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DISCUSSION PAPER

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– von Hayek, Schumpeter, Coase, von Thünen

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Four Evangelists for leading Innovation

1 Introduction: Innovation drives organic growth – but how to drive Innovation?

Organic Growth is back on top of Executives' agendas: "Executives shouldn't underestimate the power of organic growth. It may take more time and effort to affect a company's size, but organic growth typically generates more value. A look at the share price performance of 550 US and European companies over 15 years reveals that for all levels of revenue growth, those with more organic growth generated higher shareholder returns than those whose growth relied more heavily on acquistions"[1].

Innovation is at the heart of driving Organic Growth – "building new products, services or business models, continually allocating funds to areas of proven growth and improving core capabilities"[2]

However: Driving Innovation is easier said than done: Failure rates of new product developments have been notoriously high[3]. Risk averse culture and lengthy development times have been spotted as being the biggest hurdles to improving the return on innovation spending[4] . Concerning the management of R&D – not to be confused with Innovation but a key contributor to it[5] – one key challenge is that the Innovation Process faces "too many trade-offs between costs, speed, quality, (which lead) together with our bounded rationality to dilemmas … Many managers choose the 'golden mean', thereby losing the creative tension so vital for R&D"[6].

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1 Goedhard, M./Koller, T. (2017): The value premium of organic growth. Beware of letting acquisitions take priority over organic growth, in: McKinsey Quarterly (2017/2), p. 22-23.

2 Ahuja, K./ Hilton Segel, L./Perrey, J. (2017): The roots of organic growth. There are many paths to growth, and high performers take more than one – supported by reinforcing capabilities such as advanced analytics and digital customer-experience management, in: McKinsey Quarterly (2017/3), p. 8 – 11.

3 35% to 60% for consumer goods and 25% to 40% for B2B, according to Lüthje, C. (2003): Kundenorientierung als Erfolgsfaktor im Innovationsprozess. In Herstatt, v.C./Verworn, B. (editors): Management der frühen Innovationsphase, Wiesbaden, pages 36 to 56

4 The Boston Consulting Group (2009: 11)

5 "R&D is often perceived as the only source for Innovation. Yet the Innovations delivering most value are generated by the collaboration of multiple functions" Gassmann, O (2008): Innovation – Zufall oder Management? In: Gassmann, O/Sutter, P.: Praxiswissen Innovationsmanagement. Von der Idee zum Markterfolg, München, page 1

6 Zedtwitz, v.M./Gassmann, O./Boutellier, R. (2004): Organizing global R&D: challenges and dilemmas, Journal of International Management 10 2004, page 33. The dilemmas referred to are Local vs. Global,

Two schools of thought dominate the discussion on Innovation Management since decades: One focuses on Creativity, Culture, Collaboration, Customer Integration, Knowledge Sharing, Idea, Concept and Business Model Generation – the other one on the systematic Innovation Process, Stage Gates, Key Performance Indicators. These two schools of thought can be best described by their antipodes: Open Innovation[7] and Lean R&D[8].

Open innovation as "new paradigm"[9] is helpful to spot new business opportunities by either better integrating external knowledge – either scientific and business institutions or the consumer/community[10] – or licensing out own intellectual property[11]. Hence it improves the effectiveness of the innovation process.

Lean R&D focuses on deploying the techniques of Lean Management which have been successful in the operations area in order to improve quality and speed of delivery with lower costs by an empowered team. Hence it improves the efficiency of the innovation process.

In the end what we are facing here is the old struggle between effectiveness and efficiency which is the central raison d'être of economics: It is either about maximizing the output with given resources or minimizing the input to achieve a defined goal – in the end to take tough choices to make the best out of scarce resources[12].

Processes vs. Hierarchy, Creativity vs. Discipline, Control vs. Open Source, Face-to-Face vs. Information and Communication Technology and Long-term vs. Short-term

7 See Chesbrough, H. (2006): Open Innovation. The New Imperative for Creating and Profiting from Technology, Boston.

8 Barrett, C.W./ Musso, C.S./ Padhi, A. (2009): Upgrading R&D in a downturn: Cutting research costs across the board in a recession isn't smart. Companies should use R&D as an opportunity to market themselves more competitive, in: http//www.mckinseyquarterly.com

9 Chesbrough (2006: 43 following)

10 With the rise of the Internet and the new forms of communication which has been created over the last years (blogs, online communities, wikis) the traditional Lead User Concept (see Hippel, v. E. (1986): Lead Users: A source of Novel Product Concept, in: Management Science 32 (7), pp. 791 – 805, has turned into "Co-Creation of Value" between companies and consumers, see Ramaswamy, V. (2009): "Co-Creation of Value – Towards an Expanded Paradigm of Value Creation, in: Marketing Review St. Gallen, 2009 (6), pp.11 to 17

11 For a detailed explanation of the outside-in and inside-out possibilities of Open Innovation please see Gassmann, O/Enkel, E. (2006): Open Innovation. Die Öffnung des Innovationsprozesses erhöht das Innovationspotenzial, in: zfo 3 2006, pages 132 to 138

12 Samuelson, P. (1967): Economics, seventh edition, New York, p. 5.

In this struggle – like in all others – "Every generation stands alone to God" (Ranke). However that does not mean that every new generation of innovation managers needs to reinvent the wheel on balancing effectiveness and efficiency. "Every smart idea has been thought before, it is just necessary to try to think it through again" (Goethe)[13]. Although this statement is highly arguable on natural science there is something to it in social science – and innovation management – out of an economics perspective – is a social science[14].

Therefore the underlying hypothesis of this paper is that a framework referring to "eternal wisdom" of classic economics can provide orientation for an Innovation Manager in today's challenging world. This is not to prove contemporary theories like "Open Innovation" or "Lean R&D" wrong. On the contrary – it will be demonstrated that they are contemporary answers to inherent challenges of managing Innovation.

Hence we will review the contributions of von Hayek (Use of Knowledge in Society)[15] and Schumpeter (Creative Destruction through new combinations of products and processes)[16] on the side of effectiveness, Coase (Theory of the Firm)[17] and von Thünen (optimal allocation of scarce resources via marginal analysis)[18] advocating efficiency. This selection might not appear astonishing, least in the case of Schumpeter, who is highly regarded as the prophet of Innovation. However classics are seldom what they appear to be – sometimes the contrary[19]. So by turning to their original contributions and away from well-known quotes and prejudices we hope to discover fresh and relevant insights.

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13 Goethe, v. J. W. (1829): Maximen und Reflexionen, in: Beutler, Ernst: Gedenkausgabe der Werke, Volume II, 2nd edition, Zürich/Stuttgart 1962, page 54

14 See the historic definition of Alfred Marshal "Economics is a study of mankind in the ordinary business of life" in Marshall, A. (1920): Principles of Economics, 8th edition, New York

15 Hayek, v. F. A. (1945): The Use of Knowledge in Society, American Economic Review XXXV, No. 4, pp. 519 to 530

16 Schumpeter, J. A. (1993b): Theorie der wirtschaftlichen Entwicklung, 8th edition, Berlin

17 Coase, R. H. (1937): The Nature of the Firm, in: Economica, Volume 4, November 1937, Issue 16, pages 386 to 405

18 Thünen, J. H. von (1990): Der isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie, Aalen

19 It seems to be the fate of truly great economists that common beliefs often run counter their true intentions: Adam Smith was not at all a naive defender of the "invisible hand" of the market but rather a strict moralist, John Maynard Keynes not the propagandist of state run deficit spending but much more interested in reevaluating the assumptions of the classics – and similar discoveries can be made on the "Four Evangelists" for Managing Innovation

In order to link these theories to the management of innovation we will follow the logic of the typical Innovation process[20] as generally accepted model to explain the distinction between a first "creative phase" (effectiveness) and a second "implementation phase" (efficiency), both being constitutional for managing innovation[21]. The contributions of these four classical economists have been chosen as each one is able to explain a specific part of the innovation process:

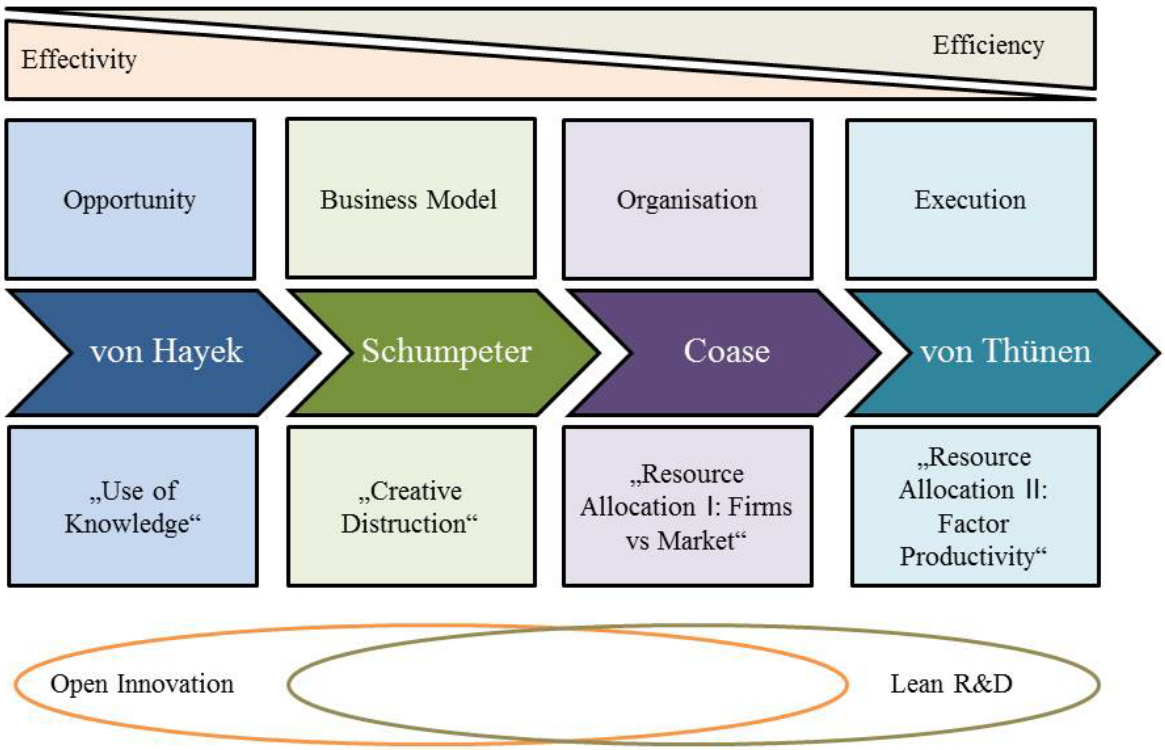

Table 1: Link between Innovation Process, Classic Economic Theories and contemporary Imperatives on Innovation Management

By each of the four phases we will first briefly review each specific theory of the relevant economic classic and assess the potential contribution to Open Innovation/Lean R&D in particular.

[20] Reference is made to the Innovation Process and not the stage gate process (see Cooper, R. G./Kleinschmidt, E. J. (1990): Stage-gate systems for new product development, in: Marketing Management Vol 1 (4), pages 20 to 24), however the pros and cons will be also reviewed

[21] Zedtwitz/Gassmann/Boutellier (2004: 43)

But it is not enough just to explain the different phases by linking to economic classics. The crucial question is how an Innovation Manager, or even more Leader, as we will see, can take profit. The synopsis will show that it is not about separate tasks, that can be isolated in a Cartesian way and managed respectively, but much more about four different leadership styles that need to be applied in mastering the specific challenges inherently linked to Innovation.

Hence we will turn from managing the Innovation Process to leading the social order of Innovation, which is all about the standing the creative tension between creativity and self-discipline, development of cohesive business concepts while focusing on own strength in bringing them to life.

Yet first we need to understand the contribution of the "Four Evangelists" to the four basic tasks, starting with grasping the opportunity:

2 von Hayek: The Evolution and Use of Knowledge

Friedrich August von Hayek (1899 – 1992, Nobel price winner 1974) was obsessed by exploring how each individual and society as a whole generates and makes best use of knowledge, based on his intense studies in psychology[22], law[23], sociology[24] and most of all economics[25]. Although he is sometimes criticized as a "Paläoliberal" advocate of the harmony of the free market[26], von Hayek gave strong insights into the basis of human civilisation: the social coordination of knowledge between individuals. Thus his work deals with the basic input of Innovation:

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22 Hayek, v. F. A.: The Sensory Order

23 Hayek, v. F. A. (1991): Die Verfassung der Freiheit (The constitution of Liberty), Tübingen; Hayek, v. F. A. (1980): Recht, Gesetzgebung und Freiheit (Law, Justice and Liberty): Eine neue Darstellung der liberalen Prinzipien der Gerechtigkeit und der politischen Ökonomie, Volume I, Landsberg am Lech/München

24 Hayek, v. F. A. (1944): Der Weg zur Knechtschaft (The road to serfdom), Erlenbach-Zürich

25 Hayek, v. F. A. (1969): Wettbewerb als Entdeckungsverfahren, in Hayek, v. F. A.: Freiburger Studien, Tübingen

26 See Ulrich, P. (1997): Integrative Wirtschaftsethik. Grundlagen einer lebensdienlichen Ökonomie, Bern/Stuttgart/Wien

2.1 Theory

Knowledge is an individual concept[27] - every individual per se possesses knowledge, which is deeply ingrained in his personality by his experiences, education and traditions he grew up with as well with his capability to process information and to recognize specific patterns. Knowledge is not restricted to scientific knowledge, it is also about general rules and traditions and therefore long-term on the one hand as well as on the other about specific information on the circumstances in time and space[28]. Therefore it can be "explicit" or "tacit" – to use the expressions of modern knowledge management[29]. So practically every individual has some advantage over others because he can draw benefits from unique information. However every individual is just in command of "limited but intimate knowledge relevant for his immediate surroundings"[30] – and with the natural limitations of his "single controlling mind"[31] , hence "true, but imperfect knowledge**,** which leaves much indetermined and unpredictable"[32]. So every person needs to use his available knowledge in order to adapt to changes affecting him, changes on which he does not even know who initiated them, when and why[33]. In our world of dispersed knowledge the economic problem therefore is "the utilization of knowledge given to anyone in its totality"[34].

How can a society cope with this challenge? There a two general ways: Planning by a central authority by giving the right incentives to the economic subjects – or Competition as a means of many separate persons altering their individual plans whenever they perceive changes in the relative prices important for them. The first one is a "constructed order"[35] –

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27 Hayek (1991: Chapter 1)

28 Hayek (1945: H.9)

29 Nonaka, I./Takeuchi, H. (1995): The Knowledge Creating Company. How Japanese Companies Create the Dynamics of Innovation. Oxford/New York

30 Hayek (1945: H. 17)

31 Hayek (1945: H. 20)

32 Hayek, v. F. A. (1974): The Pretence of Knowledge. Lecture to the memory of Alfred Nobel, on www.nobelprize.org

33 Hayek (1945: H21). The effect of the global financial crisis forcing the world to adapt is a strong example for this need for adaptation

34 Hayek (1945: H4). Note that in this individualistic concept based on the evolution of use of personal knowledge the general economic problem differs quite strongly to the usual thinking in terms of equilibrium as neoclassical economists tend to do in standard textbooks. On the contrary – because knowledge and it use is individualistic there is never an equilibrium – but a constant push for "Trial and Error" (Popper)

35 Hayek, v. F. A. (1935): Collectivist Economic Planning, London

the second one a "spontaneous" one[36], in which "human reasoning is an interpersonal process, in which everybody's contribution gets checked and challenged"[37].

Which of the two options should be preferred is not that straightforward to decide as it might appear after the collapse of the socialist systems in the early 1990s. Even the late Schumpeter, the great visionary of entrepreneurship, followed a Marxian tradition[38] and was convinced that Capitalism would loose and Socialism win as the efficiency and innovative power of big multinational corporations and the process of concentration among them would crowd out smaller business – and this concentration in the end lead to ownership of the state within a socialist order[39]. In our days, Nobel Price Winner Paul Krugman interprets the financial crisis as a renaissance of the state and central authority planning[40]

However the need for the state to regulate[41] (perhaps even more) the frame in which a "spontaneous order" can evolve does not mean that the process of utilizing knowledge itself must be planned in a central way[42]. In the end, civilisation per se is about utilizing knowledge of others[43] – to the extent that we often do not have the slightest idea on how the complex systems around us function and are only made aware in case of a system's break down. Therefore the only way to develop civilisation and culture is to leverage this inherently individually dispersed knowledge by **"**competition of ideas as a mode of discovery**"**[44] , to ensure the existence of and foster an entrepreneurial spirit[45] in order to adapt to unforeseen and unforeseeable new circumstances[46].

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36 Hayek, v. F. A. (1952): Individualismus und wirtschaftliche Ordnung (Individualism and economic order), Erlenbach-Zürich

37 Hayek (1952: 27)

38 Marx, K./Engels, F. (1989): Manifest der kommunistischen Partei (Manifesto of the Communist Party), 56th edition, Berlin

39 Schumpeter, J. A. (1993 a): Kapitalismus, Sozialismus und Demokratie (Capitalism, Socialism and Democracy), Tübingen and Basel

40 See Plickert, Philip (2010): Vor mageren Jahren, in: Frankfurter Allgemeine Zeitung, 02.01.2010, p. 11

41 This is the paradigm of "functional competition" and antitrust contol mechanisms see for instance Kantzenbach, E. (1967): Die Funktionsfähigkeit des Wettbewerbs, 2nd volume, Göttingen

42 The logical impossibility to do so without the function of a price mechanism has been first proven 1922 by Mises, v. L. (1981): Die Gemeinwirtschaft, München

43 Hayek (1945: H. 25)

44 Hayek, v. F. A. (1996): Die verhängnisvolle Anmaßung (the fatal conceit). Die Irrtümer des Sozialismus, Tübingen, S. 16

45 Hayek (1980: 109)

46 Hayek (1991: 38 -40)

2.2 Importance of von Hayek for Open Innovation

Von Hayek's view on the evolution and utilization of knowledge is consistent with the basic principles of the paradigm of Open Innovation, as defined by Chesbrough:

- "Not all smart people work for us. We need to work with smart people inside and outside our company
- "External R&D can create significant value; internal R&D is needed to claim some portion of the value"
- "We don't have to originate the research to profit from it"
- "Building a better business model is better than getting to market first"
- "If we make the best use of internal and external ideas, we will win"
- "We should profit from other's use of our IP, and we should buy other's IP whenever it advances our own business model"[47]

Therefore it does not seem exaggerated to claim that von Hayek's thinking lays down the foundations of Open Innovation. He would have been glad to read that the centrally driven "corporate R&D powerhouses of the 1980s are now mostly history" and the trend towards "more corporate entrepreneurship and more information-integration" continuous with "more open and inbound innovation integrating external technology providers"[48]. Especially now that Peter Drucker's vision of the "Knowledge Worker"[49] has come true.

However: If Open Innovation were to be understood as just a stronger collaboration with external parties it would be misleading. Collaboration with external partners outside the boundaries of a firm is nothing new – neither from the scientific/technological[50] nor from a consumer side[51]. The question what should be done within the boundaries of a company

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47 Chesbrough (2006: xxvi)

48 Boutellier, O./Gassmann, O./Zedtwitz, v. M. (2007): Managing Global Innovation, Berlin, 1 52 See, first published in 1969, Drucker, Peter (1994): The age of discontinuity, Brunswick/New Jersey

49 See, first published in 1969, Drucker, Peter (1994): The age of discontinuity, Brunswick/New Jersey

50 To a different degree by various industries, however for chemical and pharma the CEO of the (then still) world's leading company, Prof. Hilger from Hoechst stated in 1986: "The chemical industry is the only industry which has not been named by the material or product but by the underlying science. Therefore science and business is not a contradiction but a partnership". Quote from Wehnelt, C. (2009): Hoechst. Untergang des deutschen Weltkonzerns, Lindenberg, p. 17

51 See the whole history of Marketing as a profession to better integrate the view of consumers in the company. As classical paper please refer to Levitt, T. (1960): Marketing- Myopia, reprinted in: Harvard Manager Marketing, volume 1, pp. 13

and what not has been a key question for economics since the days of Coase – and will be discussed in more detail in chapter 4. The main question there will be the link between effectiveness and efficiency from an organizational point of view.

What is far more important here to understand from von Hayek is how to fight tendencies of inward-looking central planning bureaucracy, which goes against the grain of Innovation by not only demotivating entrepreneurial spirit but most of all running counter the basics of the evolution of knowledge. It is a well-researched fact that many great companies fail because of exactly this inward focus on optimising their current business, thereby neglecting future threats and opportunities by the constant

evolution of knowledge[52]. "In general rarely postmen founded railways" (Schumpeter)[53] Hence the real revolution in Open Innovation is not the collaboration with external companies per se – but an open and agile mindset. Von Hayek can help to sharpen this contemporary thinking in three areas:

(1) Knowledge is per se an individual concept – and its evolution driven by the free interaction of smart people[54]. IT driven Knowledge Management – Databases web-based tools and standardized best practices implemented following theses tools can be of great support to foster free interaction. If overdone however they can kill exactly what they want to achieve by overly bureaucratizing and processing. Whoever tries to turn all "tacit" knowledge into "explicit" one falls exactly in the trap von Hayek described as "fatal conceit" – trying to replace free and creative minds with a tool.

(2) Market and technical uncertainty are the source of new inventions – which reduces the ability to plan Innovation: "A managed process can achieve nothing bigger than what the manager could foresee"[55]. This is a continuous danger – as von Zedtwitz, Gassmann and Boutellier state "based on product liability and misinterpreted ISO documentation requirements, managers repeatedly attempt to translate the reliabil-

52 See for instance Christensen, C. (1997): The Innovator's Dilemma – When New Technologies Cause Great Firms to Fail, Boston

53 Schumpeter (1993b: 101)

54 Goffee, R./Jones, G. (2009): Leading your smartest, most creative people clever, Boston

55 Hayek (1996: 192)

ity and controllability imposed on routine processes (as in manufacturing) into innovation processes"[56]. A too strict stage gate process can turn a blind eye on opportunities for licensing out as well as for new opportunities outside the boundaries of the company[57]. Again – as stated under Knowledge Management – a too strong focus on (yet fascinating) IT and web based tools can potentially be harmful by shifting attention from thinking about insights and opportunities to managing data and processes. A constructed system or process can never replace the free exchange of experimentation with ideas

(3) Innovation is about Experimentation[58] – and the best lab for economic experiments is the market: "It is the main objective of competition to show which plans have been wrong"[59]. In line with the thinking and managing in stage-gates often comes the temptation to overly test to reduce insecurity, not only to ensure quality, safety and regulatory requirements but also to reduce the flop rate. Given the low success rate quoted in the beginning of this paper this logic is plain to see. However – apart from the correlation of risk and reward – competition as a process of discovery functions by "trial and error" – and no consumer test can replace competition as incentive "to work harder, to change attitudes and to focus"[60]. Therefore Venture Capital[61], management of Intellectual Property[62] and systems of modular technologies which can be the base for various product concepts[63] play a key role for Open Innovation in order to get to the challenge of competition earlier and more often in order to generate more insights.

Von Hayek's theory on the evolution and utilisation of knowledge can still provide orientation for today's Innovation Manager. It especially clarifies the open minded attitude with which to start the Innovation Process. Now with Schumpeter we will focus on turning knowledge into innovation.

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56 Zedtwitz,v./Gassmann/Boutellier (2004: 36)
57 See the Xerox PARC case in Chesbrough (2006: 16)
58 Chesbrough calls it „Playing Poker with your own Technologies" (2006: 186)
59 Hayek (1980: 160)
60 Hayek (1980: 110)
61 Chesbrough (2006: 54 pp.)
62 Chesbrough (2006: 56 pp.)
63 Chesbrough (2006: 58 pp.)

3 Schumpeter: Turning Knowledge into Innovation

Schumpeter's name is widely regarded as a synonym for Innovation and Entrepreneurship: Research institutes[64], fellowships[65] and columns on innovation in newspapers[66] are named after him. This is remarkable and might in some cases be based on a lack of knowledge of his oeuvre: He was not a "Schumpeterian", not idealising entrepreneurship but rather believed that Capitalism would die because of its success[67]. He was a great solitaire in economics, neither belonging to any school nor founding one himself. He was an original thinker with a strong tendency to provoke with contradictions. His original writings can provoke our thinking in Managing Innovation still today:

3.1 Theory

Schumpeter's starting point was a theoretical one: For the classical economists the market will always return to a state of equilibrium[68]. The main reason is that changes leading to a deviation of the equilibrium are triggered by external events, such as new technologies in the production process or changes in the taste of end consumers. Therefore all a company is doing is adapting to these new "data". Under the "fiction of an imaginary Golden Age of perfect competition"[69] a company only reacts to changes in the marketplace – but never induces them. Also the focus of classical economic analysis is put on price and costs of commodities and not on the quality of products and services of higher value added products[70] This runs counter the experience of breakthrough shifts in industries: The "evolutionary character of the capitalist process"[71] "revolutionizes the economic process from within"[72]. It is this process of "Creative Destruction"[73] which is the most significant character trait of capitalism – "any theoretical construction neglecting this fact … is like Hamlet without

64 „Schumpeter School of Business and Economics" at the university of Wuppertal
65 Schumpeter Fellowship of the Volkswagen Foundation
66 In the German „Wirtschaftswoche"
67 Schumpeter (1993a). On the controversy with von Hayek on this point see Hayek (1945: Footnote 1)
68 See for instance Ricardo, D (1817): On the Principles of Political Economy and Taxation, reprint 2006 and the discussion in Schumpeter (1993b: 82)
69 Schumpeter (1993a: 134)
70 Schumpeter (1993a: 139 – 140)
71 Schumpeter (1993a: 136)
72 Schumpeter (1993a: 137)
73 Schumpeter (1993a: 138)

the Prince of Denmark"[74] Therefore Schumpeter stresses the need to overcome the classical "static" theory treating innovation as an exogenous variable. In search of an endogenous model able to explain the "dynamics"[75] of breakthrough shifts in the economic development[76] he focuses on situations where "productive revolutions"[77] are induced by the "execution of new combinations"[78] thanks to the "leadership"[79] of the "entrepreneur"[80].

Hence his main assumption is that innovations do not happen because of "spontaneous consumers needs" forcing to adapt the production process – on the contrary: "consumers get educated by producers on new needs"[81].

But new products and services are not the only new combinations with which an entrepreneur can revolutionize industries: New production processes, new markets for an existing product, new forms of supplies and reorganisations are other possibilities.[82]

It is important to note that for Schumpeter the entrepreneur is not an independent owner of a company or a top manager. The "function of the entrepreneur"[83] is fulfilled by anybody who drives the execution of new combinations – owners of companies or managers who do not innovate are just administrators ("Wirte" in German)[84]. However: Without innovation the "process of the elimination of the profit starts"[85] – putting the longer term survival of the company at risk: "Without Innovation No Profit – No Profit without Innovation"[86].

If Innovation is so vital – why then do companies struggle to innovate and rather confine themselves to excel in routine tasks? There is no lack of ideas and opportunities[87]: "New opportunities are constantly generated by the environment of the company, especially as

74 Schumpeter (1993a: 142)
75 Schumpeter (1993b: 99)
76 Schumpeter (1993b: 95)
77 Schumpeter (1993b: 95)
78 Schumpeter (1993b: 100)
79 Schumpeter (1993b: 124 pp.)
80 Schumpeter (1993b: 137 pp.)
81 Schumpeter (1993b: 100)
82 Schumpeter (1993b: 100 – 101)
83 Schumpeter (1993b: 111)
84 Schumpeter (1993b: 122)
85 Schumpeter (1993b: 231)
86 Schumpeter (1993b: 236)
87 See also Boston Consulting Group (2009: 11)

new discoveries constantly enrich the knowledge at hand"[88]. And more so: Innovation is not so much about inventing something new in a technical sense but about recombining factors in a different way: The challenge lies in forming a business model and executing it against persistence. The issue is the "need for Leadership in Innovation"[89] – and leading Innovations is difficult because of three factors:

- Innovations require decisions under uncertainty – it is more difficult to "pave a way than to walk on it"[90]. While routine tasks require to focus on every detail, Innovations must be dealt with a focus on the real important points, omitting details: "Detailed preparation, intellectual Mastership and logical segregation of the matter can be sources of failures"[91]
- Innovators must possess "intellectual freedom and a huge surplus of energy beyond the requirements of daily routine"[92] The Innovator must "in the midst of everyday life scratch and fight for time and energy to conceptualize new combinations and force himself to see them as a real opportunity and not just as a dream"[93]
- Innovators must overcome social pressure: "The social environment will put pressure on everybody who dares to do something new – this holds true in general as well as in economic activity"[94]

So decisive Leadership is key for Innovation – and Leadership is not so much about intellect but about "the energy to do things in a certain way, the capability to go ahead alone, not to shy away from insecurity and resistance and engage others by authority, will and persuasion"[95]. Again: The leader is not the owner of the company, not even the management, but the person who takes the challenge to fulfil this function – driven by strong psychological motivations: Be it "founding a new empire", be it "passion to win", be it the "joy of creating"[96].

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88 Schumpeter (1993b: 117)
89 Schumpeter (1993b: 118)
90 Schumpeter (1993b: 123)
91 Schumpeter (1993b: 125)
92 Schumpeter (1993b: 126)
93 Schumpeter (1993b: 126)
94 Schumpeter (1993b: 126)
95 Schumpeter (1993b: 129)
96 Schumpeter (1993b: 138 – 139)

The financing of innovations is an independent however complementary function. The issue is not the availability of money but the shift of the use of resources of the company, industry and economy to the innovation. The entrepreneur stimulates the dynamics of these shifts – the financing is part of the capitalist system. Interest rates are "neither needed in perfect competition nor in a socialist system they are only needed for the execution of new plans of the entrepreneur"[97], linked to future profits, driven exclusively by innovations.

So after all of these passionate endorsements of the entrepreneur - why is Schumpeter sceptical about the future of the capitalist system driven by entrepreneurs? Not because of a perfect satisfaction of all consumers needs by perfect production processes – "this vision is of no importance for our days"[98]. The increasing professionalism in big multinational companies might replace the entrepreneurial function with specialists: "Technical process is driven by specialists and the romantic of business adventures gone as business opportunities can be calculated much better than in the past"[99]. The personality of the entrepreneur is less required when the public is used to a never ending stream of new consumer goods[100]. Therefore the entrepreneur's "creative destruction" might be replaced by a thorough administrative planning of innovation – a contradictio in adiectio. This process gets enforced by intellectuals who turn public opinion against capitalism and its values – which are difficult to fight back[101]. Hence professionalism, rationalisation and the destruction of moral values would lead to the destruction of capitalism – and in the end to socialism, not because of the failure but the success of capitalism.

Is Schumpeter's theory still relevant for an Innovation Manager today?

3.2 Importance of Schumpeter for Open Innovation

Schumpeter's thinking is as inspiring as ever: The results of a recent survey of more than 1000 CEOs and Public Sector leaders worldwide conducted by IBM read like a seminar on Schumpeter: "At its core, the Enterprise of the Future is hungry for change, innovative

97 Schumpeter (1993b: 263 – 264)
98 Schumpeter (1993a: 214)
99 Schumpeter (1993a: 214)
100 Schumpeter (1993a: 214)
101 Schumpeter (1993a: 231 pp)

beyond customer imagination, globally integrated, disruptive by nature and genuine, not just generous"[102]. A Schumpeterian passion for entrepreneurship is obvious in this statement, but also his warning on taking the effect of companies' behavior on public opinion shines through. So what's to learn from Schumpeter today for managing Open Innovation? Three aspects are of special interest:

- Entrepreneurs use Open Innovation as an inspiration and turn it into a business concept, leveraging the company's resources
- Companies foster entrepreneurial behavior – and set restrictions
- Company must manage frictions with public opinion as a result of its innovation activities

(1) Entrepreneurs use Open Innovation as an inspiration and turn it into a business concept, leveraging the company's resources:
"New opportunities are constantly generated by the environment of the ny" [103] – "consumers get educated by producers on new needs"[104]. What seems like a contradiction is easy to be explained by the role of the entrepreneur: Being open-minded enough despite operational daily routines he is still able to be inspired by possible new consumer needs never articulated so far, often delivered by new technologies and turns them into value propositions. The innovator is not the inventor, but turns the invention into a business through a business model. He is the connection between the external and the internal world of a company in order to increase "profit as a result of the execution of new combinations"[105]. Hence Schumpeter's dynamic entrepreneur is the model of modern "Marketing as strategy – driving Growth and Innovation"[106] as well as for Open Innovation: "(Next to identifying opportunities) it is at least as important to identify how the firm is going to create and capture value from its innovation activities. The business model creates an architecture for the business through a blend of internal and external activities. The

[102] IBM (2008): The Enterprise of the Future. IBM CEO study, www.ibm.com/enterpriseofthefuture
[103] Schumpeter (1993b: 117)
[104] Schumpeter (1993b: 100)
[105] Schumpeter (1993b: 216)
[106] Kumar, N. (2004): Marketing as Strategy. Understanding the CEO's agenda for driving growth and innovation, Boston

activities of external firms can help create significant value for a firm and its customers, while the firm's own activities are central to retaining a portion of that value for itself"[107].

While the principles of Open Innovation (and modern Marketing) have already been laid down by Schumpeter, what is new are the ways in which "new opportunities" can be spotted[108]: On the side of lateral and unarticulated consumer needs, Communities are seen as "the next big innovation in innovation"[109], leveraging "the wisdom of crowds"[110] in order to "co-create unique value with customers"[111] . Companies like Dell[112] or Nike[113] give excellence examples on consumer integration in the Open Innovation Process in order to get more and better ideas at lower cost with reputation building in the consumer community. On the technical side open marketplaces for innovation pave the way for Open Innovation: Seeker organizations anonymously submit scientific challenges to a diverse crowd of thousands of solvers. Examples are for instance InnoCentive[114] and NineSigma[115].

As important as these new sources for inspirations are, they do not come for free: It is easy to get naively trapped into the pathos of the brave new world of a "network perspective", where "customers and the enterprise are no longer separate"[116] when in the end it comes to the question of the economic separation of the value achieved. Therefore the governance of the activities in community marketing and open innovation marketplaces is extremely important: What to disguise, where to focus and most of all how to protect Intellectual Property[117]. And: very often the

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107 Chesbrough (2006: 62)

108 As fascinating as the opportunities of interactive communities are: "Classical marketing has not been surpassed by interactive community marketing. The methodological discourse between "old" and "new" school does not qualify for a discussion on a paradigm shift" states Steinmann, C. (2009): Pragmatik statt Paradigma – Diskurs über die zeitgeistige Evolution des Marketing, in: Thexis 6/2009, pp. 47

109 Read, S./Robertson, D. (2008): What ist he next big innovation in innovation? The secret might just be out!, Lausanne, http://www.imd.ch

110 Surowiecki, J. (2004): The wisdom of crowds, New York

111 Prahalad, C.K./Ramaswamy, V. (2004): The future of competition – Co-creating unique value with customers, Boston

112 Dell (2009): http://www.dellideastorm.com

113 Nike (2009): http://www.nikeplus.com

114 Innocentive (2010): http://www.innocentive.com

115 NineSigma (2010): http://www.ninesigma.com

116 Lusch, R. F./ Vargo, S.L. (2009): Service dominant logic – a guiding framework for inbound marketing, in: Thexis 6/2009

117 See Davies, J.L./ Harrison, S.S. (2001): Edison in the Boardroom. How leading companies realize value from their intellectual assets

lack of ideas is not the issue – it is rather the process of turning the idea into a value proposition[118]

LEGO is an excellent case on how too much focus on "creative outside the box thinking" nearly ruined a company: "They created a very innovative culture inside the LEGO Group unfortunately many of these efforts where unprofitable and the LEGO Group hovered near bankruptcy in 2003. The new goal was to focus 90% of innovation efforts on the traditional play experiences that the LEGO Group had been known for and even the 10% of efforts focused on revolutionary innovations would have a reasonable probability of being profitable"[119].

Therefore in the current hype on Open Innovation, "following the same advice that consultants and academics still offer today"[120] it is important to get back to basics that Schumpeter defined – the entrepreneur is not a hip and creative superman – rather to the contrary, "he is without glamour, neither extremely intelligent, nor interesting, nor cultivated but even sometimes appearing ridiculous in social events"[121] – but an expert in turning inspiration into a business: articulating the value proposition, identifying the market segment, defining the structure of the firm's value chain, specifying the estimated cost structure and target margin, describing the position of the firm within the value network and formulating the competitive strategy[122]. Open Innovation is about linking external opportunities to the resources of a company – how can a company support its (sometimes hidden) entrepreneurs to do so?

(2) Companies foster entrepreneurial behavior – and set restrictions

Starting with Schumpeter's three obstacles to entrepreneurship, companies must take care of allowing thinking in a bold and creative way, leaving room for following own entrepreneurial ideas next to their operational routine work and allowing to pursue new initiatives even if puts the existing business in risk of cannibalization. At the same time however companies must watch out that they set a certain frame

118 See Boston Consulting Group (2009:11)
119 Robertson, D. (2009): Does your company have good innovation governance? Lessons from the LEGO Group, Lausanne, http://www.imd.ch)
120 Robertson (2009: 2)
121 Schumpeter (1993b: 130)
122 Chesbrough (2006: 65)

in which entrepreneurial thinking takes place. It is about balancing "promoting bottom up innovation"[123] and "steering innovation top down"[124]:

Let us first have a look on how companies can promote bottom up innovation: Linking back to Chapter 2 on the contributions from von Hayek on Innovation Management it became clear that Knowledge is an individual concept linked to the free exchange of ideas between smart people. From Schumpeter we learn that development of a business idea is equally individualistic – this still holds true today, however sometimes this fundamental truth gets neglected if there is too much preoccupation with systems, processes and structures: "Unfortunately many of the studies on innovation have treated it (the innovation process) as an artefact that is somehow detached from knowledge and skills and not embedded in (individual) know how. Individuals (are) the key component of the innovation process"[125].

It is remarkable that many companies do not – according to a McKinsey study - use enough the potential of new ideas from its own employees[126] – every employee is also a source of Open Innovation! Hence it is important that companies train their people in the science and art of thinking in business concepts. Such training should include a general understanding of the creative and systematic process to develop business ideas[127] and the tools supporting it[128]. The importance of giving employees the chance of being part of external and internal networks has already been described Chapter 2. Free time to explore new ideas is easy to advocate however difficult to do, especially under the regime of lean. Yet outperforming companies in the field of innovation seem to allow their employees this freedom at the "fuzzy front end"[129] of the innovation process[130]. At least: if an employee takes the chal-

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123 Deschamps, J.-P. (2008a): Innovation Leadership in Practice – I. Promoting buttom up innovation, Lausanne, http://www.imd.ch

124 Deschamps, J.-P. (2008b): Innvoation Leadership in Practice – II. Steering Innovation, top-down, Lausanne, http://www.imd.ch. For a holistic view see Deschamps, J.-P. (2008c): Innovation Leaders: How Senior Executives Promote, Steer and Sustain Innovation, New York

125 Trott, P. (2008): Innovation Management and New Product Development, Harlow, p. 10 -11

126 Barsh, J./Capozzi, M./ Mendonca, L. (2007): How companies apporach innovation: A McKinsey global survey, in: http://www.mckinseyquarterly.com

127 Barsh, J./Capozzi, M./ Mendonca, L. (2007): How companies apporach innovation: A McKinsey global survey, in: http://www.mckinseyquarterly.com

128 See Silverstein, D./Samuel, P./de Carlo, N. (2009): The Innovator's toolkit: 50+ techniques for predictable and sustainable growth, New Jersey

129 Koen et al. (2001), Providing clarity and a common language to the 'fuzzy front end'. Research Technology Management, 44 (2), pp.46-55

lenge of probing with a new business idea the organisation should – after a careful and informed decision - be ready to allow this freedom for a defined period of time. This can be linked to reward systems. In the end it is about the management taking the lead in setting up a culture that drives innovation: "The enterprise of the future is home to visionary challengers – people who question assumptions and suggest radical, and what some might consider impractical, alternatives. High performers earn differentiated rewards, such as a stake in the business they helped create"[131]. However, as much as a "Copernican Revolution from Structure and System to the Individual"[132] might be needed, still a company needs to steer innovation top down: This "should not be bureaucratic – it needs to remain lean, flexible and fast"[133]. But the field in which entrepreneurs should concentrate must be clear – a vision and a strategy driven by the Leadership Team. As well the resources available, the decision rules on when to start a new process, the metrics to track progress. Interestingly, an international McKinsey survey based on responses of more than 1500 executives from various industries observes that only 64% of all companies least define where to focus innovation efforts. No wonder then that the leadership team is only in 52% involved in commercialisation decisions, only 42% define themes, topics for exploration to develop breakthrough ideas, only 24% set innovation budgets, only 22% set innovation performance metrics and targets[134]. The governance of innovation will be described in more detail in chapter 5 (von Thünen). But under the aspect of on how "companies foster entrepreneurial behavior – and set restrictions" it seems to bad sad bad true that nearly 100 years after Schumpeter's "Theory of economic development" got first published entrepreneurial employees still must face the challenge of ignorance in many companies. Obviously, as the research from McKinsey, Boston Consulting and AT Kearney[135] shows, Innovation is important – but not often enough governed by the Leadership team. Is Schumpeter right that there are companies in which "leaders do not find a way to get into the

130 See ATKearney (2008): Innovation Management. Strategies for success and leadership, http://www.atkearney.com, pp. 6
131 IBM (2008: 18)
132 Bueb, B. (2008): Von der Pflicht zu führen, Berlin
133 Deschamps (2008b: 4)
134 Barsh, J./Capozzi, M./ Mendonca, L. (2007: 3)
135 Barsh, J./Capozzi, M./ Mendonca, L. (2007), Boston Consultino Group (2009), AT Kearney (2008)

battle. He turns into an administrative office worker who can be replaced easily"[136]?

(3) Companies must manage frictions with public opinion as a result of its innovation activities

Schumpeter defines the "intellectual" as a person using the "force of the written word", "without any direct responsibility", "without any practical experience", knowing that "personal success can be easiest achieved by criticism"[137]. That is not meant to be cynical – by historic analysis he shows how public opinion turned more and more against capitalism under the influence of intellectuals. The critical thinking targeting at improving things that has been vital for the raise of capitalism now puts pressure on it[138].

If Schumpeter's analysis is cleansed a bit from the underlying Marxian historic necessity of the controversy between capitalism and intellectuals, still today there is something to it: Business leaders state that in the past "market factors, such as customer trends, market shifts and competitor's action, dominated the CEO's agenda. People skills are now as much in focus as market factors, and environmental issues demand twice as much attention as they did in the past. Suddenly everything is important. And change can come from anywhere"[139]

Two major series of corporate scandals within one decade – the bursting of the Internet bubble and the financial crisis, both connected to fraud and other immoral behavior – have left its marks on the public opinion of capitalism and even more state regulated forms like the German Social Market Economy: Only 52% of Germans have a favorable opinion on their economic system compared to 70% in 2000[140]. This takes its toll also on innovative companies as the driver of the economic system.

At the same time public awareness on climate change and carbon footprint of products, fair treatment of employees, especially with regard to the "3rd world" and

136 Schumpeter (1993a: 216)
137 Schumpeter (1993a: 237)
138 Schumpeter (1993a: 231)
139 IBM (2008: 15)
140 Bankenverband (2008): Wirtschaftsstandort Deutschland 2008, http://www.bankenverband.de/pic/artikelpic/072008/080723_Demoskopie-WiSta-2008.pdf, p.14

other social and environmental issues lead – in combination with information easily at the fingertip online, to a new pressure for companies to ensure the sustainability of their products. Corporate Social Responsibility has become a must[141]
Therefore it is extremely important to review innovations under the aspect of Corporate Social Responsibility, especially when it deals with "Bottom of the Pyramid", that is lower income consumers and potential environmental hazards[142]. This should also be included in metrics of the innovation process, to be discussed in chapter 5. And of course Corporate Social Responsibility offers opportunities for entrepreneurs in a Schumpeterian and Hayekian sense – how to tackle the most burning issues of mankind better than by the best use of knowledge and "creative destruction" of environmentally and socially not acceptable practices[143].

The chapters on von Hayek and Schumpeter have focused on the sources of innovation – knowledge and the entrepreneurial generation of concepts. Now we will turn to the organization of innovation by taking the perspective of Coase:

4 Coase: The Boundaries of Open Innovation and the importance of organisation

If Open Innovation is the new paradigm for driving Innovation – what is then the role of corporate Innovation? On which activities should companies focus on? Is it possible to define any criteria to decide on which activities should be performed outside or inside any company?

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141 Crane, A./ McWilliams, A./Matten, D./Moon, J./Siegel, D. (editors)(2008): The Oxford Handbook of Corporate Social Responsibility, Oxfored

142 See for a detailed analysis: Hockerts, K./Morsing, M. (2008): A literature review on corporate social responsibility in the innovation process, http://www.designforum.fi/files/dff/Projektit/Literature_review_on_CSR_driven_innovation.pdf

143 See for instance Forum nachhaltige Entwicklung der deutschen Wirtschaft econsense (2004): Corporate Social Responsibility – Ein Memorandum für mehr Kreativität und Innovation, http://www.econsense.de/_publikationen/_econsense_publik/images/CSR- Memorandum_dt.PDF

In his Nobel Award winning paper "The Nature of the Firm" (1937) Ronald Coase asked this question in a more general way: If the market is such an efficient mechanism to allocate scarce resources to its best usage – "why is there any organisation?"[144]

We will apply his thinking to the current debate on Open Innovation by first taking a look at his theory:

4.1 Theory

As in the case of Schumpeter, Coase starts his journey by focusing on a gap between economic theory – and reality: "Economists in building up a theory have often omitted to examine the foundations on which it was erected."[145] The foundation must be reality. Thus, on the one hand "an economist thinks of the economic system as being co-ordinated by the price mechanism and society becomes not an organisation but an organism"[146].

Yet "within a firm, the description does not fit at all … If a workman moves from department Y to department X he does not go because of a change in relative prices, but because he is ordered to do so"[147] "Yet having regard to the fact that if production is regulated by price movements, production could be carried on without any organisation at all, well might we ask, why is there any organisation?"[148] Therefore "it is surely important to enquire why co-ordination is the work of the price mechanism in one case and of the entrepreneur in another. … We have to explain the basis on which, in practice, the choice between alternatives is effected."[149]

The main reason to establish a firm instead of relying on the market is rooted in the "cost of using the price mechanism"[150]. There are basically two types of costs[151]:

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144 Coase, R. (1937): The Nature of the Firm, in: Economica, New Series, Volume 4, Issue 16, p. 388
145 Coase (1937: 386)
146 Coase (1937: 387), with direct reference to von Hayek. Hence this is another prove that the "creative tension" for the Innovation manager between Open Innovation and Lean R&D is not entirely new but a contemporary expression of a fundamental dialectic in economics
147 Coase (1937: 387)
148 Coase (1937: 388)
149 Coase (1937: 389)
150 Coase (1937: 390)
151 Coase (1937: 390 pp)

- Discovering what the relevant prices are: The time and money to invest in searching for the "right" price might be reduced by using specialists, but never be eliminated.
- Negotiating and Concluding a separate contract for each exchange transaction: In a firm the cost of negotiation for the permanent use of a production factor is limited to one contract if organized within a firm

Next to the costs another important factor explaining the existence of firms is the character of the contract: Within a firm "for a certain remuneration (the production factor) agrees to obey the directions of the entrepreneur within certain (legal and moral) limits. Within these limits, he can therefore direct the other factors of production"[152]. Hence the freedom operate is far bigger within the boundaries of a firm then by contracting over a market relationship. This is of especial importance when it comes to ensure long term availability of production factors which are essential to the sustainability of the company (services and labour rather than commodities) – linked also to the "risk attitude of the people concerned"[153].

Another reason is that certain regulatory frameworks treat the same activity different whether performed within a firm or over a market relationship, e.g. sales taxes or rationing of goods in times of crisis. Yet regulatory frameworks explain more the actual size of a company than its raison d'être.

To sum it up: "The operation of a market costs something and by forming an organisation and allowing some authority to direct the resources, certain marketing costs are saved"[154]. And: The entrepreneur sets up a firm with a fallback position: "it is always possible to revert to the open market if he fails to do it"[155]

Having explained criteria leading to the existence of firms Coase then turns to the factors why certain firms chose one of the two coordination mechanisms:

[152] Coase (1937: 391)
[153] Coase (1937: 391)
[154] Coase (1937: 392)
[155] Coase (1937: 392)

Starting with the axiom that "a firm becomes larger as additional transactions (which could be exchange transactions co-ordinated through the price mechanism) are organized by the entrepreneur and becomes smaller as he abandons the organization of such transactions"[156], Coase enters into marginal analyzes of different factors determining the size of companies. In the end it is about "Diminishing returns to management"[157]:

- Decreasing returns of the entrepreneur function: "Naturally, a point must be reached where the costs of organizing an extra transaction within the firm are equal to the costs involved in carrying out the transaction in the open market"[158]
- The failure of the entrepreneur to place the factors of production in the uses where their value is greatest leading to a point where "the waste of resources is equal to the marketing costs of the exchange transaction in the open market
- Also the supply price of goods can be linked to the size of the company in imperfect competition

Hence: "All changes which improve managerial technique will tend to increase the size of the firm"[159]. After decades of downsizing, restructuring, business process reengineering and decomposition of the value change, where size of an organisation has been a synonym for bureaucracy and inefficiency, it is refreshing to be reminded what Lean Management is all about: Be so efficient in your internal processes that you are more efficient than the market. If this holds true, the size of a company is a symbol of strength and not of slack!

And: Size is also an expression of whether a company is able to handle various activities around the world in an efficient way: "As more activities are organized by an entrepreneur, it would appear that the transactions would tend to be either different in kind or in different places."[160]

To sum up: A firm can afford to be large, if it is managed efficiently – and constantly checks whether its set up is more efficient than a market solutions. In the end it is down to

156 Coase (1937: 393)
157 Coase (1937: 395)
158 Coase (1937: 394)
159 Coase (1937: 397)
160 Coase (1937: 397)

Initiative and Managerial Skills of the Leadership Team: “Initiative means forecasting and operates through the price mechanism by the making of new contracts. Management proper merely reacts to price changes, rearranging the factors of production under its control”[161]. In other words: It takes the Schumpeterian Innovation Leader as well as the von Thünen Manager to steer a firm. Hence Coase builds the link between Effectiveness and Efficiency, between Open Innovation and Lean, between spotting new Opportunities and executing them flawlessly.

Whether a company is able to stand this “creative tension” is down to the “marginal product” of its entrepreneurial and managerial capabilities.

[161] Coase (1937: 405)

4.2 Importance of Coase in bridging "Open Innovation" with "Lean R&D"

How can Innovation Managers today use the insight of Coase to decide on which activities shoud be performed outside or inside his company? Referring to the Chapters on von Hayek and Schumpeter is has become clear that Open Innovation is indispensable in our times of rapidly developing knowledge as a source of inspiration. But what about the actual conceptualisation and the development of new products and processes? How far should a company go there with Open Innovation? Should the margin of a company be only linked to its function of orchestrating a set of virtual development teams? Or is there also a margin to be gained for efficiency in fast and flawless development on its own? These questions touch the core of the debate on Innovation Management since the 1970s:

It is a paradigm in the scientific community of Innovation Management that large established corporations face at least tremendous difficulties – if not are unable – to come up with new "breakthrough" or "disruptive" innovations:

Abernathy and Utterback explored the way how major innovations conquer the market place, first product, then process innovations, both through the Fluid-, Transitional- and Specific Phase, bringing a shift in the characters of organisations driving it from "organic" to "mechanistic" firms[162] Utterback described that "most industry-shattering innovations do not spring from the established competitors in an industry but from new firms or from established firms entering a new area".[163]

Christensen coined the terms of the "Innovators dilemma" – large established firms are so focused on serving the needs of their costumers by incremental step-by-step improvements and are locked in these relationships as well as their assets and knowledge base that they are not capable to grasp the opportunities of new technological developments so they face to be diminished in the end[164].

Building on this paradigm Markides and Geroski propose that established companies should aim to be "fast second": They should not focus on breakthrough innovation at all

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[162] Abernathy, W./Utterback, J. (1978): Patterns of Industrial Innovation, Technology Review, vol. 80, No. 7 (June/July), pp. 40

[163] Utterback, J: (1994): Mastering the Dynamics of Innovation, Boston, p. xxvii

[164] Christensen (1997)

but on carefully observing the marketplaces of interesting start ups – and whenever an interesting "colony" appears to leverage its financial power and capabilities in managing economies of scale to radically create new markets as "consolidator"[165]. Is this the end of Corporate R&D?

No – states the probably most influential scholar on Open Innovation, Chesbrough: "The Open Innovation paradigm is not simply an approach that relies on external technologies for innovation. There remains a critical role for internal R&D in this approach: the definition of an architecture to organize the many parts of a new system"[166]. In other words: The technical part of the "Business Plan, connecting internal and external innovation"[167]

Let us see whether the work of Coase can help to draw the link between internal and external innovation a bit clearer:

Before deciding whether to enter into a cooperation with an external partner every company needs to ask what it will bring from a static as well as a dynamic perspective:

The static perspective poses questions on the cost of finding out the correct market price, negotiation of the contract and on the sharing of the outcome of the deal, e.g. fixed or variable license fees. It is about deciding on a deal based on the opportunity costs of the organisation as of today. In Coase's terms it is about the "managing and rearranging the factors of production under its control". The pure term static does not mean that it is task to be neglected. It is very easy to run into a cooperation based on a strategic logic – and then to wake up with operational issues in agreeing on mutual contribution and especially the sharing or exclusive usage of Intellectual Property rights. As much as it is true that "enthusiasts of IP" tend to overstate the value of Intellectual Property, triggered by success stories like IBM[168] and that the business model (be it inside the company or licensed outside) is the only objective value for Patents.[169] However in Open Innovation big corporation deal with

165 Markides, M./Gerotski, P. (2005): Fast second: How smart companies bypass radical innovation to enter and dominate new markets, San Francisco
166 Chesbrough (2006: 58)
167 Chesbrough (2006: 63)
168 Davies/Harrison (2001)
169 Chesbrough (2006: 156)

companies whose only business model is the active usage of their patents[170]. Hence if not properly thought through from the beginning and diligently managed, the brave new world of Open Innovation can turn quickly into an operational nightmare for both parties involved. Hence it is important not to neglect the cultural dimension of Open Innovation – at least it is important to invest into the collaboration to build a joint knowledge base, which requires mutual sharing[171]. But even more important than the cultural side is never to forget one fundamental truth:

Open Innovation is another form of market interaction – and cooperation in the end a contract between two different independent entities who engage because of maximising their own value – in the long run.

From a dynamic perspective it is important what would be impact on the future "returns on the entrepreneur function" if the company decides to source out the development of a product or a process. Following the two thousand year old advice of Roman statesman and philosopher Cicero, every organisation must be led that it is build to last ("ut diuturna sit") – as hard as it is to do[172]. If the ability to perform tasks more efficient than the market is the raison d'être of every company, then the management must ask itself what are the root causes if Open Innovation is more efficient – and what will be the effect in the future. The company absolutely must maintain its ability "to direct its factors of production", especially for all of strategic relevance.[173]

If it is about acquiring knowledge that is absolutely crucial for the long term value of the company and could have been delivered by the R&D of the company itself– then is it possible that the organisation has lost its scope in creating the future and needs restructuring in specific areas to fight inertia? In this case Open Innovation must not be misused as a strategic move hiding operational issues.

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170 Strongly supported by government authorities, see Bundesministerium für Bildung und Forschung (2009): Umgang mit know how in internationalen Forschungskooperationen, Bonn

171 Schulze, A./Heyn, G. (2009): Teaming up to innovate: The importance of a joint knowledge base, in Thexis 02/2009

172 Cicero, M. T. (1991): De re publica, Stuttgart

173 Coase (1937: 392)

In the (far more often and relevant) case that Open Innovation is a strong contributor to the company's general direction with fresh thinking the company could not have generated itself – the Hayekian case of Chapter 2 – what is the best way to "integrate" rather than "combine"[174]?

Oliver Williamson, Nobel price winner in economics 2009 and a successor of Coase in transaction theory[175], offers a simple checklist: If there is no risk of hazard in a collaboration, go for an unassisted market solution. If there is a risk of hazard due to the involvement of specialised assets, when productive values would be sacrificed, than make sure that both parties promote continuity via safeguard investments. If the magnitude of these safeguard investments is considerable, go for either interfirm contracts with added support like penalties, disclosure of added informations and a specialised dispute mechanism – or go for a merger of the two companies[176].

Last but not least this dynamic perspective and the experiences with Open Innovation must be a continuous call for arms to review signals for "returns on management"[177] of its internal organisations. The fact that "the corporate R&D powerhouses of the 1980s are now mostly history" and that most big multinational companies have opted for a model of networked internal R&D structures supported by Open Innovation and new ways of working leveraging web enabling innovation processes[178] is a strong proof.

However: For the right reason: Not for following blindly a new management idea or copying other companies with specific culture, strategy and scope[179] – but by carefully weighing the pros and cons for their own organisation in a Coasian way.

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174 Coase (1937: 397)

175 Williamson, O. (2005a): Transaction cost economics and business administration, Scandinavian Journal of Management, Volume 21, Issue 1, pp. 19

176 Williamson, O. (2005b): Why Law, Economics, and Organization?, in: Annual Review of Law and Social Sciences 2005, pp. 369

177 Coase (1937: 395)

178 Boutellier/Gassmann/v. Zedtwitz (2008: 1)

179 Procter & Gamble is frequently quoted as the model for Open Innovation given the ambitious goals of P&Gs "connect & develop" program. See: Procter & Gamble (2010): Connect & Develop Portal, https://secure3.verticali.net/pg-connection- portal/ctx/noauth/PortalHome.do

"Entrepreneurial efficiency" is not only enhanced at the macro level of the structure and organisation of the R&D Centres. It is equally important to have a close look at the Innovation Process itself. This is the scope of the next chapter on Lean R&D and von Thünen:

5 von Thünen: Output-orientation, Governance and Self- Discipline in Leading Innovation & Renovation

Johann Heinrich von Thünen (1783 – 1850) was a farmer and agronomist located in the province of north-eastern Germany – and yet thanks to his mathematical capabilities, his tenacity, his quest to understand and improve the factors influencing the economical success of his operation and most of all his excellence in combining facts and experience of daily life with abstract economic reasoning made him one of the most influential economists until today, admired by Nobel Price Winners like Samuelson[180] and Krugman[181].

Does von Thünen also has something to offer for managing R&D?

5.1 Theory

Von Thünen's main theoretical achievement was his work on the optimal usage of land as a scarce resource, describing in a purely economical reasoning why certain agricultural goods are produced in a certain distance from a centre, taking into consideration transport and production costs as well as methods: "A town surrounded by a homogenous plain, trading city goods for the rural fruits of labour and land; and with the inner rings nearest the town specializing on the goods dearest to transport while the farther out low-rent- generating acre are growing the goods cheaper to transport"[182]. Like this he was able to ex-

[180] Samuelson, P. A. (1983): Thünen at two hundred, in: Journal of Economic Literature, Vol. XXI, pp. 1468 – 1488.

[181] Fujita, M./ Krugman, P. (1995): When is the economy monocentric? von Thünen and Chamberlin unified, in: Regional Science and Urban Economics, Volume 25, Issue 4, pp. 505 – 528.

[182] Samuelson (1983: 1468)

plain why certain industries build clusters around cities – the "Thünen circles" – with mathematical precision[183]:

Return of an agricultural business = Output (t/km²)*(Price –Costs) - Output

*Distance to the centre * Transport Costs

He also invented a "natural wage", balancing productivity with a certain social responsibility[184].

His theories are still food for thought for contemporary economic work especially in geographical cluster theory. For the focus of managing Innovation & Renovation however the way in which he worked is far more interesting: Relentless output orientation, thoughtful and diligent Governance and impeccable Self-Discipline.

When von Thünen acquired his farm at the age of 26, he did not start the life typical of a "Junker" but focused with greatest diligence on the continuous optimisation of his business. Unusual for his social position he took over the responsibility of the accountant himself, tracking every cent and gram of input and output. In order to better understand the sources of productivity he greatly improved the methods of accounting towards controlling[185]. For gaining deeper insight into the forces at work he basically invented "ceteris paribus" as a method of isolated abstraction, a key tool for economists until today: What is the impact if one factor of production changes while keeping all other the same? In optimizing output he applied the logic of the marginal analysis and differential calculus– what will be the impact of one additional unit in terms of marginal cost and profit? Hence in his quest to optimize the output of his business, von Thünen went a long way in defining mathematically founded methods still key for any economist today[186].

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183 Thünen, J. H.von (1990): Der isolierte Staat in Beziehung auf Landwirtschaft und Nationalökonomie, Aalen

184 Thünen, J. H. von (1850): Der naturgemäße Arbeitslohn und dessen Verhältnis zum Zinsfuss und zur Landrente, Rostock

185 Gerhardt, E.A. (1964): Thünens Tellower Buchführung. Die Gewinnung des Zahlenmaterials für den Isolierten Staat und für anderweitige Arbeiten Johann Heinrichs von Thünen, 2 Bände, Hain Meisenheim

186 Fasse, M. (1999): Standort Scholle. Johann Heinrich von Thünen: „Der isolierte Staat", in: ZEIT-Bibliothek der Ökonomie, http://www.zeit.de/1999/24/199924.thuenen_.xml

Needless to say that this huge effort of "continuous improvement" – next to normal work in running the business on an operational day to day basis – required an admirable self discipline.

Yet von Thünen was not only interested in maximizing profit – but also to do so in a fair and ethical sound way. He was deeply influenced by Immanuel Kant and Adam Smith and a social entrepreneur, taking care of his workers for instance via paying boni linked to the profit of the farm. Therefore he is regarded today as a pioneer of Germany's Social Market Economy[187].

Therefore Innovation Managers can learn from von Thünen in terms of

- Lean Management in driving the Innovation Process in an output oriented way
- Governance of the output and productivity
- Self-discipline in keeping this way of working

5.2 von Thünen as a role model for continuous improvement in leading Innovation

"Companies can also make their development efforts more effective by infusing them with lean-management principles", to quote a recent McKinsey publication on "Upgrading R&D in a downturn"[188]. However Lean is to often confused with purely cost cutting "corporate belt-tightening rituals", especially in departments which "doesn't produce cash directly"[189]. This too often results in short sighted ad hoc change programmes – raising the challenge "From lean to lasting - making operational improvements stick"[190]. Lean initiatives fail if they focus mainly on "hard" operational tools like reviewing processes, defining ambitious lead times by benchmarking best practices, improving the average time by reducing unnecessary steps in each process and therefore cutting waste out of every process. These are important activities – but only one piece of the puzzle. Lean is a holistic

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187 Engelhardt, W. W. (2008): Johann Heinrich von Thünen als Vordenker einer Sozialen Marktwirtschaft, Marburg

188 Barrett, C.W./ Musso, C.S./ Padhi, A. (2009): Upgrading R&D in a downturn: Cutting research costs across the board in a recession isn't smart. Companies should use R&D as an opportunity to market themselves more competitive, in: http//www.mckinseyquarterly.com

189 Barrett et alt. (2009, 1)

190 Fine, D./Hansen, M. A./ Roggenhofer, S. (2008): From lean to lasting: Making operational improvements stick, in http://www.mckinseyquarterly.com

concept, a “battle cry against institutional waste” and a “redefinition of values delivered to customers from a customer point of view”[191]. It is key to combine the big picture, the output of the company, to understand the relationship of every activity vs. this output and conduct it in the most efficient way[192]. This is not a one man or one team show, but requires an integration of the technical operating system (e.g. production planning) with the management infrastructure (e.g. performance measurement) and most of all with mind-set and capabilities (e.g. focus, collaboration, dedication, discipline)[193]. It requires certain autonomy of each employee to figure out the most efficient and effective way of getting things done – and tenacity of the management to drive lean thinking over and over again. In all of these aspects von Thünen was an early prophet of Lean: It took him ten years of diligent analysis until he thought he was ready to have achieved the sufficient Mastership in managing his farm in such a “Lean way” that he could write down his insights in formulating his theory[194]

So what does this mean for Lean Innovation? “In our experience meandering development timelines, bureaucratic roadblocks, and high levels of waste in the development process of many companies do far more to dampen the spirits of top engineers than senior managers suspect. By seizing on the sense of urgency that difficult times create and challenging long-held assumptions about R&D processes, organisations can pinpoint the huge potential for improvement while sparking their employees’ creativity and energy”[195] And this is exactly where von Thünen comes into play: “Early structuring, synchronization for simplicity and safe adaptation for mastering complexity”[196]. Lean Innovation is about a clear definition of fields which needs to search for new ideas, from the consumer side as well as in Science & Technology – and who is responsible to do so. It is about aligning the goals and plans of Marketing, R&D, Technical operations and the expectations of Finance and Control. It is about a well defined vertical start up from the pilot plant to the factory, about

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191 See Womack, J. P./Jones, D.T. (1996): Lean Thinking. Banish waste and create wealth in your corporation, New York

192 Drew, J./ McCallum, B./ Roggenhofer, S. (2005): Unternehmen Lean. Schritte zu einer neuen Organisation, Frankfurt/New York, p. 9

193 Fine/Hansen/Roggenhofer (2008: 5)

194 See Fasse (1999: 1)

195 Barrett/Musso/Padhi (2009: 2)

196 Schuh, G./ Jenders, M./ Arnoscht, J.: Lean Innovation: Komplexität der Produktentwicklung sicher beherrschen, in: http/www.wzl.rwth-aachen.de

early equipment management and a close integration of the category management of the retailer via a close link between Key Account and Innovation Management to go all the way from the Concept Board to the Shelf. The biggest pitfall is to do so in a technocratic way: Well defined Processes are important; IT supported New Product Development and Implementation systems too – but not for a means in their selves but rather as a tool for alignment and fact-based decision support. This leads to the second principle of von Thünen: Governance:

Von Thünen spend a lot of effort in getting the facts right – and understanding the interdependencies of the production factors. Astonishingly though companies refrain to do so when it comes to Innovation. As a McKinsey study states: "For most organisations, the first step is to examine the R&D Portfolio rigorously to accelerate the most strategically promising projects while cancelling irrelevant or moribund ones. It would seem obvious that companies ought to be doing this all the time, but many resist because of the challenges therein. Portfolios often grow organically, for example, with little central oversight, so it can be difficult for senior executives at a large company to get their arms around the totality, let alone the expected value, of its R&D activities"[197]. Furthermore a study from the Boston Consulting Group reveals "While most executives – 73% of the respondents – believe that Innovation should be tracked as rigorously as other business operations, only 46% said that their organisation actually does so"[198]. And worse: "Companies consider themselves most effective at measuring innovation outputs (such as revenue growth, shareholder returns, and brand impact. They consider themselves far less successful at tracking innovation inputs (for example, dedicated resources, such as people and funds invested) and the quality of their innovation processes."[199] Reason is that Innovation is often seen as a creative process which is not measurable – like advertising, "where 50% of the spent is wasted, the only question is which one". However academic research and leading industries like pharma, where the R&D spend is crucial both from a top and bottom line perspective, have set new benchmarks of professionalism in Innovation Portfolio Manage-

197 Barrett/Musso/Padhi (2009: 2)
198 Andrew, J./Haanaes, K./ David, M./ Sirkin, H./ Taylor, A. (2009): Measuring Innovation 2009. The need for action. A BCG Senior Management Survey, in: http://www.bcg.de, p. 6
199 Andrew/Haanaaes/David/Sirklin/Taylor (2009: 6)

ment[200]. In the end what is more important than elegance in modelling financial relationships is that companies do track the relationship between the inputs (R&D project hours & external contracts, specific raw material costs, consumer tests, Intellectual Property), the expected outcome (incremental sales, Marginal Contribution, Net Present Value, Risk and Return relationship), the alignment with the overall corporate strategy and the efficiency in managing the project along the Innovation Funnel. Few but impactful KPIs on each area, that are understood by all relevant parties, are key. And even more important: The continuous communication on the status of the Portfolio as such vs. the long-term growth objectives as well as joint decision making between Marketing, Technical and R&D in Stage Gates Meeting so that everybody is on the same page. Again: The biggest pitfall is a technocratic approach: It is not about creating huge files of power point presentations justifying decisions and filling templates – but about communication and aligned fact based decision making. Which leads to the third principle to learn from von Thünen on managing Innovation: **Self- discipline**:

"The purpose of bureaucracy is to compensate for incompetence and lack of discipline"[201]. That is why according to Jim Collins, author of bestselling "Good to Great", a culture of discipline is a trademark of every truly great company: "Self-disciplined people who are willing to go to extreme lengths to fulfil their responsibilities"[202]. It is important not to confuse "self-discipline" with a "tyrannical disciplinarian"[203]. "Self-discipline" is a character trait crucial for every entrepreneur in a Schumpeterian sense, how else could he achieve his self-motivated ambition next to operational day to day responsibilities? "Tyrannical disciplinarians" will destroy exactly this inner urge to achieve. However there is a slim line between both: the history of Prussia - as a state embodying the value of self-discipline, from Friedrich II and the Great Reformers Stein, Hardenberg, Scharnhorst and Gneisenau to the heroes of the operation Valkyrie, shows how easy such a positive value can deteriorate and even get perverted in few generations. Yet this makes self-discipline even more

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200 See for a close link between Corporate Finance and R&D expenditures: Guerard, J. B./ Bean, A. S. (2005): Corporate Financial Policy and R&D Management, New Jersey and for the specific management of R&D Portfolios from a microeconomic perspective: Le Corré, A./ Mischke, G. (2005): The Innovation Game: A new approach to Innovation Management and R&D, Berlin

201 Collins, J. (2001): Good to Great. Why some companies make the leap … and others don't, New York, 121.

202 Collins (2001: 124)

203 Collins (2001: 124)

important, as it is threatened by “corporate politics” and “tyrannical management styles”, bureaucratic attempts of over processing and systematising as well as an ideology of creativity that creativity is a chaotic act[204]. Again von Thünen, the “inventor” of so many basic tools of modern economic analysis, is a role model that self-discipline lies at the heart of every attempt for Lean and Governance in Innovation Management: The higher the self-discipline of all players involved in the Innovation Process, the better the focus on the output and the real issues to be tackled, the smother the daily operations, the higher the productivity, the better the communication and alignment and the more time to be spend on new ideas.

With this chapter we have gone all the way from von Hayek (Knowledge) over Schumpeter (Concept) to Coase (Organisation) and von Thünen (Productivity). Now it is time to take a holistic view to bring this together:

6 Synopsis: From managing the Innovation Process to leading the social order of Innovation

We started our analysis from the current pressure Innovation Managers are facing in times of recession: achieving a higher output with fewer resources. Starting from the assumption that the most contemporary answers to this challenge – Open Innovation and Lean Innovation – are expressions of the underlying economic challenge of Effectiveness and Efficiency, we formulated the hypothesis that classic economic insight can help to shed some light to bring a bit more clarity and enhance orientation for the Innovation Manager. The discussion in the past chapters has shown that the insight gained can help to better understand each task along the Innovation Management process:

- von Hayek: Knowledge is an individual concept and evolves in its totality through spontaneous orders. Therefore it it indispensable to leverage external and internal networks to generate knowledge and not to rely on an internally constructed knowledge basis inside the organisation or its departments

[204] See the argumentation against this position in Katz, R./Luecke, R. (2003): Managing Creativity and Innovation, in: Harvard Business Essentials, Boston, p. 80

- Schumpeter: The real challenge is to turn ubiquitous knowledge and the opportunities it brings from outside the organisation into business concepts, requiring not only to match internal capabilities and to focus on generating business plans but especially to overcome internal hurdles of inertia, mistrust and daily operational work, which must be kept as low as possible
- Coase: The organisational question on what should be done outside or within the organisation in driving Innovation can only be solved from an economic point of view by a marginal analysis asking whether the entrepreneurial efficiency within the organisation leads to lower costs than a market solution – leading to different results by company in terms of flexibility and decentralisation. The need for Open Innovation in New Product Development for a specific company (apart from the knowledge aspect mentioned under von Hayek) is therefore subject to detailed economic analysis on a case by case basis
- von Thünen: Managing Innovation requires the same kind of scrutiny in evaluating output/input relationships, fact based decision making and thorough governance than any other operation or activity within an organisation. The basis must be a strong sense of self-discipline of all parties involved

Yet we have also seen in all four chapters that the biggest threat to managing Innovation is a technocratic understanding of the task at hand:

- von Hayek: IT systems, structures and processes on Knowledge Management distorting the very nature of it – the free exchange of knowledge in a spontaneous order
- Schumpeter: Once the entrepreneur turns into a “Wirt” focusing on the pure administration of the business and execution of the once developed business model, Innovation is unlikely to happen as the internal barriers rise
- Coase: Entrepreneurial efficiency is the raison d’être of firms – therefore the market solution is a constant challenge to the existing organisation. If a firm looses this spirit, does not benchmark itself against other market options and takes actions to improve the internal efficiency it will decline

– von Thünen: Governance and Lean Thinking is crucial – but most be done in an output oriented and holistic way and not follow quick wins of an isolated approach to cost cutting

Therefore it is important to ask whether the model of the Innovation Process itself does not lead to a technocratic misunderstanding: Its pure inherent logic gives the impression that it is good enough to follow the different stages – and success will be inevitable. From a managerial point of view this notion is not even wrong: The practitioner of Innovation Management knows about the importance of Checklists when it comes to "Flawless Execution": No concept should enter the development phase without a business plan or a safety evaluation or a Patent analysis, no Product ever enter the Industrialisation Phase without a Manufacturing Dossier capturing preliminary hazards at critical control points or volumetric market tests. So the Innovation Process does have its merits in managing Innovation.

Yet, in leading Innovation a too strong focus on the Innovation Process can be misleading: Opportunities outside the current scope get overlooked if they do not meet actual hurdle rates for marginal contribution or CAPEX payback times, technical barriers are not tackled because of lack of interest in building "IP Fortresses" in this field or the new category might stretch the existing brand too far. The clarity that the Innovation Process brings to incremental innovation or renovation will turn into myopia when it comes to more radical innovation.

Therefore leadership in Innovation requires to tackle these tasks from another perspective than the sequence of a process.

Interestingly enough, the history of thought of the occidental world shows that "thinking in processes" has never been as prominent as "thinking in orders". "Order" is of course not to be understood as "imperative" but as a system where the elements are allocated and related to each other in a way that it makes sense – from the perspective of the single element as well as in its totality[205]. This holds true for physics and chemistry[206], biology[207], theolo-

[205] See fort he definition of the term „order" Eucken, W. (1990): Grundsätze der Wirtschaftspolitik, Tübingen
[206] Bohr, N. (1934): Atomic Theory and the Description of Nature, Cambridge
[207] Linné, C. v. (1758): Systema Naturae, Stockholm

gy[208] and also – most interesting for our case – in social science like administration of the state[209], law[210] and economics: The German so called post war "Economic Miracle" was based on a theory of "thinking in orders", trying to find a way to combine a "functioning and human economic and social order"[211], the group of economists called themselves "Ordoliberals"[212].

So is there an advantage in "thinking in order" vs. "thinking in processes" – and if so – which?

While "thinking in processes" provides all the relevant information to the individual but prescripts him in its usage, "thinking in orders" provides the same information, gives the individual to freedom to apply it in the best possible way – and also provides a normative framework in the sense that all elements involved should fit together like a puzzle, given the "interdependency of orders"[213]. The puzzle might or will look different in adaptation to the task – but the individual must come up with a puzzle, a harmony, the positive order must orient itself to the normative one.

Therefore "thinking in orders" is better suited to solve complex problems than "thinking in processes". This holds also true for leading Innovation – which is a more complex task than managing the single tasks linked to it.

The Innovation Leader can only master this challenge by

- being aware of the different characteristics of the four tasks in detail – that means by understanding the elements in detail. This is not about a superficial understanding of how to run a focus group or how to evaluate a business plan or what is a microbiological challenge test in the Food industry, but a thorough knowledge on the importance of each field that he is able to evaluate and justify information presented to him

208 Augustinus (1997): De civitate dei, edited by C. Horn, Berlin
209 Cicero, M. T. (1991): De re publica, Stuttgart
210 Radbruch, G. (2003): Rechtsphilosophie, Heidelberg
211 Eucken, W. (1990: 14)
212 See also Röpke, W. (1979): Civitas Humana: Grundfragen der Wirtschafts- und Gesellschaftsreform, Bern/Stuttgart
213 Eucken, W. (1990: 19 pp.)

– having an overview over the relationship of these tasks in general – this requires a deep understanding in the nature of the interactions between the different partners involved, the way decisions are taken, the company's strategy, the consumer and scientific trends forming the opinions of the various partners
– having the authority to influence the outcome – which comes from the functional position within the organisation but also from experience, capabilities and the personal link to the various partners

Based on these three characteristics the Innovation Leader can adapt to any situation – starting from any of the four fields described above, and in coherence with the total order to achieve the desired outcome:

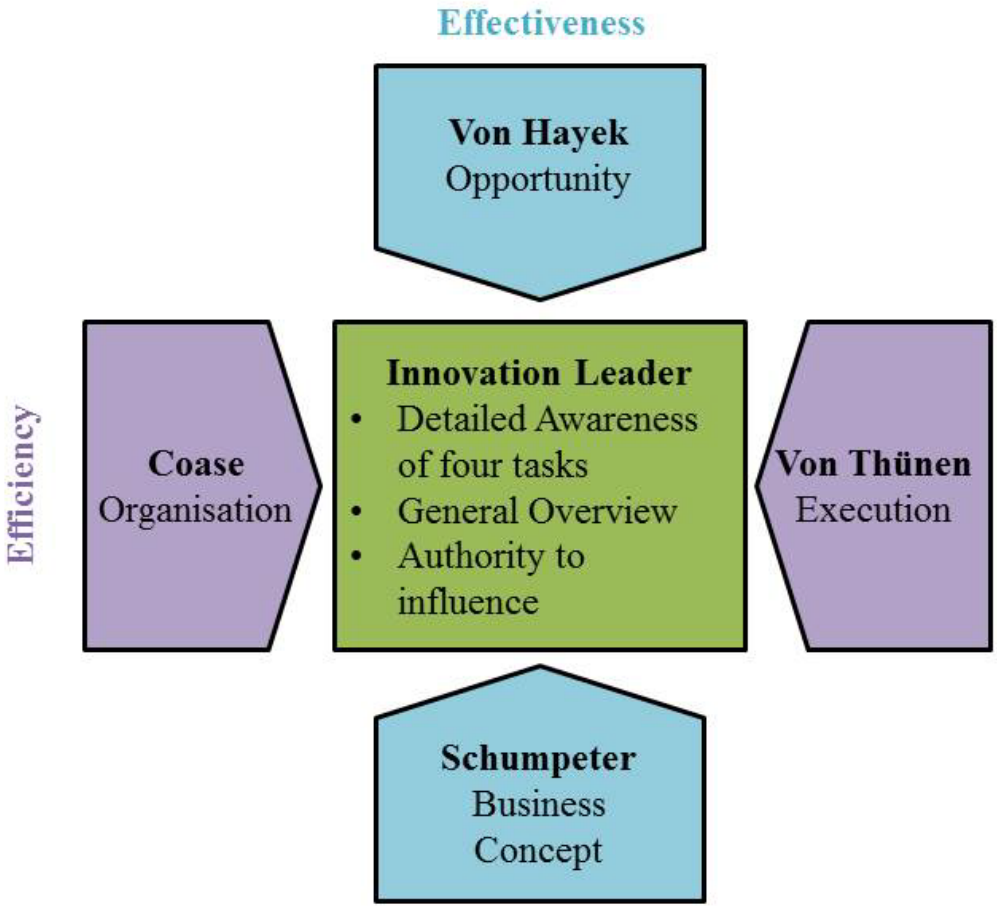

Table 2: Framework of Leading the Order of Innovation

This adaptation of the Innovation Leader to the natural order of each of the four tasks requires him to be curious enough to be engaged in the discovery of new opportunities, entrepreneurial enough to figure out new business concepts, courageous enough to adapt and restructure the organisation to the needs of the Innovation programme and self-disciplined enough to track and decide upon facts.

Is such a profile realistic for a Leader? And: can one organisation excel at all tasks at the same time?

Analogies from other fields than business – but linked to the challenge of Innovation under sharp restrictions – might be helpful in answering these questions:

Bismarck took over the responsibility of chancellor of Prussia in a situation where the administration was blocked internally by sharp dissents between public opinion and parliament on the one hand and the crown on the other as well as a weak position in foreign policy. His leadership style was marked by a cool look at the facts, the analysis of the given situation like a chess player, an hypothesis of the future developments and trends and leading to strong moves, calculated like a mathematical prove, adapting to the nature of things[214] - in other words: the characteristics of the different tasks. In doing so he grasped every opportunity (e.g. “Emser Depeche”) matching his overarching principle, to strengthen the position of Prussia, following a “business plan” – a unified Germany under the lead of Prussia, with a clear separation of tasks following the law of “entrepreneurial efficiency” regarding the role of the different forces at hand (Prussian vs federal administration, military vs. civil administration) – and in the end with great self-discipline.

Another example would be Adenauer, taking the challenge of rebuilding a in every possible sense destroyed Germany, most of all morally. With the same cold look at facts and sense of reality, yet clear principles (rebuilding rule of law and democracy and international trust) he grasped every opportunity to gain a bit more national sovereignty, following a clear “business plan” (orientation towards Western Europe), linked with Mastership of a huge experience in organisation and fact based decision making[215].

[214] See Engelberg, E. (1985): Bismarck. Urpreuße und Reichsgründer, Berlin, pp. 451
[215] Schwarz, H. P. (1986): Adenauer – Der Aufstieg 1876 – 1952, Stuttgart

Of course this does not mean that an Innovation Leader must play in the league of Bismarck or Adenauer – yet the challenges are also different. These two role model show however that such an adaptive, yet focused, creative and self-disciplined leadership style is not impossible.

If so, how realistic is an organisation that is at the same time disciplined, focused, fact based – and passionate, entrepreneurial and creative? Actually this is exactly the type of company that Collins describes in "Good to Great" – the company that makes the leap from mean to excellence[216]. Yet again an example from outside the business world might help to gain a wider understanding:

The Jesuits are well known (though not always liked) for a combination of self-enforced discipline and individual freedom in pursuing goals driven by individuals who are given the chance to perform in areas where they are best at, be it an academic career in philosophy, theology or even economics, be it teaching, missionary or priest. Like this they leverage individual intellectual brilliance and capabilities with humility and discipline against a higher goal, the possibility to take new opportunities in their fields of interest in a coherent way to do so as an organisation[217]. Therefore the Jesuits have become the role model of many professional service firms, for instance Consulting companies.

The core remains the individual combination of self-discipline and creative entrepreneurial spirit of every employee. Role Models like the four economic classics might give him a better orientation in his daily work than a strict adherence to prescriptive processes.

[216] Collins (2001)
[217] Haub, R. (2007): Die Geschichte der Jesuiten, Darmstadt

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