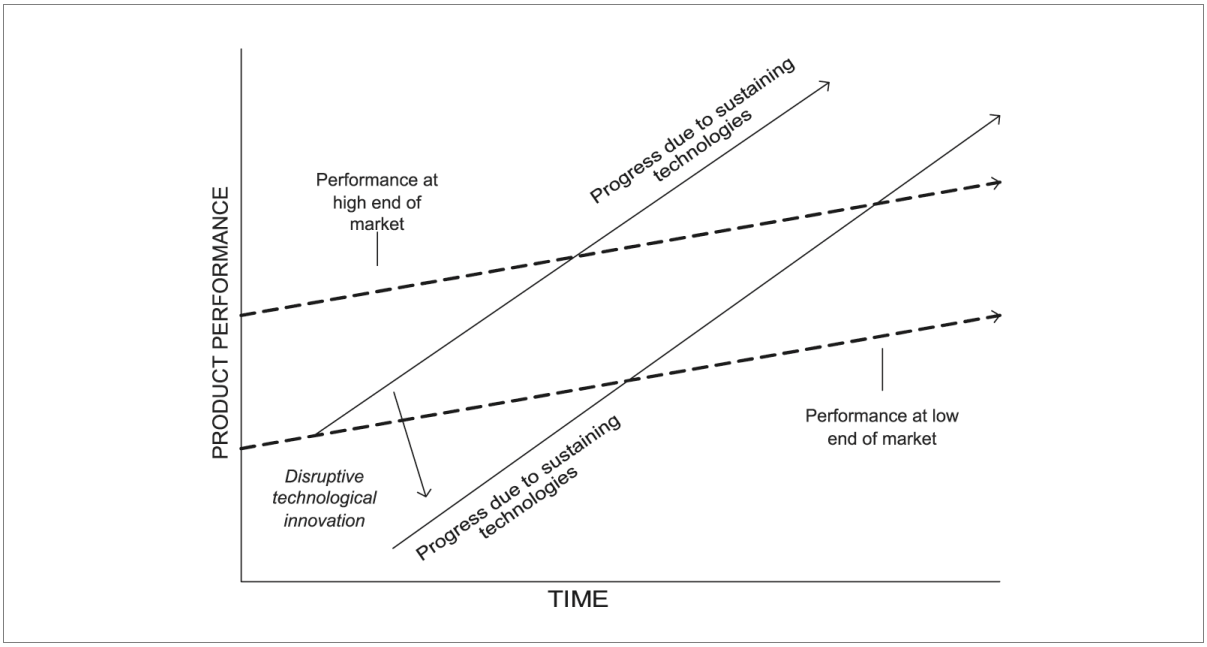

Figure 4: The Impact of Sustaining and Disruptive Technological Change (Source: © 1997 Harvard Business School Publishing → http://www.emeraldinsight.com/content_images/fig/0150250601001.png)

[26] *The process of disruption mostly develops as follows: A premature low-quality, but differentiated product gets positioned in a low-volume marginal segment of an existing market. Its customer segment is willing to give up performance attributes that mainstream users are not. One of the marginal players starts occupying the niche, grows rapidly in terms of size and quality management and retains a cost advantage. The incumbent market leaders are forced to ignore the disruption threat as they have to satisfy the demands of their mainstream customers for whom the new technology/approach isn't good enough yet. The marginal player(s) finally benefit from their steep learning curves and catch up to the quality and performance attributes of the market leaders, still retaining the cost advantage. At least now, the incumbent has to react but it is already to late, as its business model, processes and technology are misaligned to compete with the new entrant. According to Christensen some but not all disruptees have at least the option to retreat to and remain at the higher end of the market (e.g. SAP vs. Salesforce).*

Examples for Disruptive vs. Sustaining Technologies/Innovation

Disruptor	Disruptee (Sustaining Technology/Solution)
Hydraulic shovels	Cable-winch shovels (early 20th century)
Compact discs	Magnetic tapes
Cellular phones	Fixed line telephony
Internet telephony[27]	Fixed line telephony
Community colleges	Four-year colleges
Discount retailers (e.g. Wal-Mart)	Full-service department stores
Smaller, cheaper hard drives	Incumbent hard drive makers
Ink jet printers	Laser printers
Notebook computers.	Wireless handheld devices[28]
Retail medical clinics	Traditional doctor's offices
Nintendo Wii	Playstation and Xbox
Salesforce	SAP
Netflix	Local video stores
Southwest Airlines	Average Airlines
IBM Personal Computer[29]	IBM Mainframes

Table 1: Some examples of innovative market disruptions (compiled by author)

Disruptive innovation is therefore rather market-based[30] and mustn't be conceived in a merely technological sense. However it may emerge intertwined with a radical technological innovation, being the reason for the often erroneously use of »radical«, as some authors just subsume the upper left quadrant of disruptive and radical (see Figure 3, p.23). Radical in that sense means both *technological* and *market/managerial innovation*. If I use *radical* in the following then relating to this notion.

[27] *Cisco and others originally developed the packet-switching technology. It wasn't good enough to be applied to voice communication and took therefore root in the less demanding application of data transmission. Over time it got better and better and nowadays voice signals can be sent over the internet.*

[28] *Here the disruption started with the famous Palm Pilots, developed further to the Blackberries in business environments. Now it reached its current status-quo with iPhone, iPad and Android handheld devices.*

[29] *An exciting example of a company disrupting itself in order to stay competitive. The mainframe business was threatened by the PC development on the one hand and didn't take it seriously on the other. So the whole business was conceived as a completely separated entity.*

[30] *Critics of Christensen's work argue that his theory is best suited to explain direct substitute competitions. Innovations changing consumer behaviours, forcing the redrawing of market boundaries are not sufficiently explained in the model. The same holds for large-force developments, like the technological revolution of the internet.*

2.3 Limitations of Current Innovation Perceptions and Practices

> *"Technology alone, not embedded in an effective business design,*
> *is no longer a viable approach to generating sustained value growth."*

Adrian Slywotzky (1996, p.24)

Against this background the current understanding of innovation can now be criticised. The most obvious point of criticism applies to the perception of innovation. It is clear that, depending on industry focal points it may be perceived as technology (e.g. product R&D in chemical, oil or gas industries) or process (e.g. branding and distribution in consumer packaged goods industries) improvement. Too much concentration on technology (here meant again as product- and process-level) however may be dangerous, regardless of industry focal points which often represent the blind spots, providing ground for either a *radical-disruptive substitute* or *management/business innovations*, being far broader in scope and ranging from complete business models, strategies, leadership styles and even changes to the organisational culture (cf. »The 12 dimensions of business innovation«, p.133, Sawhney et al. 2006).

The three above exemplified dimensions of strategy *content*, *process* and *tools* are all intertwined and influence each other. The thinking that drives strategy making, also drives the approach to innovation. Most of these old ways of strategising are now ill-suited for today's business challenges[31] (cf. the *disruptive forces* from the introduction) and therefore strategic innovation, which is especially true for the now widely adopted 80s principles of the quality and operational excellence movement, the 90s with its business process re-engineering hype and the resulting concentration new product development as drivers of growth (Figure 5 on the next page). Benner & M. L. Tushman (2003) summarized the dangers of the diffusion process of those management techniques favouring *exploitive* innovations at the expense of *exploratory* ones as follows: *"Whereas in stable, technologically certain settings these practices may be productive, in uncertain or technologically complex contexts [they] may be quite counterproductive. [...] Process management and its associated technologies and philosophies are conservative and resistant to anything but incremental or competence-enhancing innovation. This variance-hostile focus on incremental change and existing customers […] severely stunts a firm's dynamic capabilities"* (p. 253). In the same line of reasoning Henry Chesbrough (2011) warns that this, what he calls, »product manufacturer thinking« directly leads to the mentioned *commodity trap,* which brings about products being sold on basis of their cost instead of their value.

[31] *Besides the already introduced disruptive forces, companies also to face the phenomenon of the unmanageable consumer (Liebl 2011) who further weakens their predictability and forecast abilities. Also therefore any overemphasis of e.g. process management thinking may lead to resistance to change and momentum and therefore organisational variability, which in turn may reduce an organisation's ability to adapt (cf. Benner & M. L. Tushman 2003, p.252).*

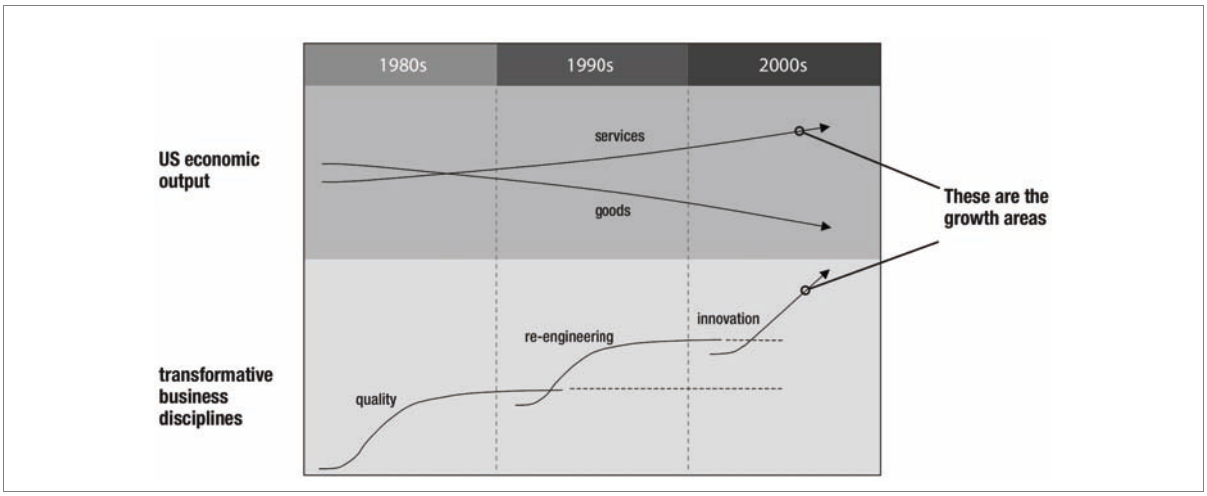

Figure 5: Transformative Business Disciplines (Peer Insight 2007, p.2)

Benner & M. L. Tushman (2003) further add to the discussion that additionally the *"the pressures for organizations to meet multiple, often inconsistent, contextual demands have escalated"* (p. 238). In many cases the conflicting interests of multiple stakeholders (e.g. departments, customers, suppliers, employees) in strategic decision making need to be addressed. This complicated and expensive collaborative process is needed and desired by most companies, but regularly suffers from the pressures of the current turbulent environment (cf. p.11 ff.) which undermines long planning horizons. Nowadays problems in strategic analysis and decision making it seems, have become *wicked problems* (Rittel & Webber 1973) compared to the rather *tame* and well-defined problems of the efficiency and product improvement movement.

EXCURSUS »TAME VS. WICKED PROBLEMS«

The term **wicked problem** was first coined by Rittel & Webber (1973) and describes those tasks, that are difficult or seemingly impossible to solve, because their nature typically is messy, contradictory, aggressive and confounding[32]. They "are ill-defined and unique in their causes, character, and solution" (Chuchman in Riel 2009, p.94) and involve many factors, stakeholders and decision makers with often conflicting values. Moreover a resolution of one aspect is likely to reveal or create other problems, due to complex interdependencies. Therefore approaching wicked problems requires to understand the nature of the problem itself, first. Conklin (2005; 2009) summarised the six main characteristics of wicked problems as follows: 1) They can't be understood until a solution has been developed; 2) They have no stopping rule; 3) Solutions are neither right or wrong; 4) Each problem is essentially unique and novel; 5) Every possible solution is a »one-shot operation with consequences that may include new wicked problems; 6) No alternative solution is given (for a detailed description see appendix Figure 54, p.119).

Tame problems however are relatively »well-structured« with a stable problem statement. They have solutions which can be tried and abandoned until a solution is found. The developed solution can be judged objectively as »right or wrong«, something that is often considered important in organisations with a strong reliability-oriented decision attitude (cf. R. Martin 2009). Further they often belong to classes of similar problems which can be solved in similar manners. As they are primarily technical in nature, having »definite stopping points« (i.e. knowing when an answer or solution is reached) sufficient time and resources work for them.

Infobox 1: »Tame« vs. »wicked« problems

[32] *"The causes of the problem are not just complex but deeply ambiguous; you can't tell why things are happening the way they are and what causes them to do so. The problem doesn't fit neatly into any category you've encountered before; it looks and feels entirely unique, so the problem-solving approaches you've used in the past don't seem to apply. Each attempt at devising a solution changes the understanding of the problem; merely attempting to come to a solution changes the problem and how you think about it." (Riel 2009, p.23)*

As wicked problems are rather social and political, i.e. negotiable in nature, their solution requires behavioural change[33], forcing planning for strategy and innovation to be a social and political process as well. Such a »second-generation planning-system« has already been demanded by Rittel (1973). Instead on just relying on empiricism, analysis, logic and closure (inside-out) he additionally called for processes and tools that emphasise collaboration, facilitation, argument and a multiplicity of views (outside-in). This also explains the ongoing hype of design thinking (with its comparatively different content, process and tools) which will be examined in more detail in Chapter 5.2.1.

Planning progression: Inside-out to Outside-in

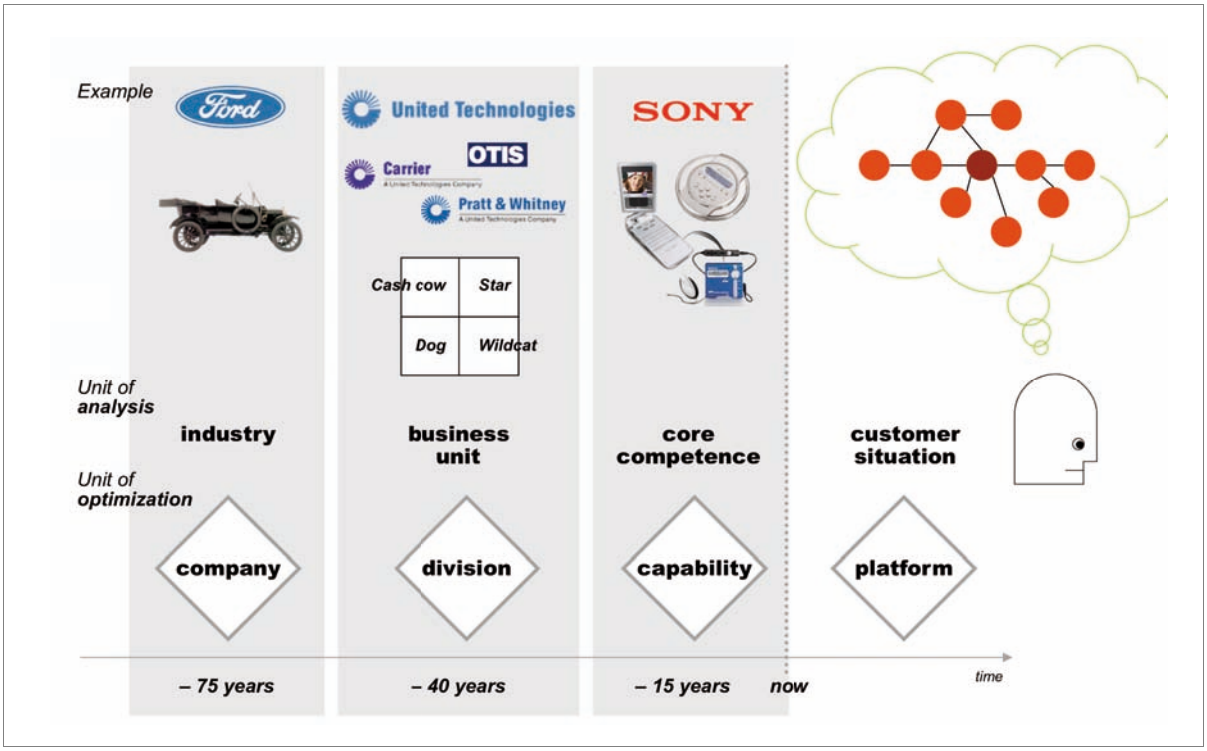

Figure 6: Planning progression from inside-out to outside-in (Source: Keeley 2003)

All these findings are also confirmed by the already mentioned Peer Insight research (2007) which examined the success factors of outstanding American services and business models. The study additionally revealed the following »new« imperatives for planning and strategic innovation: 1) (Business model) innovation is becoming the centerpiece of strategy. 2) The customer as new reference point replaces direct competition, industry or other dominant market-bound reference points. 3) As simplified shown in Figure 6, planning attention shifts from an inside-out (e.g. resource-based view with core competencies and diversification) to an outside-in perspective (cf. H. W. Chesbrough & Appleyard 2007). 4) Strategic innovation means driving the market and competition across industry boundaries, instead of being market-driven. 5) And finally »design« is seen as a »competitive strategy« (Peer Insight 2007; cf. Liedtka 2004b; Fraser 2007; R. L. Martin 2009a; Liedtka & Ogilvie 2011).

[33] *For instance regarding clashing motivation, aspirations, values, (hidden) agendas or desires.*

2.4 So, what is Strategic Innovation now?

> *"The strategist's goal is not to find a niche within the existing industry space but to create new space that is uniquely suited to the company's own strengths – space that is off the map."*

Hamel & Prahalad (1989)

The claim for taking the *customer as reference point* and unit of analysis may not be new (Leonard & Rayport 1997; Kim & Mauborgne 1997; 2004 to name but a few) although it has been uncared for, or misunderstood as mere (user-centered) market research for a long time. Relatively new however is the suggestion to additionally/consciously use the *business model* (cf. Stähler 2002; H. W. Chesbrough 2006; H. Chesbrough 2011) as central unit of analysis for strategising.[34] Above all hovers the strive for *disrupting existing or creating new markets*. These three elements can also be found in most definitions of strategic innovation »proponents«.

DEFINITIONS (emphasis added by the author)
Hamel (1998b; 1998a) perceives »strategy innovation« as the capacity to reconceive existing industry models in ways that create **new value for customers**, wrong-foot competitors and produce new wealth for all stakeholders by devising new products/services, **redefining market spaces**, or redrawing industry boundaries (1996). He further already in the 90s mentions the growing importance of **business model innovation** as source for competitive advantage (1998c).
Also Yates and Skarzynski (1999) think of strategy innovation as the act of redefining the basis of competition within the company's industry. This may be achieved by **breaking through established boundaries**, e.g. with the help of **new business models**, which leads to the **creation of new market space**.
Schlegelmilch et al. (2003) say that "[s]trategic innovation is the fundamental reconceptualisation of the business model and the reshaping of existing markets (by breaking the rules and changing the nature of competition) to achieve **value improvements for customers** and high growth for companies."
Kim and Mauborgne (2005) think that "[v]alue innovation makes the competition irrelevant by offering **fundamentally new and superior buyer value** in existing markets, and by **enabling a quantum leap in buyer value** to create new markets."
Markides (1999; 2000) says: "Strategic innovation is a **fundamental reconceptualisation of what the business is all about**, which, in turn, leads to a dramatically **different way of playing the game in an existing business**" (2000, p.19).
Hamel and Prahalad introduce the notion of »strategic intent« as a company's main driver to **create new industry space** (1989) and develop/maintain core competencies which facilitate the **invention of new markets** (1990).
As outlined in 2.2, Christensen et al. (2002) claim that growth derives from **new ways of competing** and that companies are well-advised if they search for ways to create **new markets and business models**.

[34] *Authors like Adrian Slywotzky (1996) or Kees van der Heijden (1999), to name but a few, demanded this already in the 90's (the success of companies like Dell, Starbucks or RyanAir proved them right). Nevertheless it took a long time for this kind of thinking to diffuse into the mainstream of the academic as well practical realm.*

DEFINITIONS (CONTINUATION) (emphasis added by the author)
Tushman and O'Reilly (2002; 2004) show how an ability to manage the ambidexterity of disruptive, as well as incremental, streams of innovation may lead to **new markets and a rewriting of industry rules**.
Markides & Charitou (2003) describe strategic innovation as "**innovation in one's business model** that leads to a **new way of playing the game**" (ibid, p.55) and attacks the established players (2004).
Hamel and Välikangas point to resilience as "[…] the ability to dynamically **reinvent business models** and strategies as circumstances change" (Hamel & Välikangas 2003, p.53).
Govindarajan and Trimble (2004) perceive "[…] strategic innovation [as] a creative and significant departure from historical practice in at least one of three areas: the **design of the end-to-end value chain architecture**, the **conceptualization of delivered customer value**, or the **identification of potential customers**" (p.69).
Also practitioners like Palmer & Kaplan (2007) see it as "the creation of growth strategies, **new product categories, services and business models** that change the game and generate significant **new value for consumers, customers and the corporation**."

Figure 7: Strategic innovation – A collection of definitions

Strategic innovation therefore is neither technical nor managerial or social[35] innovation alone. It is always a holistic combination or recombination of all of these which lead to either …

1) Increased value for the customer[36] and in consequence to the company,

2) New business models, or

3) New markets (by disrupting or reshaping existing ones, or by creating new ones).

[35] *Or as Peter Drucker put it: "Above all, innovation is not invention. It is a term of economics rather than of technology. Nontechnological innovations—social or economic innovations—are at least as important as technological ones" (Drucker 2007, p.22) Accordingly he concluded that "[it] is the job of business to convert change into innovation, that is, into* ***new business****. And it is a poor businessman who thinks that innovation refers to technology alone. Social change and social innovation have throughout business history been at least as important as technology. After all, the major industries of the nineteenth century were, to a very large extent, the result of converting the new social environment—the industrial city—into a business opportunity and into a business market. This underlay the rise of lighting, first by gas and then by electricity, of the streetcar and the interurban trolley, of telephone, newspaper, and department store—to name only a few" (ibid.. p.56).*

[36] *In this work I will use the terms customer, user or client synonymously – although I am aware of the fact, that there exists a finely graduated differentiation (e.g. customers as decision makers being different to end users in corporate settings), especially from a design perspective which not without reason often rather talks about human- or people-centric design. I will also try to avoid the term consumer, as it is outdated in the context of this thesis (e.g. implies passive consumption, no co-creation or other involvement activities from a services perspective, the implication of just personal use, etc.).*

2.5 Conclusion

Peter Drucker (2007, p.20 f.) once stated, the one and only purpose of a business is to *create a customer*. A customer however is created by offering (new) value to him. The value in turn is delivered by the unique configuration of the business model which must, in customers subjective perception and as the next chapter will show, be superior to available alternative solutions constituting the market. In order to achieve the latter, one needs to know exactly what he values, how he currently accomplishes his tasks and goals within his given context and which new value (offering) configurations (that he even dares to think of yet) could provide him this new superior utility (cf. Chapter 5).

Deduced from that the following pages will now further examine the topics that emerged. To begin with I'm going to give a view on a useful definition of the market construct and its relations to the notion of user value and business model innovation. Secondly, Chapter 4 will look in very detail behind the concept of customer value itself (p.37 ff.), as its thoroughly understanding seems to be the very basis of being able to innovate in terms of what has been written so far. This also involves a short discussion of design approaches to innovation in Chapter 5 which are inevitably bound to it (p.50 ff.). Chapter 6 will then examine what exactly is meant by business model innovation and how it relates to service design (thinking), a design stream that may connect the previously examined dimensions (p.81 ff.).

3 Creating new Markets – Creating User Value?

"There is only one valid definition of business purpose: to create a customer."

Peter Drucker (2007, p.20)

Disrupting existing or creating new markets sounds theoretically great. But what actually constitutes a market? And what are the important dimensions one has to consider if this should be the outcome of strategic innovation? One definition that is able to answer that and which is referred to and built on until today, can be found in Derek Abell's famous business classic *»Defining the Business - The Starting Point of Strategic Planning« (1980)*, where he conceives market as the area, where *customer functions* (i.e. goals to be fulfilled, utility to be provided, value to be delivered), *alternative solutions* (e.g. technologies, services, DIY, etc.) and *customer groups* (any segmentation of customers according to preferred alternative solutions and demanded functions) overlap and form a *market space*. They are outlined shortly in Infobox 2.

Figure 8 immediately uncovers the most common trap, namely perceiving and therefore officially defining one's own market boundaries just by the industry one is operating in[37]. Real disruption often emerges outside this space and leads to what Adrian Slywotzky (1996) called »value migration« across industry borders. Additionally it shows clearly that two of three dimensions are concerned with the living contexts and perspectives of the user, which underlines the importance of the conclusions drawn in Chapter 2.3 (p.28). I want to emphasise some of them again.

First, the customer as reference point. Again it was Drucker who pointed to its importance and stated: *"With respect to the definition of business purpose and business mission, there is only one such focus, one starting point. It is the customer. The customer defines the business. [...] It is defined by the want the customer satisfies when he or she buys a product or a service. To satisfy the customer is the mission and purpose of every business."* What immediately brings us to the second point, the outside-in perspective, as he concludes: *"The question, What is our business? can, therefore, be answered only by looking at the business from the outside, from the point of view of customer and market"* (Drucker 2007, p.24).

[37] *Joachim Berg (2005, p.76) named those in fact fluid and not predefined market boundaries »collective imaginations« (cf. Levitt 1960).*

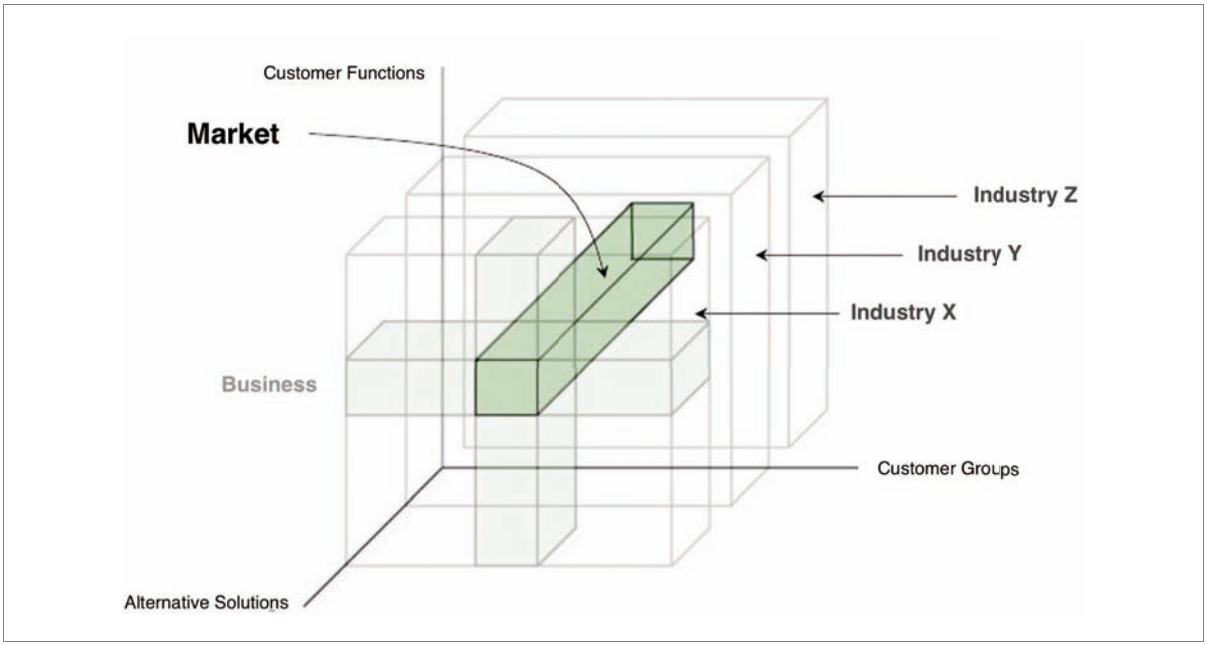

Figure 8: Market vs. industry vs. business (unit) (Source: adapted from Liebl 2007)

ABELLS THREE DIMENSIONS OF A MARKET (DEFINITION)

Customer Groups

For Abell the customer groups are the starting point of any business definition. Their segmentation can be performed in many different ways. It could be done by geographical, demographic, or socio-economic factors, or by lifestyles and individual characteristics. A decision that is subject to the individual requirements of the company (Abell 1980, p.170). The interplay of the customer groups and the two other dimensions of his model have already been described by Drucker (2007) in 1954: *"The consumer—that is, the ultimate user of a product or a service—is always a customer. But there is never the customer; there are usually at least two—sometimes more. Each customer defines a different business, has different expectations and values, buys something different"* (p. 24-25).

Customer Functions

Which customer problems, respectively needs is the firm addressing with its offering? Or better, which ones should it address? These questions can be answered by analysing the motive structures of customer groups. From a users perspective the functions are a combination of attributes that form the utility or value that is delivered (Abell 1980, p.170 ff.). A classic textbook example for that is the case of Cadillac which nearly had to file for bankruptcy when it decided to not compete anymore within the logic of the car industry: *"Cadillac competes with diamonds and mink coats. The Cadillac customer does not buy 'transportation' but 'status'"* (Drucker 2007, p.25). Such a radical business definition led Cadillac into a major growth despite the depression in the 1930s.

Alternative Solutions

Abell originally termed this dimension »alternative technologies« but I prefer solutions as they needn't be technologic in nature. It encompasses those solutions that, from customers perception, are a way of addressing and solving his problems. If for instance he encounters a transportation problem his solutions could roughly be street, rail or air. Again the company can decide how precisely it wants to granulate the alternatives so that they make sense. In the example this could lead to walking, private car, car rental, bike, helicopter, speed boat, etc. (Abell 1980, p.172 f.). Or as Drucker puts, "[...] competition must always be defined according to the customer's concept of what product or service he buys and thus must include indirect as well as direct competition" (Drucker 2007, p.27).

Infobox 2: Abell's three dimensions of a market (definition)

As Figure 9 shows, this market-based view (*company should*) obviously has to be aligned with what already exists (*company can*) and what shall exist (*company will*) in a company. This may encompass a resource-based view on core competencies and the like and more importantly not at least cultural factors (e.g. the driving vision and values that could be in complete contrast to what to what users demand).

BUSINESS MODEL MANAGEMENT

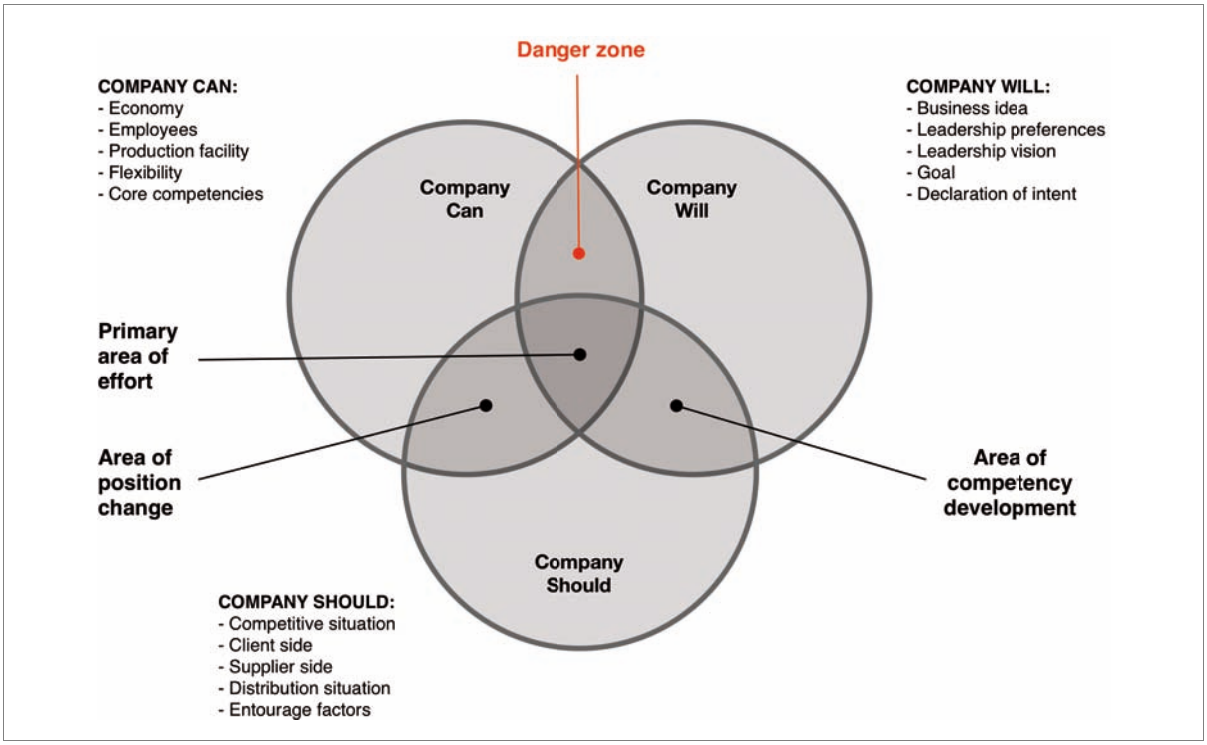

Figure 9: Business Model Management with the hedgehog concept
(Source: Adapted from von Rosing (2011) and Collins (2001))

However, the influence of the self-conception in the decision-making process on what a company should do is restricted insofar, as it has to be connectable to internal and environmental realities. Those realities are (similarly to the above figure) also represented in the most common constraints design thinking tries to resolve: *desirability, feasibility, viability*[38] (cf. Chapter 5.2.1).

So in order to drive the market the company has to generate better insights on alternative solutions and how users perceive them (*feasibility*). It also needs to know what users value or will value (*desirability*) and should develop an own vision of a possible alternative solution that can be proposed to people (Verganti 2009, cf. p.67) which moreover must realistically be in compliance with its current or near future capabilities (*viability*). The balancing of these dimensions can help »innovating the user« by proposing or teaching him new value configurations, of which he wasn't even aware that they solve his customer functions better than other solutions

[38] *Feasibility: What is functionally possible within the foreseeable future; Viability: What is likely to become part of a sustainable business model; Desirability: What makes sense to people and for people; (T. Brown 2009, p.18 ff.)*

available. This may be the reason why design, or better a design attitude on a meta level, is perceived as a competitive advantage: Design practices are very adept in commensurating these dimensions. For a continuing in-depth discussion of this see chapters 5.2.1 to 5.2.3.

Furthermore the business model as the centerpiece of strategy was mentioned. Being clear here about one's own market definition[39] is very important, as it serves as one of the starting points for business model innovation (Berg 2005). Therefore Abell's notion of what constitutes a market also proves useful for this purpose (an exemplary selection of famous market definitions is collected in Figure 10).

TWO EXAMPLES FOR FAMOUS MARKET DEFINITIONS

Hilti (the world-famous Lichtenstein drill machine and building equipment manufacturer) defines its market simply as providing everything for producing the customer outcome »**holes**«. Any decision on technology or diversification happens around this definition and its process steps »*opening, processing, fixing, closing* and *measuring*« from a customer perspective. Hilti's customers are mainly contractors who don't earn money by *owning* tools but by using them as often and efficiently as possible. However they often don't utilise their resources to full capacity and couldn't spread their fixed costs over a maximum of uses (cf. H. Chesbrough 2011), what makes owning and managing them expensive. Hilti converted this insight into a holistic offering (value proposition) by selling the service »*tool use*« instead of tools. This customer-centric »job to be done«-view culminates in how Hilti executes its new business model. For a monthly fee it manages its customers' inventory by repairing, replacing and updating them at exactly the time the customer needs it. To deliver this unique value proposition it had to create new processes and resources, e.g. a fleet-management program for the tools, and now the whole company shifts towards a service-dominant logic (M. W. Johnson et al. 2008, p.54) producing »holes«.

Artimede (an Italian design luminaries and lightning manufacturer) has a similar approach. They conceive themselves not as producers of lamps or design objects, but as creators of »**human light**« with all the consequences for their product design, which shifts to rather unusual forms and technologies.

Figure 10: Two examples for famous market definitions (compiled by author)

Last but not least Abell's conception already helps taking a radical service perspective. Users don't care about the kind of alternative solution solving their problems. Their only concern is the job-to-be-done, that is the outcomes[40] the service provides them. These outcomes mustn't necessarily be just utilitarian in nature. Value for the user may also reside in not so obvious parameters of a service experience (just think of small and unexpected surprise factors, the addressing of emotional needs, or the often claimed »WOW« moments of truth (cf. Liedtka & Ogilvie 2011; Schneider & Stickdorn 2011)) which may make the lasting difference in shaping customers preferences). Therefore it is crucial to know what dimensions from a customers POV have to be considered if one wants to understand their needs and valuation criteria in

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[39] *"Defining the business means to set boundaries for certain types of activity a company decides to perform" (Berg 2005, p.76). However there clearly exist interdependencies between the dynamics of implementing and executing business models (experiments) and possible discoveries of new markets and opportunities to shift boundaries.*

[40] *Again, already Drucker took this service-like perspective: "The want a business satisfies may have been felt by the customer before he or she was offered the means of satisfying it. Like food in a famine, it may have dominated the customer's life and filled all his waking moments, but it remained a potential want until the action of businesspeople converted it into effective demand. Only then is there a customer and a market. The want may have been unfelt by the potential customer; no one knew that he wanted a Xerox machine or a computer until these became available. […]* ***What the customer buys and considers value is never just a product. It is always a utility, that is, what a product or service does for him****" (Drucker 2007, p.20).*

distinguishing alternative solutions. Theodore Levitt in his famous text *»Marketing Myopia«* already stated in the 60s: *"Customers attach value to a product in proportion to its perceived ability to help solve their problems or meet their needs. All else is derivative"* (Levitt 2006, p.102). Therefore he concludes "*[…] the entire corporation must be viewed as a customer-creating and customer-satisfying organism. Management must think of itself not as producing products but as providing customer-creating value satisfactions*" (Levitt 1960, p.56). Customer-creating value satisfactions? A good catch-word, leading us directly to the next Chapter, examining what actually »customer value« is.

4 Creating the User by Innovating User Value

Knowing now that all the three dimensions of strategic innovation, *increased value for the customer, new markets,* and *new business models,* are interconnected and ultimately gathered around the notion of »value creation«, it seems worth to decompose it and take a deeper look at its structure. The value (proposition) construct itself is probably one of the most overstressed terms used by practitioners, especially in marketing. Even in the academic realm it seldomly is defined concisely. But, as the thesis shall show, how the innovation of »value« by design is related to the creation of markets and new business models, this chapter will try to examine in some detail how the terms »value« and »value proposition« are negotiated in the current academic discourse.

4.1 The Value Construct

Throughout the economics-, business- and also design literature an overwhelming variety of notions of the (umbrella) term value[41] exist. Not to speak of views in philosophy and political economy. As this treatise is primarily concerned with a users perspective on value, the term »customer value« shall in particular be reviewed in the following.

CUSTOMER VALUE – BASIC FOUNDATIONS

A first differentiation needs to be drawn regarding the use of customer value within different contexts. On the one hand it can portray what is *derived by the customer* from a supplier while on the other hand it could also mean what is *derived by the supplier* from the customer. The latter found its way into literature as »customer lifetime value« (CLV), whereas the former – associated with the demand-side notions of value – has been proposed by Woodall (2003) as »value for the customer« (VC) which sometimes is also referred to as »perceived value«. As the focus of my research is in value creation *for* the customer/user, supply-side notions of (customer) value will be ignored in the thesis. The following deconstruction of the latter will be based heavily on Woodall's research (2003) as he did the most comprehensive perceived value discussion that can be found so far[42].

Initially I want to briefly address the very foundations of the value concept from the field of economics and philosophy that found their way into the business literature and form the basis of any following discussion. According to Woodall there exist three different approaches to value from an *economic perspective*. Firstly *»exchange value«*, being the (ac)countable value that is predicated upon cost and scarcity, and implying, that value is an intrinsic part of commodities

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[41] *It can often be found as a compound word with »value« in the beginning* ***(value #appendage)*** *or in the end in form of a tail* ***(#trunk value)****. Examples for the former are value migration (eg. A. J. Slywotzky 1996), value creation, value delivery, value network (eg. Fjeldstad & Stabell 1998), value innovation (Kim & Mauborgne 2005) or value chain (Porter 1985). Instances of the latter could be customer value, added value, service value, perceived value or transaction value, to name but a few.*

[42] *Another comprehensive discussion of the perceived value concept can be found in Sánchez-Fernández & Iniesta-Bonillo's (2007) review »The concept of perceived value: a systematic review of the research« which covers both, uni- and multi-dimensional approaches/research streams to value conceptualisation (cf. Figure 55 in the appendix, p. 120).*

that can be measured (cf. Marx 1847; 1867). Secondly *»use value« (or value-in-use)*, an perspective originating in Aristotle's notion that value is rather subjectively perceived via the use derived from a commodity. And thirdly *»utilitarian value«*, being the outcome of one's personal consideration of sacrifices and benefits, e.g. comparing to be expected benefits of a purchase with the price and other sacrifices (learning costs, search costs, etc.) that have to be »paid«.

If we look at value from an abstract, and what Woodall calls *philosophical perspective*, the central issue becomes one's personal estimation (valuation) of the value of a thing. This however is dependent on »internal drivers« that influence the expressed choices of an individual, i.e. one's personal *value system*[43]. According to Rokeach (1973) and Schwartz (1999) values are motivational orientations that influence any cognitive activity and information processing of a human. Therefore they lead actions and serve as evaluation criteria, especially when making consumption choices. Although basically all humans have the same limited set of basic values worldwide, we merely share them to certain degrees and prioritize them into our personal value system.

Value-oriented characteristics however may also reside within objects (Frondizi, 1971, as cited in Woodall 2003) and can be termed as *extrinsic* (i.e. represented via the real economic »worth« of an object in terms of use or exchange value) or *intrinsic.* The latter meaning *"that all products have »qualities« (or attributes) but if a quality is not valued, then it remains a quality. If it is valued, then it becomes an intrinsic value, and helps determine the strength and direction of the relationship that exists between a particular product and a specific customer"* (Woodall 2003, p.4). In other words, value here is created at the interface of user and object.

Deduced from these deliberations Woodall comes to the conclusion, that subjective value for the customer *"can best be comprehended through the conjoint appreciation of economic and abstract/philosophical perspectives that, together, recognize the existence of value-oriented properties. These properties reside within, or are associated with, both the object and the subject, and are manifest at the point of interaction between the two."* Further he claims that *"sacrifice and market are also key factors"* (Woodall 2003, p.5) and that any conceptualisation of a value construct has to consider the interdependencies between those perspectives: *"Value, therefore is neither use, nor exchange; it is neither object-based, nor subject-based; it is neither my view, nor your view, it is all of these things*" (Woodall 2003, p.5). He therefore conceives value for the customer as a gestalt property[44], visualised as a model in »Figure 11«.

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[43] *According to Schwartz (1999, p.1) values are beliefs, which are tied inextricably to emotion, and therefore not to be understood as objective, »cold« ideas. They are* ***motivational constructs****, referring to desirable goals people strive to attain.* ***They tend to transcend specific actions and situations****. Being abstract goals, the nature of values distinguishes them from other concepts like norms and attitudes, usually referring to specific actions, objects, or situations. They further* ***guide selection and/or evaluation processes of people, actions, policies, and events and therefore they set standards or criteria****. In contrast to norms and attitudes* ***people's values also form an ordered system of value priorities*** *(relative to other values), characterising them as individuals. This is were the term »value system« derives from.*

[44] *A gestalt is "an organised whole in which each parts affects every other part" (Baker, 1956, p. 615 as cited in Woodall 2003, p.20).*

According to his model four primary interpretations of value can be distinguished: *use value, intrinsic value, utilitarian value* and *exchange value*, whereas every type may also "be recognized and/or expressed individually or collectively (as a gestalt) by the consumer, and [all of them are also] subject to the influence of both the subject's value system and environmental contingency (Woodall 2003, pp.5–6)."

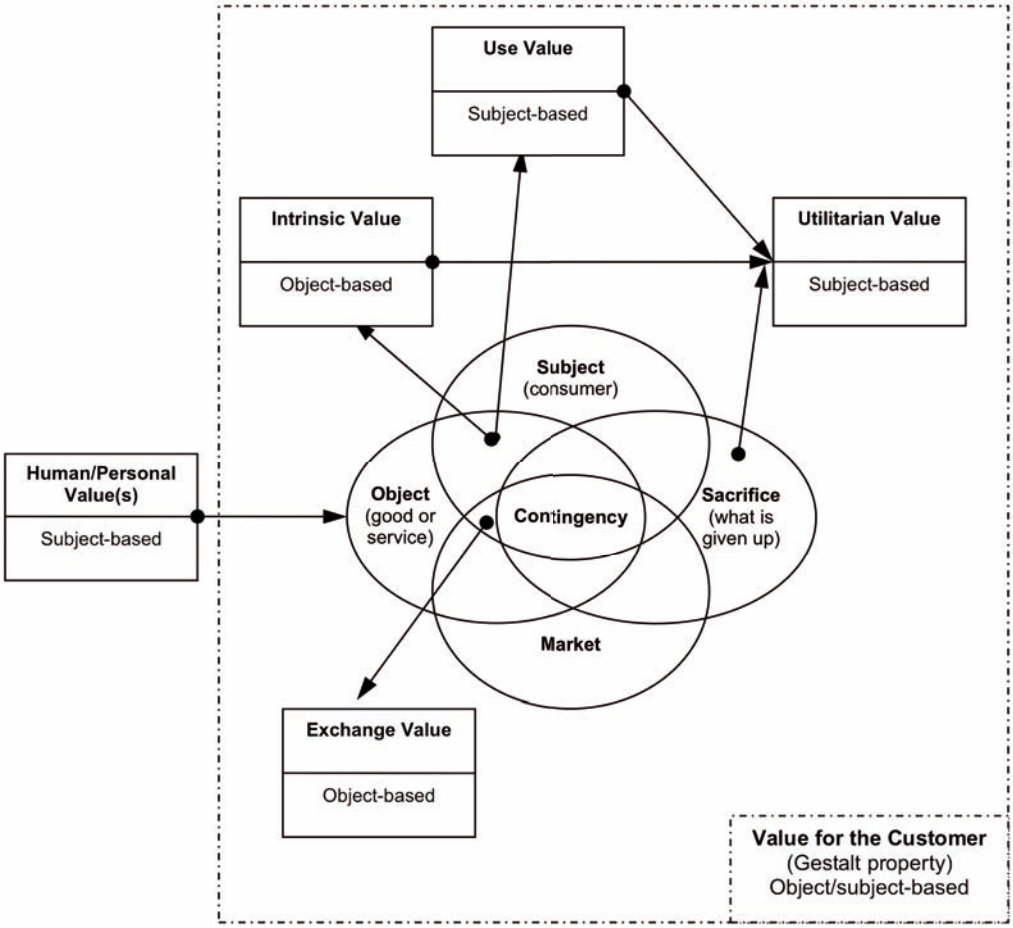

Figure 11: A Preliminary model of value for the customer (Source: Woodall 2003, p.5)

SUMMARY: WOODALLS FOUR INTERPRETATIONS OF VALUE

Use value
"Subject-based, and also perceived as the object and subject interact (during, or after consumption)."

Intrinsic value
"Object-based, and perceived as the object and subject interact (before, or during consumption)."

Utilitarian value
"Subject based, and identifiable at the point when intrinsic and/or use-value are compared with the sacrifice the subject is required to make in order to experience those forms of value."

Exchange value
"Object-based, and primarily influenced by the nature of the object and the market in which it is offered. The subject, however, has an influence on the process of ascribing value as he/she can either accept, reject and/or negotiate the value that is offered (Woodall 2003, p.6)."

CUSTOMER VALUE – THE BUSINESS CONTEXT

Having examined the very foundations of the customer value construct Woodall also performed a literature analysis of 90 texts from marketing, strategy, operations and quality management in order to find out how it is used in the business context. Again only the demand-side was considered, and again definitions varied in their conciseness and consistency – even *across* the works of particular authors. However, five primary forms of value for the customer emerged. Woodall labelled them as follows: *Net VC, Derived VC, Marketing VC, Sale VC* and *Rational VC* (Figure 12).

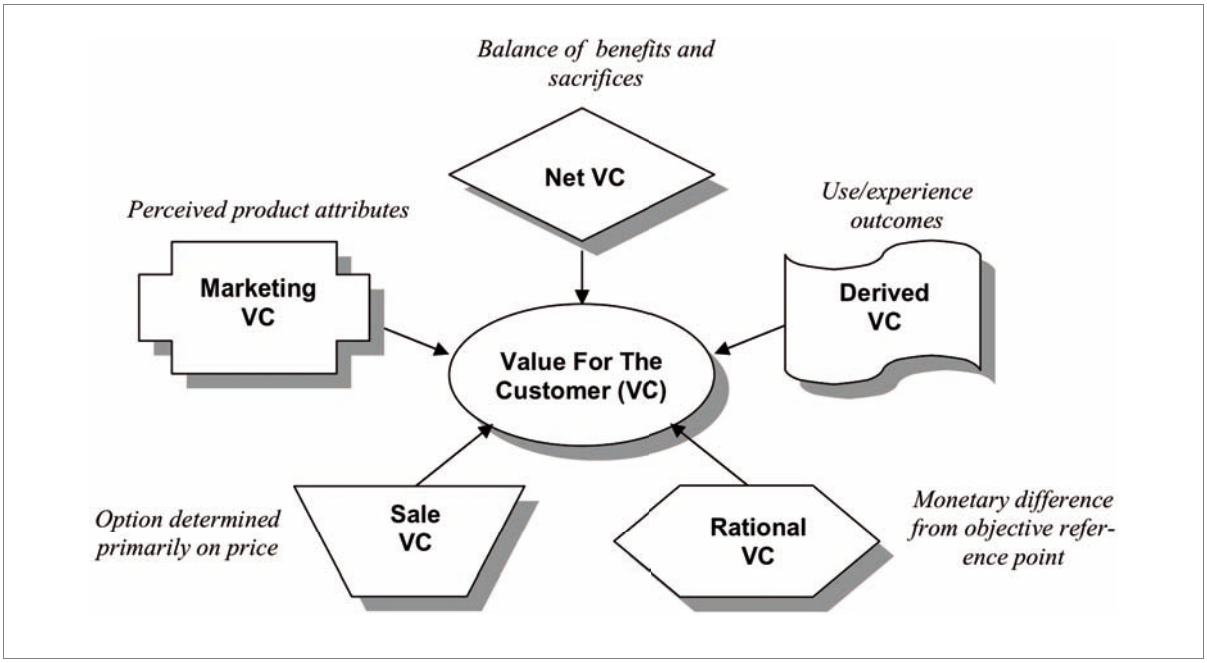

Figure 12: Five primary VC forms (Source: Woodall 2003, p.7)

Net VC – Balance of benefits and sacrifices: The Net VC clearly takes an utilitarian perspective on consumption. Benefits and sacrifices (cf. Woodall 2003, p.12 and »Figure 56«, p.120 in the appendix) are compared and weighted against each other. This can be done for an individual product alone, for alternatives of the same product or for competing alternative solutions. The individual »computation« of a Net VC however may also happen via a subjective »intuitive calculations« where the influencing factors of the balancing process are rather hard to observe. According the Woodall there is agreement between all Net VC proponents that *"[the] equal and coincident consideration of both benefits and sacrifices is essential for establishing a sense of VC, though there is less consensus regarding whether accrued benefits should be perceived as product attributes (e.g. quality, performance), or as outcomes (e.g. use, convenience), or as both; or whether relevant sacrifices are entirely practical/cognitive (e.g. cost), entirely of the senses/affective (e.g. disappointment) or, again, a binary amalgam"* (Woodall 2003, p.7).

Derived VC – Use/experience outcomes: The notion of a Derived VC clearly relates to Aristotle's' »use value«, were the customer value has an outcome-oriented nature and is rather derived than computed as in Net VC. That means, this conceptualisation looks at benefits stemming from consumption-related experiences and links them to social and human values (cf. Boztepe's (2007) value-in-experience, p.44).

However, to make matters more complicated, Woodall also found sub-forms of Derived VC. That is *Strategic VC* (derived from second order, consumption-influenced after-effects), *Personal VC* (highly intimate, or even spiritual, perception of value), *Social VC* (related to value derived from social exchange activities), *Practical VC* (derived from usefulness and fitness-for-purpose), and *VC in kind* (financial/commodity view). VC in kind equals »exchange value«. The others could all be subsumed within »use value«.

Marketing VC – Perceived product attributes: According to Woodall this rather supplier-oriented perspective is similar to the qualities/preference schema of Frondizi's (1971) intrinsic object values. He states it is supplier-oriented on that score, as the emphasis of product attributes usually becomes important when offerings »go to market« and seem to have strategic importance for differentiation. He further found that Marketing VC – in the literature usually referred to as value proposition – has as proposed and a perceived component[45]. Chapter 4.2 will discuss this in more detail and develop a different notion of Marketing VC.

Sale VC – Option determined primarily on price: The simplest concept, where value for the customer is conceived as a low price or a reduction in sacrifice (best »value for money«). No other factors (e.g. balancing benefits vs. sacrifices or taking into account the nature of product attributes) impact this interpretation of VC. Examples could be »value airlines« like EasyJet or RyanAir or perhaps »value shops« like Aldi or Lidl.

Rational VC – Difference from objective price: Comparable to Net VC the Rational VC is utilitarian in nature. It combines the properties of exchange value and intrinsic value. A typical application for determining Rational VC's is the widespread »value-benefit analysis«, in German »Nutzwertanalyse« (Zangemeister 1976; Keeney 1976) in B2B contexts which results in weighted ratios that enable decision makers to benchmark complex investments against each other: *"Dependent upon the perceived benefits or attributes of the product under consideration, the customer will compute what a »fair« price might be in relation to the benchmark(s) already established"* (Woodall 2003, p.8). The Rational VC therefore is usually applied in comparative situations, where it is difficult to judge the very different price/feature combinations of a product objectively and at a glance.

[45] *"[A] proposed VC exists, longitudinally, before the consumer begins to identify what attributes represent value for him/her. […] When the supplier's 'Proposed Marketing VC' and the customer's value system initially interact, or when - through the valuing process - product qualities or properties suggested by the supplier are converted into 'intrinsic values' by the customer, a 'Perceived Marketing VC' emerges" (Woodall 2003, p.17)*

Nevertheless it is again the user who computes it by subjectively determining which weighting factors he will use for (and therefore how he will value) the respective feature combinations.

Woodall also found other types of VC, namely »Contingent VC« and »Nature of Derived VC«, he called »sub-forms« of VC (cf. »Figure 57«, appendix p.121). The latter is interesting as it is concerned with meaning, spirituality and emotions. Scholars from human sciences and design disciplines wouldn't perceive them as sub-forms but rather as essential main forms transcending above and through all the other forms of value (Geertz 1973; Krippendorff 1989; Diller et al. 2005; Verganti 2009; Utterback et al. 2006; Katarina Wetter Edman 2011 to name but a few). The former however represents a perspective of VC in time – the often referred to user experience. Here he aggregated all temporal and cumulative concepts to a longitudinal perspective with four categorisations of value: *ex-ante, transaction, ex-post,* and added by himself *disposal.* They roughly correspond to the stages of experience proposed by authors like Arnould et al. (2003) (*anticipated consumption, purchase experience, consumption experience & remembered consumption/nostalgia*) and Shaw & Ivens (2002) (*expectation setting, pre-purchase interactions, purchase interaction, product/service consumption, post-experience review*).

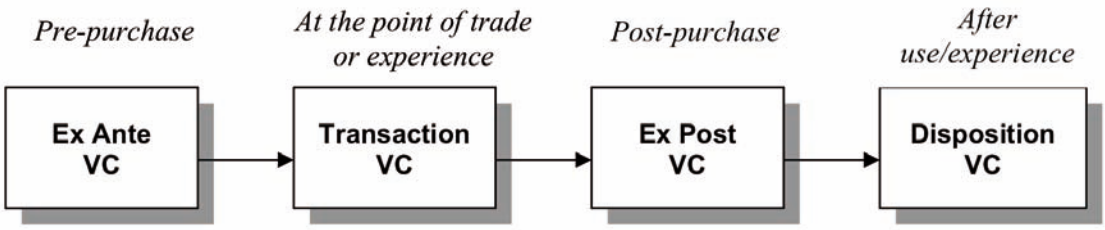

Figure 13: A longitudinal perspective on VC (Source: Woodall 2003, p.10)

He further concluded that *any* type of VC can be perceived in different ways: 1) As being *public/general* or *private/exclusive* or in other words construed as *shared* or *individual* meaning. 2) As VC emanating from a relationship between user and product (*single stimulus*) or VC resulting from other secondary stimuli like social/commercial contexts (*dual-stimulus*). 3) VC also inheres a hierarchical dimension with regard to its ability to please. It ranges from *Basic* and *Expected* over *Desired* to *Unanticipated* (Woodall 2003, p.10, also see Kano et al.'s (1984) model of customer satisfaction in the appendix, p.130).

Finally he extracted »other context factors« (*customer factors, product factors, consumption factors* and *market factors*) that exert influence on a valuer and have to be taken into account as well. The diagram of »Figure 58« in the appendix, p.121 displays them in full detail.

Let's sum up Woodall's research by taking into account his most important findings. Within the current literature five customer-related conceptions of value exist (»Table 2«, column 1) which are complemented by a longitudinal perspective with four temporal types (column 2). All forms are in one or another way subordinate to Net VC (Woodall 2003, p.20), typically representing users overall view of VC delivered.

VC forms	Temporal types of VC
Net VC	Ex-ante VC
Marketing VC	Transaction VC
Sale VC	Ex-post VC
Rational VC	Disposal VC
Derived VC	

Table 2: Principal forms and temporal types of value for the customer (VC) according to Woodall (2003)

The aggregated notion of Net VC (with its assumption of utilitarian choice) however insufficiently considers that value does neither emerge, nor isn't perceived in a rational manner. He suggests that it should rather be conceived as a gestalt (cf. »Figure 11«, p.39) that also takes those irrational valuation processes into account: *"It is likely that a succession of different VC determinations and associated critical incidents may influence the customer's »overall« VC perception, and that VC will be accumulated and/or aggregated through a largely non-rational process"* (Woodall 2003, p.20). In other words, value forms are usually experienced cumulatively (temporal perspective) and they (the forms) are prioritised differently within any progression of an relationship to the consumer. For this overall view on VC he therefore proposes the concept of an »Aggregated VC« that is defined as follows:

> *"Value for the customer (VC) is any demand-side, personal perception of advantage arising out of a customer's association with an organisation's offering, and can occur as reduction in sacrifice; presence of benefit (perceived as either attributes or outcomes); the resultant of any weighed combination of sacrifice and benefit (determined and expressed either rationally or intuitively); or an aggregation, over time, of any or all of these" (Woodall 2003, p.21).*

His holistic gestalt notion of an Aggregated VC is in line with Sánchez-Fernández' & Iniesta-Bonillo's (2007) view that none of the current and dominant value perspectives adequately address the full scope of customer experience, which led them to the (rather simplistic) conclusion that:

> *(Perceived) Customer Value [note: here understood as Aggregated VC]*
> *"must be seen as an ongoing assessment within an evolving consumer relationship"*
> *(Sánchez-Fernández & Iniesta-Bonillo 2007, p.433).*

Whereas they equate Aggregated VC with just the term »customer value«, other authors who also built on Woodall's work, use terms like »customer value-in-experience[46]« (Turnbull 2009, cf. Table 5, appendix p.122) or »value as experience« (Boztepe 2007) instead.

[46] *"Customer value-in-experience is defined [...] as the customer's perception of value over the entire course of the customer experience (Turnbull 2009, p.4)"*

Experience in turn cannot be replicated as it differs in context, on that score also the term »value-in-context« is used (cf. Grönroos 2011; Chandler & S. L. Vargo 2011). However, despite of plain naming conventions the problem remains, that all of those aggregated customer value notions throughout the literature are based on different approaches for deconstruction of the value construct. So is the value as experience approach of Boztepe (2007) just a subcategory in their aggregated research streams and therefore not really in accordance with the holistic gestalt notion mentioned above (cf. Figure 14).

	Exchange Approach	Sign Approach	Experience Approach
Value Arises from	price and desire for a product	social and cultural context	interaction between user and product within a particular socio-cultural setting
Value is	objectively determinable in terms of price	subjective, almost arbitrary	both objective and subjective
Unit of Analysis is	an exchange situation	social communication	any point of experience with the product
Product is	a sacrifice made by user measured in terms of money	socially assigned meaning	what enables experience
Implications for Design	the need to make product qualities visible	the need to understand social sense making	the need to understand what makes up experience

Figure 14: Traditional approaches to user value (Source: Boztepe 2007, p.58)

On the other hand she gives emphasis to an important research stream that is rather neglected or hidden[47] in Woodall's work, the concept of *»value as sign«*: *"People have an enormous capacity and tendency to invest objects with meanings that sometimes have nothing to do with their utility or with the meanings intended by their producers. They often value objects not for what they do, or what they are made of, but for what they signify"* (Boztepe 2007, p.56). Such a view rooted in anthropological and sociological theories looks at the cultural aspects of value and the symbolic meanings attributed to goods. In its extreme this standpoint conceives consumption as a conversation of individuals with their social sphere[48]. By using a »shared code« between members of society, products act as signs communicating messages and images, which have nothing to do with their intended use[49]. The value merely lies in *sign value*, replacing exchange and use value. This however implies that value just emerges through the subjective experiences of the user and objects cannot contain value (cf. ibid, p.57). But as discussed above (cf. »intrinsic value«, p.39) views are interwoven and value is created at the interface of the product and the user:

[47] *E.g. within the »personal perception« of use-value, intrinsic value or the subforms of Contingent VC. The same is true for emotional value and further value forms.*

[48] *This fact is well-known in the design sphere, for instance with Krippendorf's (1989) description of the four uses within a »sociolinguistic context«, in which the meaning of artifacts is constructed: 1) As signs of social differentiation, 2) as expressions of user identities, 3) as content of communication, and 4) as a kind of »material« support for social relationships.*

[49] *Goods are for example valued as they serve as an index of social status: "This notion of value, then, calls for consideration not only of the use of products and communications but also of how they are made sense of and what the range of social ends they provide to users are, including ends involving issues of status, prestige, and identity." (Boztepe 2007, p.57)*

"Value resides not in the product purchased, not in the brand chosen, not in the object possessed, but rather in the consumption experience(s) derived therefrom" (Holbrook 1999, p.8). Therefore the product too has the capacity to shape and guide meaning within users experiences[50].

CONCLUSION

Remains the question, what all those value conceptions have in common? Well, firstly perceived value, or value for the customer must be understood as a holistic gestalt consisting of different interwoven and interdependent forms (which can have an *utilitarian-*, *use-*, *intrinsic-*, *exchange-* or *sign-value* nature). These forms are pronounced differently depending on the individual perception (personal value system, social values, living and usage context, etc.) which in turn is influenced by social context (e.g. socially assigned meaning vs. personal meaning) and experiences. It therefore has an social exchange and relationship component and is *temporal in nature* as it emerges, develops and accumulates over the course of time. One could also say, it is a *socially constructed and subjective customer experience*.

Secondly, the implied experience emerges in »socio-material[51] interactions« of diverse actors which leads to relationships and exchange being part of the perceived value itself. In the interaction the value may emerge subjectively within the users engagement, at the interface of object/subject (i.e. service/user), or shared and in relations to other parties involved (i.e. other stakeholders, cf. p.49). It embodies reinterpretation and meaning-making processes which may lead to valuations which are at first glance incomprehensible for outsiders. Therefore especially the narrow utilitarian views, conceiving benefits and sacrifices in terms of money, fall short of the mark. Other »currencies« like social capital, participation or co-determination, to name but a few, are equally important sources of value, what again proves its unidirectional, negotiated nature that involves more parties than just consumer and supplier.

Unfortunately very important forms (currencies) of value often get neglected, which play a major role in the research as well as the design of product- and service innovations. As already mentioned, Woodall (with his business background) just subcategorized into the nature of Derived VC, i.e. use and experience outcomes, what designers would prioritise as most important: Emotional value, aesthetic value, social value, play value, to name but a few (cf. Figure 57, p.121).

Derived from this discussion so far one thing already became apparent. To get a comprehensive picture of what a user really values in order to create or innovate meaningful (value) experiences for him, one needs a holistic approach to uncover, negotiate and measure it. Design thinking (and derived from it service design) is primarily concerned with exactly these questions of value and meaning creation (cf. p.78), which will be discussed after drawing some conclusions for the construction of value propositions.

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[50] *"I simply cannot swallow Holbrook's pronouncement that value resides not in the product purchased but rather in the consumption experience derived therefrom. Yes, the consumption experience is very important, possibly of fundamental importance, but surely the product has something to do with it, even if it's only as a cue, a trigger or an excuse for flights of hedonistic fancy" (Brown 1999, p.163 as cited in Woodall 2003, p.22).*

[51] *Which in my point of view also includes »socio-technical interactions«, which I wouldn't treat separately as done by some authors.*

4.2 The Value Proposition Concept

The notion of the *value proposition* (Marketing VC to speak with Woodall) has its roots in the 80s, where McKinsey introduced its »value delivery system« (cf. »Figure 60«, p.123), a concept that for the first time highlights the importance[52] of formulating and implementing a holistic premise of the value a company provides. Typical for that time, it was thought in a rather supplier-led manner (G-D logic) and had an significant influence on today's conventional marketing view on value propositions. That is, a »seller-side« value promise which is crafted and communicated (ergo to speak with Woodall a *proposed component*) to a »beneficiary or buyer« with the intent that is finds resonance (the *perceived component*), leading to a purchase. The extensive discussion of the previous Chapter already showed that such a sender-receiver view seems quiet unrealistic, as it is to assume that a value proposition can only be crafted if we know our users subjective perceptions[53] on what constitutes perceived value for him. Further we learned that value is exchanged and negotiated in a social sphere and within reciprocal relations of different stakeholder groups, a view taken also by proponents of the service dominant logic (in short S-D logic) on marketing.
In S-D logic communication is rather unidirectional *and* dialogical (i.e. a reciprocal exchange) and stakeholder parties are purposefully engaged in working and learning together.

EXCURSUS: SERVICE-DOMINANT LOGIC

The S-D logic fits very well with the idea of value emerging in socio-material interactions as its core logic is to conceive "[…] customers [in] participat[ing] in the co-creation of value, which they assess through the sharing and integrating of resources with suppliers, especially their skills and knowledge. […] [G]oods and physical resources [therefore] are seen as service appliances, as distribution mechanisms for service, and their value is determined at the time of use, as value-in-use" (Ballantyne et al. 2011, p.202; cf. Vargo & Lusch (2004a, 2004b, 2008); Merz et al. 2009). So the basis for any assessment of value-in-use is the service experience, seen through the eyes of the users (in S-D logic also called beneficiaries). Thereby it plays no role whether that value is derived from goods or by interaction with other parties. Meanwhile the discussion develops further towards value-in-context (Vargo & Lusch 2008) and the even more radical social constructionist perspective of value-in-social-context (Edvardsson et al. 2010). Figure 59 on p.122 shows S-D logic's core in more detail in form of its »ten fundamental propositions«.

Infobox 3: Excursus on service-dominant logic (S-D logic)

Some of the few researchers who already examined value propositions through a S-D logic lens are Ballantyne et al. (2011). Similar to Woodall they performed an investigation on existing value proposition perspectives so far. I used their classification as a basis for structuring the findings from my literature review as well as for defining the term. A comprehensive overview with details on the particular perspectives can be found in the appendix, Table 6, p.124. In the following I will merely summarise the findings.

[52] *Many companies in these days still were focusing on »just« making and selling products within their G-D logic.*

[53] *E.g. the meanings users attribute to the offering, how they repurpose it, against what alternative solutions it competes, etc.*

In the first instance there exist six perspectives on value propositions: 1) *Supplier-crafted value for customers* and 2) *supplier-crafted generic strategies*, both classically conceived as positioning against the competition. 3) Further the view as *a promise to other stakeholders* occurs, which accentuates variation and emphasis of other aspects for the different groups a value proposition addresses. 4) Also the notion of *supplier-customer co-production* with mutual adjustment via knowledge/learning collaborations[54] is mentioned alongside with 5) *reciprocal exchange*, meaning the value proposition is negotiated with stakeholders. The last perspective is 6) the *collaboration with customers to achieve customer solutions*, where the supplier/service provider learns from customer-developed (alternative) solutions or creates those with them (Ballantyne et al. 2011, p.203 f.), an approach also known as co-creation. Ballantyne et al. reconciled them with S-D logic and proposed that:

"[V]alue propositions should be crafted: as a reciprocal exchange of value; described in terms of perceived benefits or reduced costs; transparent about to whom that value should flow and how; perceived as a fair exchange of value; delivered over a time frame longer than a single transaction[55]*; often co-created through interaction between two or more parties; and, congruent with the relationship objectives set for a particular market.*" (2011, p.206).

In other words, (reciprocal) value propositions can be initiated by any other party[56], become a starting point for negotiation, e.g. an agenda for co-creation with participating stakeholders in order to create mutual benefits, and again have a temporal nature as they emerge from a process of dialogue and knowledge sharing. As Chapter 5.2.2 will show, this reciprocal process can also be seen as a coordinated meaning making in a discourse of different stakeholders (Verganti 2009). Not without reason they finally concluded that *"[t]he process of achieving propositional agreement with customers or other beneficiaries (by working together or negotiating) may be assessed by any participant to be of unique value in itself"* (Ballantyne et al. 2011, p.205).

Another important finding of their research is the fact that value to be derived is often *emergent* in kind (ibid 2011, p.207), which is in accordance with Woodall's conclusions, Mintzberg's (2001) notion of *emergent strategies* and the recent *strategy-as-practice* movement: *"The strategy-as-practice perspective integrates well with our concept of reciprocal value propositions, as both are grounded in patterns of communicative interaction, with the final form and content emerging through that communicative interaction"* (Ballantyne et al. 2011, p.207).

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[54] Cf. Bolton (1998, p. 48/49): "[The perception of value is] constantly updated through a sequential anchoring and adjustment process in which the individual's prior cumulative satisfaction (the anchor) is adjusted by succeeding pieces of new information" (as cited in Woodall 2003, p.20).

[55] Cf. "[The] perception of value is formed through all the experiences a customer has throughout a product's life-cycle. These experiences start with pre-sales literature, continue through ordering, receiving, and installing, to learning, using, supporting and finally disposing" (Goodwin and Ball, 1999, p. 27 as cited in Woodall 2003, p.20). Regarding this see also Kim & Maubourgne's (2005) »buyer cycle«, p.139 in the appendix.

[56] The dominant belief that only the supplier holds that privilege constrains innovation as he doesn't know exactly what value he actually provides the user with. Examples may be product or service hacks which repurpose the original intent of a solution. So by surprise a supplier may discover that he isn't in the business he thought he is. Again Peter Drucker gave a nice example of an small Indian engineering firm which sold a bicycle with an auxiliary light engine. The bike never did well. But some people bought the bike just for the light engine. People were taking the engines off the bicycles for using them to power irrigation pumps which had been hand-operated before. So the company discovered that they were in the business of water pumps. They are now the world's largest manufacturer of small irrigation pumps, which revolutionised farming in whole Southeast Asia (Drucker 2007, p.147).

Grönroos (2011) goes even that far that he states *"the customer creates value, and the firm facilitates value creation"* (p.21), meaning that it is the firm and not the user which gets the opportunity to take part (as a co-creator) in the customers value-creation process (cf. Drucker's above example in footnote 56).

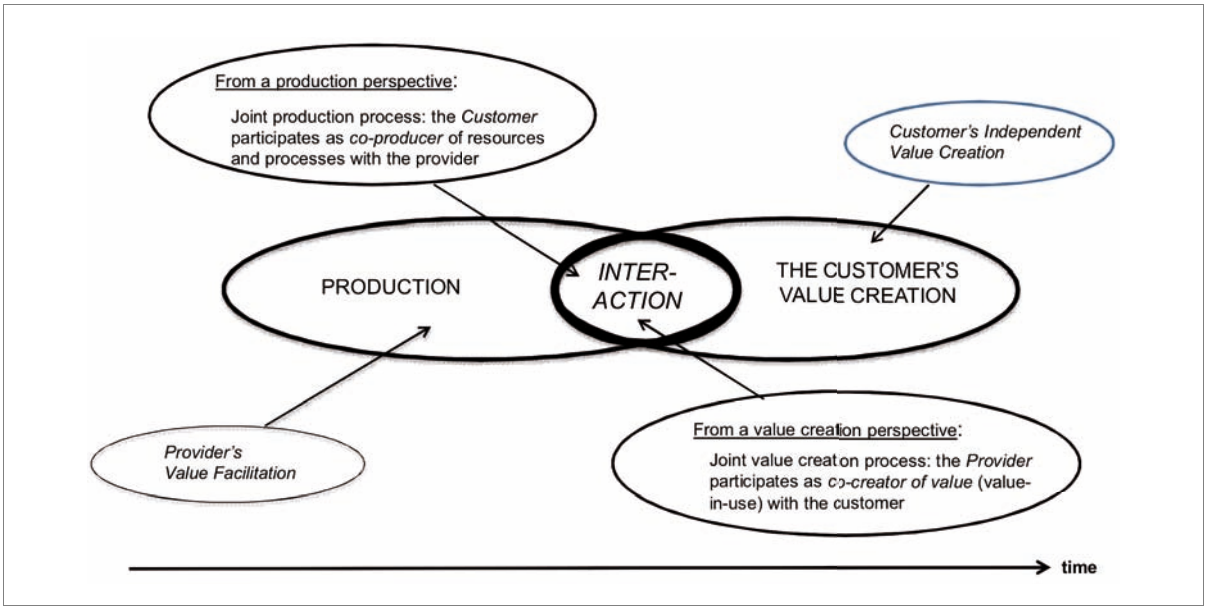

Figure 15: A value-in-use creation model (Source: Grönroos 2011)

Therefore *"[f]irms have to support customer's practices with resources and interactive processes in a way that enables the customers to create value for themselves in those practices"* (Ibid, p.16). In turn the service provider will gain from those value co-creation possibilities. Namely, by discovering new business opportunities and at best, ways to create or disrupt new markets.

Put differently and in simple words (customer) value proposition can't be separated from the perceived customer value (in S-D logic value-in-use; to speak with Woodall the holistic gestalt mentioned above). It is the totality of the end to end experience of an offer, which is co-created by many actors. Therefore any proposition experience (ergo customer experience) needs to be thought in terms of an ongoing interaction of those actors over the whole customer lifecycle[57]. And finally, as value propositions are reciprocal, any actor (or stakeholder or beneficiary) can, in a S-D logic, initiate or participate in its formulation and hence will determine what is of value in his own terms.

[57] *"An end customer's value-in-use assessment is the culmination of a time-series of interactions, including value propositions and negotiated agreements as well as value-in-use determinations by various resource providers and integrators" (Ballantyne et al. 2011, p.208).*

According to (Ballantyne et al. 2011) the stakeholders that should be involved in such an process-oriented, dialogical and knowledge generating interaction are broadly the actors from the six markets framework by Payne et al. (2005). This includes *customer markets*, *internal markets* (e.g. existing employees), *supplier and alliance markets*, *referral markets* (here a firm's referral system and its advocates), *recruitment markets* (potential employees) and *influence markets* (the institutional stakeholder context in which the focal firm operates).

Figure 16: Six markets stakeholder model (Source: Ballantyne et al. 2011, p.206)

This view is clearly in accordance with the recent emphasis of open innovation and co-creating outside-in strategy practice (Piller et al. 2005; H. W. Chesbrough & Appleyard 2007; Maria & Finotto 2008; West & Lakhani 2008 to name but a few). So the innovation of value (propositions) is also always about the finding and commitment of partners which enable the creation and delivery of the latter. Other authors from the industrial design sphere take a similar approach by proposing the negotiation of meaning within a »design discourse« (Utterback et al. 2006; Pisano & Verganti 2008; Verganti 2009) which will be outlined in Chapter 5.2.2. The group of actors here may be different to the six markets, but process and goals are the same, what leads us directly to the next chapter which examines the role of design in innovation in general, as well as in creating value (propositions).

5 The Role of Design in Innovation

> *When people talked about innovation in the 90s, they really meant technology.*
> *When people talk about innovation in this decade, they really mean design.*

Bruce Nussbaum, BusinessWeek columnist

Before starting to analyse the relations of design to strategic innovation, innovation practices, value creation and finally business model innovation, I want to carry out a definition of the term at first. Just like »strategy«, »innovation« or »value« it is used and perceived in rather sloppy ways. Therefore it is important for the following discussion to first develop a differentiated understanding on possible notions of design.

5.1 Views on/Accounts of Design

Etymologically, the word »design« (as a verb) is derived from the prefix *de* and the Latin verb *signare*, (in turn derived from signum, a »mark, sign«), meaning »to mark, mark out, or sign«. The prefix de- (here from »out«) doesn't signify any derogation in a sense of opposition or reversal but rather an implication of deduction, or inference, meaning hereby that *"design is about the derivation of something that suggests the presence or existence of a fact, condition, or quality"* (Terzidis 2007, p.69; cf. Flusser & Cullars 1995). Over the course of time the word found its way into other languages[58] and its meaning changed slightly. Beginning from renaissance, the Italian *disegno* was basically used to describe a draft, outline or drawing in terms of a general idea which forms the fundamental concept of a piece of (art) work. With the beginning of the 16th century the English term *design* expressed a plan to be realised, e.g. for a piece of art or an object of applied arts (Herrmann & Moeller 2008, p.13). These roots still influence today's understanding of design as any form of development work[59] in English language areas. So if one looks it up in a dictionary today (cf. Figure 61, p.125 in the appendix), a huge differentiated spectrum of the words meanings can be found depending on its usage as verb or noun. John Heskett, former Chair Professor at the School of Design at Hong Kong Polytechnic and professor at the Institute of Design, IIT Chicago, once put it beautifully in a nutshell by stating: *"Design is to design the design of a design[60]"* (adapted from Heskett 2005, p.3). So design is either a verb or noun[61], and Hesketts bon mot implies that it can be seen as representing a *general concept* (noun 1), *an activity* (verb), *a plan or intention* for implementation (noun 2) or finally as *a finished outcome, policy or product* (noun 3).

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[58] *The Latin **designara** changed into **disegno** (Italian), which led to the French **dessein** and the English **design**.*

[59] *Just think of software design, machine design, genetic design and of course business design, to name but a few.*

[60] *In original "Design is to design a design to produce a design."*

[61] *Actually it could also be an adjective, e.g.: "The beautifully designed lamp."*

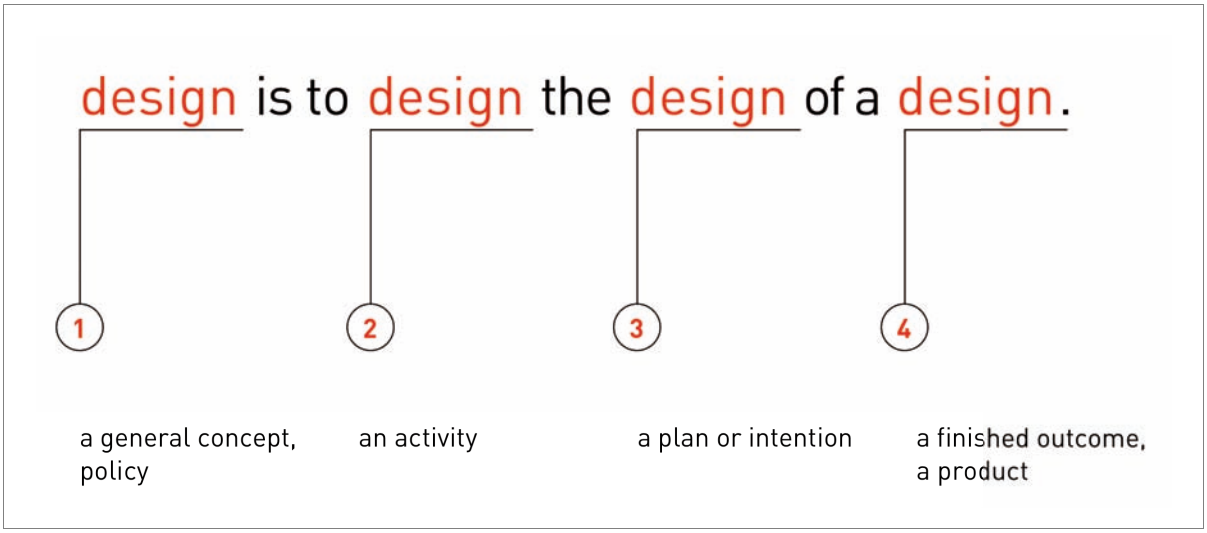

Figure 17: John Heskett's (2005) summarisation of design (Source: Hardt 2006)

However, other scholars like Katarina Wetter Edman (2011) or Jay Doblin[62] (1987) subsume it without further ado into just three broad distinctions/dimensions: *product*, *process* and *practice*. So one needs to keep in mind, that any attempt to define design can fall into any of these four or three categories or transcend between them.

Additionally a dualism of two »design theory cultures« (Jonas 1999), namely the humanities (the »critical« culture) vs. the science (the »useful« view), has emerged over the course of time. This is to some extent also reflected in the two main paradigms which are still often discussed separately today. One conceives design in an *interpretative tradition* (also referred to as *exploratory enquiry*) with its two main streams *reflection in action*[63] (Schön 1983) and *design as making sense of things* (Krippendorff 1989; Utterback et al. 2006; Verganti 2003; 2008; 2009). The other paradigm apprehends design as *(rational) problem solving*[64] (also known as the *deterministic view*) in Heribert Simons tradition who gave the broadest possible definition of it by stating: *"Everyone designs who devises courses of action aimed at changing existing situations into preferred ones"* (Simon 1996). Marty Neumeier shortened even that and claimed *"design is change"* (Neumeier 2009) by arguing that change, or better the process of change, can be changed. That is, change can be designed; thus, design can be designed. Simons as well as Neumeiers definitions can be conceived as search processes for problem-solving *"[…] in which [a)] the desired state of affairs is known at the outset and problems can be decomposed into smaller units before being solved. [O]r [b)] in contrast, problem solving is seen as […] exploratory [where] the desired end state cannot yet be known"* (as cited in Kimbell 2011, p.42). The latter refers to the already introduced wicked problems as a key challenge for strategy making (cf. p.27). Buchanan (1992) therefore highlights the capability of design in dealing with situations where no single solution exists and where stakehold-

[62] *Jay Doblin, distinguishes between design as a state (e.g. product/service appearance or performance) or a process, which in turn can be differentiated according to their levels of complexity as products, unisystems or multisystems (Doblin 1987).*

[63] *Reflection-in-action means that design develops through an interaction with the design material or the situation (often also referred to as a conversation with the situation at hand).*

[64] *The definitions in the problem-solving paradigm have in common that they all refer to a process, which is goal oriented, and in which the goal is solving problems (Friedmann 2003 in Wetter Edman 2011, p.23).*

ers interactions influence the nature and definitions of those problems. In practice both paradigms, the interpretative and problem-solving tradition, co-exist and should at best complement each other. The same goes for the above mentioned dualism, which Jonas (1999), pleading for a 3rd culture, calls outdated.

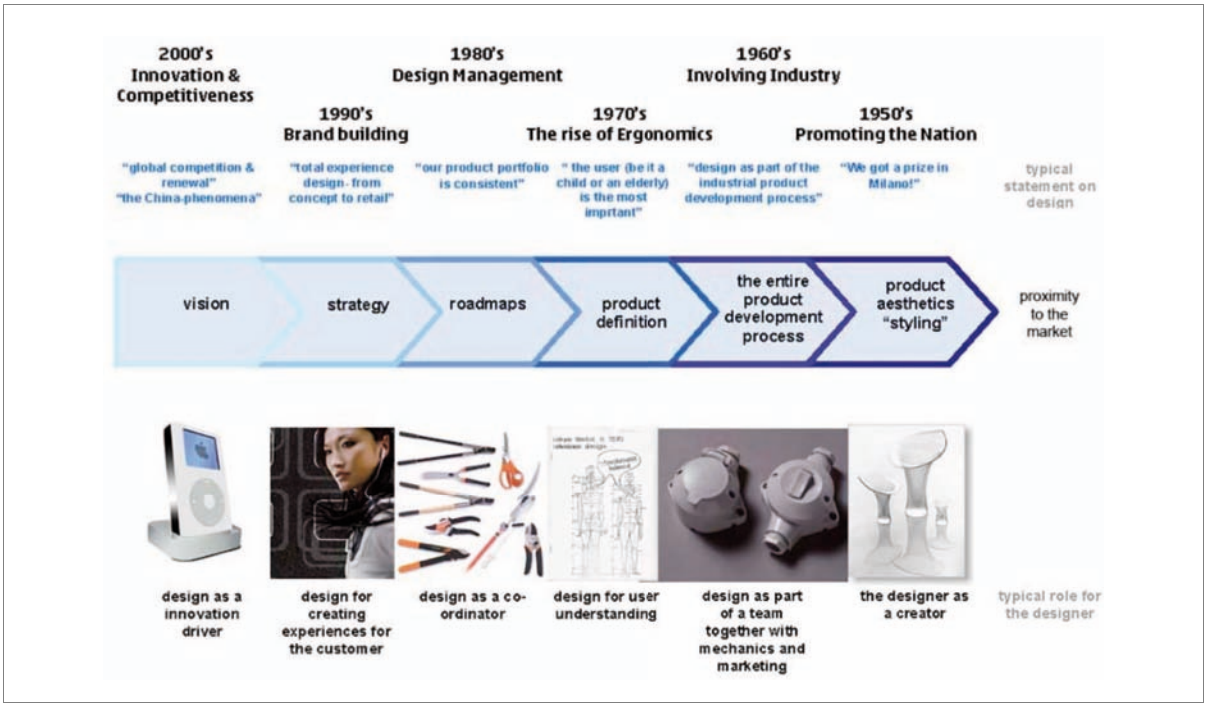

Figure 18: The different/changing roles of the (industrial) designer: Anna Valtonen clearly shows the evolution of the design disciplines from graphic to industrial design and from interaction to environmental and strategy design (Source: Valtonen 2005, p.7; Valtonen 2007, p.86).

When looking at the dimension of *design practice* and what (product) designers are actually designing (see Figure 18), one recognises the changing character of the design object towards the conception[65] of environments and systems. Buchanan (2001) roughly maps this evolution in his four orders of design, starting with *symbols* (e.g. all kinds of visual design like graphic design, typography, film, TV or new media), proceeding with the design of material objects and artifacts, the *things* which in turn may mediate relationships with people and symbols. This leads to the 3rd order of design, *action* – often also referred to as interaction design. The last and most abstract order is *thought* representing above mentioned environments and systems. Here the relations between things and actors instead of objects or things are designed. A viewpoint that is for instance taken when conceptualising »design for service« (Kimbell 2011). Recent examples are the attempts to transform tax- (Preston 2004; Carlsson 2004) or health-

[65] *"Beim konzeptionellen Design […] geht es weniger darum, nur abstrakte Zukunftsentwürfe zu entwickeln, die vom Unternehmen dann doch meist nicht realisiert werden, als vielmehr abstrakte Strategien konkret auszuprobieren und in anfassbare […] Servicekonzepte zu übersetzen" (Herrmann & Moeller 2008, p.71)*

systems (Design Council UK 2004) with the help of design approaches, which led to the synonym use of the label »transformation design[66]« (Burns et al. 2006).

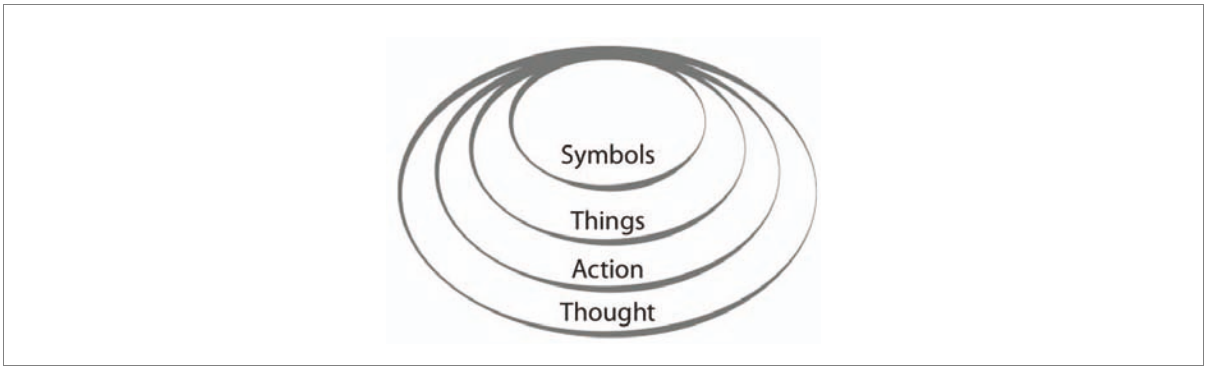

Figure 19: The four orders of design, adapted from Buchanan (2001) (Source: Wetter Edman 2011, p.27)

Some scholars alternatively try to approach a design practice definition, by distinguishing between the *act*[67] and the *process* of designing (Wetter Edman 2011, p.28). I have to leave aside any discussion of the act for reasons of scope, will however – as it is of high importance for this work and already mentioned above – recommit to the particularities of the process(es) in some detail in Chapter 5.2.1. Also any further discussion of for instance functional[68] definitions or nuances within the subdisciplines of design and design research (cf. Sanders 2008) wouldn't further support the goal of this thesis, as the only conclusion that can be drawn is, that design struggles with its own definition. This fact rather should be conceived as a sign of strength not weakness, as the design-inherent permanent learning, de-learning, reflection and questioning attitude is also reflected in the fluidity of its meaning. Otl Aicher, co-founder of the famous Ulm School of Design and one of the best-known German designers of the 20th century, once said: *"Design is a discipline of knowing by doing by knowing by … , a discipline whose essential characteristic (and problem!) is the necessity of permanent learning (without any 'progress' in the scientific sense)."* (in Jonas 1999). Therefore Jonas (1999) concludes *"[…] that design theory [and] research is design itself. [D]esign research, to be effective, must not consist of ideas about design … but rather must be design itself […]"*, in other words, design theory *is* design.

I personally, and for this thesis, prefer a balanced view on design in general, as my own experience has shown that it always is a problem-solving and as well reflective but also meaning creating practice, over all of Buchanans orders. However in its highest level of abstraction, where also design for services fits in, I take the view that meaning creation becomes at least equal, if not more important than problem solving.

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[66] *The attempt to consciously »(re-)design« and guide behaviour, or in other words to innovate the user by orientating him, instead of being orientated by him (Liebl 2011), is seen critically within the design discourse: "User centered design risks becoming 'user design' where the process in which people turns into users is in focus - how use and users should turn out." (Wetter Edman 2011, p.28)*

[67] *Here seen as the skills and attributes that constitute a »good« designer and his expertise. According to a research of Tom Inns (Inns 2007 in Wetter Edman 2011, p.29) six roles of designers have emerged in the 21st century. The designer as 1) negotiator of value, 2) facilitator of thinking 3) as visualizer of the intangible, 4) as navigator of complexity, 5) mediator of stakeholders or 6) as coordinator of exploration.*

[68] *Design is "**use-oriented** (with quality of life as criterion, without claiming to know what this is), **illustrative** (creating wholes, contexts, narratives, aiming at agency), **anticipative** (looking ahead, in different directions and time scales), **generative** (aiming at the synthesis of structures, patterns of behaviour and artifacts), **integrative** (neglecting disciplinary boundaries, moderating perspectives, including its own), and* context-***sensitive** (being aware of and using social, cultural, technological interdependencies)" (Jonas 1999).*

In the light of this short account of design notions alone one can clearly see that an approximation on design can range from general theories to accounts of particular practices and subdivisions of those. The topic is also controversially discussed in institutions and fields outside of »design«, ranging from engineering (e.g. at TU-DELFT, IIT, MIT, etc.) over architecture, general management (A. J. Slywotzky 2004; R. L. Martin 2009a; R. L. Martin 2009c; Dunne & R. Martin 2006; Boland Jr. & Collopy 2004; Liedtka & Ogilvie 2011), product development (its »classical neighbour discipline«), systems design (cf. Ackoff 1981; Senge 1994; Collopy 2009a, to name but a few), anthropology (e.g. Sanders 2002; Wasson 2002) and even up to philosophy (Flusser & Cullars 1995). In view of all these differing subject areas the question arises why they deal with design at all? Again it was Jonas who stated that *"Design is the expert discipline for relating and connecting floating fields"* (1999). He follows Buchanans (1990) view that the purpose of design is to find a center between the tensions of art and aesthetics, engineering, natural sciences and human sciences, which he conceives as the identity of design thinking and what provides a good starting point to understand the particular contributions for our case, the perspective of business and strategic (innovation) management.

5.2 The Intersections of Design and Management

The Design Ladder

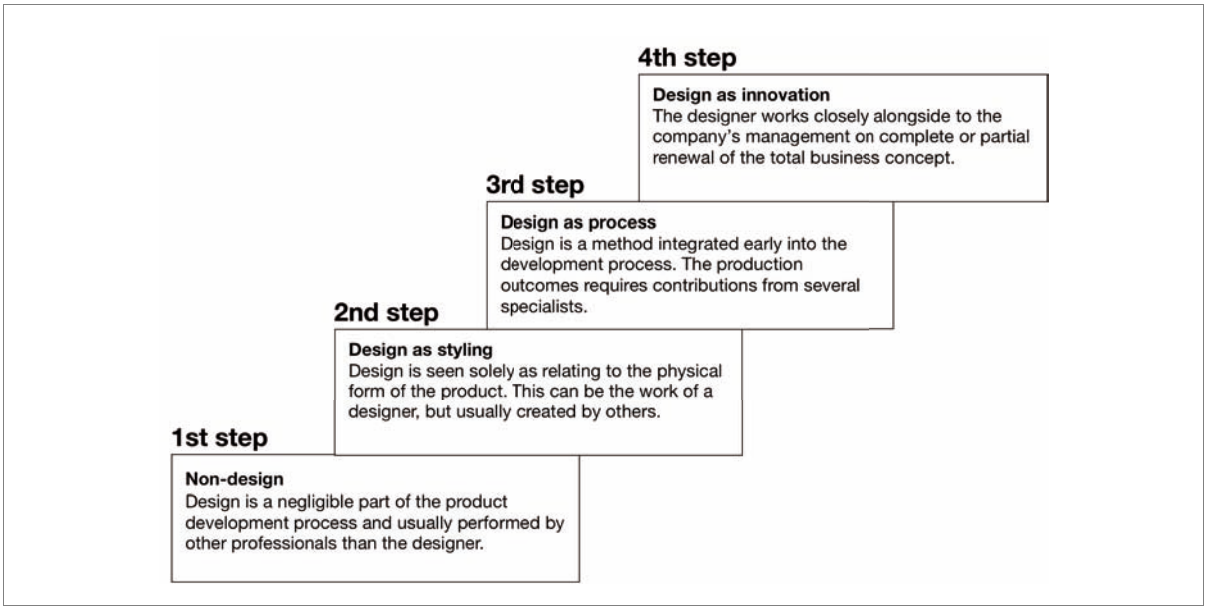

Figure 20: The design use maturity ladder (Source: adapted from SVID 2003)

Figure 20 shows the design ladder, a hierarchy representing how design can be applied in business environments (partly corresponds Buchanans four orders on p.53). It is based on an empirical research[69] conducted by the Swedish Industrial Design Foundation, SVID (2003) and starts with *non-design*[70] which basically *is* design, as one, to speak with Watzlawick, »cannot not design«. The second step, *design as styling* is the most-widespread stereotypical view on its use. In step three, *process* and four, *innovation* it already is perceived as a meta activity which corresponds to the perspective of strategic innovation taken in this thesis.

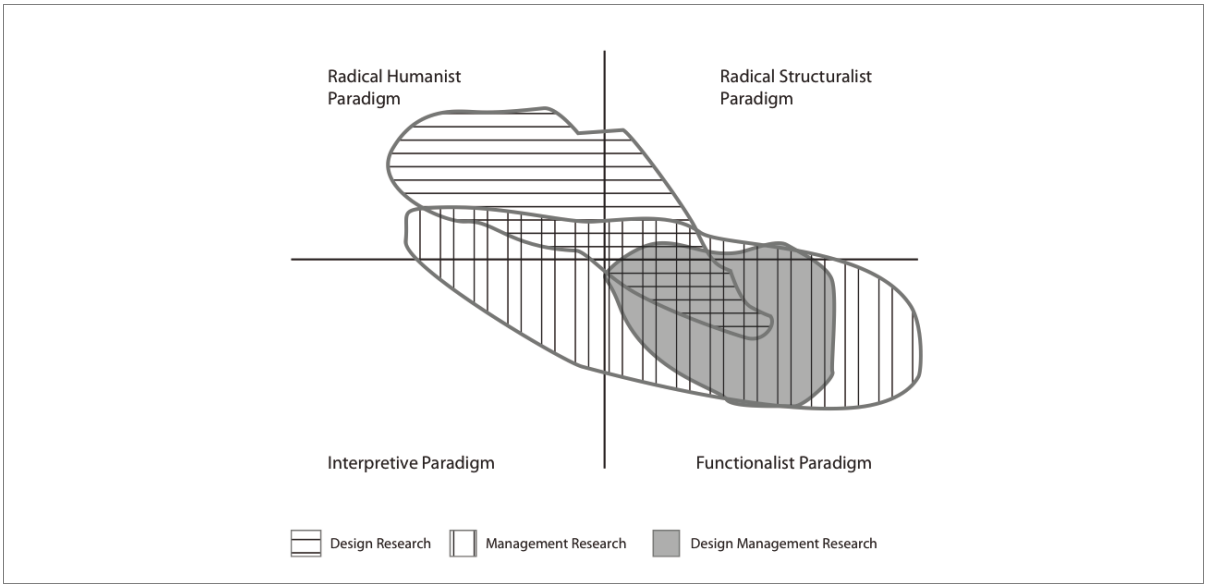

Figure 21: Paradigmatic overlap of management, design and design management. (Source: Sanders 2008, p.39)

Classical design management at first was often concerned with styling and streamlining (in the sense of an aesthetic inside-out management of for instance the »corporate identity«), later on with establishing, standardising and integrating design processes and functions *into* organisations, that is the management *of* design (Wetter Edman 2011, p.36), a very functionalist perspective on the topic and its practices. This view often stood diametral to the (humanist) streams of design research (cf. typical stereotypes of business and management vs. design attitudes: see Table 7, Table 8, and Table 9 on p.126 ff.). Only a very recent and still small research stream appeared over the last ten years which is examining the *intersections* of management *and* design within three main research areas: 1) *Design thinking,* as catalysing organisations innovation capabilities with designerly tools, processes and methods; 2) *Design in innovation,* linking design, technology and innovation management theories, and 3) *Service design*, expanding design practice to include systems (service, people, processes and policies) into design practice (cf. Wetter Edman 2011, p.41). Let's take a closer look at them.

[69] *Interestingly the design ladder is backed up with empirical data (cf. Figure 62, p.125) proving that there is a correlation between seeing design as a meta activity and higher growth potentials in the market (Herrmann & Moeller 2008).*

[70] *Non-design refers to the fact that much of designing is undertaken by people not trained in design. Other authors like Gorb and Dumas (1987) also call this acts of »silent design«.*

5.2.1 Design Thinking

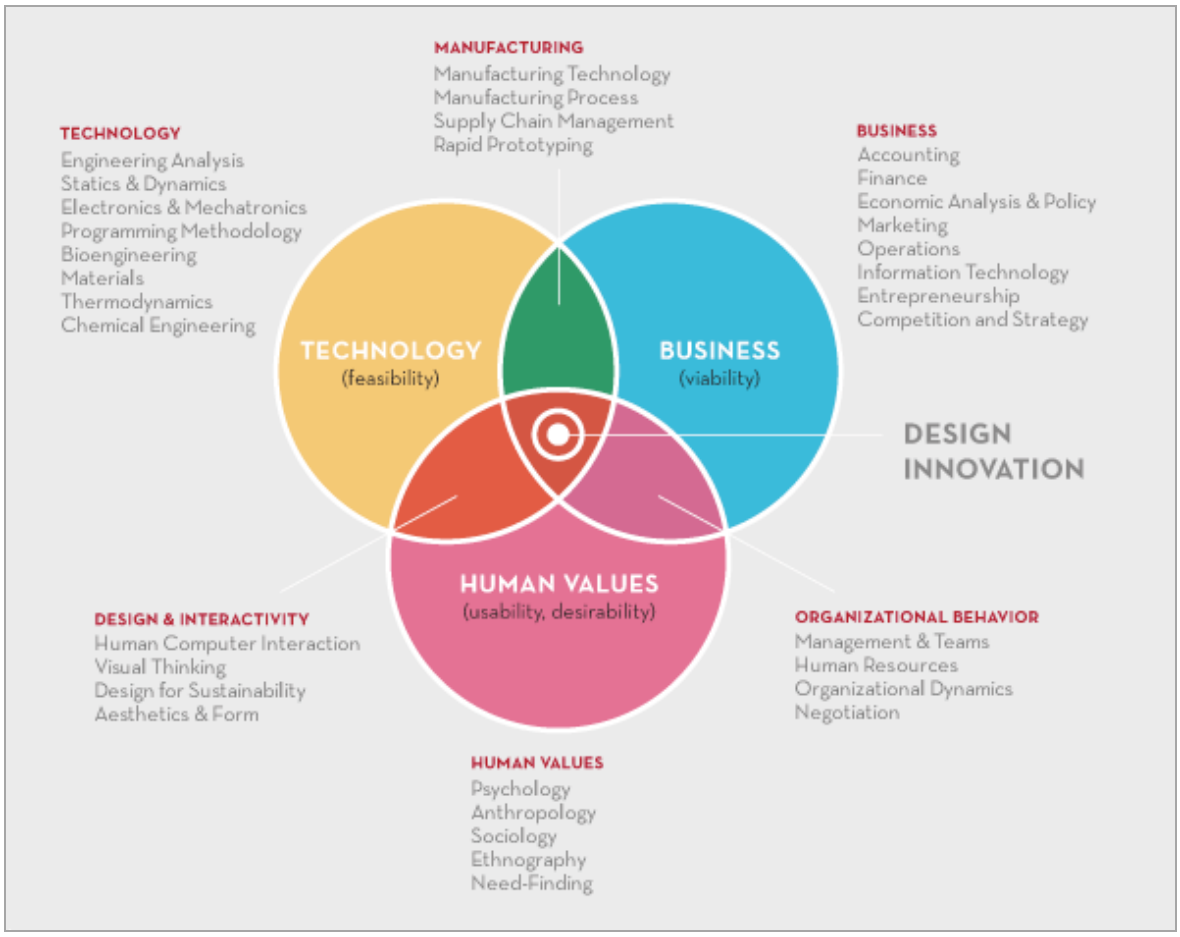

Figure 22: Venn diagram showing the three criteria for design outcomes representing the balance of the main constraints in design thinking and showing the intersections of the various disciplines that it links as well as some typical fields of application (Source: d.School Stanford, 2009)

If, as Buchanan states, the purpose of design thinking is to negotiate and find a center between disciplines, it is important to keep in mind that oftentimes it may be hard to grasp in terms of the thinking paradigms of the respective disciplines. First and foremost it needs to be practiced and trained continually in order to understand it. It also shouldn't be perceived as a »quick win«, as the recent hype proposed: *"Design thinking is different from scientific thinking (analytic, reductionist, aiming at explanation), it is different from engineering thinking (aiming at efficient functionality), and it is different from artistic thinking (taking the artist's self as primary criterion). For all these reasons design thinking has to claim theoretical and methodological autonomy"* (Jonas 1999). It therefore also isn't the often claimed antithesis of data-driven and analytical thinking, it just balances the emotional and rational within its particular modes of analysis: forms, relationships, behaviour, emotions and real human interactions. Once one has accepted this, one learns to use it appropriately and it will unfold its potential. Therefore, what predestines it to complement existing tools for strategic innovation and planning, given the challenges in Chapter 2, will be discussed in the following.

I hereby will not focus anymore on the understanding of design thinking as reflection-in-action within the design discourse but rather emphasise possibilities for non-designers (cf. the two understandings of design thinking in Wetter Edman 2011, p.42 f.). Infobox 4 shows some common definitions on how design thinking is perceived to be of value for non-designers or as a means to innovate.

AN ACCOUNT OF »MANAGEMENT-ORIENTED« DESIGN THINKING DEFINITIONS

Management Perspective

"A way to instill customer-centricity and empathy [...], to solve complex problems [and a] methodology to foster exploration and experimentation." (Mootee 2011, p.3)

"A person or organisation instilled with that discipline is constantly seeking a fruitful balance between reliability and validity, between art and science, between intuition and analytics, and between exploration and exploitation" (R. L. Martin 2009a, p.62) Therefore "[d]esign thinking is the application of integrative thinking[71] to the task of resolving the conflict between reliability and validity, between exploitation and exploration, and between analytical thinking and intuitive thinking. Both ways require a balance of mastery and originality" (R. L. Martin 2009a, p.165).

"Design thinking is the way designers think: the mental processes they use to design objects, services or systems, as distinct from the end result of elegant and useful products. Design thinking results from the nature of design work: a project-based work flow around 'wicked' problems." (Dunne & R. Martin 2006)

Temporal working definition from a business background (here Weatherhead School of Management): "Design is the process of finding and solving non-routine (wicked) problems, often with a focus on bringing new products or services to market. Design is the intentional assembly of systems with interacting parts to achieve some objective. Design is a collection of methods and techniques, often drawn from the fine arts, to creatively solve problems." (Collopy 2009b)

Learning and Process Perspective

Beckman & Barry (2007) define it under the lens of a learning process, by stating Charles Owen (1993): "Design is the creation process through which we employ tools and language to invent artifacts and institutions. As society has evolved, so has our ability to design. [Design thinking as a process has] recognizable phases, and these, while not always in the same order, nearly always begin with analytic phases of search and understanding, and end with synthetic phases of experimentation and invention" (as cited in Beckman & Barry 2007, p.27). Design in this view therefore means a process of knowledge development, which has both analytical (finding and discovery) and synthetic (invention and making) elements and operates in both the theoretical and practical realm.

Practice Perspective

"Design thinking can be described as a discipline that uses the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity, [it] converts need into demand." (T. Brown 2008)

Infobox 4: An account of »management-oriented« design thinking definitions

[71] *"Integrative thinking is the metaskill of being able to face two (or more) opposing ideas or models and instead of choosing one versus the other, to generate a creative resolution of the tension in the form of a better model, which contains elements of each model but is superior to each (or all)" (ibid., p.62).*

These short definitions will become more clear when looking at design thinking's main principles[72] (following Mootee 2011) that are of importance for our matter:

1. It is *action oriented* and fosters a cross-disciplinary way of learning-by-doing. This distinguishes it from traditional strategy making were *"[…] business too often gets stuck at the talking stage"* (Liedtka & Ogilvie 2011, p.12). The »talking phenomenon« in business may also have sth. to do with the fact, that business people can't easily use other media than language and numbers (e.g. build sth.), whereas designers with their »build to think« attitude immediately produce sharable artifacts that avoid the detours of long talking about abstract concepts everyone imagines different. So the »bias towards action« serves as a catalyst for understanding and decision-making.
2. It is also *disruptive and provocative* by nature. As, to speak with Neumeier, it is change itself, searches change and always strives to challenge existing assumptions, what makes it perfect for dealing with ambiguous issues and wicked problems. This in turn helps organisations to escape internal codified logic and tacit knowledge (e.g. industry paradigms) in order to frame things differently. On the other hand it also helps to generate useful new tacit knowledge in a positive way, e.g. about users, practices and usage contexts, because …
3. It also is *human-centric* and heavily focused on *end-user's needs*. That means it will never loose sight with the real people behind the »demand« (cf. A. Slywotzky & Weber 2011) who are otherwise clustered into market segments and demographics. That also predestines it for uncovering opportunities for value creation as it is especially concerned with unmet, latent and unarticulated needs[73].
4. With the help of its human- and client-centric[74] research tools and approaches it *promotes empathy*. This can quickly translate into insights which are needed to know what users really value. As again user value is at the core of everything, design thinking may serve as a catalyst for becoming the »customer-creating value satisfaction« organisation as demanded by Levitt (1960) in the end of Chapter 4.2.
5. Its *explorative character* also helps to bring realistic foresight and anticipatory imagination into strategic planning processes. As argued in 5.1, design by nature is adept at and tailored to dealing with inadequate, insufficient information (here uncertainty in strategic planning). But it usually derives a valid outcome from it (Liedtka & Ogilvie 2011, p.14). That means, it additionally manages to seamlessly transfer its explorative outcomes

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[72] *I excluded some of the obvious and often mentioned fundamentals like »visualisation« or »collaboration« as this is conceived being inherent, when talking about design in this thesis. Its importance should also be recognised by now, after nearly ten years of discussion. For more specific and practical informations on tools and process, a good introduction into the overarching mindset of design thinking with its imperatives (»Show Don't Tell; Focus on Human Values; Craft Clarity; Embrace Experimentation; Be Mindful Of Process; and Radical Collaboration«) can be found in the yearly updated d.school Bootcamp Bootleg (Hasso Plattner Institute of Design Stanford 2010).*

[73] *For instance its focus of exploring extreme user scenarios is a powerful way of looking into possible futures while not forgetting the present.*

[74] *Internally also via its setup of team processes.*

(e.g. insights, experiments, perpetual prototypes) into viable approaches for business exploitation, too (R. L. Martin 2009a). Applied right, it therefore may help finding the right balance for becoming an »ambidextrous organisation« (M. Tushman & C. O'Reilly 2004; cf. Schmiedgen 2010).

6. Design and/or design thinking may also be perceived as a *continuous learning process*, whereby it already inherits a critical component of the demanded conversational character of a second-generation planning approach (Rittel 1973). Its hypothesis generating and iterative outside-in nature[75] provides a structured »unstructured process« that doesn't unnecessarily restrict creativity and exploration but also provides enough guidance for moving fast through the knowledge funnel (cf. R. L. Martin 2009b), an important prerequisite for strategic planning in uncertain environments. A detailed discussion of the process follows in the next chapter.

7. Furthermore it *reduces development risks* for new products and services. So, the again and again quoted »fail early, fail often« statement is repeatedly misunderstood. It doesn't mean that design thinking encourages »failure« but it means fostering experimentation and holistic context exploration in terms of hypotheses testing (cf. the »validity vs. reliability« discussions of R. L. Martin 2009a and Moldoveanu 2009e). According to Liedtka & Ogilvie (2011, p.20) the widely shared basic belief that in circumstances of uncertainty »analysis equals reduced risk« is plain wrong and the opposite is true as *"[…] no amount of data about yesterday will solve the mystery of tomorrow"* (Ibid, p.14), or as R. L. Martin (2009a) put it *"The validity seeker, unlike the reliability seeker, treats past predictive success as hypotheses to be carefully tested before using them to generate predictions that are expected to be valid. Hence, the real empirist is 'a first-rate noticer' of precisely the anomalies that would cause him or her to throw out the 'all things are equal' assumption"* (p.56). This again shows the importance of moving knowledge fast through the funnel (cf. the short ROI discussion on p.65).

8. Design thinking also *creates meanings via its conversational character,* be it conversations about deep insights, or proposals of possible meanings derived from these insights, it has the tools[76] to make meanings accessible for negotiation[77], which is – as Chapter 5.2.2 will show – a critical prerequisite for disruption by innovating meaning.

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[75] Here meant in the sense of an ongoing definition, redefinition, representation, assessment as well as visualisation and prototyping of problems and solutions at hand.

[76] Again a look into the Bootcamp Bootleg (Hasso Plattner Institute of Design Stanford 2010) may show what is meant. General examples for sharing meanings by the production of artifacts are maps, models, sketches or scenario stories and the like.

[77] "The criterion is meaning and purpose-orientation, which cannot be generalized but can only be derived from acting and making and producing, always with respect to concrete cases. Truth has to be replaced with meaning and appropriateness." (Jonas 1999)

9. Design thinking, seen as *attitude and organisational culture "[…] can bring enterprise creativity and knowledge management to the next level"* (Mootee 2011, p.7), which helps overcoming old G-D logic as well as balancing the tensions of an ambidextrous organisation (M. Tushman & C. O'Reilly 2004; Benner & M. L. Tushman 2003; cf. Sutton 2004) by handling exploration and exploitation simultaneously[78] (cf. Schmiedgen 2010).
10. Seen as the *»competitive logic of business strategy«* it complements the mentioned practices from Chapter 2, which aren't as suited for turbulent and uncertain environments as design thinking may prove to (see differences of traditional business logic and design logic in appendix p.126 f. (Table 7, Table 8 and Table 9).
11. As it couples with the disciplines and connects to »what might be« through a user's perspective, it pragmatically balances given constraints and therefore finds the *strategic and operational point of a sustainable equilibrium* (Fraser 2007). In other words, design thinking helps finding the point between maximum value for the user and best viability for the company, which is the prerequisite for defining the right combination of »customer functions« (as mentioned in Chapter 3) and profitable ways to capture some of the value created in monetary terms.

[78] *Examples are internal self-observations through reflection loops which may lead to questioning organisational paradigms, what in turn could help to absorb new environmental externalities into the corporate culture. But also the empathic experience through the eyes of their users and stakeholders are valuable for self-reflection. Furthermore such an intensified user knowledge helps in decision-making, as user- or human-centeredness serves as the one and only corridor for the latter.*

THE DESIGN PROCESS

One critical matter of discussion that hasn't been elaborated yet is the *design (thinking) process*[79], which is, as already mentioned, fundamentally different to most linear strategy or innovation processes. It is also one of the most important aspects one needs to understand when trying to apply design methods to strategic innovation, as it may turn many traditional and brought in processes upside-down.

Most design process models share three main steps. In traditional models these are: *Analysis → synthesis → evaluation*. Some scholars consider that to narrow, why often also the notion of *divergence*[80] (un-learning) → *transformation*[81] (generation of new options, conflict resolution) → *convergence*[82] (comprising the traditional analysis-synthesis model) can be found. These two are also the ones I will concentrate on. Setting out a full range of existing design processes would make no sense as they are highly contingent, context-dependent and often also a matter of fashion. (cf. Jonas 1999). A very comprehensive collection of over 100 models from academia and the practical realm can be found in *»How do you design? – A compendium of models«* (Dubberly 2004).

The Analysis-synthesis bridge model

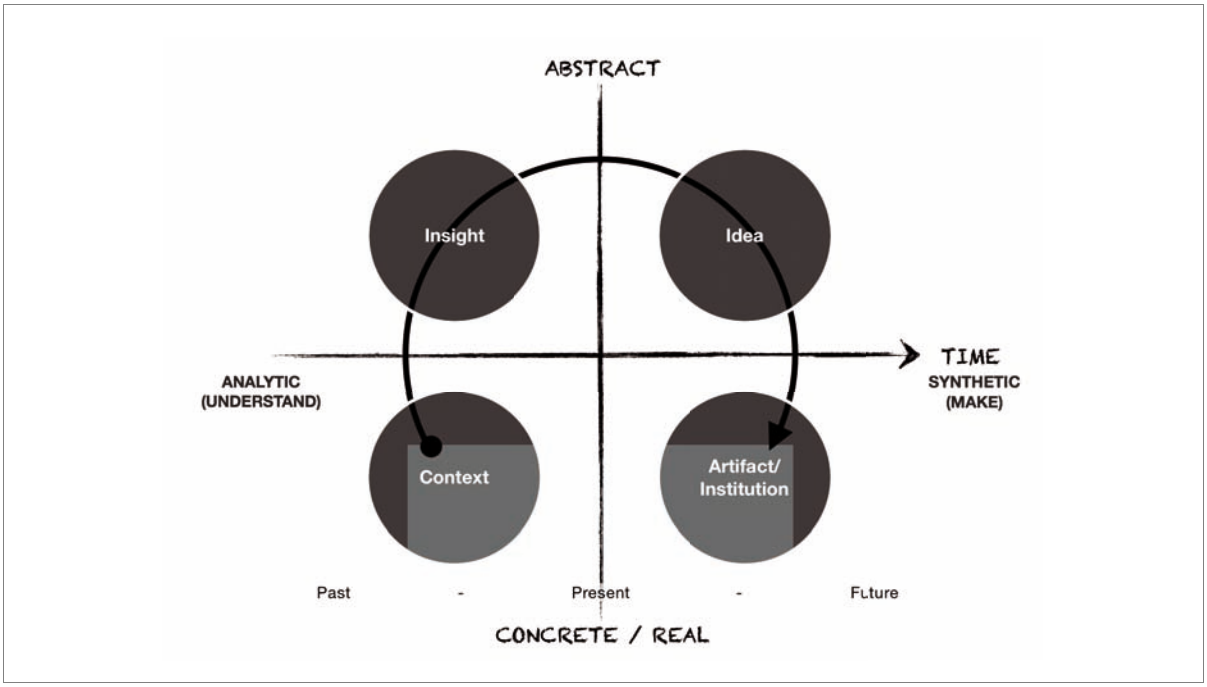

Figure 23: A typical analysis-synthesis bridge model (cf. Dubberly et al. 2008; Dubberly 2004)

[79] ***The*** *design (thinking) process doesn't exist. In the following I will therefore just refer to two of the most prominent conceptualisations.*

[80] *The divergence stage is "[…] extending the boundary of a design situation […] to have a large enough, and fruitful enough, search space. […] The objectives, and the problem boundary, are unstable and tentative. Evaluation is deferred. Every effort is made to escape old assumptions, and absorb new data." (Jones 1970)*

[81] *"This is the stage when objectives, brief, and problem boundaries are fixed, critical variables are identified, constraints are recognized, opportunities are taken and when judgements are made. [It is] pattern-making, fun, flashes of insight, changes of set. […] Pattern-making [is] the creative act of turning a complicated problem into a simple one by […] deciding what to emphasize and what to overlook." (Jones 1970)*

[82] *In the convergence stage "the problem has been defined, the variables have been identified and the objectives have been agreed. The designer's aim …[is to] reduce the secondary uncertainties progressively until only one of many possible alternative designs is left… Persistence and rigidity of mind is a virtue: flexibility and vagueness are to be shunned." (Jones 1970)*

The left column of the 2x2 matrix in Figure 23 represents the *analysis*, which may be the current situation at hand, the problem, or user needs and contexts that have to be researched. The right column is *synthesis*, in terms of a preferred future, a proposal or response, a solution, or even a form)[83]. The bottom row of the picture represents the *concrete* world we inhabit or could inhabit, while the top row is concerned with the *abstractions* and imaginations of what is/what could be. So in short the cycle of a design thinking process evolves through »what is« in reality (*context*), is then distilled to a model of »what is« (*insight*) and a model of »what could be« (*idea*), which in the end manifests in a »what could be« solution (*artifact*), for instance a prototype[84] or an intervention (Fitzner 2011). Above mentioned evaluation then takes place as the whole cycle is repeated with the designed artifact in order to immediately test the solution or proposal within the context it is build for. These cycles are reiterated over and over again until the solution is »right«.

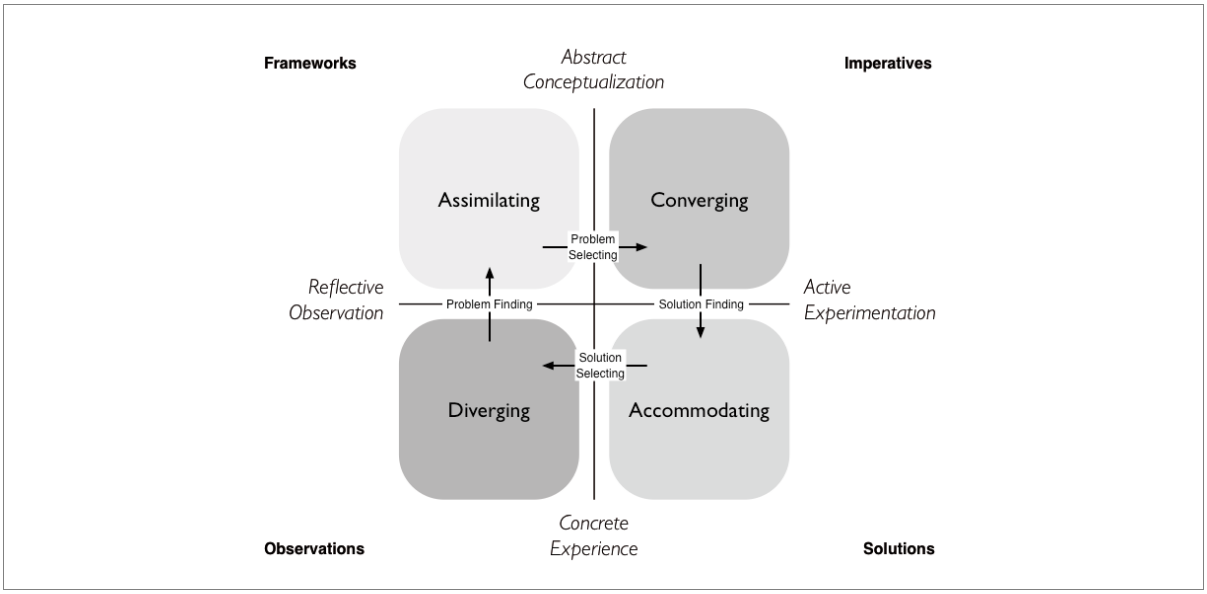

Figure 24: Design thinking as a learning process (Source: adapted from Beckman & Barry 2007, p.28)

Beckman & Barry (2007) found that the analysis-synthesis model can be mapped to the four learning styles[85] (Figure 24) of *experiential learning* (Kolb 1984) as well as to a framework for storytelling, which makes it great for interdisciplinary team work where no common language base for knowledge exchange exits. This is also in accordance with the notion of design as social systems which conceptualize the sub system design as »learning system« (Jonas 1999).

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[83] *Charles Owen named the columns in addition with respect to the kind of people performing the respective tasks. The analytical left column, concerned with discovery, gets done by **finders**. The right however, concerned with invention, by **makers**. One could now map professional disciplines to the respective fields and see where they converge, or better, how such a kind of process helps them converging (cf. Owen 2005).*

[84] *With prototype a design thinker doesn't necessarily mean just physical objects in terms of a product design. This could also be »behavioural prototypes« like role plays or bodystorms. Also sketches, storyboards, stop motion clips other scenario movies are used to make the »what could be« experienceable.*

[85] *The »diverging« learner often performs well in idea generation activities, the »converging« style represents people who prefer technical tasks over tasks dealing with social or interpersonal issues. The »assimilating« style means being good in taking a lot of information and logically ordering it, while the »accommodating« learner prefers hands-on experience and action-oriented learning (Beckman & Barry 2007). In multidisciplinary design and consulting studios like IDEO or Continuum people are often mapped accordingly in the process, depending on their professional speciality. However they are still involved in the other stages and should be able to relate to the other styles (the often quoted T-shaped profiles cf. Leonard-Barton (1998)).*

Seeing the process from this perspective may also help in resolving leadership tensions within the different stages. They found that successful teams just rotate leadership so that it goes to the one person that is most skilled in the required phase of the process (Beckman & Barry 2007, p.52 f.). And as basically every strategy and innovation process is, or should be, a learning process (Nonaka & Takeuchi 1995; Mintzberg et al. 2001; Govindarajan & Trimble 2004; Pietersen 2010), the question simply is how to it set up. Here I would like to refer back to the assumption of linearity in strategy processes as mentioned in the critique chapters 2.1 and 2.2. As Figure 25 shows an understanding of this kind may lead to merely staying in either the practical or theoretical realm of analysis-synthesis within the learning cycle.

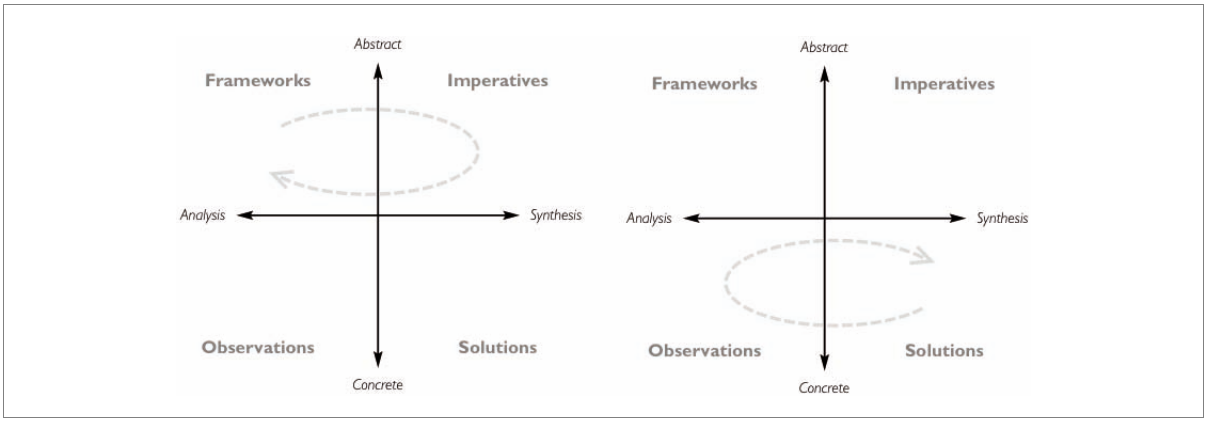

Figure 25: Academic isolation vs. express test cycle (Source: Beckman & Barry 2007, p.49-50)

What happens, when basic assumptions aren't challenged by observing real world phenomena can currently be observed in macro economics with the world's financial and environmental crisis. Beckman & Barry called this »academic isolation«. The typical misunderstanding of design as just user-centered is displayed in the lower column as an »express test cycle«.

> *"Many engineering-driven organizations start with solutions and then in classic technology push fashion, place those solutions in the market to see whether or not there is a need. Today, in fact, it has become quite popular to engage in the 'express test cycle', iterating rapidly between observation and solutions, but remaining in the concrete realm of the innovation process. Unfortunately, while this approach may well uncover many use and usability needs, it often fails to discover the higher level meaning-based needs that can be crucial to the success of an innovation"* (Beckman & Barry 2007, p.48).

Therefore especially the iterations between the abstract and the real are crucial for the alignment of the innovation strategy with discovered real world market opportunities. That's why derivates of the model can be found all over in innovation practice and research. Figure 26 shows IDEO's design thinking process and Kumars (2009) innovation model as two examples. Also typical linear visualisations with their re-entry points (cf. the representation of HPI, School of Design Thinking, Postdam, Figure 63 on p.128 in the appendix) can be understood in this tradition.

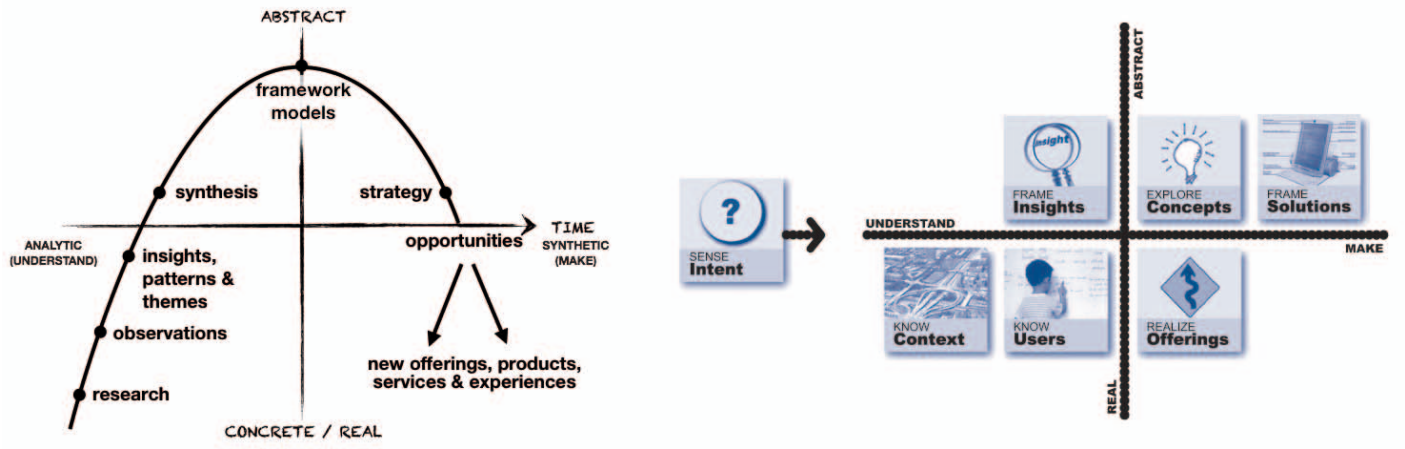

Figure 26: IDEO's Fulton Suri model and Vijay Kumars innovation model with its seven modes (Kumar 2009, p.95) in comparison (Sources: adapted from IDEO 2009; Kumar 2009)

The second way of conceiving and therefore representing design models is the »divergence-convergence« process, which can be understood as two exemplary iterations of the analysis-synthesis process. Such representations are often found with service design studios but also in the »necktie model of flare and focus« from d.school Stanford (again see Figure 64 in the appendix, p.129) or in Liedtka & Ogilvie's (2011) recent book *Designing for growth*[86].

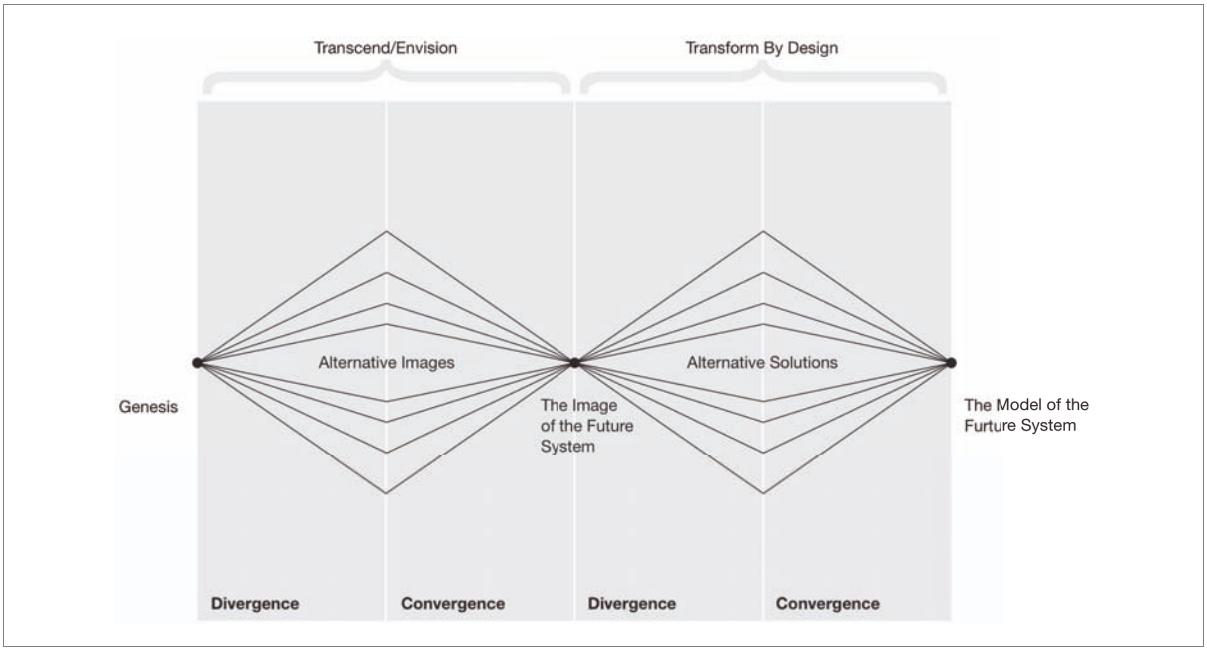

Figure 27: Divergence and convergence in the design process after Bela H. Banathy (1996) (Source: Dubberly 2004, p.24)

[86] *In »Designing for growth: a design thinking tool kit for managers« they simplified the process to the four stages What is?, What if?, What wows?, and What works? (2011, p.21), which may be quite handy for an immediate application of design thinking as a* ***toolkit****, but there will be an ongoing discussion of the dangers such a conception brings along – especially when it is misunderstood as just a tool instead in contrast to an attitude or mindset.*

The widening and narrowing of the band represents the divergent and convergent phases, and therefore also the different thinking modi, within the process. So, this representation clearly shows too, that design thinking holistically embraces all learning and thinking styles and is not just about creativity and the creation of options via brainstorming or the like. The whole opposite is true, it makes decision making in convergent stages easier as it works out reference points for the latter by immersing with the real world, usually »the potential user« and its context (Liedtka & Ogilvie 2011, cf. design thinking for risk reduction), what avoids taking the »wrong paths« to market. Therefore, and given the condition that it is applied »properly«, it can have a significant impact on innovation ROI, which has been set out in Martins (2009b) description of design thinking as an accelerator for moving fast through the knowledge funnel and what shall next be explained from another angle.

THE IMPACT OF DESIGN AND DESIGN PROCESSES ON INNOVATION ROI

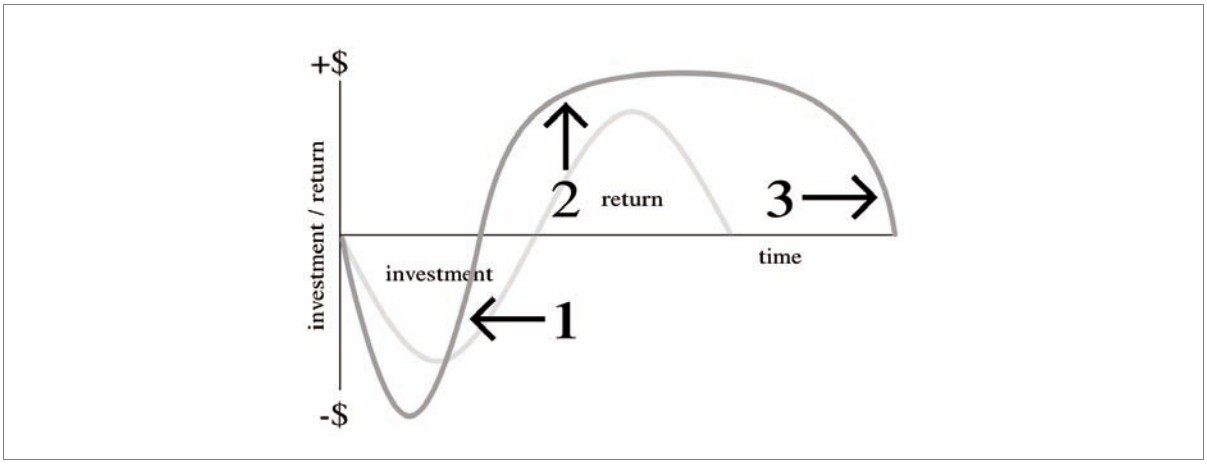

Figure 28: The impact of a design strategy on the classic investment/return curve (Source: Owen 1998, p.3)

(1) According to Owen (1998) it is the close coupling of ideation and evaluation (e.g. fast prototyping → »show don't tell«) that shortens the length of development processes shown by number one in Figure 28. Companies like Procter&Gamble have already introduced this experimental way of working organisation-wide (cf. B. Brown & Anthony 2011).

(2) Furthermore, the user-centric research approach in design uncovers what users (unconsciously) value and what not. Resulting product- or service-system configurations will therefore keep the delicate balance between unarticulated basic expectations and excitement generators, while still being economically viable (cf. Kano et al. 1984)[87]. Or in other words, design thinking may help to make the right proposals regarding what standards can be lowered and which are critical to raise (cf. C.-C. Yang & K.-J. Yang 2011; Kim & Mauborgne 2005) in the comparison to alternative solutions. At best this leads to falling costs while resulting in new value offerings that uniquely fit users (unarticulated) needs. Both will raise the return portion of the innovation investment curve.

[87] *This already mentioned virtual balance on a knife's edge becomes easier to understand when having again a short look at Kano's model of customer satisfaction which is attached in Figure 65 in the appendix, p.130.*

(3) As design thinking approaches problems holistically and systemically, resulting solutions are like that as well. Therefore it may also help lengthen the return portion of the curve by resulting in product-service systems or business models that are hard to copy[88] (Owen 1998, p.2-3; Chesbrough 2011) and uncomfortable for customers »to escape«. One just needs to think of the systemic customer lock-in's in Apples proprietary platform business. All this leads to a greater ROI and competitive advantage in the long run.

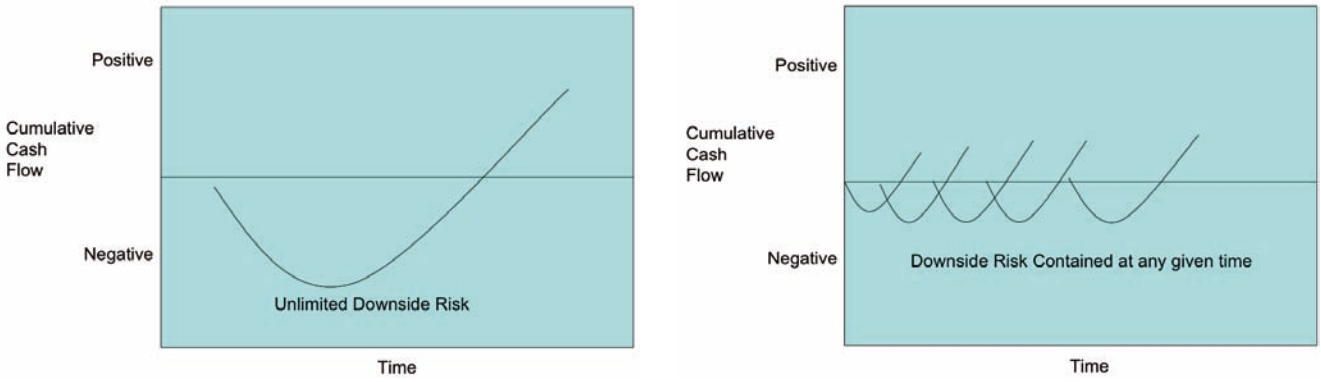

Figure 29: Conventional »black hole« investment vs. options oriented investment approaches (Source: McGrath 2010, p.256)

Figure 29 illustrates that in addition the design-inherent fast cycles of experimenting with alternative options may lead to, what Rita Gunther McGrath, a strong advocate of discovery-driven planning (McGrath & Macmillan 2009), calls »real options reasoning«. Instead of basing decisions on deterministic approaches as projected EVA (economic value added) or NPV (net present value), investments will be kept small by iterating slightly modified small experiments as long as a profitable business/innovation has been found. If they have to be cut off, the downside losses aren't as negative as with traditional development approaches, not challenging basic assumptions over the course of time (ibid 2010, p.255 f.).

[88] *cf. Porters notion of the activity system (1996), where copying any or just a few elements will not return comparable results.*

5.2.2 Design and Innovation: Design-driven Innovation?

> *"Market? What market? We do not look at market needs. We make proposals to people!"*

Ernesto Gismondi, Founder and Chair of Artimede Group (as cited in Verganti 2009, p.48)

Having briefly discussed design thinking's user-centric contributions to strategic innovation, I will now turn to the parallely developing discourse of design and innovation management[89], especially Verganti's concept of *design-driven innovation* (2009). Utterback et al. (2006) state that *"[f]unctionality aims at satisfying the operative needs of the customer, [while] the product meaning tickles their emotional and socio-cultural needs"* (p.156), a view they share with Verganti (2003; 2008; 2009; 2011) who developed their idea of *design-inspired innovation* further into the above mentioned notion. Similar to Christensen (2004; cf. Chapter 2.2, p.22 f.) he argues that technological innovation alone, even if it is radical, risks being disrupted by either new meanings or worse, a new combination of technology and meaning (Figure 30). The latter infrequent combination of both he calls a *technology epiphany*, which *"[…] is usually much more disruptive to competition than is the technological breakthrough itself"* (Ibid, p. 80).

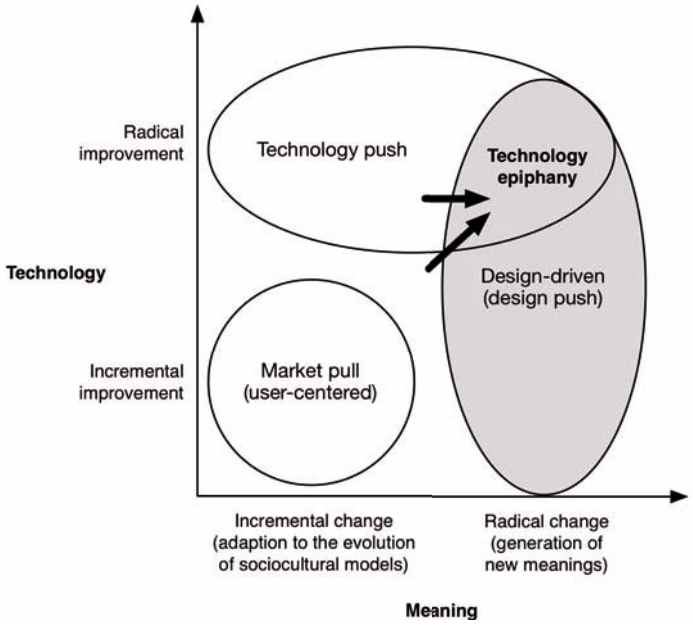

Figure 30: Three innovation strategies (Source: Verganti 2009, p.55)

The overlap of technology-push and design-driven innovation to a *technology epiphany* happens[90] if a company discovers or reveals what he calls the powerful hidden or *quiescent meaning*

[89] *According to Wetter Edman (2011, p.44) within the last ten years two theory streams emerged that left aside the old product development theories and linear approaches (e.g. stage gate, TQM, etc.): Hatchuel's* ***concept-knowledge (C-K) theory*** *(Hatchuel & Weil 2002) and Verganti's* ***design-driven innovation*** *(2009). As the former is still rather coupled with a rationalistic understanding of design (Wetter Edman 2011, p.44), I will not further discuss it here and instead turn the readers attention to innovation as meaning-making.*

[90] *Technological and sociocultural models are usually entangled and coevolve both through incremental and radical innovation cycles.*

of a new technology. A recent example for this phenomenon was Nintendo Wii's redefinition of what playing games on a console means. The design-driven innovation of meaning pertains to the *way* (no passive immersion but socialisation; sport, workout and even physical recovery therapies; etc.) *new user groups* (all ages and demographics – especially girls) now use and perceive video gaming. Or to speak with Abell (1980) different customer functions combined with new user groups suddenly compete with other alternative solutions[91] helping Nintendo to escape its »industry's« technology race. The overlapping technology-push which enabled the core of such a new gaming experience, namely the controller, was empowered by so called MEMS accelerometers, which were used for the first time in this industry context (cf. the ongoing discussion of cross-industry innovation, pyramiding, etc. (cf. Poetz & Prügl 2010; Gassmann et al. 2011)). That is meant by saying, Nintendo revealed the *quiescent meaning* of this technology for gaming. And whereas X-Box and PlayStation still compete on the same parameters, Nintendo redefined its market boundaries in terms of a blue ocean strategy (Kim & Mauborgne 2005) by lowering graphics and hardware standards and simultaneously raising factors valued by its new user groups like physical activity and social get-together in to a more engaging user experience. So in terms of design thinking the Wii found the perfect balance of desirability, feasibility, and viability.

Another example showing that technology-push alone (again in terms of limiting innovation strategies to technological substitutions) can be dangerous, is Sony. Although it incrementally changed functionalities and performance in the evolution from Walkmans to MiniDisc players and later to MP3-Walkmans (which can be seen absolutely as a radical improvement of technology), the existing meaning of those devices remained untouched. They were mere portable music players compliant with the dominant technological regime.

Serious competitors in the late 90s (e.g. the Rio Portable Music Player 300) made the same mistake, although the trend of filesharing networks and new practices of sharing music libraries among users (here: key interpreters) have already been more than obvious. Well, the rest is history, in the early 2000s the technology epiphany of the Apple iPod and its attached ecosystem revolutionised the market and degraded the old industry leader in portable music playing (Ibid, p. 75).

[91] *E.g. fitness clubs, board game producers or even whole entertainment industries to name but a few.*

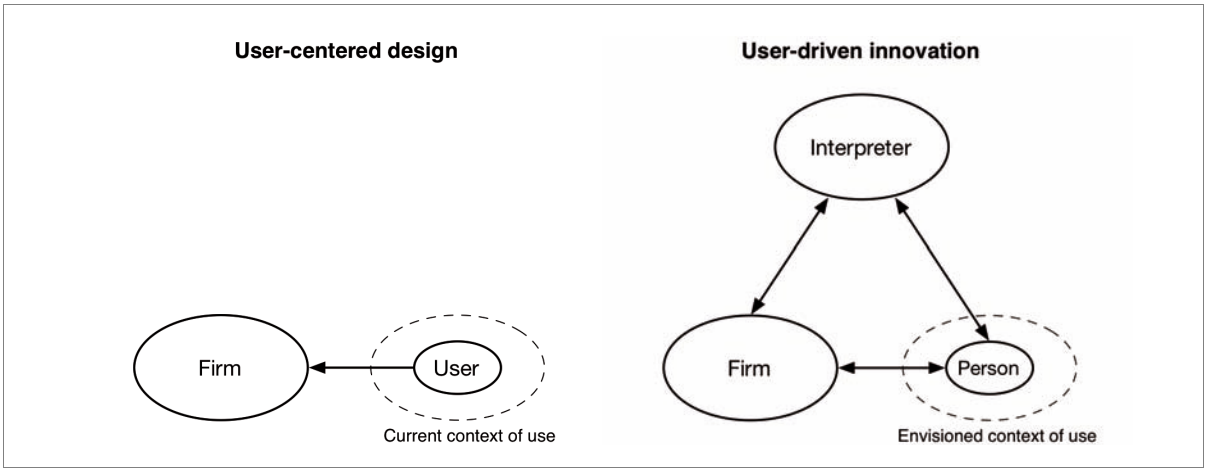

Figure 31: User-centered design vs. user-driven innovation (Source: adapted from Verganti 2009)

Remains the question, how are those innovative meanings formed? How come Nintendo found the MEMS accelerometer technology and was able to (re)combine it with »extreme-user« insights (namely those who refused to play so far) and its personal vision of new gaming practices into a new proposal to the market? The key to an understanding of Vergantis notion of innovation, is his claim to not get too close to ordinary users in terms of user-centered design. That doesn't mean one shouldn't research or even co-create with users, the opposite is true. However such a research has the one and only purpose, to understand current context and practices in order to unveil peoples present meaning-making which is bound to existing sociocultural regimes[92] (Ibid 2009, p.54). Once this is understood, he proposes to *"search for new possibilities that are consistent with the evolution of sociocultural phenomena but are not there until a company transforms them into products and proposes them to people"* (Ibid 2009, p. 55). This notion of companies being able to trigger sociocultural transitions is also shared by Spinosa et al. (1999) who think of »the entrepreneur« as a person (or entity) who »discloses new worlds« by proposing new meaning innovations to the market[93].

The negotiation of these new meanings happens in, what Verganti calls, *design discourses* consisting of a multitude of *interpreters*, i.e. elite actors who identify new combinations and link previously unconnected discourses and communities (cf. the notion of stakeholders as »converters of pattern« in Krippendorff 1989). Other authors also call them brokers (Hargadon & Sutton 1997), bridges or gatekeepers, who can, as Figure 32 shows, come from a variety of

[92] *Examples could be the social construction of meanings like »car« vs. »mobility in general« (most people don't need a car anymore and less than ever as status symbol), »cage egg« vs. »free range hen egg« (same product – two meanings), the changing meaning of SUV's in America and worldwide, or even the meaning and its associated form of a chair: "When we showed early prototypes [of the Aeron, the worlds most successful office chair,] to customers they asked if they could see a finished upholstered model instead of a semifinished prototype. They could not believe that was the final version." (Bob Wood, VP Research, Design & Development, Herman Miller in Verganti 2009, p.50) Therefore "meanings reflect the psychological and cultural dimensions of being human. The way we give meaning to things depends strongly on our values, beliefs, norms, and traditions. [They] reflect our cultural model. And that, in turn, reflects what occurs in our personal lifes and our societies. And sociocultural models do change […]" (Verganti 2009, p. 53). So, if one interacts with normal users they may not be aware of new possible meanings yet, what renders user-centered research in that sense useless. But the approach still cares about peoples needs as it investigates how they* ***currently*** *give meanings to things respectively what they "could love in a yet-to-exist scenario and how they might receive new proposals" (ibid, p.55).*

[93] *Just think of Henry Fords famous bon-mot: "If I had asked my customers what they wanted, they would have told me 'a faster horse'".*

fields. Taking part in this discourse requires an open and participative knowledge sharing attitude and the strive for getting close to those interpreters instead of just users[94].

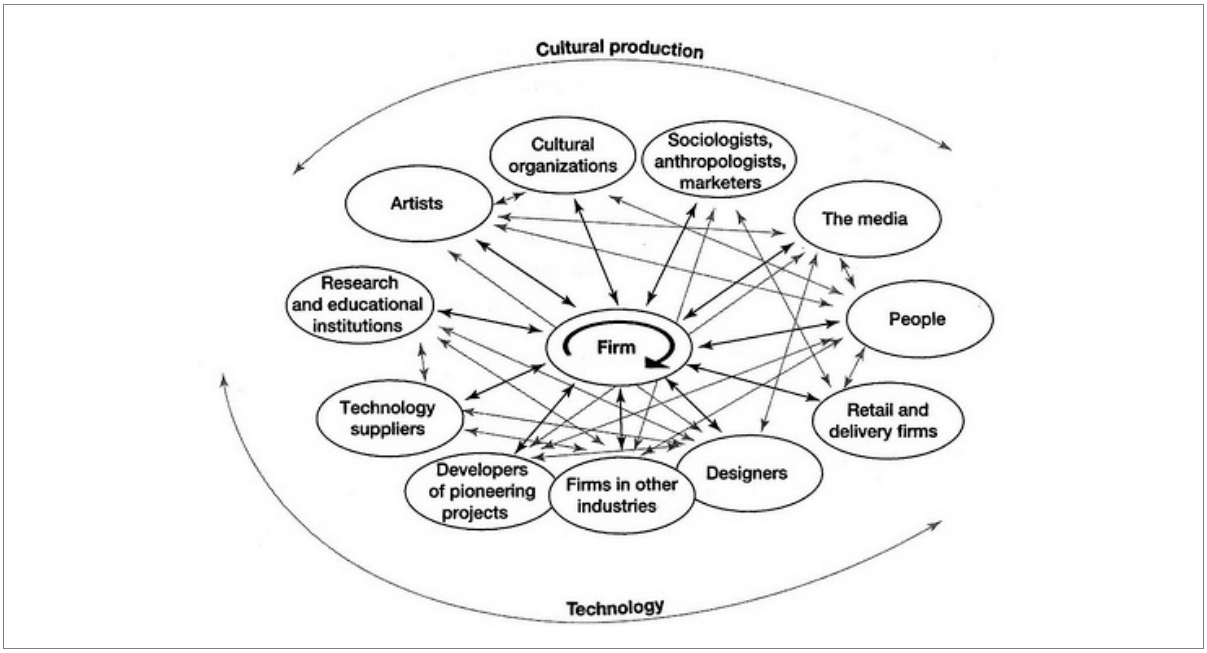

Figure 32: Interpreters in a collective research laboratory (Source: Verganti 2009, p.12)

The designer as interpreter has a special role within this discourse, he acts as a broker of product and sign languages (Verganti 2003; 2009). A not so long ago pioneering example for that was the use of colored translucent materials for reinterpreting the meaning of former grey working machines into fun-emanating and home furnishing-like iMacs by Apples Jonathan Ive. Suddenly the computer spoke the language of home rather than the office (Utterback et al. 2006, p.178). In this case Ive, a former bathroom designer moved his known design vocabulary into another context. It wasn't the people who wished for it (user-centeredness). They may have not even felt any unconscious or latent need of integrating computers as furniture design objects into their homes (user-centric). It was a companies strong vision of how the PC's meaning will change in the near future (user-centric changing of meaning) pushed to the market. Therefore such *"[…] proposals […], are not dreams without a foundation. They end up being what people were waiting for, once they see them"* (Verganti 2009, p.10), as they are based on research in which directions current sociocultural models may evolve[95].

[94] *Obviously users, especially extreme users may also be interpreters par excellence. Verganti for instance gives the example of Rory Cooper, the man who turned his handicap into a new form of sport, by building the first sport wheelchair in the 70s. Wheelchairs by then where perceived as medical devices and appeared in an ugly functional dominant design that signified the helplessness of its user. They were designed as segregating people instead of integrating them. By turning its meaning it into a sports device he also restored the dignity of its users and incidentally built a whole new business out of it. (ibid, p. 132 f.)*

[95] *It is also clear that the designer's vision emerged from the negotiation of different meanings in the discourse. So he is always influenced by given contexts in the creation of new ones. Also Krippendorf therefore concluded: "Meaning always requires reference to someone's (self or other) cognitive processes. Accordingly, the designer's form [or better solution] is the designer's way of objectifying an, hence, disowning their own meaning in the process of making sense for others" (Krippendorf 1989, p.14).*

Interpreters (just think of researchers or artists) can therefore also be seen as seducers: Once the interpretation of a new meaning (or an attractive vision, what Verganti calls *cultural prototype*) is very well received in the discourse, the other interpreters are likely to push it forward and it may become a self-fulfilling prophecy, as technology, products, services, and even artwork shape sociocultural models.

In both, the Nintendo and the iPod example the strong visions of new ways of gaming or embedding music into everyday life overlapped with radical technological innovations. Other examples that aren't technology epiphanies, but nevertheless represent remarkable innovations of meaning (i.e. the lower right area in Figure 30, p.67) are: *Actimel*, the *Flip Camcorder*, *Spotify*, *Body Shop*, *Circe du Soleil* or *Artimedes' Metamorfosi Lamp,* to name but a few. The examples also show that the innovation of meaning can incorporate proposals on a mere marketing and branding, or a product and technology, but also on a service design and business model level.

CONCLUSIONS

Also design thinking is concerned with meaning, but slightly different: It first uncovers current practices and use contexts of to be observed actors which also includes to understand how they give meaning to things or their practices. Later on it ideates and co-creates new solutions and contexts in collaboration with them, some network partners (e.g. for technology), and the company's design/innovation team itself (see the steps in the bottom in Figure 33).

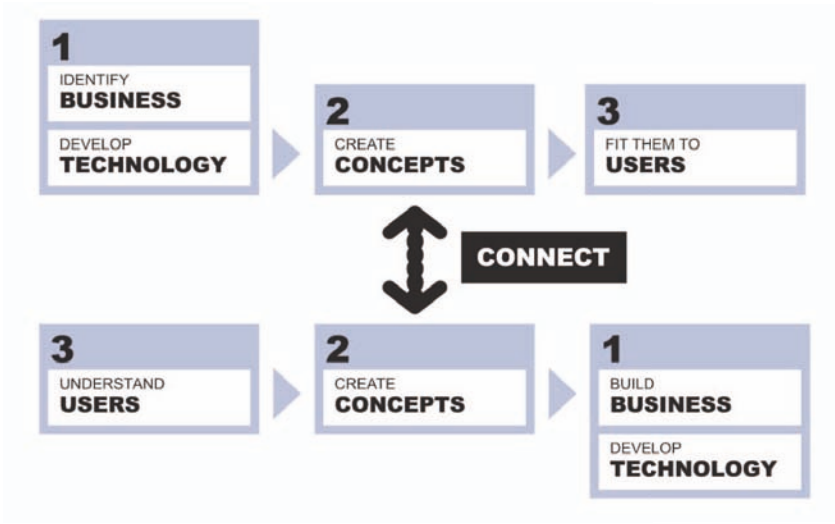

Figure 33: Three different models of innovation, driven by technology, business processes and design, and the points at which they intersect (Source: Kumar 2009, p.92)

Design-driven innovation however emphasises more the additional discourse with elite interpreters (the upper part of the Figure). Nevertheless the engagement and experiments within this discourse can, or better must, be informed by the interactions or learnings from the design thinking processes. The thereon derived proposals of new meaning are fed back (as ideas, or artifacts) in to the design process during the synthesis and may – if they are tested at all[96] – for example be validated against the appropriation willingness of critical key interpreters like for instance extreme users. In other words, and to come back to the implications for strategic innovation: Design thinking's outside-in openness helps discovering practices and meaning. The inside-out openness of a design-driven innovation discourse in turn is required to be able to exchange insights regarding new meanings or technologies derived from the design experiments and the dialogue with other interpreters. Design thinking and design-driven innovation therefore intersect exactly at the critical point of an outside-in (pull) and inside-out (push) perspective of innovation. The detailed translation of the compiled new concept or proposal into an integrated user experience is a speciality, the growing practice of service design is dedicated to.

[96] *Very radical proposals sometimes are hard to discuss even with extreme power- or non-users. If the company has a very strong vision and strives to push this vision into market even if it my take a long time and significant investments, it probably wouldn't intensify the discourse with possible users but only with very specialised key interpreters.*

5.2.3 Service Design

> *"A service may be defined as a change in the conditions of a person or a good belonging to some economic unit, which is brought about as the result of the activity of some other economic unit with the prior agreement of the former person or economic unit."*
>
> Jean Gadrey (2002)

Service design[97] itself is a relatively new research area and the cross-disciplinary field of general research in services itself often seems confusing. Wetter Edman (2011) is one the few who tried to roughly disentangle the particular streams and locate service designs position in relation to others, although she also admits that they are hard to separate. I will combine her examination with my own research findings to introduce and set out briefly service designs importance for strategic innovation.

Services are researched since the 70s in the stream of *services marketing*. Back then the famous IHIP[98] model emerged and dominated many discussions (Zeithaml et al. 1985), even until today. Its static description however that contrasts services to products is outdated (for a comprehensive discussion of the topic see Edvardsson et al. 2005; Kirsikka et al. 2009, p.6 f.). Due to that new perspectives were developed and brought together by Vargo & Lusch (2004a; 2008) in their service dominant logic which conceives service as the fundamental basis of exchange (cf. the ten foundational premises of S-D logic, p.122, appendix).

THE S-D LOGIC PERSPECTIVE

As Chapter 4.1 already briefly addressed, the *S-D logic stream* is rather concerned with a perspective on value creation than being a new theory (Wetter Edman 2011, p.50). It defines service as the *"applications of competencies (knowledge and skills), through deeds, processes, and performances, for the benefit of another entity or the entity itself."* (Vargo & Lusch 2008, p.7). Goods are subsumed in services as both are means for *value creation*. This brakes the traditional product-services dichotomy and emphasises the actual use situation. So the value in S-D logic is usually perceived as *value-in-use*[99] but the discussion moves slightly towards *value-in-context* (both already discussed). S-D logic further emphasises the co-creation aspect of value as also already described in Chapter 4.1. This again implies that it is the customer who determines the value

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[97] *Both terms, service + design in combination, were first mentioned by Shostack (1984) in his HBR article »Designing Services that Deliver«.*

[98] *IHIP stands for »unique characteristics« that are attributed to services: intangibility, heterogeneity, inseparability and perishability. The first* ***intangibility*** *becomes immediately obsolete when taking a customers' perspective. They don't distinguish between the physical and intangible of an experience (e.g. of a PSS).* ***Heterogeneity*** *says that a service experience can never be replicated, as it is always different and depends on the customer. This is common sense and true for all experiences, as there is always a contextual element and individual predisposition of the user.* ***Inseparability****, saying that production and consumption happens always together, isn't true either. Just think of car repairing, web-services or machine to machine communications via API's.* ***Perishability*** *from old GD-logic means that services can't be stored, nor they last. Well, from a designers POV this is the most »funny« view one can take on customer experiences, or as Kirsikka et al. (2009) formulated: "Isn't it, one aim of the service design, to create long lasting memories?" (p.7).*

[99] *This perspective is meanwhile also taken in research streams from engineering. The here existing notion of product-service systems (PSS) has often been understood as product-oriented after-sales service or a combination of a product sale coupled with value-adding services. Now also in PSS the discussion heads towards providing the function instead of selling the product, providing the function. A fictive example would be the free delivery of a washing machine to ones home, where a pay-per-wash (instead of selling the washing machine) is charged.*

of the service innovation, but *"it is the firm that is responsible for developing the proposition, or for facilitating and organizing the collaboration process"* (Wetter Edman 2011, p.53), which is in accordance with the sophisticated notions of how »value« and »value propositions« are constituted, as discussed in Chapter 4.

SERVICE INNOVATION

According to Wetter Edman (2011) the research *stream on service innovation* emphasises behavioural aspects, i.e. service is seen as behavioural act or a *"renewal of human behaviour"* (Sundbo, 2008 as cited in Wetter Edman, p.53) and is most often conceived as a process. Newer contributions to the discourse that analysed the relations of S-D logic and discontinuous[100] innovation found that change can happen along two dimensions: in *the role of the customer* and in *the firm's value creation*. As both are closely coupled, radical innovation in services is seen as changing the way how customers co-create value. Innovation in service is therefore rather concerned with »innovating the customer« instead of products.[101] Regarding the value creation dimension she adds: *"1) knowledge is embedded in objects, 2) resources are integrated or divided within the firm and in relation to the customers, and 3) knowledge and resources are distributed among a number of parties involved in the value co-creation"* (Wetter Edman 2011, p.54, cf. Verganti 2009, H. Chesbrough 2011). First authors already go so far that they expand this perspective by integrating the iterative process where user, product, process and business model innovation go hand in hand, as a definition of service innovation (Voss & Zomerdijk 2007). This will shortly be discussed in Chapter 6.2.

DESIGN IN SERVICE RESEARCH

Within the *service research* discourse Wetter Edman criticises the view of service design as a distinct phase of a new market service development (NSD), what some, especially in Germany, also call service engineering. The name of especially the latter already implies that service design is seen as styling, »add-on« or something that comes relatively late in a process. In the conceptions of service design in the eponymous discourse of designers this is fundamentally different. Here it is seen as a holistic concept which is similar to the understanding of service innovation (Moritz 2005; Kirsikka et al. 2009; Schneider & Stickdorn 2011; Kimbell 2011)[102].

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[100] *Here synonymously used with »radical« or »revolutionary«.*

[101] *Cf. the user as design object in »transformation design«, Chapter 5.1 and Grönroos' (2011) notion of the provider participating in user's value creation, Chapter 4.2.*

[102] *Admittedly this is only true for very recent state-of-the-art discussions of the topic, as Wetter Edman (2011) also showed that the service design discourse itself is divided into several streams. The German stream around Birgit Mager and the SEDES Research – center for service design research in Cologne originally saw services from a product's perspective (p. 60) whereas the Italian research community focused on services as interaction (p.60). As the discussions also drew on adjacent research fields like design theory, research and techniques, as well as on systemic approaches, case studies and management or engineering knowledge the discussion became quite cluttered. Wetter Edman therefore summarised her main findings as follows: "In conclusion, service design has been described from a design perspective as design of interactions at different interfaces (Pacenti & Sangiorgi, 2010; Sangiorgi, 2009), as the design of experiences through touchpoints and over time (live|work in Moggridge, 2007), as applying design methods and principles to the development of service, (Holmlid & Evenson, 2008) or even as an area that is not possible to define due to its interdisciplinary character (Stickdorn, 2010)" (Wetter Edman 2011, p.62 f.).*

SERVICE DESIGN AS DESIGNING FOR SERVICES

> *"Designing for service is a process that brings together skills, methods, and tools for intentionally creating and integrating (not accidentally discovering and falling into) systems for interaction with customers to create value for the customer, and, by differentiating providers, to create long-term relationships between providers and customers."*

Dubberly & Evenson (2008a)

The above mentioned misunderstanding of service design being part of a process and not the process itself, again relates to the different perceptions (problem solving vs. interpretative enquiry, resp. third vs. fourth order) of design as set out in Chapter 5.1. Kimbell therefore put the self-conception of service designers into a nice form by showing the different approaches with their respective tensions to it (Figure 34): *"[D]esigning for a service is a strategic kind of design activity that operates at the level of socio-material configurations or systems, rather than being framed with pre-existing design disciplines"* (2011, p.49).

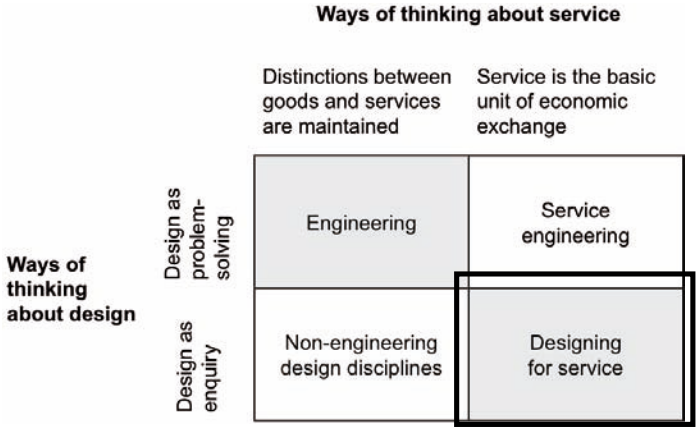

Figure 34: Approaches to conceptualizing service design. (Kimbell 2011, p.45)

She argues that a designer's understanding of service design is rather an exploratory process, which aims at creating and developing proposals of new kinds of value relations between diverse actors within socio-material configurations[103] (2011). In accordance with S-D logic any distinction between product and service in an IHIP tradition is irrelevant. She called this »designing *for* services« as "*designing for services rather than designing services recognizes that what is being designed is not an end result, but rather a platform for action with which diverse actors will engage over time. […] Designing for service remains always incomplete"* (Kimbell 2011, p.45). This fluid and constructivist approach is congruent with the exchange character of reciprocal value propositions (cf. Chapter 4.2) and views of practitioners like Dubberly & Evenson (2008a) who de-

[103] *Socio-material configurations in this sense means: It may involve people, processes, technologies and other kinds of objects. Therefore also machine to machine interactions (e.g. the exchange of data via API's of web-services or in the future the interaction of household roboters) may form such an relation.*

scribe it as above cited meta-activity in terms of fourth order design that also takes meaning into account. Similar to Kimbell they propose, that design for service should foremost be considered a iterative and exploratory process[104] (cf. Chapter 5.2.1). As Figure 35 shows, this process happens between the actors *service provider*, *user* (or client or customer) and *service medium* and provides the platform for a transformation of reality (Gadrey 1996a).

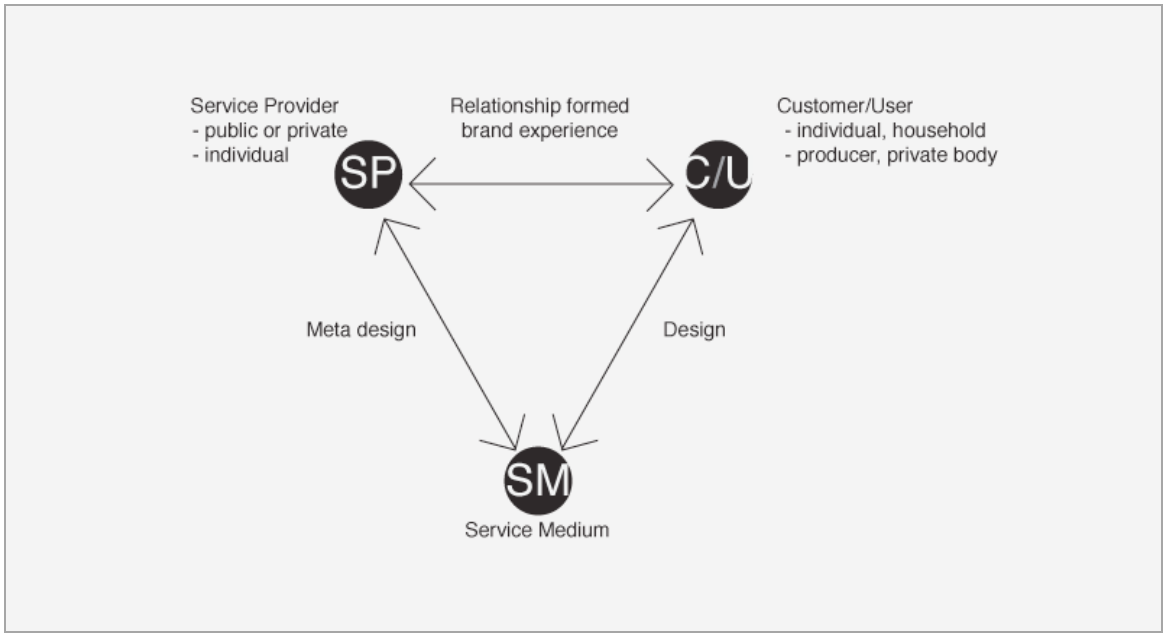

Figure 35: Services as a design triangle (Source: Dubberly & Evenson 2008a, p.3 after Gadrey 1996a)

Both notions also establish clear (Kimbell 2011) or at least implicit (Dubberly & Evenson 2008s) links to Vergantis (2009) work[105], although important co-creating actors like strategic partners, e.g. from open innovation value networks (H. W. Chesbrough 2006; H. Chesbrough et al. 2006; H. Chesbrough 2011) or Vergantis interpreters are not explicitly shown in above figure.

[104] *The process and its respective research steps can be found in the appendix, p.132.*

[105] *Kimbells socio-material configuration equals Vergantis description of being able to change dominant sociocultural and technical regimes. Kimbells as well as Dubberly & Evensons claim for an ongoing engaging on a platform for action, comprises Vergantis notion of the design discourse. The service medium as a permanently developing prototype (cf. »always beta« services in the web) can even be understood as part of the platform for action/design discourse where actors/interpreters engage over time.*

Having now carved out a working definition on *service design as designing for services,* I will touch briefly on its characteristic contributions to strategic innovation. Again I will rely on a synthesis performed by Wetter Edman (2011, as summarised in the Figure below) where the particular value contributions and characteristics of service design are structured along the most important questions of service design practice: *Who* does *what* and *how*?

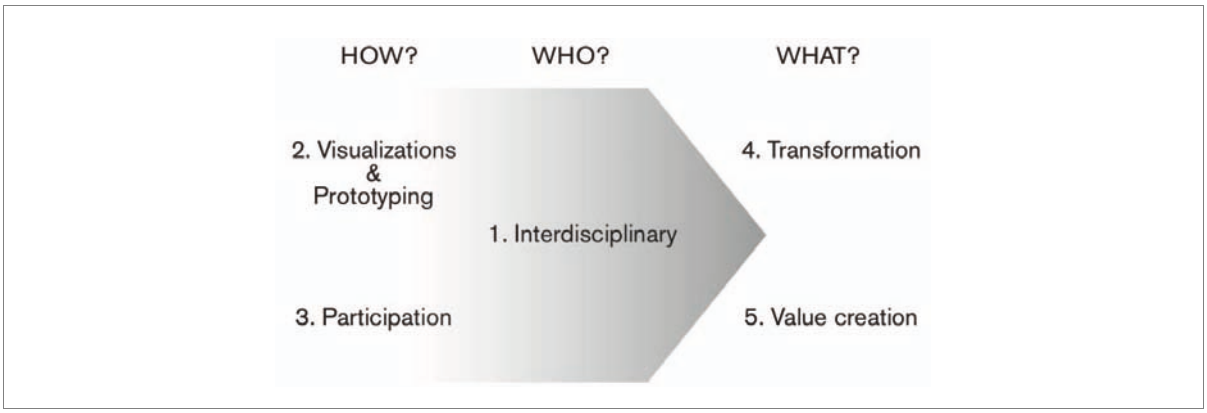

Figure 36: The questions of service design research and practice as well as their discussed characteristics in the current literature (Source: Wetter Edman 2009, p.69)

First of all one immediately realises the topic's roots in design thinking[106]. So any lengthy discussion on 1) its interdisciplinary nature is superfluous. The same is true for 2) visualisation and prototyping and its 3) participative character. However, on 4) transformation and 5) value creation I want to put short emphasis again. Service design, as transformation design, is increasingly applied for changing realities on individual, organisational or societal, ergo strategic, levels. Additionally, outcomes of service design aren't perceived as products or single transactions anymore but rather as an ongoing value co-creation process, which is clearly congruent to the conclusions drawn in Chapter 4.

[106] *"Service Design is not a new specialist design discipline. It is a new multi-disciplinary platform of expertise. Born in design thinking it integrates various fields of expertise" (Moritz 2005, p.47).*

5.3 Conclusions

> *"The service perspective as a business logic enables firms to rethink their business models […] and develop them in a service-centric and at the same time customer-centric direction."*
>
> Grönroos (2011)

When asking (service) design thinkers about their self-conception and what exactly it is they're doing, the most common answers are 1) Doing good for »the greater good«, 2) creating value for people and bringing the latter through emotions, and 3) generating insights in form of contextual understandings of customer, firm and environment (Wetter Edman 2009b, p.5 ff.). Or as the International Council of Societies of Industrial Design (2011) states[107]: *"Together, these [design] activities should further enhance – in a choral way with other related professions – the value of life."* From these value-oriented statements alone one gets an impression what is meant by the all-so-often invoked design philosophy or attitude. The chapter has shown how this deep strive for value-creation over time translated into processes, tools and specific research and practice streams, trying to bring about those new realities by either taking an approach of problem-solving, interpretative/meaning-making or both, within a spectrum of concrete and abstract design orders. So it is not surprising that a whole series of links to the value discussion in Chapter 4 became apparent, which I will summarise now.

1) Design is a, if not *the*, value generating activity

So far it has been argued that the purpose of business is to create new, or at least keep changing, customers by offering them new value, the main driver (or to refer back to the strategy critique in 2.1, the *content*) of any design activity[108].

2) Design facilitates strategic learning in uncertain environments

In order to know what they value, companies have to actively immerse themselves, or at least accept being, in a reciprocal and ongoing value negotiation which may well be initiated by other parties than themselves[109]. The complexity of the holistic gestalt notion value with its interdependent sociocultural and subjective reality construction has shown, that in order to grasp this value, any exchange has to consider peoples meaning-giving, contexts, practices and

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[107] *In full context it says: "Design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems in whole life cycles. Therefore, design is the central factor of innovative humanisation of technologies and the crucial factor of cultural and economic exchange.*

[It] seeks to discover and assess structural, organisational, functional, expressive and economic relationships, with the task of: Enhancing global sustainability and environmental protection (global ethics); Giving benefits and freedom to the entire human community, individual and collective; Final users, producers and market protagonists (social ethics); Supporting cultural diversity despite the globalisation of the world (cultural ethics); and Giving products, services and systems, those forms that are expressive of (semiology) and coherent with (aesthetics) their proper complexity. […]

Together, these activities should further enhance - in a choral way with other related professions - the value of life." (2011)

[108] *Value here again encompasses the dimensions discussed in 4.1. Design always delivers at least one, most often a combination of three types of value: Aesthetic value, social value (deep understanding of peoples needs leading to the creation of new meanings and experiences) and – for the company – economic value (innovation/business capability and performance).*

[109] *We remember Ballantyne et al. (2011), who described the value exchange via communicative interactions on a market constituted by initiators and participants and who deduced that value propositions are reciprocal.*

systemic interactions with their socio-material world. Design as a learning *process*, has by nature a conversational, iterative character with permanent feedback loops that may enable this exchange in support of the learning organisation. With its interplay of divergent and convergent thinking (respectively its inductive, deductive and abductive modes of reasoning) it is analytical and explorative in nature. It balances not only internal innovation and disciplines on a team level, it is also firm in handling external constraints which often come as wicked problems (cf. »sustainable equilibrium«, p.60).

3) Design discovers and creates customers

This preoccupation with discrepancies (e.g. contradicting practices, meanings or social predispositions) is the reason for design's close proximity to trend research (cf. Liebl 2000). It is very exercised in discovering, holding on to, and making sense of anomalies (Krippendorf 1989; 2006), which is, as Spinosa et al. (1999) reason, a fundamental entrepreneurial activity, namely the discovery of value and business opportunities[110]. In other words one could also say *it is exercised in discovering customers*. This especially becomes apparent if one compares the »customer discovery« process (cf. Figure 69, p.133) of Steve Blank (2005), a Silicon Valley veteran and serial entrepreneur, to the practice of design thinking and service design. His notion of the customer development process entails exactly the same methods design has used ever since: fast cycles of hypotheses testing with low-fi prototypes (he calls minimum viable products) in an »always beta« learning process that iterates towards a *"well –oiled machine engineered for execution."* (Ibid). Both corresponds with prior findings that value is emergent in kind and appears during interaction. This is also a reason why Grönroos (2011) claims that it is not the customer, but the service provider who gains from those interactions: *"The customer as co-producer can influence the firm's production process [and] the firm gets an opportunity to influence the customer's usage process. Because usage at the same time is value-creation for the customer, the firm gets an opportunity to take part in his or her value-creating process – as co-creator*" (Ibid, p.24).

4) Design detects new meanings and new alternative solutions[111]

Being that engaged with the user, design – as to speak with Abell (1980) – also helps uncovering and/or creating alternative practices or solutions he may consider valid to solve his functions. This not only with regard to customer utility but also in terms of the sense he makes from it, because Chapters 3 and 4 have shown that customers usually attach value to the perceived proportion of the product/service being able to solve their problems or generate meaning. Business redefinition or a reconceptualisation of industry borders may therefore be a result of the permanent pull (learning about and with users) and push (making proposals to

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[110] I can't go into further detail on trend and issue management in this thesis, but it is a related field that also deals with the question, how the »new« emerges and what early signals may help discover it. Trends are often social in nature and can be seen as cultural innovations, i.e. new practices (cf. Vergantis (2009) notion of cultural change initiated by companies) which usually consist of two components: 1) novelty/invention grade and 2) diffusion grade (cf. Schumpeter 1939; 1942). As for (1) trying to answer the question, what exactly the »new« is, Boris Groys (1992) concluded that two priorly separated contexts come together or overlap. Regarding point (2) Jürgen Link (2009) observed how anomalous things and practices become normality and concluded that the border between both poles is negotiable and dynamically shifting. Design as "[…] something new that fits in with what already exists or [that] changes it in a positive way." (Janet Murray in Dubberly 2011) operates directly at the intersection of those new and emerging contexts.

[111] Being either observed potential disruptive practices, meanings, technologies and already existing businesses, or envisioned alternative solutions (e.g. scenarios, prototypes, etc.) for a user experience/customer journey.

them) activities inherent in design. It can result in new meanings and new socio-material configurations which can come along with technical innovation, but need not necessarily to. Referring to this, Chesbrough highlights that especially the complex arrangements of a service design incorporate a vast amount of tacit knowledge that can't be copied by competition, or at least not as fast as merely its parts or technology (2011, p.54 f.).

5) Design »knows« how to collaborate

Design's openness and heavy cross-disciplinary collaboration on all levels (e.g. internal: teams and divisions; external: the customers and the design discourse, to name but a few) provides the ground for gaining exactly the critical tacit knowledge above. It would never ask whether to, but rather *how* and in *what mix* one should collaborate (Pisano & Verganti 2008). In practice this attitude leads to the conviction that it isn't important how collaboration or co-creation activities are labelled (e.g. crowd sourcing, open innovation, collective intelligence, charrette, etc.) – it often is just done by experimenting whereas any structuring and classification is left to design research and other academic entities hereafter. A successful and still up-to-date example is P&G's open innovation programme »Connect & Develop«, which demonstrably emerged out of the »Clay Street Project«, a five year programme that introduced a design thinking attitude[112] to the company in 2001 to 2005 (cf. Wills Amat 2008). That means this radical kind of opening up was rather a natural consequence of designerly ways of strategising (*design doing*), instead of a strategy, an approach or tool in itself, as it often is presented in retrospect. Therefore a design approach may also instill a higher sensitivity for collaboration opportunities in exisiting, or yet to exist, value networks of not only customers but also suppliers, allies and other partners.

To sum up, design as a meta activity is a catalysing frame for strategic innovation as set out in Chapter 2.4. Design activities as examined so far, lead to 1) increased value for the customer and they help in 2) uncovering, defining and gaining insights to all dimensions (customer groups, customer functions and alternative solutions) defining a market according to Abell (1980). Furthermore *content*[113], *process*[114] and *tools*[115] of design are in stark contrast to the established innovation and strategy practices from Chapters 2.1 to 2.3. And finally, design as a user-centric, constraint-balancing and meaning-creating activity also seems to be the perfect means for discovering disruption opportunities and developing new business models from it, a topic the next chapter will deal with.

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[112] *Internally referred to as »hybrid thinking«.*

[113] *It is heavily focused on the user and problem solving. This may, depending on the focus (cf. Figure 2, p.16), be incremental or radical in nature. A »making sense of things« attitude is basically inherent in all good design.*

[114] *The process is often very »outside-in« and explorative in nature. But it also has the balancing element of verifying ideation outcomes immediately. Therefore one could also say that it has the conversational character of a learning organisation that leaves enough room for experimentation but always reflects on what makes sense for the organisation via its various feedback loops.*

[115] *There exists a vast array of validity- but also reliability-oriented (design) methods and tools which are better suited to explore new market opportunities and value for the user. Similar to 2.1 and for reasons of scope, I can't give more details on that. Unfortunately most of these tools, often drawing on attainments from sociology and ethnography, are totally underrepresented in today's »market research« practice.*

6 Business Model Innovation as Delivering User Value

"Really, what we're doing as designers is, ultimately, and inevitably, designing the business of the companies that we're working for. Whether you like it or not, the more innovative you try to be, the more you are going to affect the business and the business model."

Tim Brown (2005), speech at the Rotman Business Design Conference

Once a new customer value, hence a new customer experience or first possible service journey, is discovered, defined, and most often already verified or tested for acceptance, it needs to be embedded into an existing, or yet to be created, business architecture. That means it needs to be translated into a value proposition with all the implications for its delivery[116]. That is, the rather customer interface-oriented service design process has to move on further into the implementation of the envisioned solutions. Although many service design tools already consider some backend and implementation variables – just think of service blueprinting technique (Bitner et al. 2008) being mindful of onstage, backstage and support processes – the design discipline still has to learn about the complex interdependencies and parameters one has to keep in mind when putting new services and strategies into action. The translation of strategic value innovation (as described in this study) into a profitable business model will affect many parameters of the way a business is run. On the other hand design needs »business« for execution and for paving clever ways of capturing parts of the created value (Liedtka & Ogilvie 2011, p.18). So only if we know the parameters and interdependencies determining »business innovation« (Sawhney et al. 2006), we can consciously design them and finally create or disrupt those desirable (new) market spaces (Kim & Mauborgne 2004; Kim & Mauborgne 2005).

There exist several approaches to categorise types of innovation into the broad term business innovation. Sawhney et al. (2006) for example developed an »innovation radar« capable of showing and benchmarking the 12 different ways for a company to innovate with its relative strenghts and weaknesses in comparison to alternative solutions (for a detailed description of the parameters see Figure 70, p.133 appendix).

[116] *Typically questions come up like: To whom exactly will the value be offered (customer segments, »six markets«)? What is received in return (company's value capture)? How is it offered (channels)? How is it created (value configuration, e.g. organisational structure, resources and capabilities)? What other entities will contribute (suppliers, partners, allies, etc.) and how? The list could go on forever with the point being that value creation alone isn't enough – it needs to be implemented and embedded into a business system.*

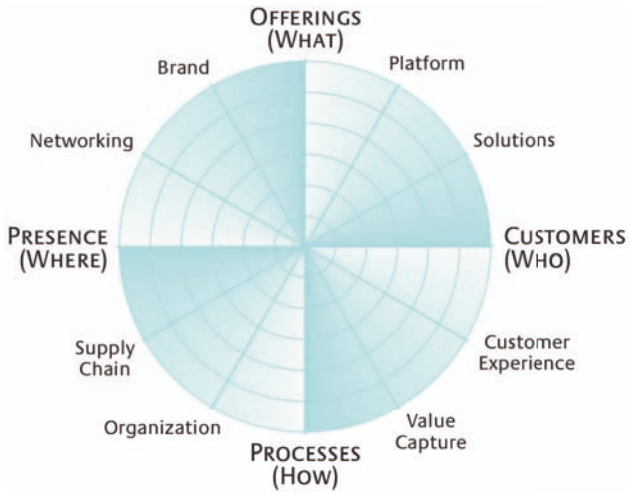

Figure 37: The innovation radar – a benchmarking tool for relative strenghts and weaknesses of companies (Sawhney et al. 2006, pp.77, 80)

The more dimensions a company innovates, the more sustainable the competitive advantage will become and the harder it will be to copy for competitors. Although I doubt the tools capability to translate those complex dimensions into benchmarkable numbers that make sense, it already illustrates the importance of systemic innovation beyond just technology and product levels. Practitioners like the Larry Keeley from Doblin Inc. developed a framework with similar dimensions but another focus, namely to visually represent the inside-out and outside perspectives of strategy making in innovation (see Figure 38). The inside-out perspective is similar to traditional value chains (cf. p.95), asking the question, what assets and core competenices are available in the firm and what products or services can be produced with them (see also Figure 33, p.72)? The inverted outside-in perspective however asks, what is it that customers want and how might it construct a new business model or even an ecosystem of partnerships and external relationships to provide that new value to them?

The reason for pointing to this framework in this work, is the research of Peer Insight (cf. Chapter 2.3) that used the »10 types of innovation« to structure and compare the most and least successful service innovations in their »Peer Insights 100« case study database. Figure 39 shows the relative difference in use of the dimensions in percentage. The diagram exemplifies the decline of the old inside-out GD-logic and shows that high performing companies who used outside-in building blocks like *customer experience*, *channel*, *value network*, *brand*, and finally *business model* achieved greater success (Peer Insight 2007, p.9). Another finding was that those companies who understood their businesses as (design-driven) services were also far more likely to innovate their business models than goods-oriented firms, what again confirms most of the findings in the previous chapters.

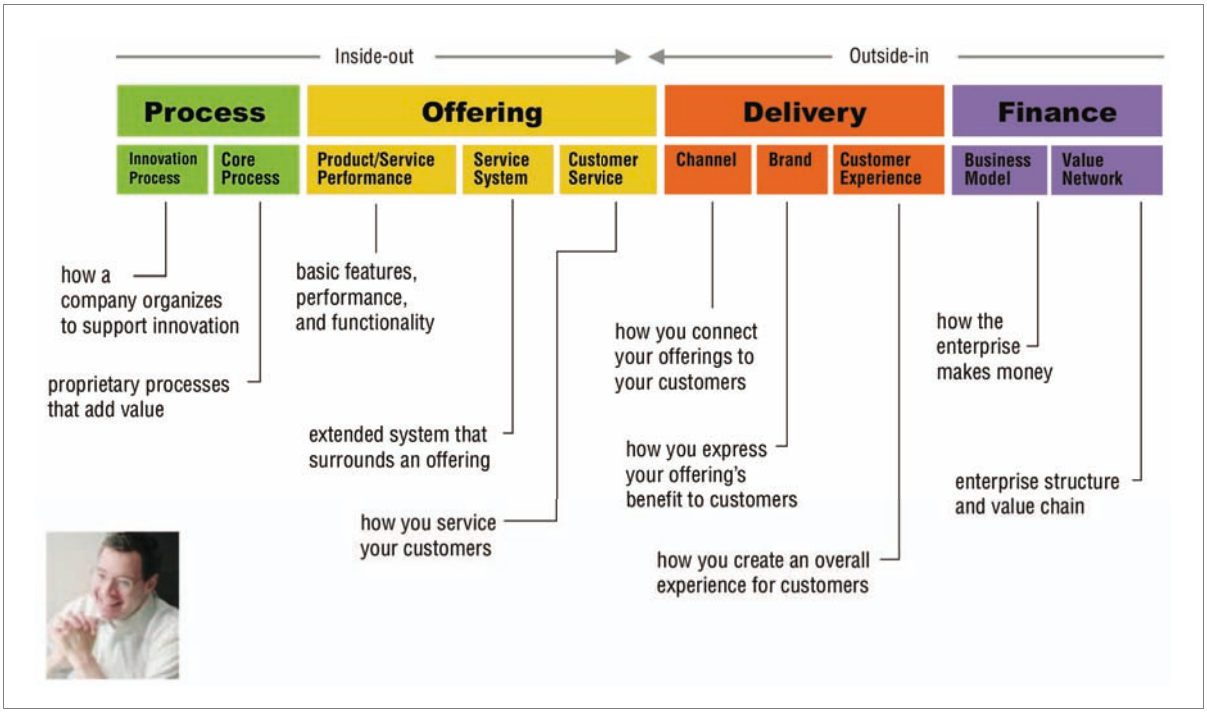

Figure 38: The ten types of innovation (Peer Insight 2007, p.6) by Larry Keeley (1999)

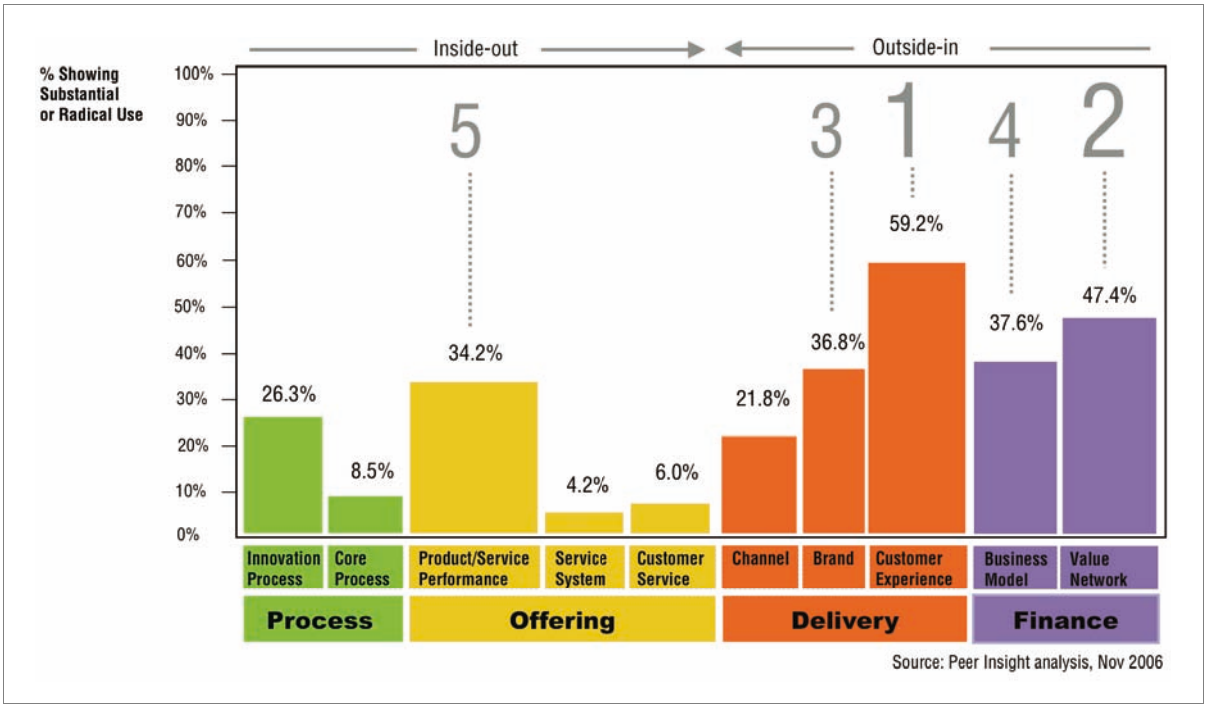

Figure 39: Differences between most and least successful service innovations (Peer Insight 2007, p.9)

Although Keeleys framework from 1999 isn't necessarily outdated, it is already quite old[117] and also Sawhney et al.'s 12 ways for companies to innovate are just an account of innovation dimensions one shouldn't »forget to consider« when trying to achieve competitive advantage. For the purpose of this thesis this isn't sufficient. Hence I now want to turn back attention to the academic discussion of business innovation, which in the last 5-10 years has increasingly shifted towards a better understanding of the notion of a *business model*, its components, interdependencies and possible processes in innovating the latter. As the follwing discussion will show, both Keeleys (1999) as well as Sawhney et al.'s (2006) views on business innovation already were bold steps towards a systemic understanding of business model innovation. So, to begin with, an understanding of the term business model has to be developed, as it also is often used in sloppy and mistakeable ways.

6.1 What is a Business Model?

Firstly, and as often claimed, it has nothing to do with *business process modeling* for IT systems, neither with *business plans* (although it may be a part of one), nor is it to be equated with *strategy* as will be shown.

Secondly, business models can be examined on different levels of abstraction. Osterwalder et al. categorised them into the level of real world company examples (e.g. Dell, Amazon, eBay) which can be modeled into 1) *instances* (e.g. the particular business model of Amazon). In the more conceptual level, pattern derived from multiple instances result in 2) *taxonomies*[118], which in turn may resemble existing business models (e.g. freemium, multi-sided markets, etc.) and help in categorising them. In the most abstract level business models are seen as 3) *meta-models,* asking what are the *elements constituting* a business model, which finally may lead to 4) a *definition* of what actually a business model *is* (2005, p.5). In this context Baden-Fuller & Morgan (2010) recently also refered to the notion of »ideal types«, representing (business) models which are guided by top-down theoretical knowledge and bottom-up real world analysis (Figure 71, appendix p.135) making it to a kind of »laboratory« where change and innovation can be tried out.

This proximity to experimentation and option-generation can also be found in Casadesus-Masanell & Ricart's (2010) discussion regarding the relations of strategy, business model and tactics. They conceive strategy as the act or plan of generating business model options, the company should adopt to.

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[117] *Whereas for instance the business model in above figures it is just a subcategory of finance – and therefore reduced to the revenue model – recent ideas on topic conceptualise it, as I think, more consistent. Nevertheless, the discussion will show that his main categories process, offering, delivery, and finance are to be found in other business model conceptualisations as well.*

[118] *Other typical taxonomies are auction, bricks & clicks, bundle elements together, disintermediation, lease instead of sell, leverage new influencers, own the undesirable, razors/blades, reverse razors/blades, servitzation of products, subscription (M. Johnson 2010), to name but a few. Osterwalder & Pigneur (2009) aggregated them even further into, what they call, business model pattern (ibid, p.52 ff.) which I also have to leave aside for reasons of scope.*

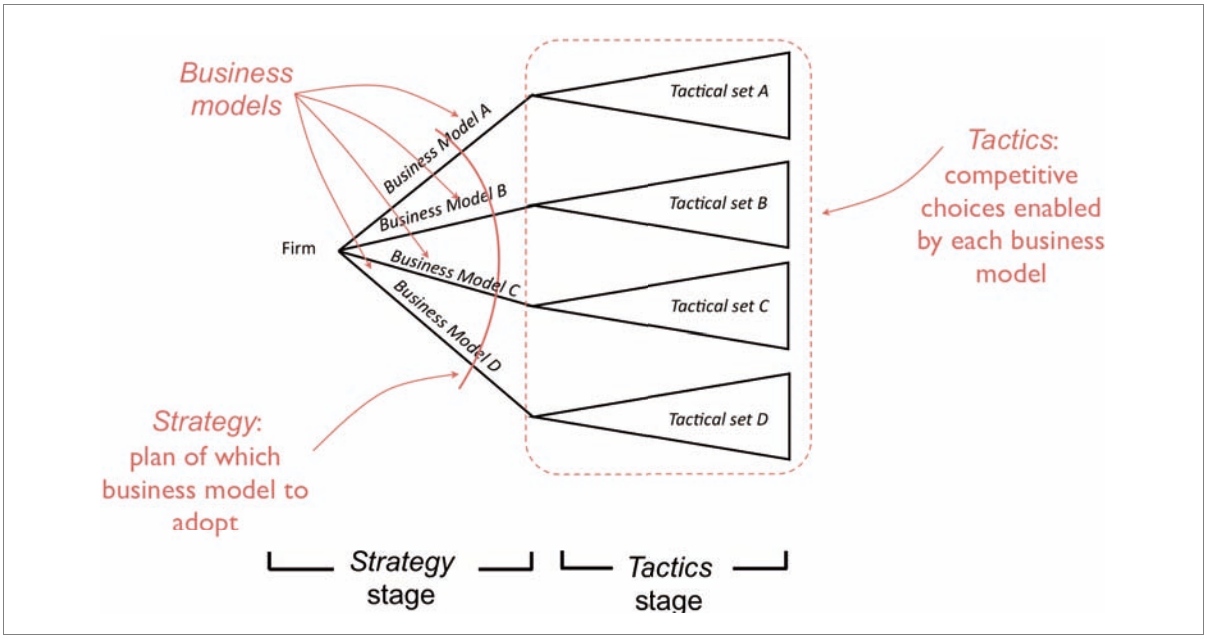

Figure 40: From strategy to business models and onto tactics
(Source: Casadesus-Masanell & Ricart 2010, p.U/D)

Once a business model is selected, the choice determines the room availabale for tatical manoevres in its operation. In that light also the already mentioned claim of other authors, to use the business model as an unit of analysis and even a method to *describe* strategy (Stähler 2002; Berg 2005, p.71 f.) strictly makes sense. Such an analysis, description or option however is always just a snapshot in time, relating either to past, present or future (Berg 2005, p.74). That means, once a business model has been grasped (or deployed), it may already (have to) change again (cf. strategic shifts leading to value migration: Slywotzky 1996), forcing[119] the firm to permanently reconfigure it in one way or another[120]. It also implies that the »never ending and option-creating« process of service design is already a strategic activity.

When trying to find or compile an overarching definition of what now actually a business model is, a similar situation as in service design is to be found. In the last ten years, the topic was pushed by practitioners (e.g. from general e-businesses, e-venture start-ups and investment companies) rather than by scholars and a vast amount of differing approaches, that try to tackle the subject, can be found.

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[119] *Some circumstances requiring a business model to change, which are also in accordance with what has been discussed so far, have been described by M. W. Johnson et al. (2008i). They are as follows: 1) The opportunity to address a large underserved group of customers (for whom existing alternative solutions are to expensive or too complicated) through disruptive innovation; 2) The opportunity to capitalize on a new technology by building a business model around it (like Apple did with the MP3 codec); 3) An opportunity to bring in a job-to-be-done focus that doesn't exist yet (ergo inducing a SD-logic in currently inert industries); 4) The pure need to react to low-end disruptors; 5) A need to respond to shifting competition spaces (or in other words, new alternative solutions are available) (M. W. Johnson et al. 2008, p.55)*

[120] *Lindner & Cantrell (2000) for instance describe basic types of changing business models with the degree to which their core logic changes. Business exploitation, ergo no change, is reflected in the* ***realisation model*** *and the* ***renewal model*** *(with just incremental change). Explorative descriptions are to be found in their change models named* ***extension*** *and* ***journey model****.*

The premature academic discussion so far rather aggravates this mess as there is still a lack of consistency in definitions[121] and nomenclature[122] on the topic (see Infobox 6, p.134 in the appendix). So, usually proposed ones aren't mutually accepted. This is the reason why many experts within the dialogue have started to rather distil and classify across current literature the most often mentioned elements or components, business models normatively should consist of.

6.1.1 Business Models as Normative Representations

Two of the first, and in scientific circles often neglected, outriders who did a thoroughly and all-encompassing synthesis of existing conceptualisations where Alexander Osterwalder and Yves Pigneur from the HEC (Faculté des Hautes Etudes Commerciales) at the University of Lausanne, Switzerland. This is the reason why I closely followed their research over the years[123] and why I will often recur to their way of approaching business models and business model innovation. Notwithstanding, if necessary I will also point to weaknesses and gaps within their model and approaches.

Most of the definitions and descriptions, including Osterwalder et al.'s (again see Infobox 6, p.134), have the smallest common denominator of two (or according to the point of view, three) components: *value creation* via certain *business processes and activities* (also refered to as *value network, value chain,* etc.) and a *revenue model* for value capture[124].

Shafer et al. (2005) additionally found a fourth component named *strategic choices*, which brings in an important perspective on the underlying logic and systemic relations, which will be discussed on p.92.

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[121] *Whereas some scholars refer to the concept »business model« as a **description** (Applegate 2000), **story** (Magretta 2002) or **representation** (Morriset et al. 2005; Shafer, Smith & Linder, 2005a), others describe it as a **conceptual tool and model** (Osterwalder 2004, 2007; Osterwalder et al. 2005; Teece 2010). Some also perceive it as an **architecture** (Timmers, 1998), a **method** (Afuah & Tucci 2001), a **structural template** (Amit & Zott 2001), a **framework** (Afuah 2003), a **pattern** (Brousseau & Pénard 2007), a **set of activities** (Seelos & Mair 2007) or just a **statement** (Stewart & Zhao 2000).*

[122] *Its fuzziness is also reflected in the synonym use of the terms business model (design), business system, business design, or sometimes even business architecture (e.g. in corporate business contexts) which I can't discuss in detail, as some authors equate the business model with the business design (e.g. Slywotzky 1996) whereas others perceive the business design being a subordinated building block of the business model (e.g. Berg 2005).*

[123] *I not only participated in the co-creation of their recent book »Business Model Generation« (2009), but also had the chance to already apply and test their approach and tools in consulting practice, what helped me gaining some insights on the strenghts and limits of their work.*

[124] *In a former paper I have co-authored (Schmiedgen & Baldermann 2008), we compared the business model conceptualisations of Achim Berg, McKinsey (2005) and Osterwalder (2003-2009) and came to the similar conclusion that a description roughly encompasses three steps: 1) An examination of the everyday world and living environments as well as of motivations and complex needs of customers; 2) Derived from that, the creation of a custom-tailored value offering (under synchronisation of resource-based view, market-based view and the extended business environment); 3) In profitably ensuring the delivery of the value offering, including two main components: **systems and business processes** (In which way are business processes configured and how are trade-offs resolved?) and **revenue model** (How do we earn money?) (cf. Berg 2005 p.72-73; Osterwalder 2004, p.45-46).*

Components of a business model

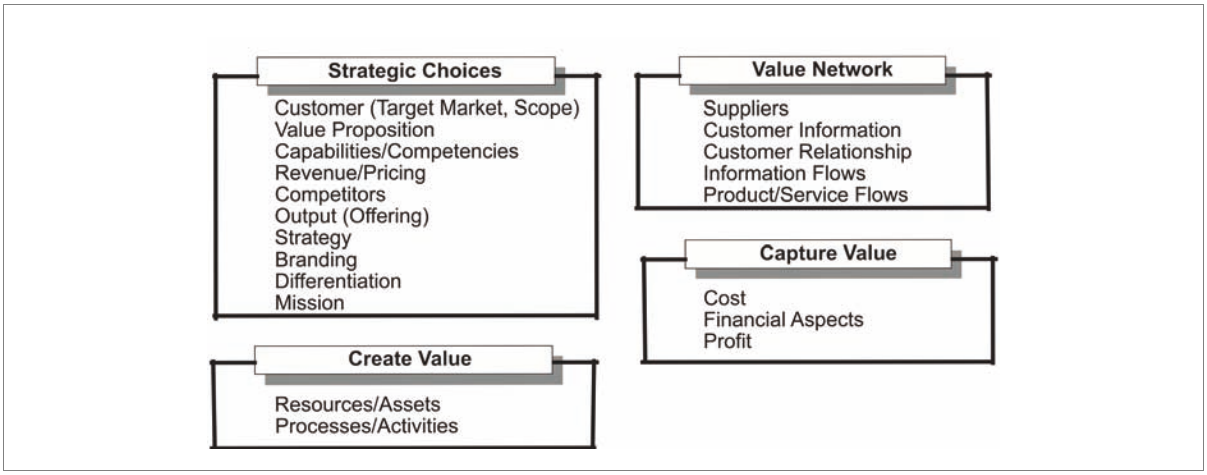

Figure 41: Components of a business model affinity diagram (Source: Shafer et al. 2005, p.202)

In Osterwalders popular »business model canvas« those main elements are also to be found, however named differently and in part with slightly deviating meanings and arrangements. As Figure 42 shows, he proposes to segment a business model along the four main categories *infrastructure*, *customer interface*, *offering* alias *value proposition*, and *finance* which in turn have nine subdivided building blocks as well (Osterwalder 2004; Osterwalder et al. 2005; Osterwalder 2006; 2007; Osterwalder & Pigneur 2009). Although his canvas provides another view and classification on Shafer et al.'s (2005) findings, their *value network*, *value capture* and *value creating* categories are reflected in his model. Merely the idea of *strategic choices* and their interdependencies hasn't been given enough attention to in his work, respectively they can't be illustrated in the canvas, as it was rather developed as a tool for fast analysing, mapping and co-creating existing models as well as future scenarios.

The Business Model Canvas and its Nine Building Blocks

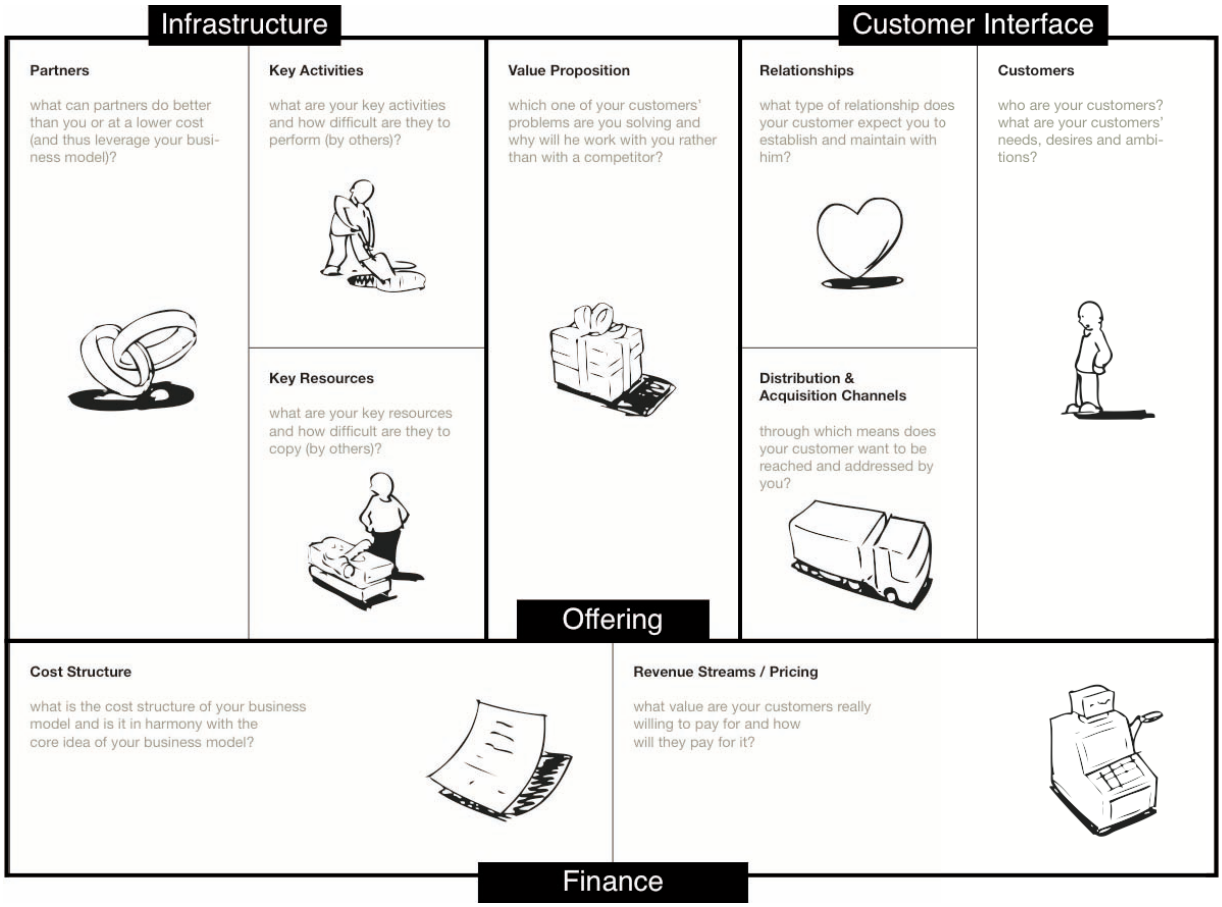

Figure 42: The business model canvas (Source: adapted from Osterwalder & Pigneur 2009)

A SHORT DESCRIPTION OF THE NINE BUILDING BLOCKS (OSTERWALDER ET AL. 2009)

Within the building blocks Osterwalder again offers generic categories which shall help and remind the »business model design team« with which options available they could play and experiment to come up with new configurations. Furthermore he provides a series of guiding questions (2007; 2009) for each block, that shall help to examine it from all perspectives. I will touch some of this briefly.

Value Propositions

Here he claims that value propositions usually can be categorised into either one or many of these: *Newness*, *performance*, *customization*, *getting-the-job-done*, *design*, *brand/status*, *price*, *cost reduction*, *risk reduction*, *accessibility*, and *convenience/usability* (pp.23-25). Given the value discussion in Chapter 4 these categories may clearly be not exhaustive but they provide a first starting point for thinking. The complexity of a thoroughly value proposition construction however has already been described and needs to take a lot more influencing factors into consideration.

Customer Segment

Here he roughly differentiates between *mass* and *niche markets*, as well as *segmented* and *diversified markets* or *multi-sided platform markets* (p. 21). However »creative« customer segmentation (Abell 1993, p.45) may not be that easy and needs to take into consideration customer functions and alternative solutions, so that it may end up in a result equalling none or several of those categories.

A SHORT DESCRIPTION OF THE NINE BUILDING BLOCKS (OSTERWALDER ET AL. 2009) CONTINUATION

Channels
With channels he means the channel and touchpoint mix over the whole customer life cycle (p.27), also known as buyer life cycle with its three stages *pre-sales* (awareness, evaluation, purchase), *sales* (purchase, delivery) and *after sales*. The staging of the channel mix is another main driver of the customer experience and the perception of value as described on p.42 in the value discussion.

Customer Relationships
Here according to Osterwalder several categories may co-exist. They range from *personal assistance* or *dedicated personal assistance* over *self-service* and *automated service* to *communities* and forms of *co-creation* (p.29).

Revenue Streams
When approaching business model innovation with a service lens the creative and clever design of the revenue streams is critical. He suggests the following main categories to consider: *traditional asset sales, usage fees, subscription fees, lending/renting/leasing, licensing, brokerage fees*, and last but not least *advertising*. Each of those streams might also have different pricing mechanisms (e.g. *fixed* or/and *dynamic*, based on market conditions; pp.31-33).

Key Resources
This clearly reassembles elements of a resource-based view, as the critical resources of the building block may *physical*, *intellectual*, *human* or *financial* in nature (p.35). However, I wouldn't recommend an isolated »resource and asset view«, as they always need to be conceived with being in interaction with critical activities (cf. Prahalad & Hamel 1990).

Key Activities
Osterwalder categorises the activities following Stabell & Fjeldstad (1998), who found that it needs an extended value chain analysis/synthesis especially for services, as Porters classic notion (1980) is rather applicable to production and manufacturing companies. They propose three forms, the traditional value chain, the value shop (value creation logic focused on customer problem solving) and the value network (simplification of network relations between customers). Osterwalder names them *production*, *problem solving*, and *platform/network* (p.37). And as "[m]ost firms are not pure instances of a single distinct value configuration" (Stabell & Fjeldstad 1998, p.434), the challenge here is to configure the different value creation logics in such a way that they are effectively integrated and coordinated amongst each other.

Key Partnership
For creating partnerships he identified three main motivations: *Optimization and economy of scale*, *reduction of risk and uncertainty*, and the *acquisition of particular resources and activities* (p.39).

Cost Structure
Cost may occur in two ways: *Cost-driven* (e.g. typical no-frills and cost reduction approaches like RyanAir) or *value-driven* (focus on delivering the best performance/service where cost play a minor role). Both may assume the following characteristics: They can appear as *fixed costs,* and/or *variable costs,* and as *economies of scale*, and/or *economies of scope* (p.41).

Infobox 5: A short description of the nine business model building blocks after Osterwalder et al. (2009)

IMPORTANCE FOR STRATEGIC INNOVATION

Knowing the elements that constitute a business model and also some possible properties is already worth much. It will help the service design or business model innovation team (I will use them synonymously in the following) to 1) consider all dimensions the business innovation should encompass and 2) may help realistically adjusting »dark horse«[125] solutions when confronting them with the implementation-oriented building blocks like for instance in the infrastructure. 3) Their visual conceptualisation in form of a »canvas« also has many further advantages, e.g. a common horizon of understanding, or structured analysis, deconstruction and benchmarking possibilities with direct and indirect competition, to name but a few.

However their way of representing a business model doesn't grasp, nor makes fully visible the underlying *core logic* (J. Linder & Cantrell 2000; Casadesus-Masanell & Joan Enric Ricart 2007; 2010) with its *cause and effect linkages* (Ibid., 2010; 2011), e.g. between competencies, desired outcomes and possible measurements (von Rosing et al. 2011). One first step into such a direction has been taken in Gary Hamels book »Leading the Revolution« (2000) where he explicitly emphasises the linkages between the dimensions of his business model conceptualisation and ties them up to strategic factors like strategic fit among activities or the unique handling of trade-off's, to name but a few. He and other authors who followed a similar path built on Porters (1996) notion where a business (model) can be seen as an activity network.

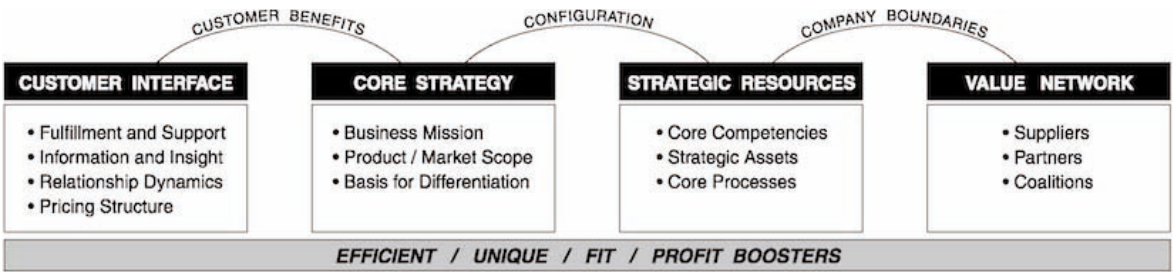

Figure 43: Hamels business model conceptualisation (Source: Hamel 2002, p.94)

[125] *Dark horse (service) prototypes or scenarios are extremely desirable but rather unrealistic outcomes of e.g. typical stages of design thinking processes where the thinking isn't restricted (divergent phases) and everything is allowed. The value of those outcomes however cannot be overestimated as the optimal solution bears invaluable clues and ideas that will guide the synchronisation process with what is currently viable.*

6.1.2 Business Models as Activity Systems

In his famous paper »What is Strategy«, Michael Porter (1996) outlined a »silver bullet« for combining cost and differentiation advantages by showing that strategy is characterised by what one chooses *not* to do (Kim & Mauborgne 1997; cf. 1999; 2002; 2004; 2005). The key to competitive advantage lies in performing activities in ways, different to how competition executes them, whereas a strategic fit[126] among the activities with regard to the whole system should be obtained. The resulting unique activity network (UAN) with its mutually reinforcing linkages will then be hard to imitate, or if attempted to, can only be copied in part.
Figure 44 shows a simplified representation of the iPod's activity system from 2005(!). The iPod/iPhone/iPad/iTunes platform business that has emerged since then is even more sophisticated and embedded into a still growing complex ecosystem of partnerships[127].

The iPod Activity System

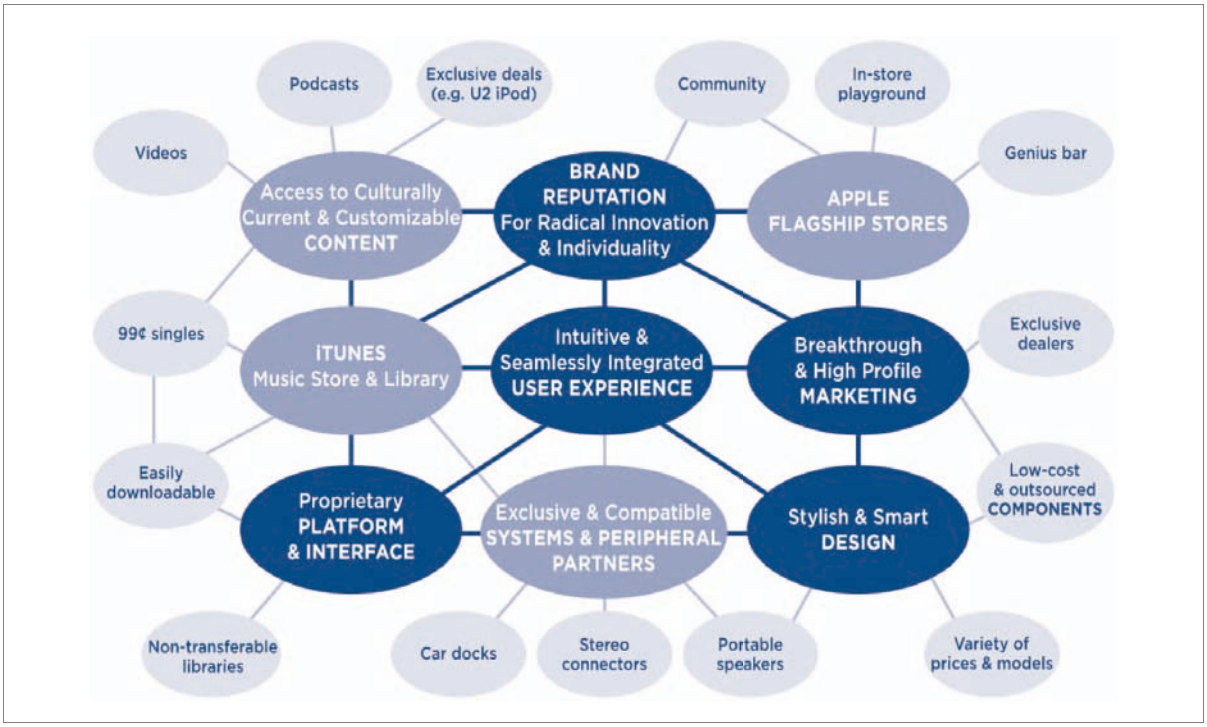

Figure 44: The activity system of the Apple iPod/iPhone/iTunes platform model (Source: Fraser 2007, p.72)

The realisation, that the *"[…] competitive value of individual activities cannot be separated from the whole"* (Porter 1996, p.72) and that strategy is about *" […] defining a company's position, making trade-offs, and forging fit among activities"* (Ibid, p.77) led other authors to the conclusion that a business model at best shall be a complex configuration with strong interdependent linkages between all of its business dimensions, which are hidden from, or hard to copy, for competition (cf. Zott & Amit 2010).

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[126] *Here he differentiates between consistency, reinforcement, and orchestration.*

[127] *Just think of the new contracting arrangements for iTunes Match, reacting to potential disruptors like Spotify. Also rumours of an integrated Apple TV device which goes far beyond the current »Apple TV« box don't fall silent.*

CHOICES AND CONSEQUENCES

In this tradition Ramon Casadesus-Masanell and Joan Enric Ricart (2007; 2010) developed an alternative business model conceptualisation which takes a choices and consequences perspective: *"[W]e do not consider any a priori categories or variables […], according to our conceptualisation, an organization's business model is an objective (real) entity: choices are made in every organization, all of which will have consequences"* (2010, p.210).

Elements of a »Choices-Consequences Business Model«

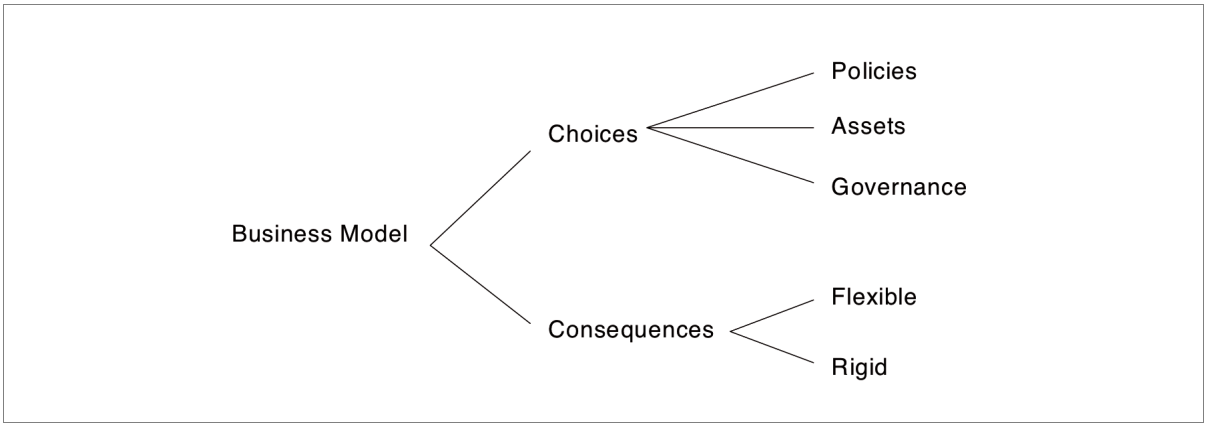

Figure 45: Elements of a business model (Source: Casadesus-Masanell & Joan E. Ricart 2007, p.3)

Choices in their view can be distinguished between *policy*, *assets* and *governance* choices. *Policy choices "refer to courses of action that the firm adopts for all of its aspects"* (Ibid., p.198). This could for instance be high-powered monetary incentives for employees, the behaviour regarding environmental issues, or using second-hand equipment to cut costs. *Asset choices* are linked to decisions about tangible resources like which kind of IT infrastructure to deploy or which type of cars will be used in fleet management. *Governance choices* finally *"refer to the structure of contractual arrangements that confer decision rights over policies or assets"* (Ibid., p.198), e.g. the often to be found and fundamental question: Make, buy or lease? Consequences which are *flexible* are highly sensitive to its preceding choices (e.g. »low prices → large sales volume« as consequence). *Rigid* consequences do not react that immediately, or at least slowly to changes in their respective choices. An illustrative interrelation of choices and their two types of consequences is showcased in Figure 46, using the example of the low-cost carrier RyanAir. When visualising the connections among them, another interesting advantage of their business model conceptualisation becomes apparent: Its virtuous[128] (and maybe also vicious) cycles become visible.

[128] *Basic (customer lock-in) examples are HP (give away the subsidised or free printer, sell the cartridges), the Gillette razor model (cheap razor, expensive blades fitting just the bought system) or the rather unknown, but funny loop of Maggi's soup/spice cubes which were rather flavourless and its separate fluid flavour as a solution for the (self-induced ☺) problem.*

VIRTUOS CYCLES

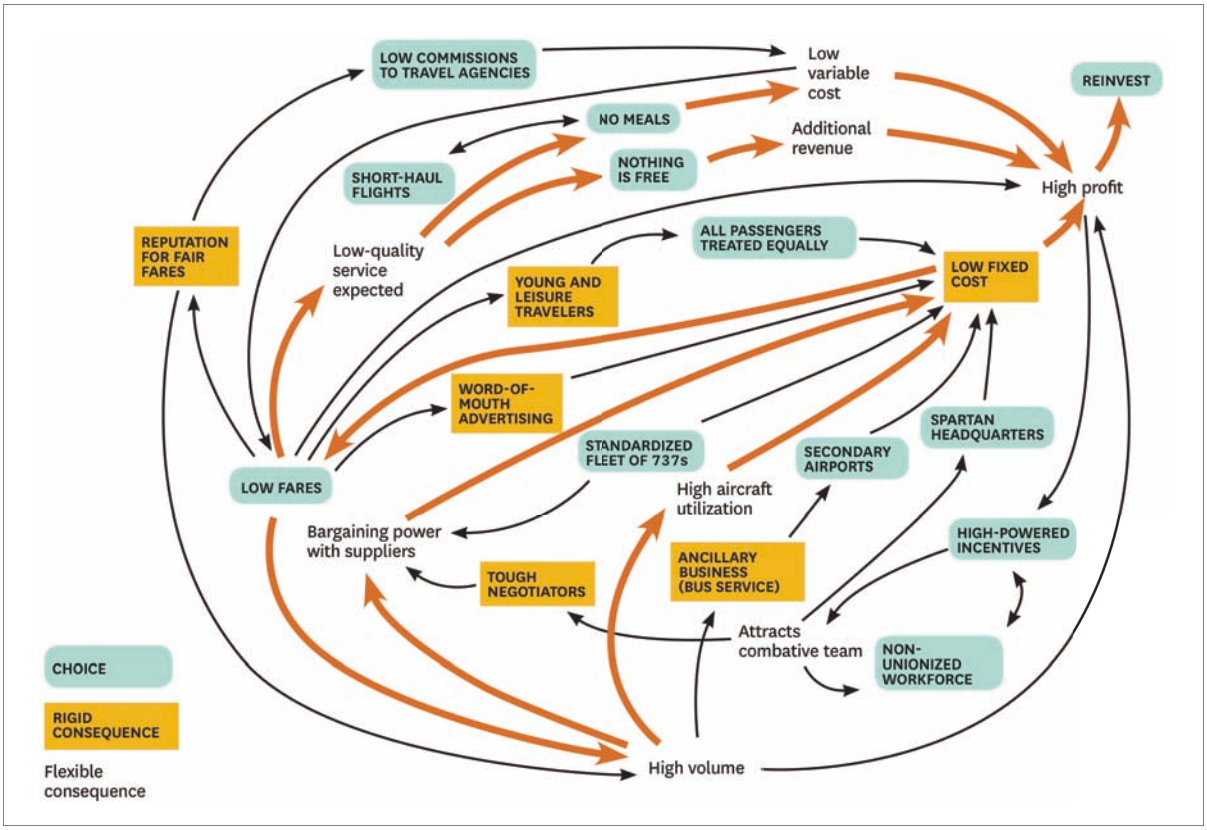

Figure 46: RyanAir's business model representation with its virtuous cycles (orange lines) (Sources: Casadesus-Masanell & Joan Enric Ricart 2010, p.199; Casadesus-Masanell & Joan E. Ricart 2011, p.105)

The concept of virtuous and vicious cycles within a business system has already been described by Kees van der Heijden (1999), stating that every business model inevitably leads to one. When designing a business model it clearly is the goal to establish one or better several positive loops. A good positive loop (or main virtuous cycle) grows stronger as its distinctive competencies feed each other. Everything that is not distinctive shall, according to van Heijden (1999) be outsourced. In the example the main virtuous cycles are highlighted in orange[129].

IMPORTANCE FOR STRATEGIC INNOVATION

Both, the »activity system« and the »choice-consequence mapping« helps grasping and examining the systemic relations of a strategy[130] and therefore the critical assumptions determining the core logic of a business model. Once (implicit) basic assumptions are »visible« they not only become negotiable (e.g. in team discussions) but also testable within the design process

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[129] *VC1: lowest fares → large volume → bargaining power with suppliers → low fixed cost → lowest fares*
VC2: lowest fares → large volume → high aircraft utilization → low fixed cost per passenger → lowest fares
VC3: lowest fares → low quality service expected → no meals → variable cost → lowest fares

[130] *The visualisation of decisions on tenable choices and consequences helps becoming clear of and considering all dimensions of a strategy according to Mintzberg (1994) (i.e. a **plan** for the future (intended strategy); a **pattern** in a series of actions (realised strategy); a **position** = decision/choices to offer certain offerings in particular »markets« (external), a **perspective** = a way of doing things (internal); or a **ploy** = the outmanoeuvring of competitors).*

(e.g. fast learning loops via prototyping and experimenting for user acceptance or the like). The perspective also helps in discussing the resolution of trade-offs, what is especially important against the background of design trying to handle important constraints in a *»both ... and«* manner (cf. Kim & Mauborgne 1997; 1999; 2002; 2004; 2005) instead of Porter's proposed *»either ... or«* choices. Design may also inform strategic decision making on especially radical but tenable choices. Just think of Nintendo's central choice to base the Wii on low-cost, low-performing graphics hardware, but investing significant amounts of money into the exploration of new and alternative gaming concepts which are critical steps in establishing an alternative logic[131] for driving the, or defining a new market. The policy aspect of choices may also explicitly bring in the very important perspective of a company's vision (core ideology and envisioned future), mission and value system (Collins & Porras 2004), or in other words parameters of its culture[132]. That is, the basic assumptions which guide the corporate values (Schein 2004) and vice versa (Hatch 2004) as well as derived goals become visible and help the service design team to either challenge or integrate them. Here designs interpretative capability to translate from assumptions and values to symbols and artifacts (and vice versa) may also serve as a catalyst for becoming aware of best possible configurations that balance all external (market-based) and internal (resource-based, culture-based) factors to be considered (cf. Figure 74, p.136 in the appendix). And finally Casadeus-Masanell's conceptualisation helps in never loosing the value capture aspect out of sight as it concentrates on the discovery or strengthening of positive loops.

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[131] *Similar, at first sight contradicting, but on closer inspection consistent choices are to be found with Ryanairs above example like low fares, no meals and spartan headquarters vs. high-powered incentives.*

[132] *"The culture of a group can be defined as a pattern of basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relations to those problems." (Schein 2004)*

6.1.3 The Value Configuration Perspective

Another weakness of Osterwalder et al.'s conceptualisation is, that it can't represent (and doesn't help in configuring) the interdependencies of the value configuration or infrastructure, as they termed it. Traditionally this is done by determining which structure of the value chain/shop/network (accordingly: production/problem solving/platform or network) is required in order to create and deliver the new value. Hence, how the building blocks' key activities, key resources, partners and often also other elements have to be aligned. Figure 47 shows the three possible value configurations, following Stabell & Fjeldstad (1998).

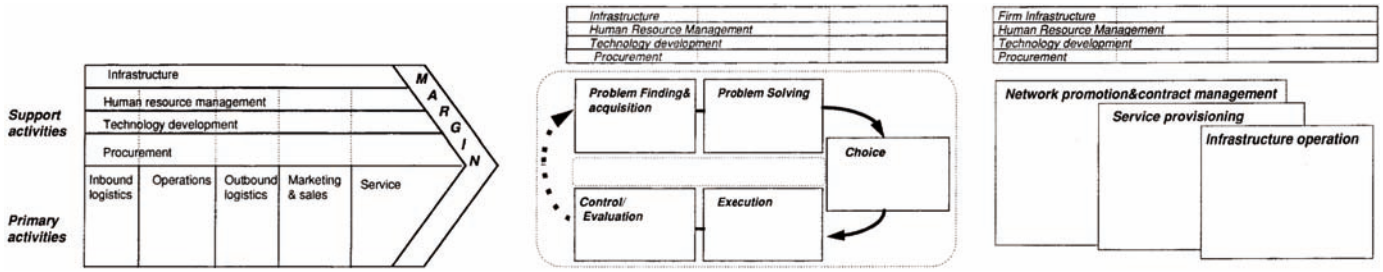

Figure 47: Value chain, value shop and value network (Source: Stabell & Fjeldstad 1998)

In the *value chain* the product is the star and services are thought of as »after-sales« services in the end of the chain, showing immediately that they are not the core of business. The *value shop* is about problem solving and a service itself, e.g. in consulting, software engineering or technology intensive engineering activities, but its expert-centered conceptualisation leaves only small room for openness and co-creation. The *value network* can be seen as an mediator of actors, people and organisations, e.g. retail banks, telephone companies, insurance companies, or postal services. This view is the closest to services, however it doesn't take into consideration radically enough both, an inside-out and an outside-in flow of interactions (e.g. ideas or technologies).

For the service-centered view in this thesis, therefore another and more recent alternative, namely the notion of an »open services value chain« (Chesbrough 2011) where services are the front *and* the center of business, may be more appropriate. Such a conceptualisation from the outset circumvents the insidious trap of neglecting what such an services platform is built upon: The iterative series of ongoing interactions with customers and other stakeholders over time.

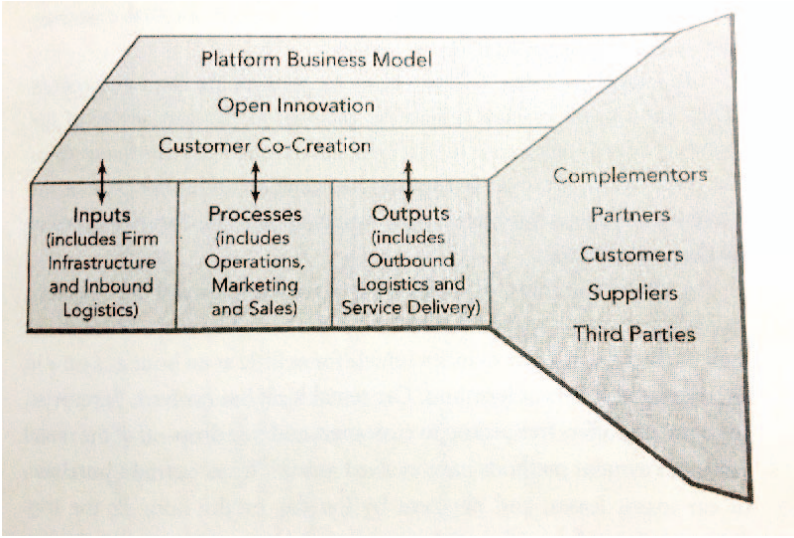

Figure 48: Open services value chain (Source: H. Chesbrough 2011, p.35)

As Figure 48 shows there still exists *inputs*, *processes* and *outputs*, but they are not only just interacting with internal support functions but also with customers (*co-creation*), external technologies, services, design discourses and ideas (*open innovation*) and may even attract third-party investments and support from an extended business ecosystem (*platform*). The widening funnel in the end of the chain represents the opposite of what a value chain signifies, the *"offering does not come to a single point; rather, it widens to incorporate the activities and offerings of many other parties as part of going to market"* (Chesbrough 2011, p.36)

IMPORTANCE FOR STRATEGIC INNOVATION

The notion of an *open services value chain* accepts the SD-logic of ongoing interactions and the »always-beta incomplete status« of a services-driven platform business (cf. Kimbell 2011). The discussion of its configuration may also help to decide on core differentiated and core competencies, which aren't considered in sufficient depth in Osterwalder et al.'s model (von Rosing et al. 2011). The value architecture (or business design/business system), being such a critical part of a business model (and in a way just another view on the previously discussed activity system/choice-consequence depiction), is therefore very important to discuss and describe in detail for the service design team, too. Constructing the latter with Chesbroughs approach in mind, may also facilitate a permeable information flow and learning attitude in the business system, which circumvents or resolves any silo formation right from the beginning. Since in particular the learning organisation receives that much attention recently, I want to finish this overview by very shortly touching two other views on business models which are in close relation to design: Business models as *learning systems* and *stories*.

6.1.4 Business Model as Learning Systems

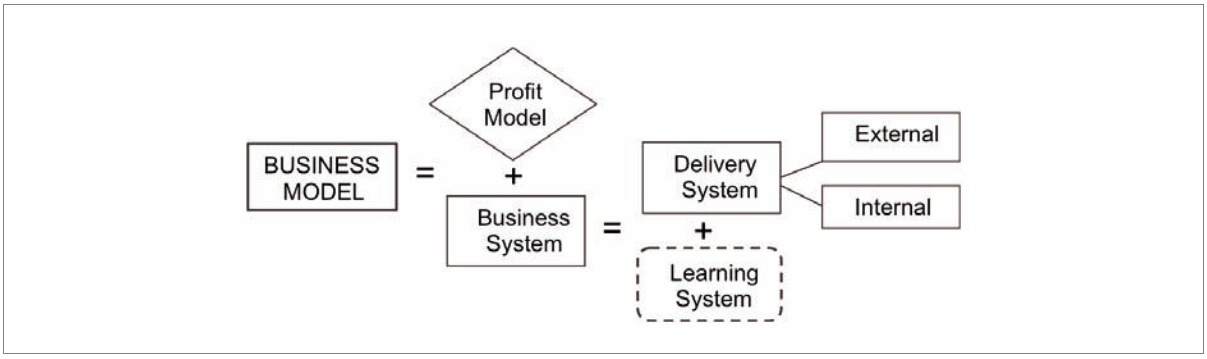

Figure 49: (Source: Itami & Nishino 2010, p.365)

Itami & Nishino (2010) argue that the value delivering business system (aka value architecture/business design) is often underappreciated in management: *"[While] the profit model is more glamorous, being directly linked to the bottom line, the business system is the real 'meat' – doing the firm's 'real work' [and] accelerating its learning for the future"* (Source: Itami & Nishino 2010, p.365). They continue by stating that the internal and external delivery system can be equated with, or has at least attached, a learning system.

IMPORTANCE FOR STRATEGIC INNOVATION

Although their article is more focused on warning against »unbundling practices«, which may lead to a loss of capabilities, the relation to a services- or design-driven view is clear. Once the design for services is conceived as a permanent learning process (cf. design as experiential learning cf. p.62), which also includes business model »experiments« (Sosna et al. 2010), the companies basic assumptions can permanently be validated against current market realities[133]. This idea also influences the idea of business models as stories: *"Once an enterprise starts operating, the underlying assumptions of its model – about both motivations and economics – are subjected to continuous testing in the marketplace. […] Business modeling is, in this sense, the managerial equivalent of the scientific method – you start with a hypothesis, which you then test in action and revise when necessary. […] When business models don't work, it's because they fail either the narrative test (the story doesn't make sense) or the numbers test (the P&L doesn't add up)"* (Magretta 2003, p.5).

[133] *This learning system notion clearly also relates to classic and internal process improvements like Six Sigma, Lean Sigma, Kaizen and the like.*

6.1.5 The Story Perspective on Business Models

> *"Competing is no longer about creating dominance in scale-intensive industries, it's about producing elegant, refined products and services in imagination-intensive industries."*

Roger Martin (2004, p.7)

Magretta (2003) therefore states that a good business model can always be told in a convincing form of story, which instantly makes clear who the customer is, what he values (unmet needs) and what underlying kind of logic it is, that profitably delivers the company's value proposition to him (cf. her definition on p.134). She further argues that a good story helps in aligning the organisations people around the particular kind of value it seeks to create: *"Stories are easy to grasp and easy to remember. They help individuals to see their own jobs within the larger context of what the company is trying to do and to tailor their behaviour accordingly. Used in this way, a good business model can become a powerful tool for improving execution"* (Ibid. p.8). This view is in accordance with the notion of stories as signatures of cultures in encapsulated forms (Lévi-Strauss 1963; Geertz 1973a), or as Boje framed it, as *"the preferred sensemaking currency of human relationships"* (1991). Some companies, e.g. 3M or Xerox, already actively use storytelling and -listening in strategy contexts. So exists a strict policy at 3M that any submission of business plans have to be created in form of short stories (G. Shaw et al. 1998, p.185; Fog et al. 2004, p.128 f.).

IMPORTANCE FOR STRATEGIC INNOVATION

Design – especially service design – is probably the most adept discipline in finding and constructing relevant stories from users (but also other stakeholders) point of views (POV). A main focus in the context analysis stage of an design process (cf. p.61) is about finding and documenting current customer stories, e.g. via anthropological/ethnographic (participant) observation methods and *storylistening*. This becomes a critical part of strategy analysis as it will fathom the mental models of users (Rughase 2002) and as customers are likely to tell the current business model from their POV (Liebl et al. 2004) with all its flaws and highlights. Once these stories (or better: story pattern) are transformed into insights and validated against the company's view of its story, they can be co-created and/or played back in the form of *storytelling*, meaning the construction of improved (service or business model) scenarios and the prototypical staging of experiences. This way of approaching innovation in experiential services is deeply anchored, as the key element and cornerstone of any service design activity will always be the unique and precise definition of the customer journey. Most service designers and consultants distinguish five distinct areas that directly or indirectly contribute to a customer's experience: 1) The *physical environment*; 2) the *service employees*, 3) the *service delivery process*, 4) *fellow customers* and their behaviour, and 5) the respective *backoffice support*. In theatrical terms these areas could be mapped to 1) *stage*, 2) *actors*, 3) *script*, 4) *audience*, and 5) *backstage* culminating in a performance that involves all those layers (cf. Grove et al. 1992). Typical approaches that emerged for constructing those service journeys are the service blueprint-

ing and service mapping technique (Shostack 1984), moment mapping (C. Shaw & Ivens 2002), the brand touchpoint wheel (Dunn & Davis 2003), or the »experience cycle« (Dubberly & Evenson 2008b). So constructing the customer journey story not only helps in configuring the customer interface, it also helps, becoming aware of the systemic connections to the value architecture and what steps have to be taken when implementing the new value offering.

6.2 Business Model Innovation and its Relation to Service Design

Remains the question whether design for services (or service innovation) can be seen as a subset of business model innovation, vice versa, or neither or. Having neglected enterprise business models so far, it should be mentioned that big corporations consist of a portfolio of business models which also may interact with each other. Although Osterwalder et al. (2009) describe the conflicting operation modes of bundled business models (cf. Hagel III & Singer 1999; 2000), they give no, or just little, advice how business *model management*[134] in such settings can be approached with their conceptualisation (von Rosing et al. 2011). As service innovation is such a multi-dimensional phenomenon, that it can not only affect the different components of value creation and architecture, but may also spread across boundaries of the business models in a portfolio or even across industries (Lester & Piore 2004). That means design for services, resp. service innovation, pushes business model innovation across a variety of boundaries[135] as it is likely to raise discussions of *"value, business models and strategy"* (Kimbell 2009). This view is also shared by governmental institutions like the Irish Forfás[136] (see Figure 50), the Dutch Ministry of Economic Affairs (2009), or UK's Design Council, but also by researchers like Voss & Zomerdijk (2007).

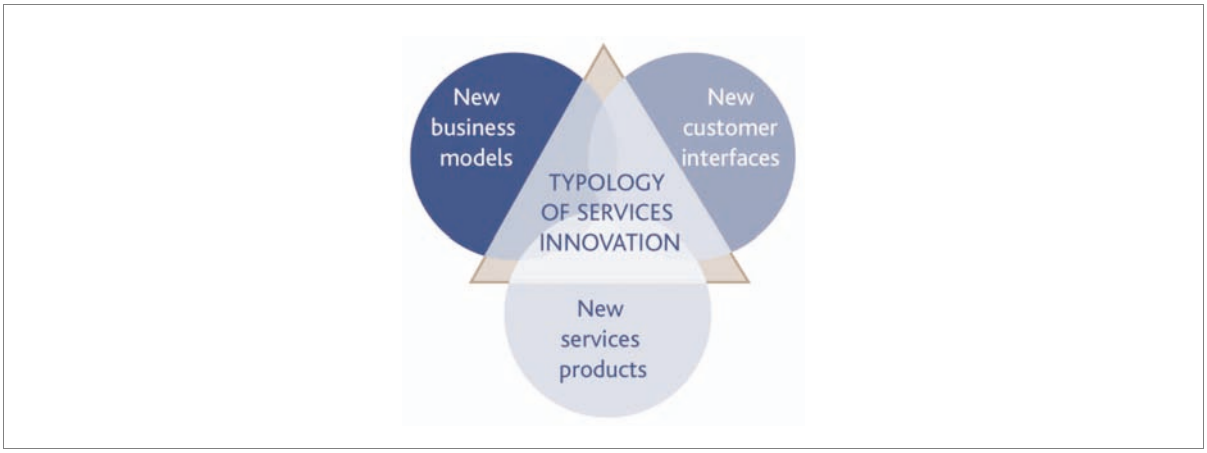

Figure 50: A typology of Services Innovation as seen by Irish Forfás (Source: CM International 2006, p.21)

[134] *Von Rosing et al. (2011) criticise for instance that neither corporate structure and responsibilities as critical variables are included, nor any suggestions how an continuous (non-radical) improvement and governance approach are addressed. For existing organisation with their path-dependencies however, these questions are critical. To complement Osterwalders approach again other research has to be involved, e.g. Voelpel et al.'s »business model reinvention« approach (2004) for permanent renewal and Markides & Charitou's (2004) frame work for answering questions of ambidexterity and competing business models within the same organisation.*

[135] *Just think of integrated value networks and their exchange interactions. Or reciprocal platform businesses, which especially in the digital world facilitate the creation of new (mashup) services via for instance open application interfaces (API's).*

[136] *Ireland's policy advisory board for enterprise, trade, science, technology and innovation.*

However, services will only affect the whole business model in such a manner, if they are really radical, whereas incremental improvements may just involve building blocks of the customer interface or new product-service system (PSS) combinations.

Therefore I conceive business model innovation (BMI) as *radical service innovation, encompassing changes in a multitude, if not all, dimensions of a business model*, a similar position which has been taken by Hertog 2010[137] (cf. the epicenters of BMI in the following). The boundaries are blurred and both, design from business, and business from design, can learn from each other as indirectly either of them is concerned with the same goal: To create new value and user experiences (design) in order to achieve competitive advantage in a profitable manner (business).

6.3 Conclusion

Therefore the conclusion can be drawn that neither service design (SD) nor BMI should be conceived as isolated research streams or worse, be applied in isolation. Both guide and inform each other. Whereas BMI benefits from SD's radical value-centric and empathic view and it's already well established method sets[138], the value-capture- and value-delivery-centric reasoning from a BMI perspective profitably aligns the constructed user value by finding customer lock-in points, possible virtuous cycles and the efficient configuration of the value architecture (including negotiations for an ecosystem of partners, process management and the setup of structures). This is also the linkage, or better the point of smooth transition, where the more traditional and in Chapter 2 criticised approaches to (process and technology) innovation may demonstrate their strengths and operational effectiveness becomes important again. Or in other words, BMI helps operationalising and executing the delivery of new value forms and therefore is a facilitator of value creation itself (we remember: it is the customer who creates the value and the firm which supports him in this process, cf. p.48). Osterwalder & Pigneur (2009) found that value creation via BMI usually has its roots in four main focal spots: In either *resource-*[139], *offer-*[140]*, customer-*[141], or *finance-driven*[142] epicenters.

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[137] *Hertog defines service innovation as "[…] a new service experience or service solution in one or several of the following dimensions: new service concept, new customer interaction, new value system/business partners, new revenue model, new organizational or technological service delivery system" (ibid., p.19), which leads him to the conclusion that "[a] service business can renew every single dimension in the system, or a combination of several dimensions […]. The significance of the dimensions, as well as the interactions between them, will vary across individual service innovations and firms. Business model innovation can be perceived as a systems-level innovation where (almost) every dimension is changed." (ibid., p. 149)*

[138] *To refer back to for instance the work of Osterwalder et al. (2009), they propose to use a visual tool they call »empathy map« in order to put oneself into the shoes of the customer. However as they describe it, and the way it often is used in business model workshops in my experience, is to make assumptions from the BMI team's perspective on how the customer may think or act. As this isn't based on real field work or interactions with current or prospective (extreme) users it is neither expedient nor will valuable insights (which inform the choices for e.g. value proposition, distribution channels, relationships, and revenue streams) be derived from it, which really have the capacity to challenge basic assumptions. Design thinking and service design are already very adept in applying elaborated research methods and interventions from the social sciences, that is, they know how to use them. This is especially true for generating insights out of the interactions with so-called »extreme users« that often can be found at the edges of a normal distribution of (possible) customers (e.g. non-users vs. evangelists) and which any BMI team should pay great attention to: "Sometimes tomorrow's growth segments wait at the periphery of today's cash cows. Therefore business model innovators should avoid focusing exclusively on existing customer segments and set their sights on new or unreached segments." (Osterwalder & Pigneur 2009, p.129)*

[139] *Resource-Driven transformation of the business model is usually built upon existing infrastructures or partnerships, e.g. Amazon S3's web and cloud service which capitalises on underused but already existing assets (server capacity and massive storage space) by offering the expertise to other companies and slowly building a platform business out of it.*

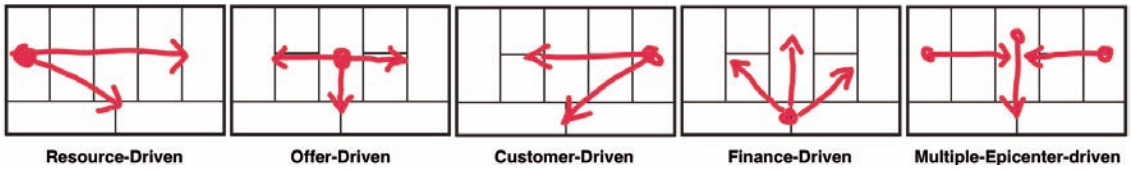

Figure 51: The epicenters of business model innovation (Source: adapted from Osterwalder & Pigneur 2009)

In the end every epicenter may produce new value from a customer's POV (e.g. resource-driven: new services from existing capabilities; finance-driven: pay-per-use or leasing as new forms of ownership). However the above stated radical service innovation in the understanding of this thesis must be *multiple-epicenter-driven*[143], only then the complex system of activities is getting hard to copy for competition. So, thinking from the single epicenters may help answering von Rosing's (2011) business model management questions[144] (cf. Figure 9, p.34) which then get configured into new value. The multiple-epicenter-driven view in my view can therefore be perceived as the worthwhile attempt to permanently realign the tensions of market-based (customer-driven) and resource-based view (resource-driven) with one's decided upon market definition (offer-, or as Verganti (2009) would probably call it, proposal-driven) in a profitable manner (finance-driven). The importance of such a systemic view becomes even more apparent when thinking back to Chapter 5.2.2, where I briefly described Nintendo Wii's, blue ocean strategy to escape the prevailing industry paradigm. In order to redefine its market boundaries it had to ask itself the questions from the »blue ocean framework« and change its business logic accordingly: *"Which of the factors that the industry takes for granted should be eliminated?; Which factors should be reduced well below the industry's standard?; Which factors should be raised well above the industry's standard? ; [and] Which factors should be created that the industry has never offered?"* (Kim & Mauborgne 2005; cf. Osterwalder & Pigneur 2009, p.226 ff.)

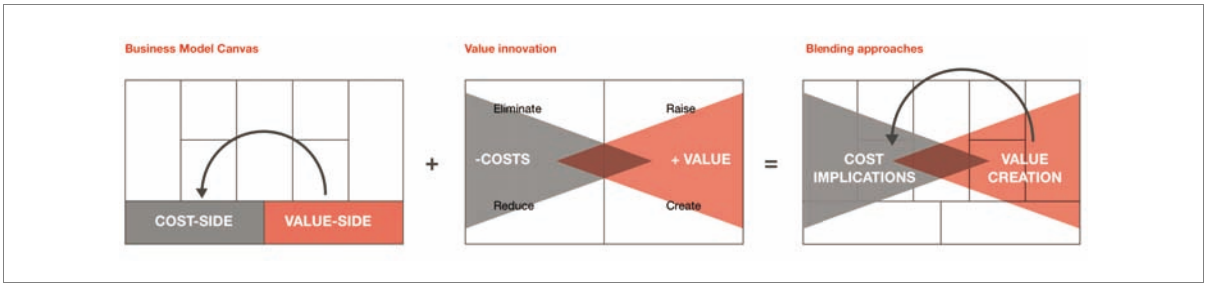

Figure 52: Business model perspective on blue ocean strategy and the creation of new markets (adapted from Osterwalder & Pigneur 2009, p.228)

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[140] *Offer-Driven innovations equal the complex new value (proposition) creation this thesis is concerned with.*

[141] *Osterwalder et al. understand them as "based on customer needs, facilitated access, or increased convenience" (2009), meaning rather customer/user-centered. However, as it has been shown in the previous chapters, customer-driven innovations in terms of user-centric innovations are hard to separate from the offer-driven perspective.*

[142] *According to Osterwalder et al. finance-driven innovation can be seen as new "revenue streams, pricing mechanisms, or reduced cost structures that affect other business model building blocks" (p. 139). Examples are the German elevator producer Schindler who charges for its elevators on a pay-per-use basis, i.e. the distance covered in miles. This reduces the initial investment but in the long run the first subsidised offer ends in a win-win situation for both, Schindler and its customers. The same goes for Rolls-Royce, where airlines don't need to buy their engines for airplanes anymore. They rather buy the service of »engine uptime«, what is summarised in the new value proposition »power by the hour«.*

[143] *Multiple epicenter-driven business model innovation means impacting many building blocks and is the most desirable way gaining competitive advantage, as it leads to the described hard-to-copy and systemic activity system. The case of Hilti, as set out on p.35, is a good example of such and holistic innovation which started with a new value definition and ended in fundamentally reconfiguring a multitude of building blocks.*

[144] *Company can?; Company will?; Company should?*

So, in order to find the sustainable equilibrium between max. value for the user and max. value for the company, as I refered to at the beginning, these questions can also be applied to the business model (canvas) as exemplarily shown in Figure 52. Osterwalder & Pigneur (2009) for instance propose to use the canvas' cost and value side and ask them accordingly for every building block[145]. However – and this is where the discussion from Chapter 4 again comes into play– they can't be answered without the information/research on *what actually constitutes value for the customer*. As has been shown in chapters 4 – 5.3 this value needs to be negotiated and design is about facilitating this negotiation process, i.e. the clever answering of those questions may be a unique outcome of embracing a design posture to innovation.

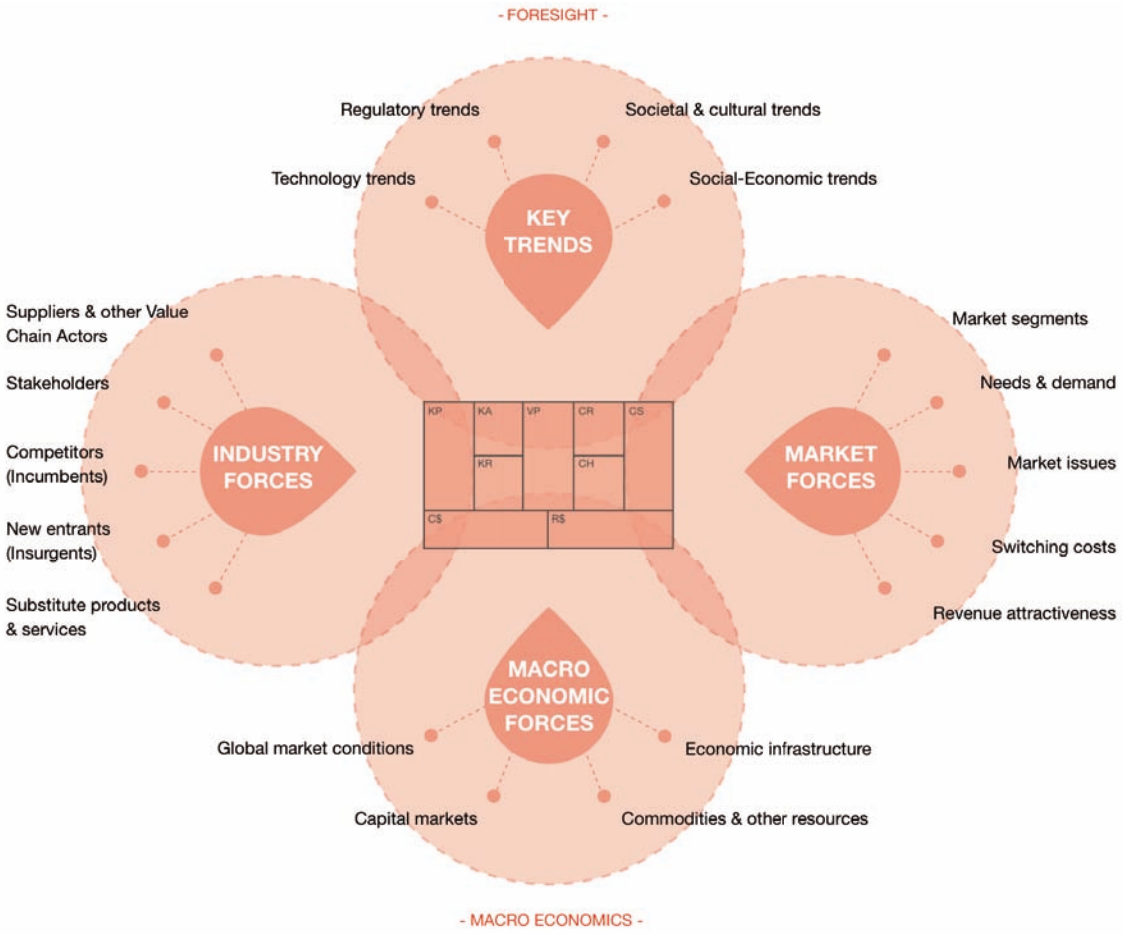

Figure 53: The forces influencing business model innovation (adapted from Osterwalder & Pigneur 2009, p.201)

Design, as understood in this thesis, also already considers (or even influences, e.g. via a »design discourse«) the many contextual factors a business model and its possible innovations operate in. This external environment, or the »design space« (Osterwalder & Pigneur 2009, p.200), can be examined in Porters tradition (cf. the »five forces«, 1985) by considering four areas which *constrain* (e.g. regulatory trends, dominant competitors, etc.) or *drive* (e.g. new

[145] *For an exemplary application of Kim & Mauborgne's (2005) blue ocean approach to Osterwalder & Pigneur's (2009) business model canvas see p.137 in the appendix, which maps the reduced and raised »industry factors« of the famous Cirque du Soleil to the strategy canvas (as proposed by Kim & Mauborgne) and the business model canvas (as proposed by Osterwalder & Pigneur).*

customer needs, new technologies, new meanings) any BMI: *market forces, industry forces, key trends,* and *macroeconomic forces* (Osterwalder & Pigneur 2009, p.200-209; cf. Chapter 5.2.1, p.56 and Figure 53). Except for the macroeconomic forces all the other areas are either directly or indirectly researched or influenced when taking a design attitude to strategic innovation (e.g. the discovery and creation of new meanings – ergo (key) trends – via a »design discourse«; the anticipation of new substitutes and entrants by engaging in users' practices; the critical observation of current market and industry paradigms and the discovery of new value/needs/demand, to name but a few). This again shows that design is a deeply strategic activity which knowledge-generating capacity mustn't be underestimated.

The final chapter will now summarise the interrelations of what has been said so far against the background of a services-era, as mentioned in the beginning of this thesis.

7 Innovation in the Services-Era – A Conclusion

"It is not about asking people, [nor about observing] what they want and then crafting products [and services] according to their answers [or one's observations]. It is about creating [experience solutions] that people could not imagine, but about which they say in hindsight, that they had always wanted them."

Adapted from Büschemann (1999), as cited in Liebl (2011, p.6)

Research institutions and scholars like Peer Insight (2007, p.18) or H. Chesbrough (2011, pp.4, 17f.) often emphasise certain competitive prerequisites for innovating in a services-era. According to them the main »success characteristics« one should follow are: 1) Being absolutely clear about which customer problems one is dedicated to solving; 2) Being able to tap into unmet needs for those and for prospective customers systematically; 3) Knowing how to develop skills for translating this into superior customer experiences, which at best are accompanied by the creation of eco-systems (i.e. innovation networks) and business models, and therefore enabling the delivery of the experiences; and 4) Deploying clever change management approaches which facilitate the transformation of unfamiliar business designs into fast-growing businesses that take advantage of economies of scale and scope.

Except for the latter this thesis has touched and elaborated all of the former three from a value perspective and connected them to the creation of new services, business models and markets. Regarding item 1) it has been shown that in order to assess what kind of customer outcome (or job-to-be-done) a company provides, or shall provide, it needs a thoroughly understanding of valuation dimensions and processes that go far beyond utilitarian measurements[146] or technological performance (Chapter 4). Most of these dimensions either are discovered or they only unfold during interaction and negotiation processes with not only users, but also visionary interpreters[147]. This customer discovery and/or creation process (which also includes alternative solutions, ergo technologies and practices) influences how a company approaches its market definition et vice versa. It further has been shown, that design in all its sub-forms, is very adept in uncovering and collaboratively creating these value dimensions, which also qualifies it for the engagement with (latent) user needs, values, motivations and emotions as stipulated in item 2). Chapters 5–6 finally have outlined that based on such interactions the joined forces of (research and practice in) service design and business model innovation are capable to fulfil the requirements of item 3): Finding ways of constructing *desirable* customer journeys, ergo experiences, by using *feasible* technological solutions in a *viable* and profitable way. In other

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[146] *Here also including the shallow (but hidden and all over practiced) emotional charge of functional »product attributes« with »emotional added value« by marketing. I don't want to deny the importance of a systemic brand management and its interrelations to design, especially when propagating the innovation of meaning, however I take the view that marketing shouldn't use its tools and techniques for the everlasting increase of becoming more clever in manipulating »consumers« decisions and preferences by just charging commodities or inferior services with meaning and emotions. The goal of value and service innovation should therefore always follow an ethic which strives to really improve peoples lives (cf. p.78 and the self-conception of »good« designers) by creating really new value for them instead of just selling pseudo-innovations with new meanings. However I am aware that the borders are blurred and also the findings of this thesis could in short term be misused in such a way.*

[147] *For instance of a design discourse, or within open innovation and co-creation programs.*

words, together they may be able to balance the constraints, imposed by the wicked problems companies are confronted with, in uncertain and turbulent environments.

This implies that the indicated design posture to innovation (also remember Chapter 2.3: design as »competitive strategy«) must be seen as a critical prerequisite for competing in a services-era. Design, in terms of a never ending learning journey or conversation, hereby always needs to be conceived as design *for*, design *with*, and design *by* users and other interpreters[148]. It has further been shown that design (or designers) do not differentiate between goods and services (respectively between tangible and intangible) at all. They rather focus their attention on meaning and experiences instead[149]. This design-inherent thinking automatically embraces the repeatedly demanded logic of treating *everything* as a service in terms of an orchestrated experience innovation (Prahalad & Ramaswamy 2003; Stephen L. Vargo & Lusch 2008; Merz et al. 2009; H. Chesbrough 2011 to name but a few). With the latter being set-up as permanent socio-material re-configurations (Kimbell 2011), one could also say that a successfully applied design attitude to innovation helps regestalting, what Spinosa et al. (1999) call, new *disclosive spaces*, which *"bring about social change by modifying the style of particular subworlds or the style of [cultures, industries and] society in general"* (Ibid, p.68). They even go so far to conceive this »unique entrepreneurial activity«[150] as being concerned with the business of changing history (Ibid, p.55). This isn't necessarily farfetched when thinking of contemporary companies like Apple, Google, Amazon, etc., not to speak of the technological and entrepreneurial revolutions in over 100 years of industrialisation (cf. Perez 2003, p.14) which always brought about new styles, practices and meanings as well.

Both mindsets, the design approach to innovation, and derived from it a strict thinking in services, therefore may help companies to circumvent looming commodity traps and overcome »old« – resp. too restricted – thinking« in strategy and innovation as set out in Chapter 2. As I asked in the beginning whether the disruption of existing, or the creation of new markets isn't just the result of a new customer discovery or creation, which normally ought to be inevitably bound the creation of new value, I want to refer back to Kim & Mauborgne's (2005) »blue ocean« framework in order to show this thesis' contributions in conclusion.

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[148] This view by the way was already taken in the 90's by a few but influential scholars from the business sphere. E.g. Slywotzky (1996, p.285) who demanded to integrate customers and suppliers into the business design process in order to guide the »value recapture« process and permanently re-check basic assumptions on customers and industry logic. But also authors like Prahalad & Ramaswamy (2003) claimed similar approaches.

[149] At first they may be detached from any particular medium. However within the experience there are of course tangible and intangible elements and (social) interactions which build on each other. Not to mention the thoroughly staged addressing of multisensuality in all its facets. But a good experience design team doesn't care about how and what from the experience is derived (e.g. via a product or technical device, a »plain service«, a product-service combination, an event, or other social interactions), as long as it provides the defined value superior to other alternative solutions.

[150] When looking at their conception of unique entrepreneurial skills, the parallels to what has been discussed in this thesis are more than obvious: "(1) [T]he entrepreneur innovates by holding on to some anomaly; (2) he brings the anomaly to bear on his tasks; (3) he is clear about the relation of the anomaly to the rest of what he does, and once he has a sense of a world in which the anomaly is central, […] he embodies, produces, and markets his new understanding; (3) to do this, he preserves and tests his new understanding – for instance, by leading workshops or other kinds of discussions – to see how it fits with wider experiences than his own; (4) […] he must take his new conception and embody it in a way that preserves its sensibleness and the strangeness of the change it produces, seeing to it that his new understanding retains for others the authority that it has for him and reconfiguring the ways things happen in a particular domain; (6) finally, he focuses all dimensions of entrepreneurial activity into a styled coordination with each other and brings them into tune with his embodied conception, so that the critical distinctions involved in appreciating the [solution] become manifest in the company's way of life." (Spinosa et al. 1999, p.50)

Table 3 contrasts the most important aspects of »read ocean« approaches to strategy and innovation (cf. the discussion in Chapters 2.1 ff.) with their proposed »blue ocean« counterparts and lists the respective relationships that have been outlined in this thesis. It again shows that the interrelations of new meanings/user value, business model innovation and the creation of new markets are manifold. Design may help and is present throughout every dimension. On that score I want to close with Drucker (cf. p.31) and ask: If the purpose of business is to create a customer, and design helps creating the latter, isn't it then the duty of business to actively engage with design?

LIMITATIONS

This paper touched a vast number of different discourses and research streams, many of which are themselves interdisciplinary, cluttered and without a common or shared knowledge/theory base. I tried to show important connections from business and design's POV by focusing on the creation of value. However, I am aware of the fact that there is still a remaining haziness in many parts of the thesis, which may range from nomenclature and vocabulary inconsistencies[151] over conflicting theories to partly very condensed summarisations of the introduced concepts and research fields. As stated in the beginning my intention wasn't to construct an exact, consistent and coherent theory, framework or treatise which is following well researched theories, but to perform an interdisciplinary sweeping blow and open up the field(s) for future research.

As my examination had such a broad spread it also had to omit closer examinations of related research areas which are critical to operationalise what has been said in this thesis. This is especially true for an organisational perspective (e.g. organisation design and change management) on strategic innovation and a design posture. Especially when trying to turn conducted »design experiments« into first service prototypes and later viable business models, a company needs the right people, leadership (style), structures, processes, systems and culture (cf. Sniukas 2011). This has also been barely addressed by Osterwalder & Pigneur (2009) in their BMI framework. Similar to Sniukas (2011) they just[152] proposed to use Galbraith's (2001) five star model (people, strategy, structure, processes, rewards) to successfully implement BMI in organisations (Osterwalder & Pigneur 2009, p.270f.). Nonetheless it is a matter of fact that these organisational dimensions have to, or do already change from industrial thinking to a more design-oriented thinking in a services-era. So obviously also this needs a multitude of theoretical and empirical future research.

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[151] By the way, this is the biggest problem even within the design discourse. Therefore every design conference and many publications (e.g. in Boland Jr. & Collopy 2004) at least have one discussion slot/part about the evolution of the current design vocabulary.

[152] This has especially been criticised by von Rosing et al. (2011), pointing to the fact that in their conceptualisation neither corporate structure nor responsibilities are included and that it doesn't consider any representation of main business goals, success factors and KPI's.

STRATEGIC INNOVATION IN TERMS OF A »BLUE OCEAN STRATEGY«

Red Ocean Strategy	Blue Ocean Strategy →	How?
Exploit existing demand.	Create and capture new demand.	Know that "customers dispositions are complex, counter-intuitive and paradoxical" (Liebl 2011) and that »new demand«, respectively new market proposals (Chapters 3 and 5.2.2), can only be created when recognizing the complex and interdependent dimensions of what actually constitutes or may constitute value to them (Chapter 4). Acknowledge that »user-centric« means orienting the user. That is, people only know what they want, once they are confronted with it, what requires to develop a permanent learning attitude, whose main subgoal is to develop anticipative empathy in interaction (Chapters 5.2.1 to 5.2.3). Accept furthermore that new customers and new value in the prospective services-era will only be created in permanent exchange (Chapters 4.2 and 5.2.3) with users themselves and other key interpreters (Chapter 5.2.2).
Make the value-cost trade-off.	Break the value-cost trade-off.	Gain insights about what users value, considering all value dimensions (Chapter 4) in order to custom-tailor an value proposition/experience (Chapters 5.2.3 and 6) that manages to handle Kano's (1984) delicate balance of basic-, performance-, and excitement factors (C.-C. Yang & K.-J. Yang 2011) – in short desirability – from a customer's perspective as well as the balance of the most important business constraints, feasibility and viability (Chapter 5.2.1).
Align the whole system of a firm's activities with its strategic choice of differentiation *or* low cost.	Align the whole system of a firm's activities in pursuit of differentiation *and* low cost.	Use the above gained knowledge about max. value creation for the user vs. max. value capture for the company to find the best »sustainable equilibrium« by knowing how to construct business models (Chapter 6) which are capable of profitably delivering an optimum of the value, i.e. the conceived ideal customer experiences (Chapter 5.2.3). Those configurations should facilitate and take advantage of the permanent value negotiation processes (Chapters 5.2.3 and 6.1.3 ff.) in terms of a SD-logic. Use design thinking to find ways of resolving alleged trade-offs in a »both … and« manner and solve the wicked problems that arise during that process (cf. Chapters 5.2.1, 6 and especially 6.1.2).
Compete in existing market space.	Create uncontested market space.	Disrupt existing or create new markets by crafting the above-stated business models and services in such a way that they provide superior value relatively to the next best alternative solutions (Chapters 2.2 and 3). This can be done by either solving or creating new customer functions (i.e. latent needs), or by addressing existing ones differently. Alternative solutions needn't be just technology, but may also be new (service-supported) practices or reinterpretations of old industry paradigms into a new meaning (Chapter 5.2.2).
Beat the competition.	Make it irrelevant.	Considering the items before, this should be done by now. ☺

Table 3: Red vs. blue ocean strategy (Source: Kim & Mauborgne 2005, p.18) and this thesis' contributions

8 Outlook

Personally I hope that we – especially here in Germany – abandon the view that we can rest on our status as world export championship for high-tech machinery, equipment and »plain« engineering solutions. Who knows? If a German solar panel manufacturer had created a service-oriented value offering for private households, which coupled his panels with let's say clever energy consumption measuring devices like the new Nest[153] (a learning thermostat, developed by former Apple engineers) they may have been disposed to buy the more expensive German technology instead of the cheap Chinese imports. Thinking from and with the user (and leaving aside the current main acquisition purpose of subsidies from the »Erneuerbare Energien Gesetz«) and his complex needs (e.g. his will to save energy, but being lazy about changing habits, trying to have a »green« consciousness, etc.) may have led to completely different systems and new business areas, where the technical solution »solar panel« either becomes irrelevant or gets valorised into a completely new meaning. False pride regarding history and present is dangerous. What we need is a new and balanced approach, which combines German engineering traditions with the new realities of a world where everything is possible with the help of non-technocratic[154] services-thinking and the domination of ICT[155].

Apropos solar panel, the more and more strengthening area of *sustainability* is one of *»the next big things«*[156] of our century. Strategy, innovation and design will therefore further be related to another huge new research field (Nidumolu et al. 2009), which will inextricably be knotted to value and meaning, and later, when the pressure to act further increases, probably to pure necessity. Until then companies will be more and more confronted with new *compliance* requirements and have to experiment with new *value architectures*, *products and services* as well as *business models* and *next practice platforms* anyways (Ibid). This probably will make some of their products more expensive or less »performing« compared to unsustainable solutions. Nonetheless they will provide new or different value that is closely coupled to many kinds of (new) meaning. In the not so far future (I personally think even today), this will be a source of great competitive advantage. So wouldn't it be a good idea to start the training right now?

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[153] For more informations see: http://www.nest.com/living-with-nest/ (Accessed Dec 5, 2001).

[154] Technocratic approach to service here means, the »typical« German attempt to apply industrial thinking to services. A recent example for that is the introduction of a new DIN norm, called DIN SPEC 77224 »Erzielung von Kundenbegeisterung durch Service Excellence« which gives companies a guideline and later on the »certified proof« that they are service-oriented. Entirely in accordance with old product-thinking this DIN specification is sold as either a printed or digital copy and has itself no service attached (yet?). It is just a matter of time until the product can be found fileshared all over the internet and until foreign service providers translate this, by all means valuable, knowledge into a real certification service. This happened for example with the DIN 14044, an environmental management norm for Lifecycle Assessments, which was nearly unreadable and too complex for any organisation to apply. British industry councils like WBCSD deconstructed the norm and built an interactive system which guides companies through the certification process. While the German norm sells for 99,- EUR (and for free in the first three Google entries), WBCSD charges his clients in a staggered way. Their way of certifying companies for Product Lifecycle Assessment has become a popular and worldwide environmental management standard used by multiple stakeholders. The original German source is unknown to them.

[155] Not to speak of the next to come waves of bio- and nano-technology. Just think of new research areas like biodesign which will radically alter the way how we perceive »design« (e.g. see http://cheme.stanford.edu/faculty/biotech.html and http://biodesign.stanford.edu).

[156] According the last GE Global Innovation Barometer (2011), 77% of executives believe that the greatest innovations of this century will be those helping address human needs over those simply creating most profit. That is, innovation should also provide value for society by »helping to green the world«. Therefore 90% also believe that it is the main driver for greener national economies, whereas 85% are expect innovation to improve environmental quality.

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10 Appendix

The Ten Schools of Strategy after Mintzberg et al. (2001)

The ten Schools		Strategy Formation as …
The Design School	(p. 23 ff.)	Process of Conception
The Planning School	(p. 47 ff.)	Formal Process
The Positioning School	(p. 81 ff.)	Analytical Process
The Entrepreneurial School	(p. 123 ff.)	Visionary Process
The Cognitive School	(p. 149 ff.)	Mental Process
The Learning School	(p. 175 ff.)	Emergent Process
The Power School	(p. 233 ff.)	Process of Negotiation
The Cultural School	(p. 263 ff.)	Collective Process
The Environmental School	(p. 285 ff.)	Reactive Process
The Configuration School	(p. 301 ff.)	Process of Transformation

Table 4: The ten schools of strategy (Mintzberg et al. 2001)

SIX CHARACTERISTICS OF WICKED PROBLEMS (CITED IN ORIGINAL FROM CONKLIN 2009)

1. You don't understand the problem until you have developed a solution.
Every solution that is offered exposes new aspects of the problem, requiring further adjustments to the potential solutions. There is no definitive statement of 'the problem': these problems are ill-structured and feature an evolving set of interlocking issues and constraints.

2. There is no stopping rule.
Since there is no definitive 'the problem,' there is also no definitive 'the solution.' The problem-solving process ends when you run out of resources such as time, money or energy, not when an optimal solution emerges.

3. Solutions are not right or wrong.
They are simply 'better/worse' or 'good enough/not good enough.' The determination of solution quality is not objective and cannot be derived from following a formula.

4. Each is essentially unique and novel.
No two wicked problems are alike, and the solutions to them will always be custom designed and fitted. Over time we can acquire wisdom and experience about the approach to wicked problems, but one is always a beginner in the specifics of a new wicked problem.

5. Every solution is a 'one-shot operation'.
Every attempt has consequences. This is the 'Catch 22' of wicked problems: you can't learn about the problem without trying solutions, but every solution is expensive and has lasting consequences that may spawn new wicked problems.

6. There is no given alternative solution.
A host of potential solutions may be devised, but another host are never even thought of. Thus it is a matter of creativity to devise potential solutions, and a matter of judgement to determine which should be pursued and implemented.

Figure 54: Six characteristics of wicked problems (Source: Conklin 2009, p. 19)

Research Streams on Perceived Value after Sánchez-Fernández & Iniesta-Bonillo (2007)

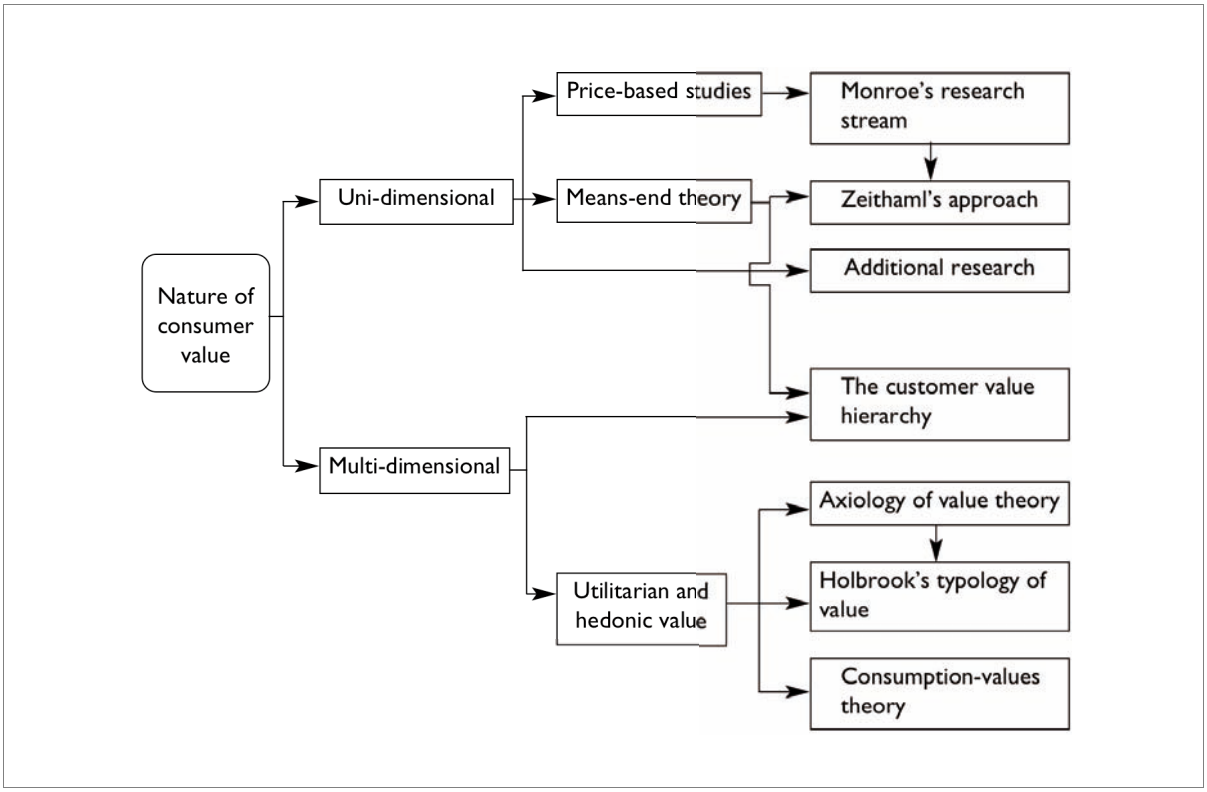

Figure 55: Research streams on perceived value (Sánchez-Fernández & Iniesta-Bonillo 2007, p.430)

A Benefits and Sacrifices View on Net VC after Woodall (2003)

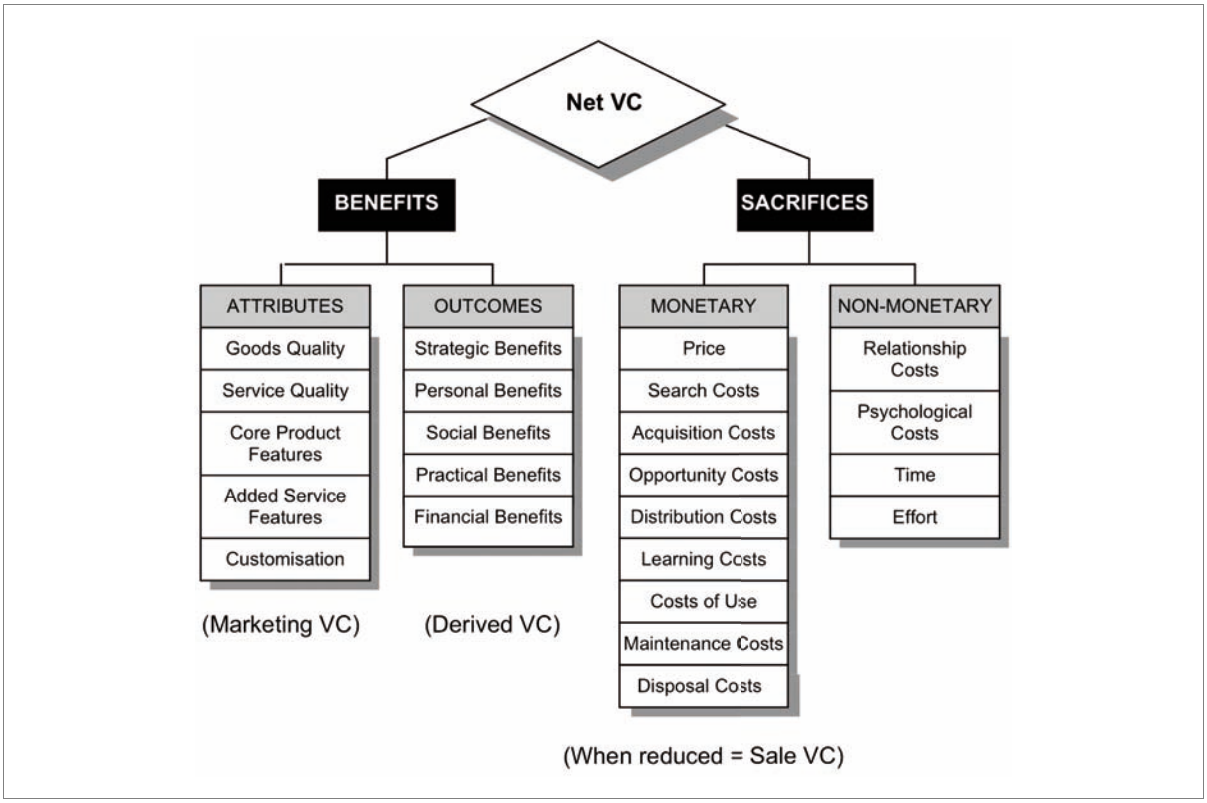

Figure 56: Benefits and sacrifices (Woodall 2003, p.14)

Sub-forms of Value for the Customer (VC)

Contingent VC	Nature of Derived VC
Acquisition value	Aesthetic value
Basic value	Conditional value
Delivered value	Efficiency value
Desired value	Emotional value
Dual-stimulus value	Epistemic value
Exchange value	Esteem value
Exclusive value	Ethical value
Expected value	Excellence value
General value	Functional value
Postpurchase/performance value	Image value
Private meaning value	Logical value
Public meaning value	Material value
Received value	Play value
Redemption value	Possession value
Relative value	Practical value
Single-stimulus value	Social value
Transaction value	Spiritual value
Unanticipated value	Status value
Use value	

Figure 57: Sub-forms of value for the customer (VC) (Source: Woodall 2003, p.9)

Woodalls Factors influencing Consumers' Valuation Process

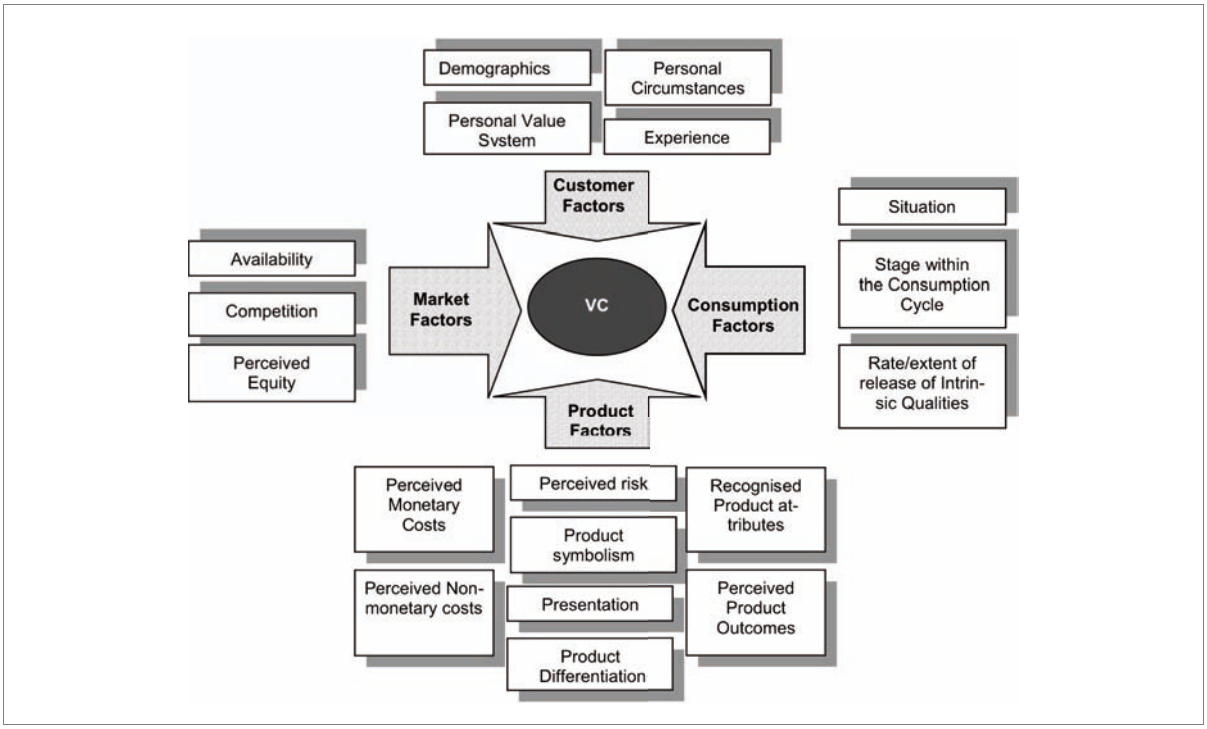

Figure 58: Factors influencing consumers' valuation process (Source: Woodall 2003, p.15)

Value Perspectives over the Customer Experience after Turnbull (2009)

Stages of customer experience	Value in exchange	Value in possesion	Value in use	Value in experience
Anticipated experience				
Purchase Experience				
Consumption experience				
Remembered experience				

Table 5: Value perspectives over the customer experience (Source: Turnbull 2009, p.4)

The Ten (revised) foundational Premises of a Service-Dominant Logic

	Original FP	Modified or New FP
FP1	The application of specialized skill(s) and knowledge is the fundamental unit of exchange	Service is the fundamental basis of exchange
FP2	Indirect exchange masks the fundamental unit of exchange	Indirect exchange masks the fundamental basis of exchange
FP3	Goods are a distribution mechanism for service provision	Goods are a distribution mechanism for service provision
FP4	Knowledge is the fundamental source of competitive advantage	Operant resources are the fundamental source of competitive advantage
FP5	All economies are services economies	All economies are service economies
FP6	The customer is always a coproducer	The customer is always a cocreator of value
FP7	The enterprise can only make value propositions	The enterprise cannot deliver value, but only offer value propositions
FP8	A service-centered view is customer-oriented and relational	A service-centered view is inherently customer oriented and relational
FP9	Organizations exist to integrate and transform microspecialized competences into complex services that are demanded in the marketplace	All social and economic actors are resource integrators
FP10		Value is always uniquely and phenomenologically determined by the beneficiary

Figure 59: The ten (revised) foundational premises of a Service-Dominant Logic (Source: Adapted from Vargo & Lusch (2004a; 2004b; 2008))

Mc Kinsey & Co's Value Delivery System

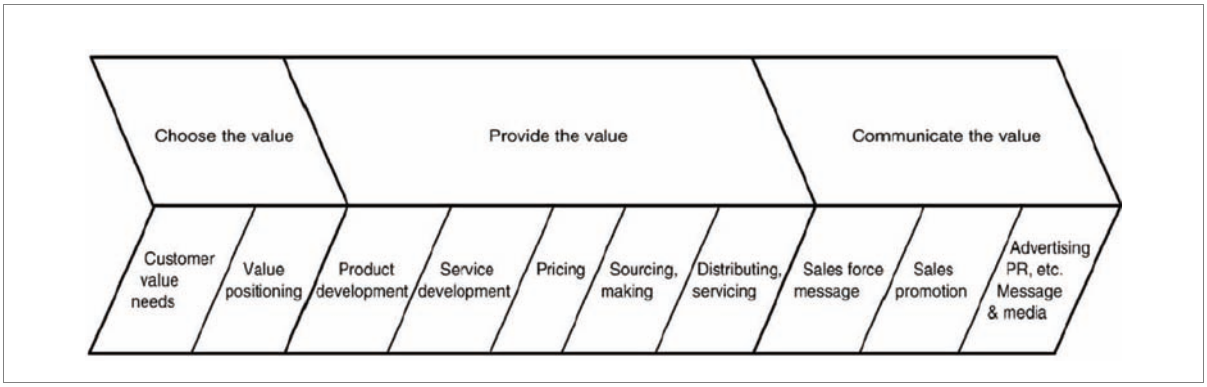

Figure 60: Mc Kinsey & Co's value delivery system
(Source: Lanning and Michaels 1988 as cited in Ballantyne et al. 2011, p.203)

Some Definitions of/Approaches to »Value Proposition«

VP as …	Authors	Approach/Definition
Supplier-crafted value for customers (203 f.)	**Porter 1985; Day & Moorman 2006; Anderson et al. 2006; Lanning 1998**	The marketing offer/promise is formulated by the supplier in terms of what he thinks would be of value to the customer and what is superior to offerings by the competition. Although challenged by Porter (1985), suggesting that value propositions should be conceived as delivering value from a customers perspective, also his proposal retained vestiges of old G-D logic as during that time "[…] the supplier's notion of customer value [was] assumed to be embedded in the goods, supported by a persuasive supplier-to-customer communication mechanism." (Ballantyne et al. 2011, 202 f.) Other representatives of this allegedly customer-oriented approach are J. C. Anderson et al. (2006) with their three types of value elements: *points of parity* (compare all benefits), (favorable) *points of difference* and *points of contention* (resonating focus) and Day & Moorman (2010) who emphasise the strategic importance of making three interlocked choices in order to be able to construct the VP. These choices are the *target customer segment, offering* and a *competitive profile*: "A customer value leader bases its value proposition on a resonating theme – a few elements where the firm is distinctly better than the competition that really to a target market. An effective value proposition offers superior performance, price or relational value and communicates that value in a way that shows that it has a deep appreciation of the customer's value priorities. The choice of value proposition is also the choice of target customer segment – and vice versa" (Day & Moorman 2010, p.68).
Supplier-crafted generic strategies (204)	**Kaplan & Norton 2000; Treacy & Wiersema 1993**	The notion of VP's as *value disciplines* (Treacy & Wiersema 1993) was heavily influenced by Porters (1985) generic strategies. It assumes that marketplace success depends on the generic value approaches firms pursue: *operational excellence, customer intimacy* and *product leadership*. Also Kaplan & Norton (2000) follow this approach, by stating that a value proposition is critical for linking the internal organization/processes to improved customer outcomes. They therefore developed three types of differentiators equal to the above mentioned value disciplines which shall lead to a *"[…] unique mix of product and service attributes, customer relations, and corporate image […]"* helping the company to differentiate itself from competitors in order to attract, retain, and deepen relationships with their respective »target customers«. Although also this approach at least »intends to understand and fulfil customer needs« it is still supplier-led (Ballantyne et al. 2011, p.204).

Promise to other stakeholdeers (204)	**Ballantyne et al. 2011**	A company usually has to align its activities to the demands of many stakeholders (Freeman 1984). It therefore doesn't deliver value just to its customers. Respective propositions are made to e.g. new employees, i.e. in order to improve firm-employee relationships (internal markets). But they are also made to improve supplier and supply chain coordination or to communicate with shareholders.
Supplier-customer co-production (204)	**Flint & Mentzer 2006**	This notion of a value proposition takes into account that suppliers and customers usually engage in a dialouge, i.e. knowledge collaboration: "What is proposed is brought together by value chain partners by knowledge sharing before it is »exchanged« or coordinated between them. Thus the value expected is not merely delivered, but is a consequence of *mutual adjustment*. While this is not necessarily an easy process to manage, it is likely to result in downstream benefits, or manifest as *value-in-use* in the language used in S-D logic." (Ballantyne et al. 2011, p. 204)
Reciprocal exchange (204)	**Glaser 2006**	Within this approach "participants in the value creation process recognize that their objectives are complementary rather rather than antagonistic, and carry this idea into *negotiation*. [Therefore] the value outcomes for all parties are likely to be enhanced" (Ballantyne et al. 2011, p.204). Regarding the value negotiation they state that "there can be no satisfactory relationship development unless exchange participants *reciprocally* determine their own sense of what is of value and communicate it to their counterparts" (Ibid, p.204).
Collaboration with customers to achieve customer solutions (204)	**Tuli et al. 2007**	The notion of *customer solutions* can be traced back to Levitt (1960) who found out that customers buy solutions rather than products. Follwing this stream of thinking the seamlessly combined resources of several (upstream) suppliers together provide the integrated customer solution. According to Ballantyne et al. (2011) there exist two literature streams following that notion: *product centric customer solutions* (customised and integrated combinations of goods and services, e.g. PSS (product-service systems)) and *relational process solutions* (e.g. multi-step plans for engaging with customers when developing their own solutions). Both approaches are reflected in S-D logic's notion of *resource integration* (as an outcome) and the *co-creation of value* (as a process).

Table 6: Some definitions of/approaches to »value proposition« (drawing on Ballantyne et al.'s (2011) six perspectives)

THE WORD »DESIGN« IN ENGLISH LANGUAGE USE

Transitive verb

1: to create, fashion, execute, or construct according to plan : devise, contrive

2 a : to conceive and plan out in the mind <he designed the perfect crime>
b : to have as a purpose : intend <she designed to excel in her studies>
c : to devise for a specific function or end <a book designed primarily as a college textbook>

3 archaic : to indicate with a distinctive mark, sign, or name

4 a : to make a drawing, pattern, or sketch of
b : to draw the plans for <design a building>

Intransitive verb

1: to conceive or execute a plan

2: to draw, lay out, or prepare a design

Noun

1: a : a particular purpose held in view by an individual or group <he has ambitious designs for his son>
b : deliberate purposive planning <more by accident than design>

2: a mental project or scheme in which means to an end are laid down

3: a : deliberate undercover project or scheme : plot
b : plural : aggressive or evil intent —used with on or against <he has designs on the money>

4: a preliminary sketch or outline showing the main features of something to be executed <the design for the new stadium>

5: a : an underlying scheme that governs functioning, developing, or unfolding : pattern, motif <the general design of the epic>
b : a plan or protocol for carrying out or accomplishing something (as a scientific experiment); also : the process of preparing this

6: the arrangement of elements or details in a product or work of art

7: a decorative pattern <a floral design>

8: the creative art of executing aesthetic or functional designs

Figure 61: The word »design« in english language use (Source: cited in orignal from Merriam-Webster Dictionary and Thesaurus 2011)

Correlation of (Meta) Design Activities and Average Growth in Turnover

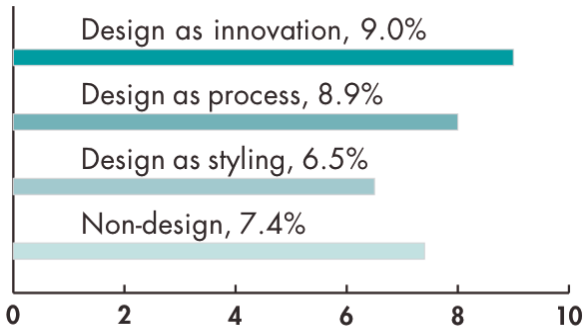

Figure 62: Correlation of (meta) design activities and average growth in turnover (Source: SVID 2003)

Assymetries and Differences in Business and Design – A Juxtaposition

	Business	Design
Underlying Assumptions	Rationality, objectivity; Reality as fixed and quantifiable	Subjective experience; Reality as socially constructed
Method	Analysis aimed at proving one "best" answer	Experimentation aimed at iterating toward a "better" answer
Process	Planning	Doing
Decision Drivers	Logic; Numeric models	Emotional insight; Experiential models
Values	Pursuit of control and stability; Discomfort with uncertainty	Pursuit of novelty and improvement; Dislike of status quo
Level of Focus	Abstract or particular	Iterative movement between abstract and particular

Table 7: Assymetries in business and design (Source: Liedtka & Ogilvie 2011, p. 12)

Feature	From Traditional Firm . . .	To "Design Shop"
Mode of Thinking	Deductive Inductive	Deductive Inductive Abductive
Dominant Attitude	Company can only do what is has budget to do Constraints are the enemy → Decision Attitude	Nothing can't be done Constraints increase the challenge and excitement → Design Attitude
Flow of Work Life	Ongoing tasks Permanent assignments	Projects Defined terms
Style of Work	Defined roles Wait until it is "right"	Collaborative Iterative
Source of Status	Managing big budgets and large staffs	Solving "wicked problems"

Table 8: Points of difference »traditional management practice vs. design practice« – a short account (adapted from Dunne & R. Martin 2006)

Points of Difference »Traditional Management Practice vs. Design Practice« in Detail

Points of Difference	General Management	Design Thinking
Dominant Attitude	**Decision Attitude** Assumes it is easy to come up with alternatives to consider, but difficult to choose among them → Solve, existing stable problems with clearly specified alternatives (usually through the use of analytical decision tools).	**Design Attitude** Assumes that it is difficult to design a good alternative, but once you've developed a truly great one the decsision about which alternative to select becomes trivial. → Problem as opportunity for invention that includes questioning basic assumptions. → Strive after improving the state of the world because: The cost of not conceiving of a better course of action than those that are already being considered is often much higher than making the "wrong" choice among them. (Liedtka 2004a, p.50)
Interpersonal Aspects	Often uncomfortable with interferences from outside. Also with working styles, that could question your own world view. Typical »John looks for Johnny«-problems.	**Emphasis of empathy** 1) understand users perspectives/needs, 2) collaborate with peers and expand perspectives by collaborating with individuals unlike oneself.
	Traditional Firms (Oster 2008)	**Design firms (Oster 2008)**
Flow of Work Life	**Ongoing tasks and permanent assignments.** → Daily routines focus upon regularly planned tasks.	Work flows around (temporary) **projects with defined terms**. → *"People are judged by their ability to add value to it."* (Roger Martin in Oster 2008, p.109)
Source of Status	**Managing big budgets and large staff.** → Size = Status = High reward	Status derives from building a track record of **finding solutions to wicked problems**.
Style of Work	**Clear defined roles** and responsibilitites → *"Individuals are typically much more adept at describing 'my responsibilities' than they are at describing 'our responsibilities'."* (Oster 2008, p.110) → Economic incentives are often linked tightly to these responsibilitites.	**Projects are assigned to teams** rather to individuals. → Charettes[157] and constant dialouge with clients
Mode of Thinking (cognitive aspects)	Two most common kinds of logic are rigorous **inductive** and **deductive** thinking. → Reasoning or arguing outside of these two usually is discouraged by: *"Can you prove that?"*	Use of **inductive** and **deductive logic** complemented by **abductive thinking**. *Inductive* → Induce patterns through the close study of users. / *Deductive* → Deduce answers through the application of design theories. / *Abductive* → Logic of ‚what might be' → *‚Designers may not be able to prove that something 'is' oder 'must be', but they nevertheless reason that it 'may be'' (Oster 2008, p.110)*
Dominant Attitude	**Constraints are the enemy**, budgets are drivers of decisions. → We can only do what we have budget to do. → *"So much more would be possible if we had no budget constraints."* → Constraints therefore are an undesirable barrier to the generation and implementation of ideas.	**Constraints are typical prerequisites of the work process.** → *"[…] the dominant mindset is, "there is nothing that can't be done. "If something can't be done, it is only because the thinking around it hasn't yet been creative and inspired enough." (Oster 2008, p.110)* → Constraints therefore are embraced as the impetus to creative solutions. They increase the challenge and excitment level of the task at hand. (Dunne & R. Martin 2006, p.519)
Representation of Interests	**Shareholder first**	**Enduser first**
	Take the first-best solution, that meets all given **requirements**.	**Generate new alternatives**, even when an apparently viable one has been found. → »make world better-attitude«

Table 9: Points of difference »traditional management practice vs. design practice« (adapted from Dunne & R. Martin 2006)

[157] *The French word "Charrette" means "cart" and is used to describe the final intense work effort expended by art and architecture students to meet a project deadline. At the École des Beaux Arts in Paris during the 19th century, proctors circulated with carts to collect final drawings while the students frantically put finishing touches on their work.*

The Design Thinking Process of the HPI School of Design Thinking, Postsdam

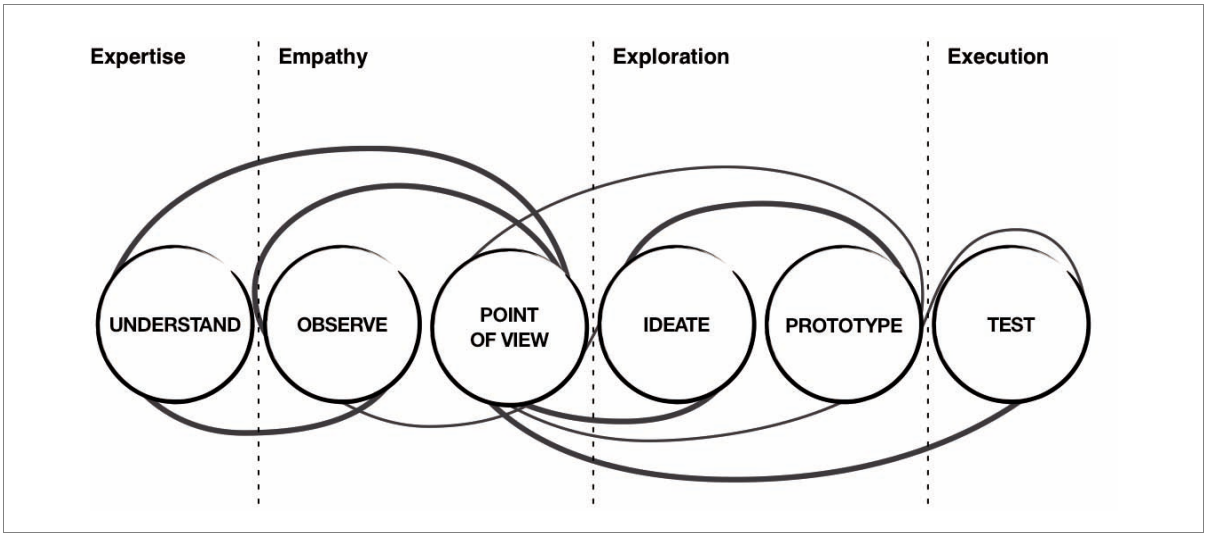

Figure 63: The design thinking process of the School of Design Thinking, HPI-Postsdam, 2011 (Source: Ibid)

Examples for Divergence-Convergence Models

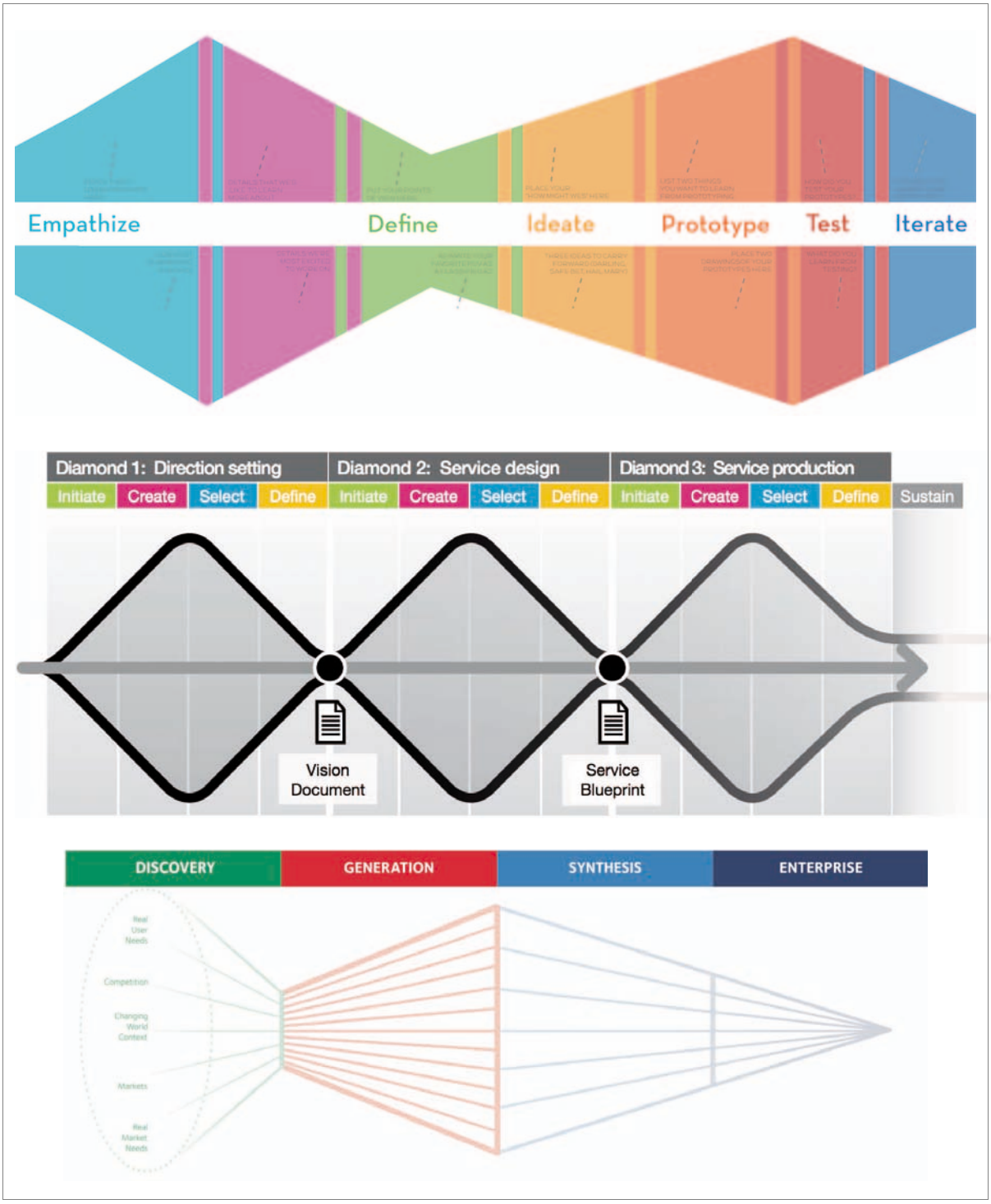

Figure 64: Divergence and convergence in design processes: d.school Stanford's necktie flare model (Source: https://dschool.stanford.edu/groups/k12/wiki/ecde0/images/5f5fa.png, accessed Nov 8, 2011) and two typical service design processes (Sources: Engine Service Design, UK, 2010 and Spirit of Creation, UK, 2005)

The Kano Model of Customer Satisfaction

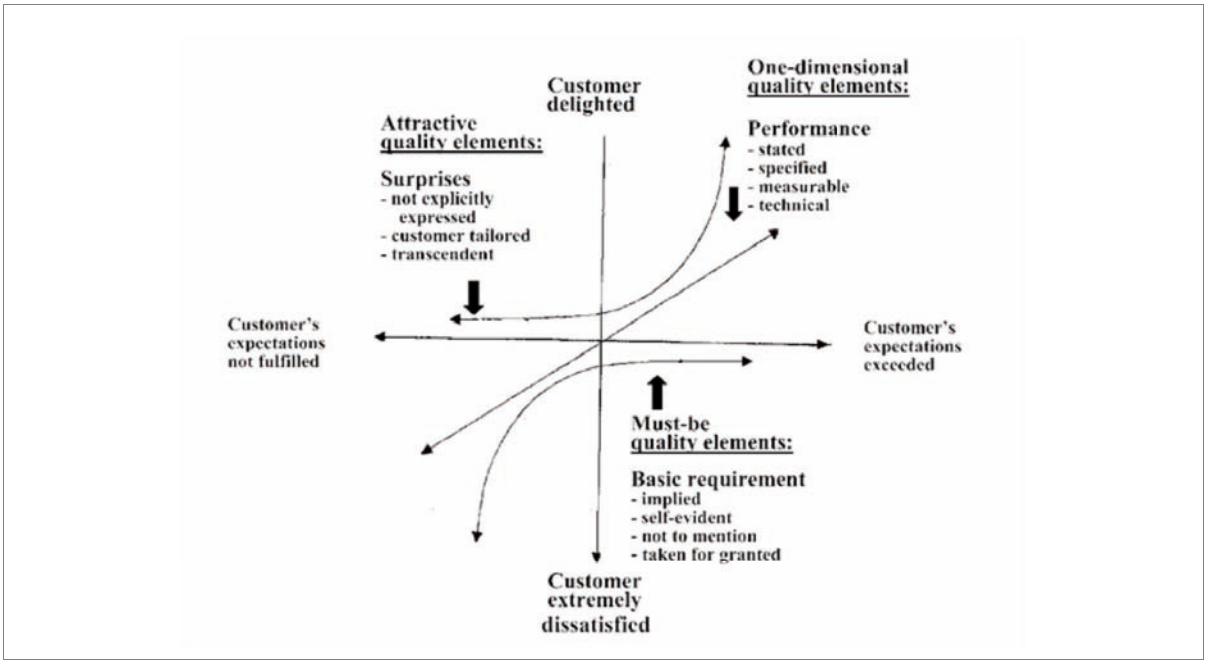

Figure 65: The Kano model of customer satisfaction (Source: Yung-Hsin Chen & Chao-Ton Su 2006, p.596)

Map of Design for Services with related Disciplines

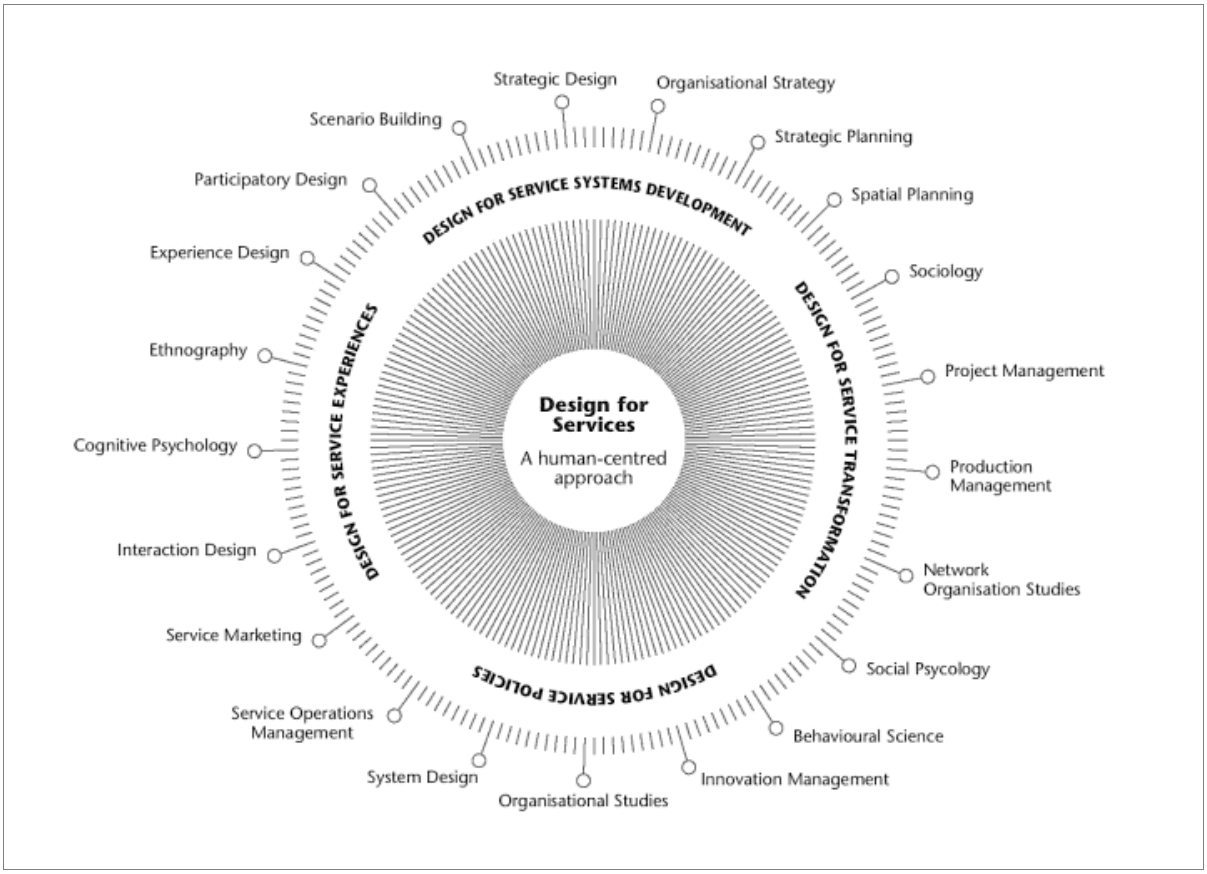

Figure 66: Map of design for services with related disciplines (Meroni & Sangiorgi 2011, p.215)

SERVICE DESIGN DEFINITIONS
Practitioners say: "Service Design is the application of established design process and skills to the development of services. It is a creative and practical way to improve existing services and innovate new ones." – Livework, 2010
"When you have two coffee shops right next to each other, and each - sells the exact same coffee at the exact same price, service design is what makes you walk into one and not the other." – 31 Volts Service Design, 2008
"Service design is a design specialism that helps develop and deliver great services. Service design projects improve factors like ease of use, satisfaction, loyalty and efficiency right across areas such as environments, communications and products - and not forgetting the people who deliver the service." – Engine Service Design, 2010
"Service design is a holistic way for a business to gain a comprehensive, empathic understanding of customer needs." – Frontier Service Design, 2010
"Developing the environments, tools, and processes that help employees deliver superior service in a way that is proprietary to the brand." - Continuum, 2010
"Service Design is an emerging field focused on the creation of well thought through experiences using a combination of intangible and tangible mediums. [...] Service design as a practice generally results in the design of systems and processes aimed at providing a holistic service to the use , This cross-disciplinary practice combines numerous skills in design, management and process engineering. Services have existed and have been organised in various forms since time immemorial. However, consciously designed services that incorporate new business models are empathetic to user needs and attempt to create new socio-economic value in society. Service design is essential in a knowledge driven economy." – The Copenhagen Institute of Interaction Design
"Service designing is a meta design activity for intentionally integrating (not accidentally falling into) systems of interaction with people – via human systems, information systems, and physical systems – to create value and differentiate providers." – Hugh Dubberly
Scholars say: "Service design addresses the functionality and form of services from the perspective of clients. It aims to ensure that service interfaces are useful, usable, and desirable from the client's [POV] and effective, efficient and distinctive from the supplier's point of view. Service designers visualize, formulate, and choreograph solutions to problems that do not necessarily exist today; they observe and interpret requirements and behavioral patterns and transform them into possible future services. This process applies explorative, generative, and evaluative design approaches, and the restructuring of existing services is as much a challenge in service design as the development of innovative new services." – Service Design Network (SDN)
"Service Design helps to innovate (create new) or improve (existing) services to make them more useful, usable, desirable for clients and efficient as well as effective for organizations wit is a new holistic, multi-disciplinary, integrative field. [It] is the design of the overall experience of a service as well as the design of the process and strategy to provide that service." – Stefan Moritz, 2005
"Service Design aims to ensure service interfaces are useful, usable and desirable from the client's point of view, and effective, efficient and distinctive from the supplier's point of view." – Birgit Mager, 2009
"Service design is all about making the service you deliver useful, usable, efficient, effective and desirable." – UK Design Council, 2010

Figure 67: Service design definitions (all definitions cited in original from Stickdorn & Schneider 2011)

An integrated Service Design Process after Dubberly & Evenson (2008a)

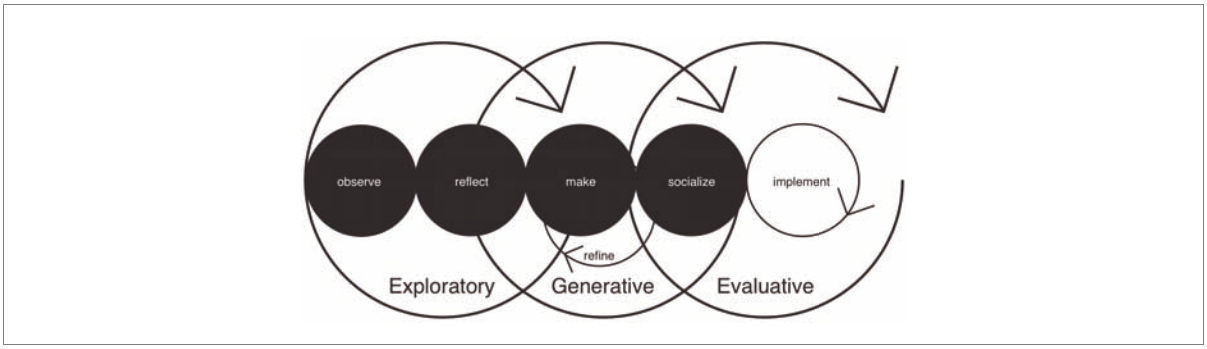

Figure 68: Integrated service design process (Source: Dubberly & Evenson 2008a, p.6)

Stage	Representative Deliverable
Observe	**Immersion in the context and community**
	environment description and user and stake holder needs identification (through immersive research)
	company/organization perception and core competency
	market conditions and brand audit
Reflect	**Creating the models of "what is" and what the service system might be like**
	journey map or blueprints
	stakeholder model and ecology
	customer typology (personas or archetypes)
	definition of core competency and brand vision and cultural model
Make	**Designing the service system resources:**
	service moment concepts
	service string and event concepts (processes)
	experience prototyping (enactments)
	draft experience strategy (values, tools, etc. across touchpoints)
	experience strategy
	refined experience prototypes (enactments)
	service specification, design language, and documentation
	service testing
Socialize	**Creating the network for uptake – both within the service organization and with the customers**
	presentations of service design process with implications for implementation
	service specification, design language, and documentation
Implement	**Bringing system resources to life**
	service betas
	feedback mechanisms to continuously inform all proceeding stages
	supporting system "tuning" and evolution overtime

Table 10: Integrated service design process overview (Source: Dubberly & Evenson 2008a, p.7)

Customer Discovery: Overview of the Process after Blank (2005)

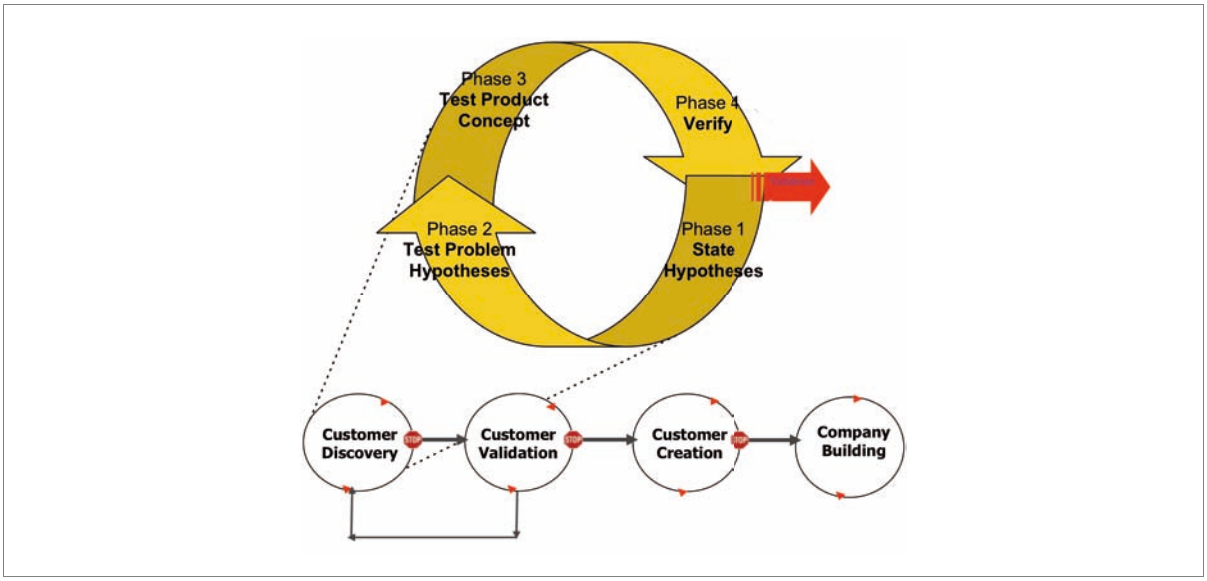

Figure 69: Customer Discovery: Overview of the Process (Blank 2005, p.32)

The 12 Dimensions of Business Innovation after Sawhney et al. (2006)

Dimension	Definition	Examples
Offerings	Develop innovative new products or services.	• Gillette Mach3Turbo razor • Apple iPod music player and iTunes music service
Platform	Use common components or building blocks to create derivative offerings.	• General Motors OnStar telematics platform • Disney animated movies
Solutions	Create integrated and customized offerings that solve end-to-end customer problems.	• UPS logistics services Supply Chain Solutions • DuPont Building Innovations for construction
Customers	Discover unmet customer needs or identify underserved customer segments.	• Enterprise Rent-A-Car focus on replacement car renters • Green Mountain Energy focus on "green power"
Customer Experience	Redesign customer interactions across all touch points and all moments of contact.	• Washington Mutual Occasio retail banking concept • Cabela's "store as entertainment experience" concept
Value Capture	Redefine how company gets paid or create innovative new revenue streams.	• Google paid search • Blockbuster revenue-sharing with movie distributors
Processes	Redesign core operating processes to improve efficiency and effectiveness.	• Toyota Production System for operations • General Electric Design for Six Sigma (DFSS)
Organization	Change form, function or activity scope of the firm.	• Cisco partner-centric networked virtual organization • Procter & Gamble front-back hybrid organization for customer focus
Supply Chain	Think differently about sourcing and fulfillment.	• Moen ProjectNet for collaborative design with suppliers • General Motors Celta use of integrated supply and online sales
Presence	Create new distribution channels or innovative points of presence, including the places where offerings can be bought or used by customers.	• Starbucks music CD sales in coffee stores • Diebold RemoteTeller System for banking
Networking	Create network-centric intelligent and integrated offerings.	• Otis Remote Elevator Monitoring service • Department of Defense Network Centric Warfare
Brand	Leverage a brand into new domains.	• Virgin Group "branded venture capital" • Yahoo! as a lifestyle brand

Figure 70: The 12 dimensions of business innovation (Sawhney et al. 2006, p.78)

DEFINITIONS OF »BUSINESS MODEL«

Slywotzky (1996)
"A business design is the totality of how a company selects its customers, defines and differentiates its offerings, defines the tasks it will perform itself and those it will outsource, configures its resources, goes to market, creates utility for customers, and captures profit. It is the entire system for delivering utility to customers and earning a profit from the activity. Companies may offer products, they may offer technology, but that offering is embedded in a comprehensive system of activities and relationships that represents the company's business"

Berg (2005)
"A business model is defined as a systematic and comprehensive way to describe the basic strategic logic of a business in a simplified and abstract manner. It is the basis for the illustration, discussion, and development of strategy for a firm or business unit. It comprises a business design that describes the comprehensive system of activities, relationships, and resources as well as a revenue model that analyses the way the business generates revenues and profit"

Osterwalder (2007)
"A business model is a conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams"

Timmers (1998)
The business model is an architecture of the product, service and information flow, including a description of the various business actors as well as a description of the sources of revenues.

Amit, Zott (2001)
"The business model depicts the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities"

Magretta (2002)
Business models are "stories that explain how enterprises work. A good business model answers Peter Drucker's age-old questions: Who is the customer? What does the customer value? It also answers the fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to customers at an appropriate cost?"

Morris et al. (2005)
A business model is a "concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and econom- ics are addressed to create sustainable competitive advantage in defined markets". [...] It has six fundamental components: Value proposition, customer, internal processes/competencies, external positioning, economic model, and personal/investor factors.

Johnson et al. (2008)
Business models "consist of four interlocking elements, that, taken together, create and deliver value."
These are: customer value proposition, profit formula, key resources, and key processes.

Casadeus-Mansell, Ricart (2010)
"A business model is [...] a reflection of the firm realized strategy"

Teece (2010)
"A business model articulates the logic, the data and other evidence that support a value proposition fort he customer, and a viable structure of revenues and cost for the enterprise delivering that value."

Infobox 6: Some business model definitions (compiled by author)

Taxonomies, typologies and ideal types

Taxonomy	Typology
Kinds (taxa) defined bottom-up through observation & empirical work	Types derived top-down through conceptual and theoretical work
Kinds – used to classify firms	Types – used to classify firms

Ideal Types

Types derived from statistical measurement and analysis of firm characteristics (e.g. Pugh and the Aston Project)

Types derived from exemplary cases and their analysis as models (e.g. Business Models)

Figure 71: Taxonomies, typologies and ideal types (Source: Baden-Fuller & M. S. Morgan 2010, p.161)

Pricing Mechanisms after Osterwalder & Pigneur (2009)

Fixed "Menu" Pricing Predefined prices are based on static variables		Dynamic Pricing Prices change based on market conditions	
List price	Fixed prices for individual products, services, or other Value Propositions	*Negotiation (bargaining)*	Price negotiated between two or more partners depending on negotiation power and/or negotiation skills
Product feature dependent	Price depends on the number or quality of Value Proposition features	*Yield management*	Price depends on inventory and time of purchase (normally used for perishable resources such as hotel rooms or airline seats)
Customer segment dependent	Price depends on the type and characteristic of a Customer Segment	*Real-time-market*	Price is established dynamically based on supply and demand
Volume dependent	Price as a function of the quantity purchased	*Auctions*	Price determined by outcome of competitive bidding

Figure 72: Pricing Mechanisms (Osterwalder & Pigneur 2009, p.33)

Southwest Airlines' Activity System

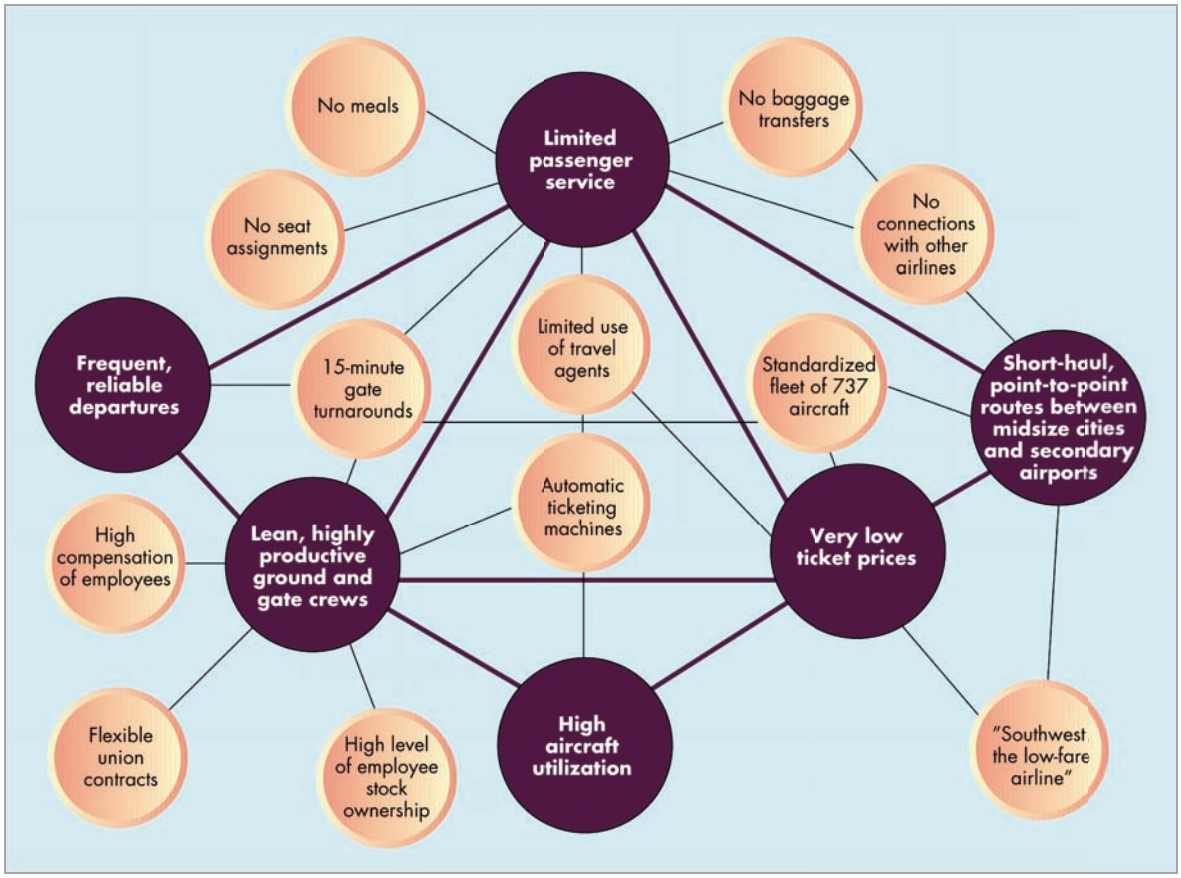

Figure 73: The activity system of Southwest Airlines (Source: Porter 1996)

The Cultural Dynamics Model after Hatch (2004)

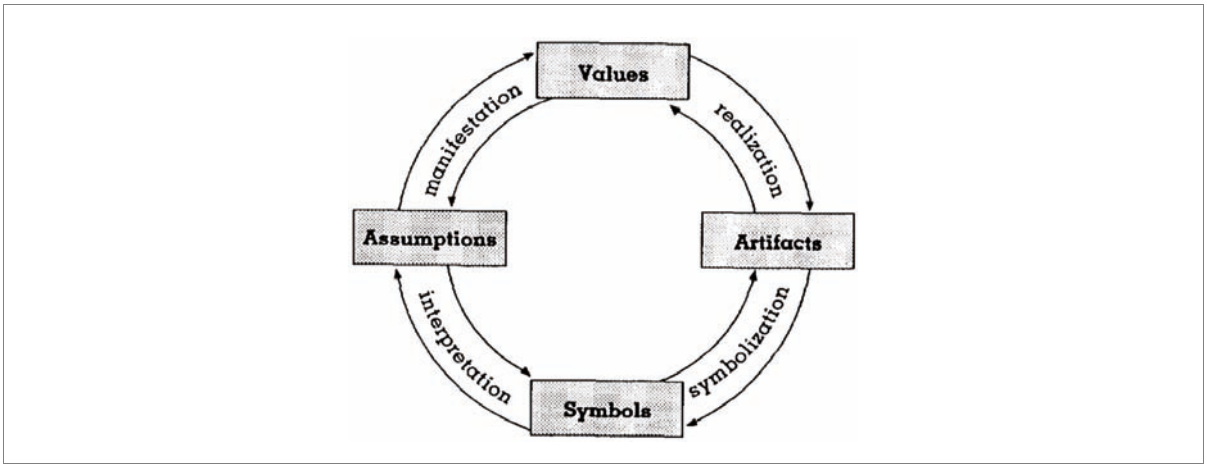

Figure 74: The cultural dynamics model (Source: Hatch 2004)

The Strategy Canvas of Cirque du Soleil

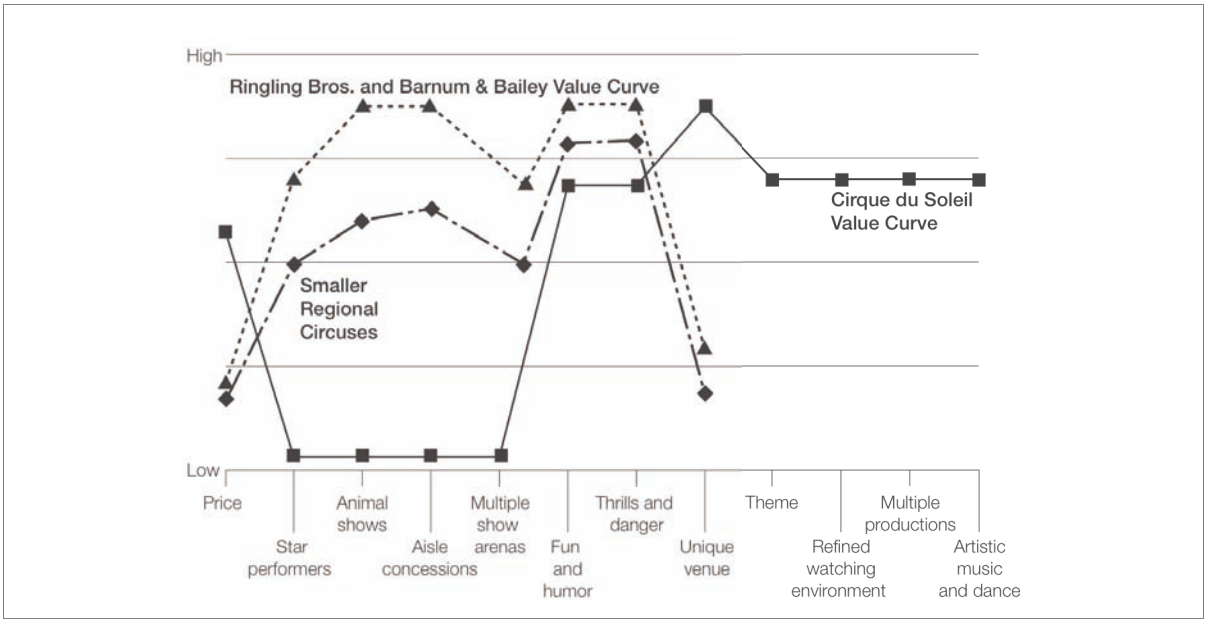

Figure 75: The strategy canvas of Cirque du Soleil (Source: Kim & Mauborgne 2005, p.40)

The Application of the Business Model Canvas to the Blue Ocean Factors

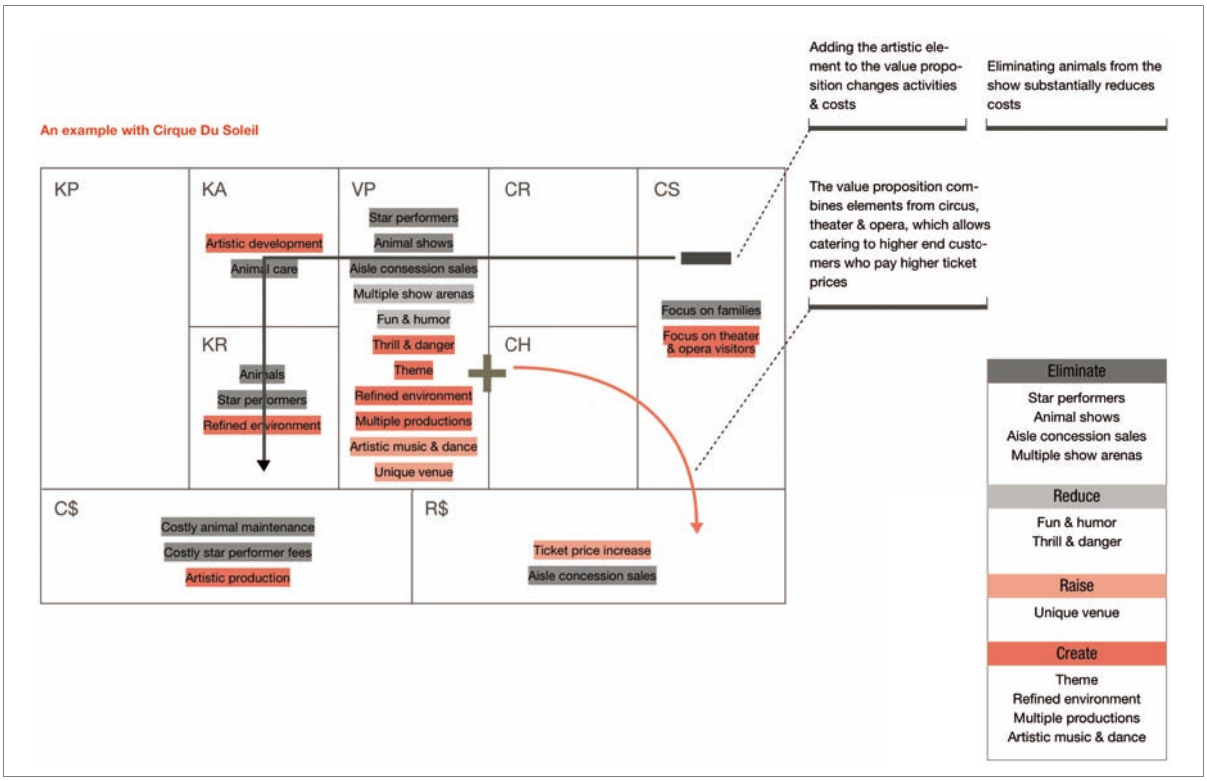

Figure 76: The application of the business model canvas to the blue ocean factors (Source: adapted from Osterwalder & Pigneur 2009, p.229)

Vijay Kumar (2009): The seven modes of innovation and his corresponding »innovation toolkit«

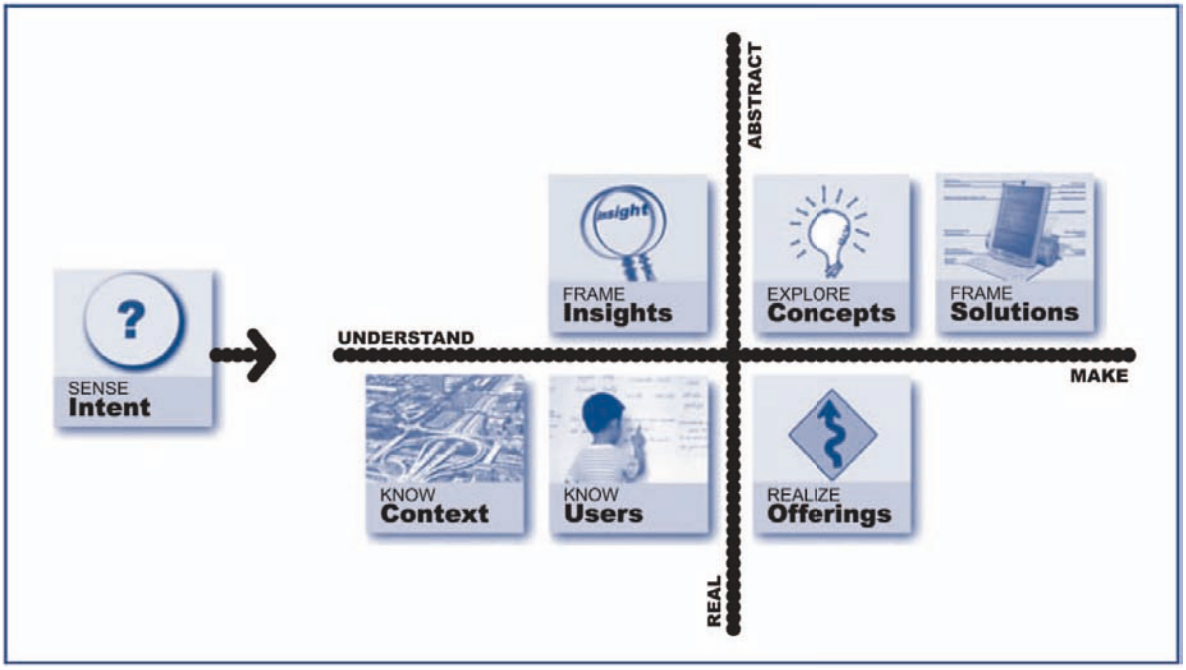

Figure 77: Innovation process with seven modes (Kumar 2009, p.95)

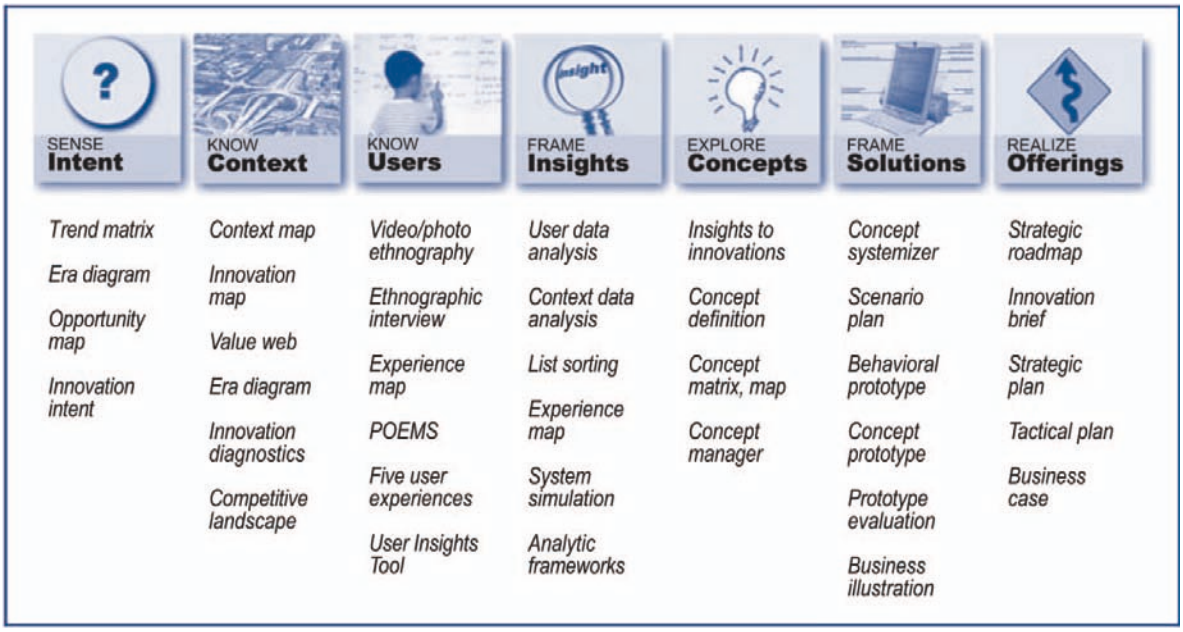

Figure 78: »Innovation toolkit«: An exemplary set of methods and tools for the respective stage in the innovation process (Kumar 2009, p.95)

The Buyer Experience Cycle

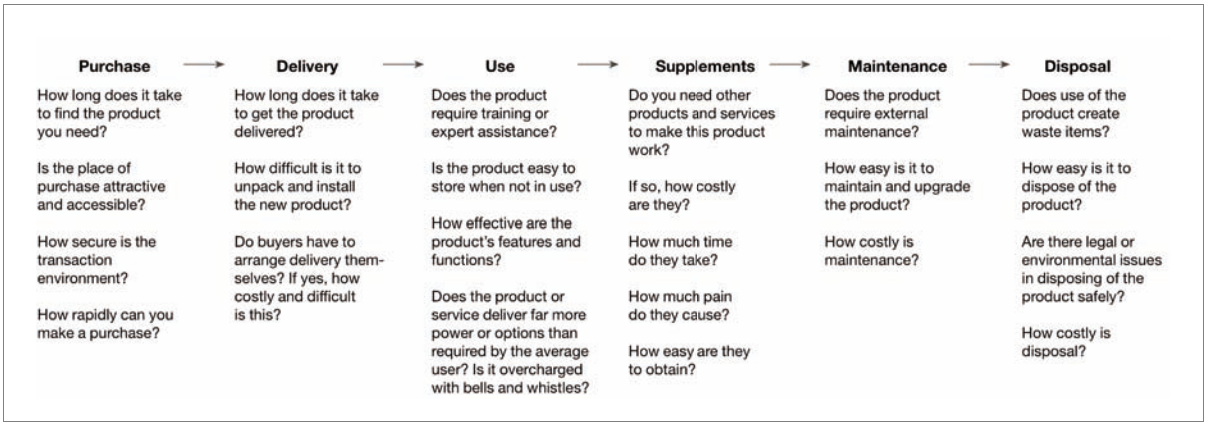

Figure 79: The buyer experience cycle (Source: Kim & Mauborgne 2005, p.123)

The Buyer Utility Map

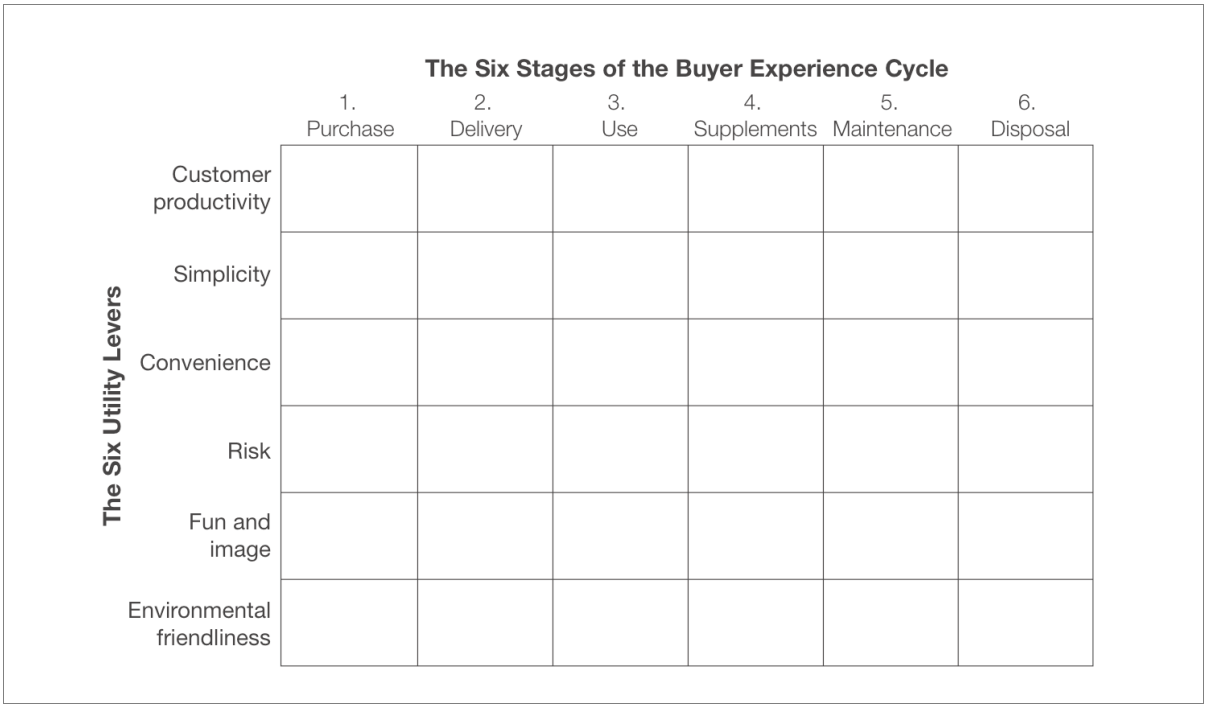

Figure 80: The buyer utility map (Kim & Mauborgne 2005, p.121)

The Five Factors of Experience Research

"To gain a comprehensive understanding of people's experience, it's useful to consider five factors:

1. ***Physical***. *How do people experience their physical interaction with things?*
2. ***Cognitive***. *How do people associate meanings to things they interact with?*
3. ***Social***. *How do they behave in teams or in social settings?*
4. ***Cultural***. *How do people experience shared norms, habits, and values?*
5. ***Emotional***. *How do people experience their feelings and thoughts?"* (Kumar 2009, p.93)

Factors to consider when implementing BMI in organisations

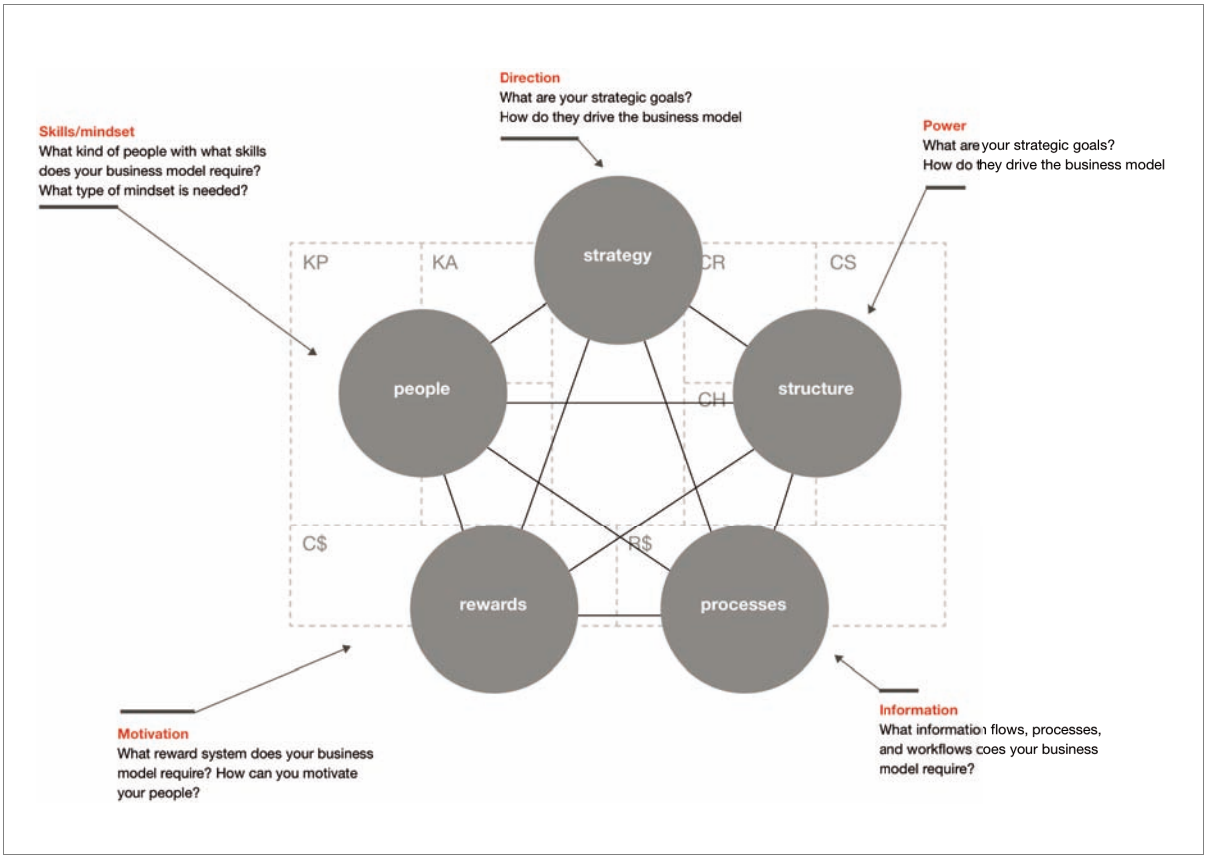

Figure 81: Factors to consider when implementing BMI in organisations (Source: Osterwalder & Pigneur 2009, p.271, adapted from Jay R. Galbraith's (2001) five star model)