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## SO WE INNOVATED ... NOW WHAT?

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### Abstract

Why innovate? The fundamental reason in the end is survival, especially in a crisis like the present global political, economical and social one caused by Covid-19. However, also in good times it is important to innovate. John F. Kennedy, US president from 1961-1963, once said, "The time to repair the roof is when the sun is shining." (Kennedy, 1962). Therefore constant innovation is the key to survival of any entity.

The core competence of organizations that apply constant innovation is responsiveness. That means quick and adequate responses to (anticipated) in- and external changes. Responsive entities embed this competence in their culture and knowledge system. Very often these traits are attributed to a single key person, one team or department, or they are only applied in a single project or crisis, or during a growth-, development- or start-up phase. This makes organizations extremely vulnerable.

In this article I will sort out how to develop, transform, cascade and embed the principles of responsiveness into an organization, its culture and its knowledge system in order to make innovation a continuous factor. I will illustrate why especially cultural dynamics management and learning from nature are critical conditions for fast, adequate and easy innovation.

I will use as framework the paradigms from the fields of Organisational & Management Sociology, Comparative Cultural Research, Mental Images of Culture, Organisational Culture Management and the new science field of Biomimicry that combines biology, engineering and social sciences to design sustainable solutions for human problems by learning from nature.

**Keywords:** Culture, Nature, Biomimicry, Crisis, Responsiveness, Nature's Life's Principles.

### 1. Introduction

Innovation in its modern meaning is "a new idea, creative thoughts, new imaginations in form of device or method" (Merriam-Webster.com). Innovation is often also viewed as the application of better solutions that meet new requirements, unarticulated needs, or existing market needs (Maranville, 1992). Such innovation takes place through the provision of more-effective products, processes, services, technologies, or business models that are made available to markets, governments and society. An innovation is something original and more effective and, as a consequence, new, that "breaks into" the market or society (Franklin, 2009). Innovation is related to, but not the same as, invention (Bhasin, 2012), as innovation is more apt to involve the practical implementation of an invention (ie new / improved ability) to make a meaningful impact in the market or society (Forbe, 2015), and not all innovations require an invention. Innovation often manifests itself via the engineering process, when the problem being solved is of a technical or scientific nature. The opposite of innovation is exnovation (Brown, 2009). In commerce and management, exnovation, an opposite of innovation, can occur when products and processes that have been tested and confirmed to be best-in-class are standardized to ensure that they are not innovated further. Companies that have followed exnovation as a strategy to improve organizational performance include General Electric, Ford Motor Company and American Airlines (Kimberly, 2014).

While a novel device is often described an innovation, in economics, management science, and other fields of practice and analysis, innovation is generally considered to be the result of a process that brings together various novel ideas in such a way that they affect society. In industrial economics, innovations are created and found empirically from services to meet growing consumer demand (OECD, 2005a, 2005b, 2010a, 2010b).

Innovation also has an older historical meaning which is quite different. From the 1400s through the 1600s, prior to early American settlement, the concept of "innovation" was pejorative. It was an early modern synonym for rebellion, revolt and heresy (Mazzaferro, 2017, 2018; Lepore, 2014; Green, 2013)

Another and more simple definition of innovation is:

“... the multi-stage process whereby organizations transform ideas into improved products, services or processes, in order to advance, compete and differentiate themselves successfully in their marketplace.”(Baregheh, Rowley & Sambrook, 2009)

## **2. Failure is an inevitable part of the innovation process**

Most innovations fail, but that is a normal, because predicting what works is extremely difficult and humans highly overestimate their competence to predict the future. Innovation has therefore the characteristics of “the search for the holy grail.”

Since decades around 50% to 90% of innovation projects offer little to no contribution to organisational goals and 1 out of 3,000 products becomes successful in the market place (Christensen, 2011).

There are two categories of causes for failures: Category 1 are internal causes of failure, with all organisational culture dimensions in the top 5 list.

1. Poor Leadership
2. Poor Organization
3. Poor Communication
4. Poor Empowerment
5. Poor Knowledge Management

Category 2 are international causes of failure because many innovations are done on an international scale: this is about the innovation process itself with the top 5 list:

1. Poor goal definition
2. Poor alignment of actions to goals
3. Poor participation in teams
4. Poor monitoring of results
5. Poor communication and access to information

Can we detect the main predictors and underlying factors of these failures in innovation? Let's first take therefore a more holistic, sociological view on what organisations really are: A group of people that try to reach a goal by working together. People form, in an ICT metaphor, “the Software ... of the Minds” that make an organization work. However “Human Software” needs hardware, else it cannot work. “Organisational Hardware” are strategy, structures, systems and processes. A majority of executives, however perceives people in their organization as a “human resource”, next to other sources like, finance, means, rules, time, organization, quality management, information. But people are not a “resource”, they are THE source of any organizational success or failure.

And to executives that state “the market was against us!” I would say: You didn't pay attention enough on what was going in your environment! You can argue, quite rightly, that global disasters like world (cyber) wars, global revolutions, world economic crises, pandemics like Covid-19 and natural disasters cannot be anticipated. But also one can say: that is not fully true. If one takes a frequent “Helicopter View” on global and local political, economical, social and technological developments, you can see certain trends coming. Next,

entrepreneurs and executives could take measures. But because their short term perspectives, they seldom do that.

The main predictor whether constant innovation will be embedded in an organization is therefore insight and understanding of the human mindset and behavior. We have two levels of human behavior that are key to innovation.

First, individuals with power, like CEO's and other members of the strategic apex; people with authority, like members of the non-executive board of directors and highly regarded senior professionals; and people with influence, like individuals inside or influencers outside an organization that are able to create a sufficiently powerful in- and or external coalition, such as researchers, product developers, action groups, lobbyists and politicians.

Second, we as human beings are a member of all kind of levels of cultural groups, like nations, regions, social classes, genders, generations, professions, functional teams and organisations (Hofstede, Hofstede & Minkov, 2010). These cultural levels are the main and most embedded inhibitors and enablers of change. No one can escape cultural programming and especially cultural values are passed on from generation to generation. Cultural values remain stable across generations, however daily practices will change.

In the next paragraph I will explore how we can characterize human behavior and look at different causes for success and failure in constant innovation.

### 3. Examples of unproductive innovation in our globalising economy

When an organization did one or more successful innovations over longer or shorter period of time that's not a guarantee that constant innovation is embedded and cascaded down to the operating core. A number of human failures inhibit constant innovation. In this paragraph I will illustrate these failures using recognizable and public business cases.

#### Failure underlying cause #1, The too much "Can Do" Mindset of Executives and Entrepreneurs

"If you say that someone has a can-do attitude, you approve of them because they are confident and willing to deal with problems or new tasks, rather than complaining or giving up" (Collins English Dictionary).

The Airline industry needs to innovate in order to deal with global sustainability goals, growing anxiety and influence of people living around airports regarding air- and noise pollution and the ever increasing numbers of global travelers (pre-Covid-19 !). Strategic Airline Alliances are since ages part of the innovation choices the industry makes. KLM, Royal Dutch Airline, is not only the oldest airline in the world but also a pioneer in strategic alliances. To illustrate the underestimation of the culture factor two quotes from the CEO of KLM when they merged first with Alitalia and failed; and later with Air France which is in fact an acquisition by Air France, which hasn't added any value so far, except both companies survive at the moment, but hardly:

"With Alitalia the failure was not caused by cultural differences. On the contrary, we talked about those from the start – they needed getting used to our cheese sandwiches with milk, and we to their habit of mobile phoning during meetings. The break was due to tensions between Milano and Brussels."

"We (Air France and KLM) have agreed that culture is not a decisive criterion. Can I work better with the French or the English, culturally speaking? – it is not a sensible criterion."

- Leo Van Wijk, CEO of KLM Royal Dutch Airlines, in NRC-Handelsblad, 4 June 2003

KLM discovered very painfully the truth of the statement that "Culture eats Strategy for Breakfast", a statement ascribed to Peter Drucker and applied by Ford Motor Company

for the first time (Rick, 2020). They had to pay euro 250 million (\$249.1 million) in damages to Italy's Alitalia for backing out of plans for an ambitious alliance. This because of the constant tension between the Dutch and the Italians about how to deal strategic business issues, leading to no added value at all. While KLM also knew more or less Alitalia was a financially very unstable partner. Unceremoniously Andrew Fitchie at London Stockbroker Collins Stewart said,

“ Any company looking to bid for Alitalia must be a nutter ...”

So was it the underestimation or ignorance of the financial weakness of Alitalia and or the national- and organizational cultural differences that lead to the failure? While KLM is a frontrunner in strategic alliances, they fail most of the time. The main cause? They ignored for all kind of reasons the organizational and international cultural dynamics. The dynamics of their own organizational culture, the mismatch with organizational culture of Alitalia, and the national cultural differences between Italy and The Netherlands. They failed to anchor the positive learnings in their corporate culture which could have made them champion strategic alliances.

#### Failure underlying cause #2, Too much Complacency

Nokia has been a telecom innovator since 1978 for decades by diversification, acquisitions and divesting. They originally started as a wood pulp mill in 1865, but already quickly expanded their activities to making rubber products. So we must assume they are/were a very responsive organization.

Up until 2012 they were world marketleader in the field of mobile phones. Their devices from that time are still seen by many users as the best and most solid mobile phones ever made. But since then they totally lost that market. What happened? They did not invest in the smartphone at all. They couldn't catch up with Apple's iPhone and led a 5 billion loss. Next, Microsoft took over the mobile division from Nokia. You could say: “A clever divest”. Since then the company focusses on network infrastructure, navigation services and the development of new technology. But with the consequence of loss of twothirds of its turnover and seeing employees transferred to Microsoft.

Nokia has always been very secretive about why they missed the smartphone market rise. However, my colleague Merita Vilen and Risto Rumpunen wrote a book about this, which finally after many years of resistance from Nokia will be published, but first in English. Nokia is such a huge business symbol for Finland that they are too big to fail. And only maybe later in Finnish. What is according to them behind the failure? In the 12th century Italian *Dante Alighierin* wrote in his “*Divina Comedy*” about 7 deadly sins: Pride, envy, hate, laziness, greed, lust and obesity. They decided to adopt these terms and apply them to their analysis of Nokia. They state: “They were a responsive, very successful innovator for 150 years but that evolved into too much complacency caused by the 7 “deadly sins” in the company, which was basically all about their corporate culture (Vilen & Rumpunen, 2019)” Complacency lead to the fact that Nokia “closed its windows”, because they thought they had the monopoly and therefore lacked the vision to understand the upcoming smartphone. The people within Nokia that do wanted to change were 1. hold back by the more powerful people, also 2. because they failed to create a sufficient powerful in- and external coalition. Nokia Chairman from 2012-2020, Risto Siilasmaa confirmed the conclusions indirectly in his book about transforming Nokia (Siilasmaa, 2018). He lead the colossal transformation that ended up in transferring knowledge and people to Microsoft and focusing on new strategic areas.

Let me close-off this paragraph with a metaphor. *Whether it is a young strong male lion, expelling the old alpha male from a group of lionesses and cubs and then killing the young lions to cut the bloodline of the expelled alpha male. Or the new CEO of a company, who throws the plans of his predecessor in the trash and collects like-minded people around*

him. And properly functioning people - who have different ideas about the new boss's goals, strategies, plans or actions - are transferred, promoted or worse, made life miserable, bullied or fired. Sometimes it is enough that you just happened to be there to make room for the new boss's team. It's all about: who is and remains the first? While, as a Vietnamese monk said, "people are like chickens fighting over a few grains of wheat, while not realizing that they will all be slaughtered soon." That new alpha lion male will soon be challenged by a young lion. Just like that new CEO or market leaders, like Nokia You might think "isn't this a very American (i.e. Masculine) methaphore?" Indeed in US- and other masculine and or hierarchical organisations around the world this happens more often. However, in my twenty years of consulting to management I learned that all executives are more masculine than most of their countrymen. They have a stronger will to excel and lead. Therefore this metaphor applies to a certain extent to many executives around the world.

Failure underlying cause #3, Underestimating the Impact of Imposed Internal Loyalty

The Fast Moving Consumer Goods industry needs to be able to respond quickly and adequately to what's in fashion. Proctor & Gamble ("P&G") started to exit the mass-market food business in the 90's – and was done with it with the epic sale of Pringles. In the same time they invested strongly in the health and beauty segments, mostly via acquisitions: Max Factor, Noxell, Clairol, Wella... Away from the high volume hypermarket model into the perfumery and duty-free channels... Those new businesses were clearly called out in business reports as one of the strategic area of development in the late 90's, early 00's.

Now those businesses are for sale or P&G is considering spin-offs and IPOs... They're moving away of most product ranges not sold through the mass retail channel, which are hypermarkets and supermarkets. After recalling a retired CEO to resume duty!

So what went wrong?

P&G were brilliant in sales, leadership, innovation processes and being the best training machine ever for their people. They have to, as they usually will hire mostly people with no previous employment history and work them up the ladder. But what key innovation did P&G bring to the market since the late 90's and the successful launches of Swiffer and Febreze?

The point is diversity. P&G is a diverse company in many ways. It is a strong advocate of gender equality; it is truly a multicultural environment where discrimination is fought against.

Yet this hides another reality. P&G is meant for P&Gers. The history of acquisitions and consequent departures of target employees illustrates that. Of course you look after synergies but you also train to retain key talents... Which P&G typically found hard to do in many countries after the Gillette acquisition, although they had really prepared for it after previous similar issues. By the way, Gillette was basically 5 time more profitable than P&G before the merger, so those Gillette employees were surely not less performant than P&Gers, were they?

P&G staff used to be well trained and performant but mostly know nothing about what's happening outside and how things could be done differently. That's because they've worked nowhere else for a significant time or in significant positions. There is no opening for experienced people at P&G, just look at the career website. This is just not part of the corporate culture. There is no option to bring in "different thinking". Cloning is the keyword in P&G..

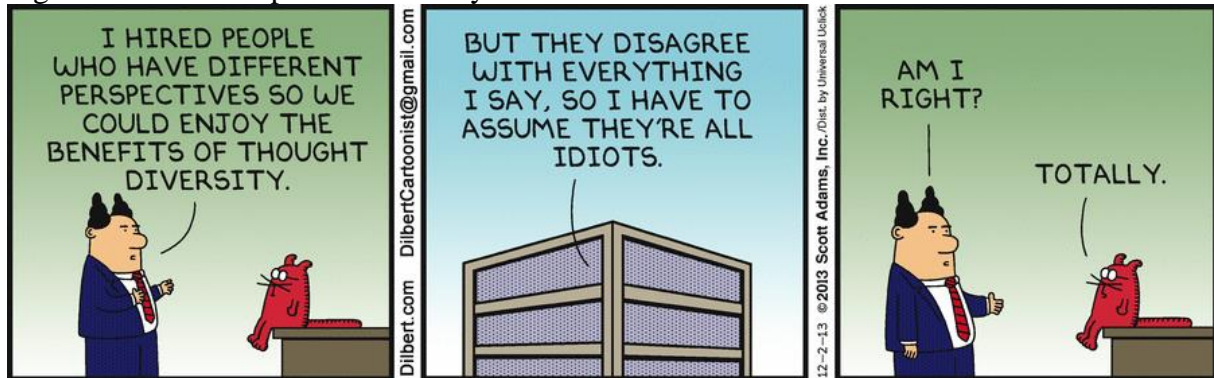
Surely that does not help understanding categories with a business different model than high volumes sold through hypermarkets with a slow innovation pace – which is what laundry, diapers, shampoos are about.

Move to premium make-up, professional hair care, fine fragrances, portable power... then you are out of the scope P&G teams usually are familiar with. Exclusive distribution,

new business channels like DIY or duty-free shops, need for an increased innovation pace as requested for phone power packs...

All those appear to be the kind of diversity P&G was not quite ready to cope with. While they had the intent to go after those new opportunities, they failed and are now backing off and selling off assets and brands. Lack of mindset diversity prevented them to adapt to the new categories and grasp business models that were on a different pace. Check this Dilbert strip about it

Figure 1: Dilbert strip about diversity.



#### Failure underlying cause #4, Lack of Discipline

The ICT industry fulfils a leading role in innovations in general in the world, but also needs to create competitive advantage continuously because the industry is a “Red Ocean full of Sharks” i.e. many competitors, according to the “Blue Ocean Strategy” (Kim & Mauborgne, 2015). IBM, despite or because of its fantastic knowledge base and process focus, is a slow motion changer and still is failing to make an impact and sound financial results after years of mergers, acquisitions and partnerships. It has made a dramatic decline in their traditional systems and consulting businesses, which they are gamely trying to counter through frenetic acquisitions and the hoped-for rise of new technologies, like cloud where they have moved into partnerships such as the one with Vodafone. The key aspects where they lack discipline in finance, marketing and organization (Scofield, 2017; Salman, 2018)

They haven’t focused on their core products and core customers. This means making unromantic financial measurements that answer a simple question: "Where do we make and lose money?" IBM is having trouble with this.

Maybe it's because of too-complex structure. It has a lot of new and old business reporting units.

In addition, it has five strategic imperatives in things called analytics, cloud, mobile, security, and social. By the way the question that comes to mind is: How do you manage an imperative?

IBM expected these imperatives would make up a growing proportion of revenue of 30%. But the financial statements don’t show that up till now.

Are you marketing your core products, and are you measuring results? This is a simple prescription for success. It's not happening at IBM. Instead, the company is pursuing a massive merger and partnership effort. This complicates the marketing task, because acquired revenue and profits have to be measured. Acquired sales and marketing channels have to be aligned. New sales forces have to be trained. All the systems have to be merged. This tactic diffuses marketing efforts rather than focusing them.

Speaking of focus, IBM speaks of focus on core competencies, focus on industries, focus on initiatives, focus on innovation.

In my opinion the poor IBM organization must be wondering where all that focus will land next, because the employee count for IBM itself has been declining for years and years from far over 430,000 to 350,000 nowadays. Usually in a restructuring the decline stops at some point.

Management's soft spot for innovation betrays a lack of discipline, and lack of discipline is why IBM has not turned around. For entrepreneurs, the lesson always is: When you decide on your core products and core customers, your operating decisions are made easier and your financial success is assured. Decades of research on what makes organisations successful learned us that one of the key success factors is: know and focus on your core competences. It was clearly explained already in "Competing for the future" (Hamel & Prahalad, 1994).

Finally, some examples of productive innovators: DuPont, the early developer of new compounds and products; Berkshire Hathaway, the responsive transformers; Apple, the out of the box thinkers and connectors into new units.

DuPont is a great starting point when talking about companies that have adapted over time. Now known as one of the world's largest chemical companies, DuPont got its start in gunpowder. DuPont was so successful in gunpowder, in fact, that the company supplied something like half of the Union's needs during the US Civil War.

From its origins in explosives, DuPont ultimately added other businesses like lacquers and synthetic rubber before inventing the first polyesters, nylon, Teflon and the first phenothiazine insecticide. Along the way, the company continued to pioneer new plastics and synthetics, but also products in fields like crop science (seeds and fertilizers), healthcare, electronics and nutrition. In many cases, DuPont has been the first in the field to develop a new compound or product, and the company continues to support a rare commitment to R&D for a company of its size and age.

There is a lot of writing about Warren Buffett that characterizes him as stubborn and inflexible, but that does not match the record of his stewardship at Berkshire Hathaway. After merging his several investment partnerships into one in 1962, Mr. Buffett began accumulating the stock of textile firm Berkshire Hathaway. While Buffett did try to make a go of it in the textile business, he also began to expand his investments into other fields like insurance as he realized the prospects in textiles were not as rosy as he once thought.

Through the 1970s and into the 1980s Buffett continued to accumulate more and more insurance operations under the Berkshire umbrella, as well as investment positions in other companies like Washington Post and Coca-Cola. Berkshire Hathaway has maintained a position in the apparel industry, but has also expanded significantly into fields like building products, retailing, logistics, utilities and railroads. Diversifying, quick and adequate responses to market developments sum up their innovation strategy.

Ask someone about what they think of when they think of Apple and the answer may well say a lot about that person's age. Anyone born before 1985 probably still thinks reflexively of Apple as a computer company - one of the pioneers of personal computers and the inventor of the still-popular "Mac" brand. If Apple had just remained a computer company, though, it is uncertain that the company would still even be in business.

It took only about a year to develop the iPod, but the launch radically changed the company. Building on the success of this portable media player, Apple then effectively created the touchscreen smartphone industry before then moving on to make the tablet computer concept a real product and an actual success. Once just a computer company, Apple is now a consumer electronics giant and whatever Apple's next move will be, nobody is expecting it to be in the traditional computer space.

#### **4. Why constant innovation is needed**

The too much "Can Do" mentality and complacency, too much focus on internal loyalty and lack discipline all come down to collective human behaviour. The bottom line is "Adapt or die". This may seem like a harsh directive for corporate managers, but there does seem to be a certain necessity to constantly move forward and adapt to new market opportunities. What's more, even decades of success are no guarantee that the future will work out - witness the bankruptcies of companies like Woolworth, Bethlehem Steel and Pan-Am.

Adaptive companies give themselves and their shareholders multiple shots at success. If DuPont had never moved past gunpowder or Berkshire Hathaway had stayed focused on textiles, neither would be what they are today.

Coming back on the fact that effectively (cross-culturally) cooperating humans make innovations work, the critical success factor in organizations is therefore: cultivate a culture in which people may be continuously responsive and innovative in their work. And not focus on systems, structures, processes and strategies.

Executives often use models to analyse the core competences of their organization and to plan change. You may e.g. remember the seven elements of the McKinsey 7S framework (Peters & Waterman, 1982). It identifies three hard elements: Strategy, Structure and Systems. Next there are four soft elements: Shared values, Skills, Style and Staff. The model is often used to make a SWOT analysis and subsequent plan changes. The paradigm of the framework is that all seven elements should be aligned. I disagree with this approach, because the "soft" elements determine in daily practice how the "hard" elements are executed. You first develop your culture, competences and leadership style, next you align strategy, structure and systems. Only then the people will build your business successfully.

*Remember this one?*

"It is not the strongest, fastest or biggest of the communities of species that survive, nor the most intelligent, but the ones most responsive to change in their environment. They have proven to be the fittest in the struggle for existence"

- Charles Darwin

However this quote is not from Darwin himself. The source is the writings of Leon C. Megginson, Professor of Management and Marketing at Louisiana State University at Baton Rouge. The quote started out as a paraphrase. He wrote (Megginson, 1963, p.4):

*"According to Darwin's Origin of Species, it is not the most intellectual of the species that survives; it is not the strongest that survives; but the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself."*

## **5. Applying universal principles to innovation. What we can learn from nature.**

As I quoted Darwin, we may want to have a look at what we can learn from nature. How do I come to this link you may think? For that I have to tell you a personal story. Since decades I am fascinated by the fact why groups of people do what they – the Sociologist in me – and why some groups are more successful than others. Over the years I collected, researched, discovered and read about factors that seem to be the key success factors. So I started developing a framework of practices that successful groups of people seem to apply. All practices had a relation with culture and individual competences. Had I found the "Holy Grail?"

I developed a framework and named it after a suggestion of one of my business partners: The SOFT ROCKS Framework™. That stands for Survival of the Fittest Through a Responsive Organisational Culture and Knowledge System. And the contrast between "Soft" and "Rocks" illustrated nicely that people and their cultures are mostly called the soft factors

but are in fact the toughest and most embedded inhibitors and enablers of change. Also the word SOFT relates to software that you need to develop, roll-out and implement else the “hardware” won’t work. The minds, attitudes and values of people are the “software” of any organization.

I decided to start talking to clients and business partners to get their feedback on these successfactors. A vast majority of them recognized them and were fascinated and intrigued about most of them. Remarkably, one client made a very strange statement, at least in my opinion. He said “you have to talk to my wife!”. I was flabbergasted. He smiled and said:

“Well, a lot of the factors that you mention are principles that nature uses to survive. There is a rather new science called Biomimicry that combines biology, engineering and social sciences to solve human problems. And my wife is the co-founder of the Dutch branch of this in the US originated field.”

- Jan Schumer, Sales Director, Mactwin Security, at that time Sales Director at Tyco Fire Protection

So I talked to his wife Annette Schumer and again I was astounded of what I heard. Nature has found most solutions that can help solve human problems (Benyus, 2003). Since then I am a partner of Biomimicry NL and got trained in applying the principles of Biomimicry in innovation management. I still learn everyday how nature can help us solve our (global) challenges.

Biomimicry as mentor for product, system en social innovation.

Billions of years of evolution delivered a treasury of natural designs that can inspire solutions to human challenges. Evolution is a research and development lab; failures are fossils, what surrounds us is the secret to survival. Biomimicry is about imitating life to create a better life. We can learn from old nature to design for next nature, organisations and society.

“Biomimicry implies conscious forethought, an active seeking of nature’s advice before something is designed”

- Janine Benyus, co-founder of Biomimicry

Hereby some examples of how Biomimicry is applied. When you search on [www.AskNature.Org](http://www.AskNature.Org) you will find many examples of how nature solves problems of survival that can be and are applied for solving human problems.

1. The Japanese Shinkansen trains were developed by studying the colibri that silently slices through the air.
2. Wind farm spatial design increases efficiency. As fish swim, they shed tiny vortices. In large schools of fish, individuals transfer energy to each other with these vortices, lowering the energetic costs of swimming. Researcher John Dabiri has taken inspiration from this strategy and applied similar principles to the spatial design of wind farms. By placing vertical-axis turbines (different from the traditional horizontal-axis, propeller-style turbines) close together in a strategic array, energy is gathered by each turbine, while simultaneously directing wind to nearby turbines. Dabiri’s research team, supported in part by Windspire Energy Inc., is currently working to determine ideal positioning of turbines to achieve optimal power output.
3. Water shortage emergency is a real threat for all of us. Our planet is getting drier and drier every day. Scientists at Harvard University have designed a new material inspired by organisms such as cacti, pitcher plants and desert beetles that can effectively harvest water from thin air.
4. And a learning for social innovation: wolves can change the flow of rivers! Watch the YouTube videoclip on: <https://www.youtube.com/watch?v=ysa5OBhXz-Q>

The rules of the social game that nature applies are best visualized in the following model.

Figure 2: Model: Life's principles in nature, the Biomimicry Design Lens (Biomimicry, 2013).



So let's make life more easier regarding innovation and use nature as inspiration, which lies under our feet and around the corner (Tazzi, 2017).

## 6. Culture and Innovation

Let me start with a metaphor that I learned from my cousin Kees Trouw, who is a farmer. "First, I need to cultivate my land and soil." Implication for organisations are: Cultivate your organizational culture.. "Second, I need constant insight in, understand and anticipate weather conditions." Implication for organizations: understand and anticipate the cultures that surround them, i.e. the national, regional and other levels of cultures. "Third, only then I can plant my seeds." For organisations: recruit, train, develop and support the competent people after you have created the right environment i.e. culture in which they will deliver the strategy.

Culture is about the unwritten rules of the social game. It is about (changing) work practices in such a way that you follow stable values that impact strong preferences in how people prefer to behave. Nature also has them: in a flock of birds, they all trust each other and follow their neighbors blindly when they make a sudden move. It is all about trust and rules of engagement. Given the fact that the only stable factor in society is change, organizational culture as an expression of partly - because functional diversity is needed - shared values, norms and practices should focus on providing this necessary trust. Systems, structures, strategies and processes can't, because before they are fully effective they are often obsolete again.

However the rules of the social game are not the same the world over. National cultures shape how people deal with innovation. See this overview how different culture clusters of the world develop new products, ideas and services.

When forging these different approaches together the innovations become even better because people with different value profiles look at questions from many more angles than one. E.g. Japanese see more details than Dutch; French are better in company politics than English, etc.

Figure 3: Table: How 5 of the 7 culture clusters of the world deal with innovation, change management and motivation (Wursten, 2019).

<i>Some Mental Images of culture clusters</i>	Network	Solar System	Pyramid	Well-Oiled Machine	Contest
<i>Examples of countries</i>	<i>Netherlands, Norway, Sweden</i>	<i>Belgium, Northern Italy, Urban Spain, France</i>	<i>Rural Spain, Southern Italy, Greece, Portugal</i>	<i>Germany, Austria, Hungary, Israel, Luxembourg</i>	<i>UK, Ireland, Australia, USA</i>
	Consensus	Hierarchy and impersonal bureaucracy	Loyalty, hierarchy and implicit order	Order or miracle	Competition
<i>Attitude towards innovation</i>	<ul style="list-style-type: none"> <li>Emphasize opportunities in nurturing environment</li> <li>As many employees as possible should feel to have contributed</li> <li>General acceptance of ideas needed</li> </ul>	<ul style="list-style-type: none"> <li>Emphasize fear of failure</li> <li>Philosophy of project first</li> <li>Provide enough background info re the ideas to create buy-in</li> </ul>	<ul style="list-style-type: none"> <li>Emphasize fear of failure</li> <li>Opinion of 'father figure' all important</li> <li>Opinions only given informally and indirectly, unless there exists total rejection</li> </ul>	<ul style="list-style-type: none"> <li>Emphasize fear of failure</li> <li>Principles should be clear before action</li> <li>General acceptance of ideas needed</li> </ul>	<ul style="list-style-type: none"> <li>Emphasize opportunities in a competitive environment</li> <li>Just do it</li> <li>Answers to the question 'So what?'</li> </ul>
<i>Change management</i>	<ul style="list-style-type: none"> <li>Give facts</li> <li>Allow everybody to be involved</li> <li>Emphasize mutual interest</li> <li>Involve all stakeholders</li> <li>Factual buy-in</li> </ul>	<ul style="list-style-type: none"> <li>Top manager respected for vision and ability to play network</li> <li>Give total picture</li> <li>Conceptual buy-in</li> </ul>	<ul style="list-style-type: none"> <li>Top manager respected for vision and ability to play network</li> <li>Top manager has trust and respect</li> <li>Emotional buy-in</li> </ul>	<ul style="list-style-type: none"> <li>Top-manager respected for vision and know-how</li> <li>Give facts and total picture</li> <li>Conceptual buy-in</li> </ul>	<ul style="list-style-type: none"> <li>Top-manager respected if seen as hero</li> <li>Burning oil platform</li> <li>Give facts</li> <li>Involve all stakeholders</li> <li>Identification with new challenge</li> </ul>
<i>Motivator</i>	<ul style="list-style-type: none"> <li>Autonomy within meaningful content</li> <li>Competent, yet kind boss</li> <li>Nice colleagues</li> <li>Pleasant work ambience</li> <li>Challenging tasks</li> <li>Equity</li> </ul>	<ul style="list-style-type: none"> <li>Effective boss</li> <li>Clear standardization</li> <li>Success and continuity of the employer to safeguard one's job</li> <li>Identification with professional group</li> <li>Appreciation vis-à-vis one's professionalism</li> </ul>	<ul style="list-style-type: none"> <li>Good boss</li> <li>Harmonious in-groups</li> <li>Clear standardization</li> <li>Climbing the social ladder</li> <li>Status and increase in status</li> </ul>	<ul style="list-style-type: none"> <li>Good rules; within given context autonomy to come up with best solutions</li> <li>Knowledgeable boss</li> <li>Success and continuity of the employer to safeguard one's job</li> <li>Recognition of competence and professionalism</li> </ul>	<ul style="list-style-type: none"> <li>Career</li> <li>Successful boss</li> <li>Earnings</li> <li>Challenges</li> <li>Public praise and recognition</li> <li>Increase of status</li> <li>Success of own unit and/or organization</li> </ul>

Most cultures in organisations develop by happenstance. So the key principals, to ensure constant innovation, need to be developed purposely according to the "cultural rules of the game" and carefully aligned with the company's (innovation) strategy.

The six important principles are:

1. Understand and respect other cultures, either locally or internationally. Don't ask what others can do for you, but try to understand how others perceive you and what their mindset is. Use the best of both worlds when forging multicultural teams. It is a balancing act of forging a strong corporate culture and at the same time understanding, trusting and learning about other Nation's values and reach consensus on best ways of working;

2. Everybody is responsible for innovation and serving customers;
3. (Shared) Goal orientation (Hofstede, Neuijen, Ohayv & Sanders, 1990). Focusing on disciplined, supported by short-term wins, achievement of the long term goals. The focus on means, processes and structures need to be much less, certainly when working internationally on innovation. Rule out complacent people;
4. A “cosmopolitan” or professional locus of focus (Hofstede et al., 1990). Create diversity and inclusion. Open the “windows” of the organization and try to look years ahead, forge cross-cultural and functional collaboration and bring in “naïve or lay experts” (experts from other and totally different fields). Be critical but trustful towards others. Don’t focus on local team loyalty and “Can Do” mentality, because maybe you need to worry, analyse and think a little bit more before you act;
5. Assure accessibility of people and resources at all times (Hofstede et al., 1990). Keep everybody well informed . This sounds contrary to innovation, because secrecy is very often needed there. But nobody can copy your culture or product if you create mutual trust amongst the in- en external partners in innovation;
6. Develop a social, servant and situational cultural leadership style. Given the fact that people make an organization tick, taking good care of them, in line with the fable of Lafontaine about the farmer with its goose that lay golden eggs, is key. Because different people need different leaders, and people from different cultures working together need situational leaders.

#### **7. How Culture Management and Biomimicry can be your mentor in solving constant innovation questions. Introducing The SOFT ROCKS Framework™.**

The principles of embedding constant innovations are based on three fields of expertise:

1. Talent Management;
2. Cultural Dynamics Management and
3. Bio-based Design, using nature as mentor (Biomimicry)

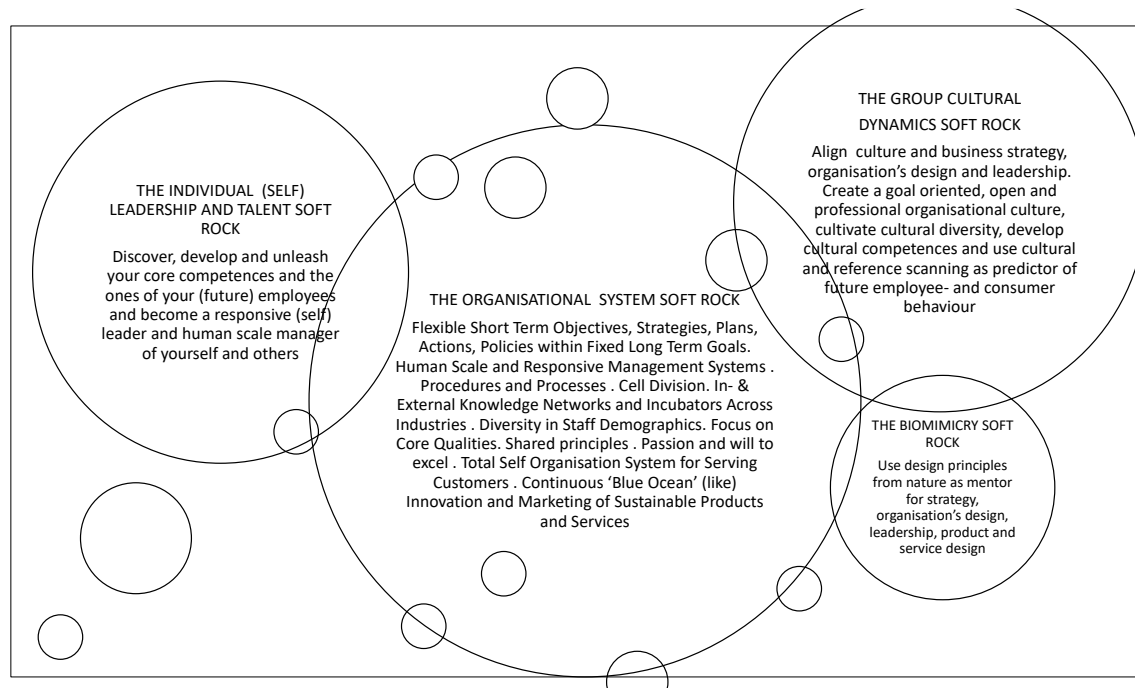
Ad.1. Talent Management. People should work according to their core competences including a healthy life style. People’s traits predominate the systems-human interfaces in systems, structures. This will lead to people having a passion and will to excel;

Ad.2. Cultural Dynamics Management. Innovation strategy and culture are always aligned. Everybody is bound by the six corporate culture principles: 1. trusting others (and their cultural heritage), 2. everybody is responsible for innovation, 3. goal orientation, 4. professional focus, 5. accesability of people and resources and 6. a cultural situatuational leadership style;

Ad.3. Bio-based Design. Using nature as mentor. People work in self steering units no larger than 12, 50 or 100. Workers are connected to people from other types of industries. There is diversity and inclusion in all aspects of staff demographics. The organization focuses on its core qualities only. Due to the outward mindset there is constant innovation. Before systems, structures, processes, products and services are developed the key question will be asked “how would nature solve this problem?”. Therefore biomimicry knowledge and skills should be developed in the organization and or brought in via external biomimicry experts and or biologists (Wijffels & Louwissen, 2018).

These fields of expertise are integrated in The SOFT ROCKS Framework™ in four “rocks”, the individual talent, the group culture dynamics, the organizational system and Biomimcry. Model 2 reflects this clustering.

Figure 4: Model: The four rocks of the SOFT ROCKS Framework™, (Pappe, 2020).



To make an organization constant innovative is a complex process as illustrated before. Therefore it is important that it starts simple and on a small scale. Maybe even with a separate project that operates as “a speedboat next to the mother ship”. That means it starts by identifying is there a sense or urgency to change (Kotter, 1996), where is that and what’s it about and how does the actual culture looks like (Neuijen, 1992). Measure this! Next start solving this problems, create short-term wins by identifying the solution with most impact and less effort. By applying Biomimicry principles and aligning culture and strategy this will be easy. Solving the problems is done through levers of change, that change the environment in which people operate but not the people. Only their mindset and behaviour. This means that people would be a fool not to change their behaviour.

Only when constant innovations works on a smaller scale only than carefully create more change and cascade in down all the way to the operating core. This process lasts at least two to three years. Bring in or develop Culture Management Experts, Talent Developers and Biologists.

Visualizing this process it looks like this.

Figure 5: Model: The general change process (Biomimicry, 2013, Pappé, 2020).

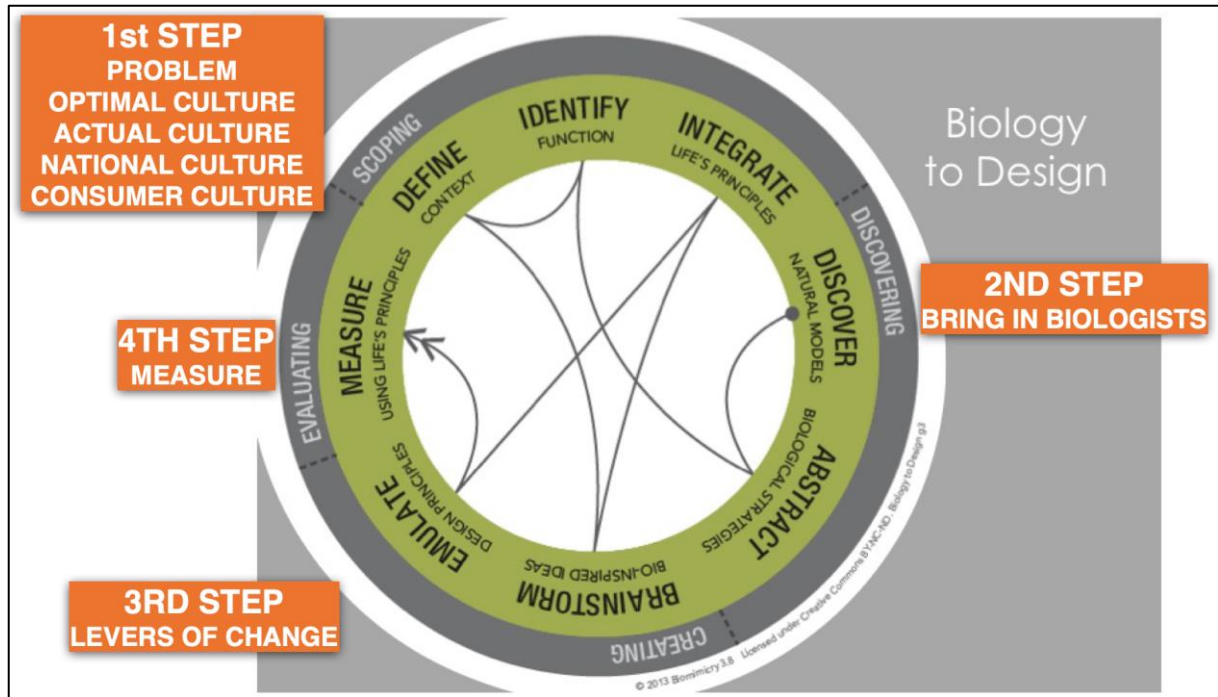
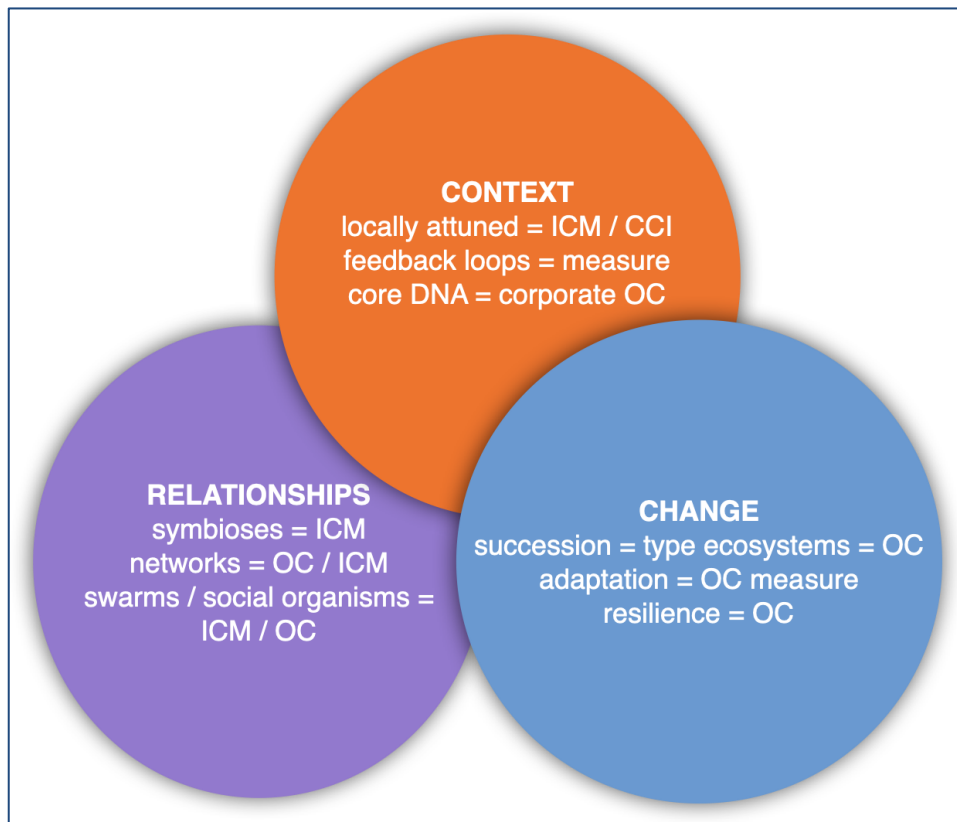


Figure 6: Model: The key elements of the social innovation process, (Wijffels, 2020).



### 8. Conclusion

Many organisations are pretty good in one-off innovation or even repeat innovations, but too much “can do” mindset or complacency, lack of discipline and imposing loyalty to internal management and norms are inhibitors of constant innovation.

Because the political, economical, social and technological tracks and markets change so quickly, change is the only constant and therefore constant innovation is key. Responsiveness, so a quick and adequate response, is key to success.

Culture is the biggest inhibitor of change, but at the same time it is the most important enabler of change into constant innovation.

Biomimicry studies nature as mentor for innovation and makes life much easier, because nature is much older than mankind and has found most solutions for our problems.

However, developing and embedding constant innovation is a complex process and therefore needs focus on one problem at a time, addressing it as a start-up.

But Nature and Culture are closeby and therefore easy to handle!

“The foolish man seeks happiness in the distance, the wise grows it under his feet.”

- James Oppenheim

## References

1. Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision*, 47(8), 1323-1339. doi: 10.1108/00251740910984578.
2. Benyus, J. (2003). *Biomimicry : innovation inspired by nature*. New York: Morrow.
3. Bhasin, K. (2012). This Is The Difference Between 'Invention' And 'Innovation'. Retrieved from <https://www.businessinsider.com/this-is-the-difference-between-invention-and-innovation-2012-4>
4. Brown, J. (2009). Should you“exnovate” your product portfolio?. Retrieved from <https://tech-clarity.com/exnovate-product-portfolio/1350> .
5. Kim, W.C. & Mauborgne, R. (2015). *Blue Ocean Strategy*. Harvard Business Scholl Publishing.
6. Christensen, C. (2011). *Milkshake Marketing*. Harvard Business School Working Knowledge.
7. Franklin, P. (2009). Questioning two myths in innovation literature. *The Journal of High Technology Management Research*, 20, 40–51.
8. Green, E. (2013, June 20). *Innovation: The History of a Buzzword*. *The Atlantic*. Retrieved from <https://www.theatlantic.com/business/archive/2013/06/innovation-the-history-of-a-buzzword/277067/>
9. Hamel, G., & Prahalad, C.K. (1994). *Competing for the Future; Brethrough strategies for seizing control of your industry and creating the markets of tomorrow*. Harvard Business School Press.
10. Hofstede, G., Hofstede, G. J., & Minkov, Michael (2010). *Cultures and Organizations: Software of the Mind. Revised and expanded 3rd Edition*. New York: McGraw-Hill USA.
11. Hofstede, G., Neuijen, B., Ohayv, D. D., & Sanders, G. (1990). Measuring Organizational Cultures: A Qualitative and Quantitative Study Across Twenty Cases. *Administrative Science Quarterly*, 35(2), 286-316.
12. Kimberly, J.R. (2014). The Exnovation Conundrum. Retrieved from <https://ldi.upenn.edu/voices/2014/04/29/the-exnovation-conundrum>.
13. Kennedy, J. F. (1962). State of the Union Address. On *The Presidential Years* [CD]. Amazon Music (2007).
14. Kotter, J. P. (1996). *Leading Change*. Boston, Massachusetts: Harvard Business School Press.

15. Lepore, J. (2014, June 23). *The Disruption Machine: What the Gospel of Innovation gets wrong*. *The New Yorker*. Retrieved from <https://www.newyorker.com/magazine/2014/06/23/the-disruption-machine>
16. Maranville, S. (1992). Entrepreneurship in the Business Curriculum. *Journal of Education for Business*, 68, 27–3.
17. Mazzaferro, A. (2018). "Such a Murmur": Innovation, Rebellion, and Sovereignty in William Strachey's "True Reportory". *Early American Literature*, 53(1). 3-32. doi: 10.1353/eal.2018.0001.
18. Mazzaferro, A. M. (2017). *No newe enterprize* (Doctoral dissertation). Rutgers University, Camden, New Jersey.
19. Megginson, L.C. (1963). Lessons from Europe for American Business. *Southwestern Social Science Quarterly*, 44(1), 3-13..
20. Merriam-Webster (2016). Innovation. Retrieved from <https://www.merriam-webster.com/dictionary/innovation>.
21. Morgan, J. (2015, September 10). *What's the Difference Between Invention and Innovation?*. *Forbes*. Retrieved from <https://www.forbes.com/sites/jacobmorgan/2015/09/10/whats-the-difference-between-invention-and-innovation/>.
22. Neuijen, Bram (1992). *Diagnosing Organizational Cultures. Patterns of Continuance and Change*. Groningen: Wolters-Noordhoff.
23. OECD (2005a). *Growth in Services*. Paris: OECD PUBLICATIONS.
24. OECD (2005b). *The Measurement of Scientific and Technological Activities. Proposed Guideline for Collecting and Interpreting Technological Data*. Oslo Manual. Paris: OECD PUBLICATIONS
25. OECD (2010a). *Consumer Policy Toolkit*. Paris: OECD PUBLICATIONS
26. OECD (2010b). *The OECD Innovation Strategy: Getting a Head Start on Tomorrow*. Paris: OECD PUBLICATIONS.
27. Peters, T. J. & Waterman, R. H. Jr. (1982). *In Search of Excellence*. HarperCollins Publishers Inc.
28. Rick, T. (2020). How and Why Organizational Culture Eats Strategy for Breakfast, Lunch and Dinner. Retrieved from [https://www.supplychain247.com/article/organizational\\_culture\\_eats\\_strategy\\_for\\_breakfast\\_lunch\\_and\\_dinner](https://www.supplychain247.com/article/organizational_culture_eats_strategy_for_breakfast_lunch_and_dinner).
29. Salmon, F. (2018). What Went Wrong With IBM's Watson. Retrieved from [https://getpocket.com/explore/item/what-went-wrong-with-ibm-s-watson?utm\\_source=pocket-newtab](https://getpocket.com/explore/item/what-went-wrong-with-ibm-s-watson?utm_source=pocket-newtab).
30. Scofield, J. (2017). What went wrong at IBM? Its 'master plan' has failed to deliver...Retrieved from <https://www.zdnet.com/article/what-went-wrong-at-ibm-its-master-plan-has-failed-to-deliver/>.
31. Siilasmaa, R. (2018). *Transforming Nokia. The Power of Paranoid Optimism to Lead Through Colossal Change*. New-York: Mcgraw-Hill Education.
32. Tazzi, F. (2017). *Biomimicry in Organizations: Business management inspired by nature: How to be inspired from nature to find new efficient, effective and sustainable ways of managing business*. Createspace Independent Publishing Platform. 3rd edition.
33. Vilen, M., & Rumpunen, R. (2019). *An Impossible Flop*. Summary of the book to be published.
34. Wijffels, B., & Louwisen, L (2018). Tien ideeën voor circu-lean organiseren. WildWorld.
35. Wijffels, B. (2020). Nature's key insights for social innovation. BiomimicryNL Workshop.

36. Wijk, L. van, (2003, June 4). KLM kan in alle vrijheid alliances kiezen. *NRC-Handelsblad*. Retrieved from <https://www.nrc.nl/nieuws/2003/06/04/klm-kan-in-alle-vrijheid-alliantie-kiezen-7641461-a724726>.
37. Wursten, H. (2019). *The 7 Mental Images of National Culture: Leading and Managing in a Globalized World*. Helsinki: Hofstede Insights.