

# .experience

## Holistic Innovation

A magazine by ERNI.  
2/2018



With a special report on  
human-centred design





At ERNI, we are committed to performing at the highest level to conquer the biggest hurdles.

**Daniel Britschgi, Handball player and Senior Consultant**

# Innovation really is all about people



**Andreas Gisler**  
CEO  
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We live in an era of innovation. Technological, organisational, personal. But being innovative is not just about disruptive ideas, cool apps or hot new technology anymore. Today, innovation means diving deep into the DNA of our company and changing the way we think and act, sometimes even changing who we are. To achieve that, we need to put people at the centre of every innovative change and process as they are the key to any meaningful holistic and sustainable transformation.

Innovation can only be successful if we accept that we are all human beings. We all have different personalities, strengths and faults. We look at things differently. Take this and use it as an advantage for your company. Embrace the diversity that opens the doors to new ideas and approaches. Being human means so much more than just our assigned business role, so keep that in mind about yourself as much as about leaders, employees and customers. Be open, transparent, and most importantly, let yourself and others fail. Value every failure for bringing new ideas and experiences that you would have never acquired otherwise. It pays to look at the failures as an investment – in your employees, in their personal nurturing – that provides real experience. Accepting mistakes, and accepting people for who they really are means accepting that innovation and a shift in mindset

don't happen overnight. You learn to be patient. You realise that you cannot force the change as it needs time to spread through the whole company.

Appreciating people on a personal level has become crucial in today's volatile, uncertain, complex, ambiguous world. A world in which all we know needs to be challenged. Challenge the system, ask what is not working anymore and change it. But also appreciate how you got there and only keep what is efficient and be flexible. The ever-changing environment requires continual iteration and searching for the right ideas for your company, your customers and society as a whole. Don't just stick to the first thought you have. But be prepared for the many changes that will be needed along the way. It might be a long and painful journey, but it will be a meaningful one, and if done properly, it will bring profit to your company as well as to society.

At ERNI, we lead by example. Our belief in the principles of holistic innovation approaches means we guide and fully support our clients along every step of the path towards transformation. We enable and facilitate the changes our clients need in an artful, individual and customised way, so they become holistic innovators too. Take the first step now so that you don't fall behind.

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### About ERNI

ERNI believes in the impact of Swiss Software Engineering to create customer value. Our mission is to boost people & businesses in the innovation of software-based products and services.

The global platform for Swiss Software Engineering combined with a deep market understanding provides the framework for customer success. Our crew manages the complexity of projects, enables people and delivers customer solutions fast. A Swiss mindset with behaviours like consensus-building, pragmatism, integration, reliability and transparency have been deeply rooted in the ERNI culture since 1994. Together with our great crew, they are the basis for successful software projects. Today, the ERNI Group has more than 650 employees at 15 locations.

### About .experience magazine

In the magazine, published triannually by ERNI, we share important lessons learnt in collaboration and technology.

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# Innovation Transformation

How to stay on top of the game

# **At the intersection of innovation: Take the holistic turn**

**It's not just about new products and services. It's not just about competition. And it's certainly not just about showing stakeholders that you are doing something. Innovation has become an inseparable part of every industry and those who are reluctant to see it may end up regretting it very soon.**

**Every company has the potential for new ideas. And although everybody would like to introduce disruptive ideas to the market, companies can benefit from every innovation, even on the smallest scale. Because innovation is about motion and change. And change is life.**





## Searching for opportunities

Without innovation, the world as we know it wouldn't exist. The ability to see the potential of making work easier, winning over competitors, making profit, satisfying customer needs and bringing new ideas to the table has been making the world go round for thousands of years.

Not only wouldn't there be any smartphones, cars or radios, but there also wouldn't be any wheels, axis, or even a light to see past the stillness we would all be locked in. Innovation has made the world go round for thousands of years by seeing the potential of profit – first in making work easier, later in winning over your competitor and ultimately in financial gain.

But coming up with ideas and recognising them for their potential isn't always obvious. The past few decades offer all too many examples of those who ruled their industry once, failed to innovate, fell behind and became history, as we all saw with Kodak and Blockbuster.

The American photography icon Kodak was royalty in its industry for 131 years. It gave the world its first camera designed for the masses, first black-and-white film, first coloured film for amateurs – the list of firsts could go on and on. At its peak, Kodak owned 90% of the US film market and was one of the most valuable brands in the world. That changed in 1975. It

was the year when one Kodak employee came up with the idea of a digital camera. The film business was going so well for Kodak that the company didn't consider it beneficial to promote the new technology and didn't introduce the idea to the masses. That was the beginning of the end. Sony and Canon saw the gap in the market and introduced their own digital cameras. Kodak filed for bankruptcy in 2012. Just because you are successful, it doesn't mean you shouldn't pay attention to market needs.

It is not only success that can hinder progress but also customers' lack of understanding about a new idea. True innovators show customers what they need and want even if they didn't know it before. Nobody really needed an iPhone, but Steve Jobs, co-founder of Apple, showed everyone that they did. Or at least that they wanted it. The same goes for cars. No one knew what one was before it's invention, and horses were perfectly sufficient. Now we can't imagine a world without cars.

Although it may be challenging to seemingly go against your own business, radical changes come with progress in the world. Technological development, changes in society, professional and personal possibilities for growth, changes in value systems and different priorities in life all shift the needs of the world and with it the needs of customers.

Another example of a lost opportunity is the American movie rental company Blockbuster. The largest movie rental chain in the US built its brand on thousands of new movie releases, a customer-friendly approach, popcorn and candy. The company didn't want to change its approach, not even after streaming services such as Netflix emerged. It took only six years for Blockbuster to go from \$6 billion in revenue a year to bankruptcy. Just like Kodak, Blockbuster failed to analyse customer needs and adjust

### Common challenges we encounter when working with clients:

- Customers and their needs are not included in the innovation process
- Releasing products and services that the market and customers don't actually need or want
- The innovation team is too autonomous, which leads to rejection of the innovation approach by the rest of the company
- Lack of cooperation throughout the company
- Lack of commitment among C-level representatives

### End-to-end journey with ERNI: How we support you during your innovation process

#### ERNI Innovation Fitness Check

At ERNI, we support you by assessing the current situation in your company and analysing what processes require improvement. The ERNI Innovation Fitness Check helps you determine the innovative quality of your company. We help you find the answers to what fits you the best and what are the most important gaps you'll need to fill to be successful in the innovation process.



#### Workshops

We look at the results of the Fitness Check and offer you tailor-made workshops that suit just you.

These are specifically designed to provide a comprehensible basis for decision-making. →

# Example innovation process: from idea to prototype

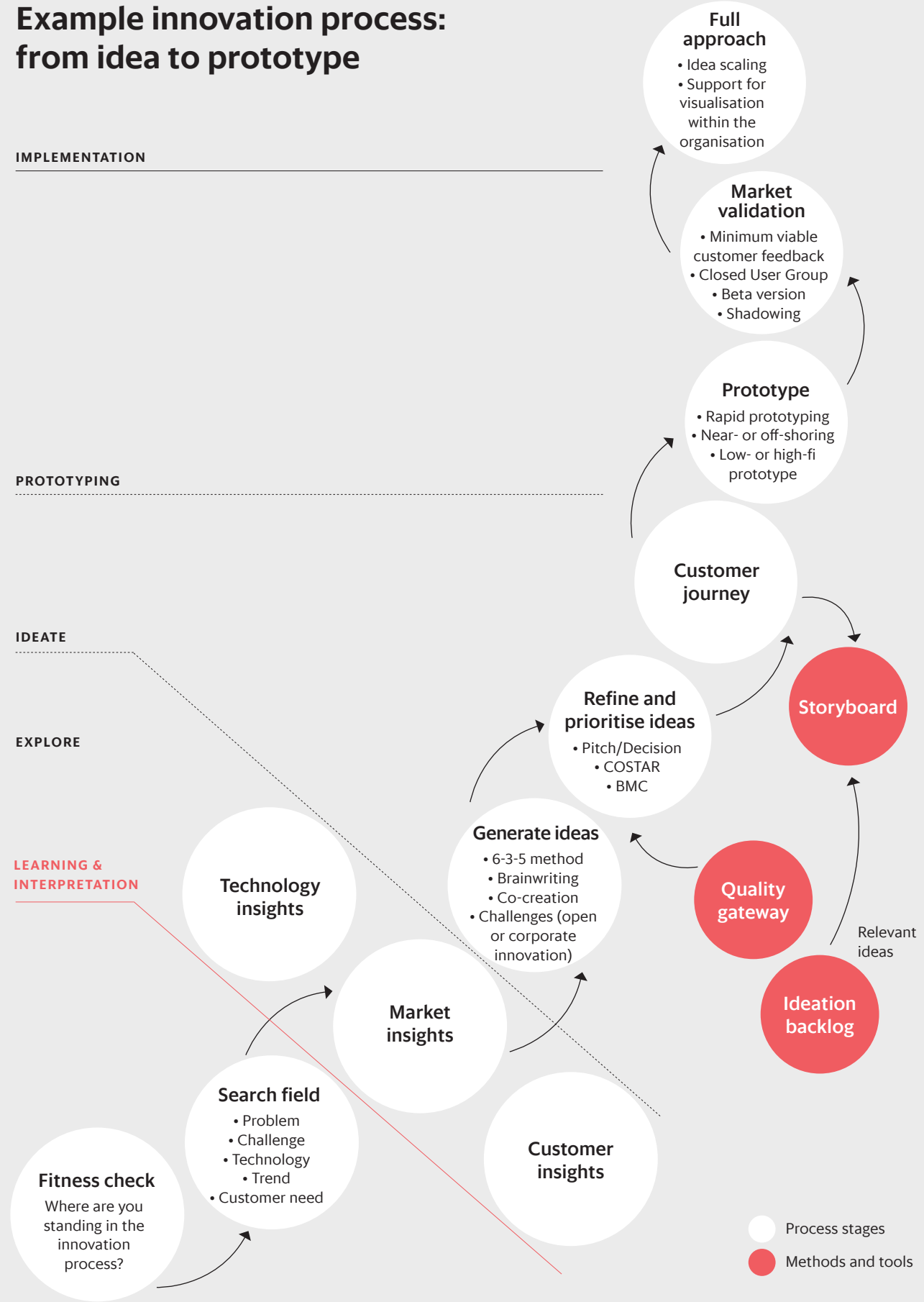
IMPLEMENTATION

PROTOTYPING

IDEATE

EXPLORE

LEARNING & INTERPRETATION



to new technologies in time. Even if it looks like all the good ideas have already been realised – disruptive or not – there is always the need to think ahead. Every successful innovation is just a basis for the next one. Every failed innovation is a new experience, and another opportunity to grow, learn and adapt. No innovation is a company's dead end.

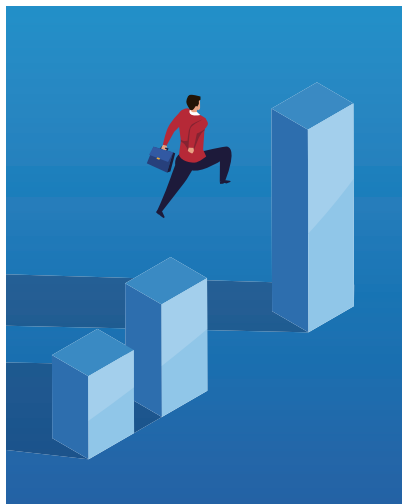


## The new approach

Brainstorming and just throwing ideas around doesn't necessarily mean doing innovation. Although these methods are part of the innovation process, innovation is rather a long-term mindset that includes observation, communication, analysis and cultivation. The goal of innovation is not only coming up with new products and services and generating value through applying new technologies but also about changing the approach, systematically creating ideas, and testing and implementing them as soon as possible to ensure a short time to market. This can be achieved using structured processes and relevant methods.

During the innovation transformation, the company will surely reach the point where the old processes just don't work anymore. Innovation

transformation requires a flexible approach, so you might find that the waterfall method you have been using is no longer suitable. This method hinders innovation because of its extensive analysis phase. It takes years before the initial idea is realised; by that time, customers' needs may have changed. You may find that switching to Agile methods significantly improves the flexibility of your teams. The Agile approach is far more effective when it comes to innovation projects – the knowledge is not planned in advance but rather arises from research and experimentation.



## Step by step towards innovation

When we talk about innovation in general, we talk about three steps. First, new ideas need to be collected and thought through. Establishing a culture that is open to creativity and giving the freedom to think differently are essential for this step. Only then can new ideas be shared, and horizons broadened. The second step begins with deciding which of these ideas are worth developing and working on. Those ideas that are identified as desirable should

Via workshops we enable leaders and employees in innovation and support them during the iteration until the final idea is just right for the company and ready for implementation.



### Coaching

If you already have innovative processes in place but don't know how to go further, ERNI can support your innovation team, help you identify new approaches and inspire you with new ideas. You may also use the services of our own creativity factory.



### Innovation management

Innovation is interdisciplinary. We can provide you with tools for successful and sustainable innovation. Our experienced consultants support you and offer their expertise.



### Prototyping

Prototyping makes an idea tangible. ERNI supports you while making things easier, faster and delivering results. Our specialists test and validate your ideas on the market with real customers.



### Innovation culture

Innovation is not just about products or processes. It works best in an open and transparent corporate culture. We help you find a way to transform your culture into one with an open mindset that leads to successful innovation.

be adopted. To be able to make this decision, you need a structured system that can evaluate the potential of the end product and its success on the market. Put yourself in your customers' shoes to consider what they would like about your product or service, what they would miss and what the pain points are for them. After thinking this through and adjusting your idea to customer needs, get feedback. Ask customers their opinion and listen to them carefully, because their opinion is what matters the most. Iterate, experiment and evaluate, because only after that will you be ready for the third step: testing on the real market. During this whole process, it's important to think about the company's proper atmosphere. People need to feel that it is possible to try and fail, and learn from their mistakes and the mistakes of others.

Every company has its own journey, and you should approach innovation in such fashion. Holistic innovation thinks about the company and its people as a whole.



## Support from Switzerland

Switzerland has been named the most innovative country in the world for eight consecutive years, according to the Global Innovation Index. Switzer-

land stands out in terms of ecological sustainability, knowledge-intensive employment process, research collaborations and creation of knowledge. These attributes go hand in hand with the number of patents filed, knowledge diffusion and creative outputs that are among the country's strongest aspects. As a global platform for Swiss Software Engineering, we rely on these values.

The Swiss innovation mindset has been deeply rooted in our corporate culture since 1994 and includes the creation of consensus, pragmatism, integration, reliability, quality and transparency. Our international innovation team supports companies on the road to innovation with our skills and experience, and also with our willingness to take risks and the belief that failure helps companies grow (which is so characteristic for Silicon Valley). Our consultants are continually searching for and trying new developments and can differentiate between valuable ideas with potential and short-term hype.

At ERNI, we believe in a holistic approach to doing innovation. We support our clients in designing products or services, and in installing a real innovation culture in their companies, which means that the results can survive in the long term.

There are different models of cooperation. We offer a variety of workshops that target fields from ideation to transformation of mindset, but we can also support you with prototyping or market strategy workshops. We can guide you and coach you and your employees in proceeding further and implementing the innovation sustainably. It's all about getting things done. We can work with your teams and your project managers from day one, to ensure sustainable changes. But if necessary, we place our innovation managers – who are experienced in innovation projects

– into your company, to help empower cultural change from within the client's ranks. They support the clients in cultural change and transformation towards a new mindset.

Whichever model the client chooses, our innovation managers always work from the inside of the company. We observe, evaluate, analyse, put ourselves in our clients' shoes and offer end-to-end solutions. We understand that no matter how competitive your industry might be, every company has different people and a different approach to ideas. That is why we always offer tailor-made products and services. Our consultants will provide support during the creative process of developing ideas, and bring methodical competences that smoothen the innovation journey – from the idea to a monetised innovation.

Our goal is not a single-store innovation that generates instant profit or just makes customers happy. Although these are both valid goals, we want our clients to establish and adopt the innovation culture. We support them with methods and techniques that assist them during the recruiting process and integration of employees with the right skills and mindset. At ERNI, we always innovate with sustainability in mind. We teach our methods and train our clients, enabling them to successfully innovate on a regular basis. ✕

# Creating new business opportunities in medtech

Innovation doesn't shy away from any industry. But when it comes to medical equipment, progress is inevitable if you want to not only survive but also succeed in this extremely competitive market. And, of course, it enables better patient care.

Whether it's the increased pressure on margins, ever-growing demands for market access and compensation, increasing regulation, digital change or even lack of unique selling points of their products, medical equipment companies face great challenges.

Some of our clients, including market leaders in the field of specific medical equipment, have asked us for support in 'looking beyond their own horizon'. Large and established suppliers often find this difficult, which is why they rely on external support from experts.

Losing margins on product sales is especially problematic in hardware business within the medtech segment, as hardware becomes a commodity and its price is pushed down by competitors.

## Strict regulations



One of our recent clients asked us for support in finding a solution for how to secure or even increase their margin.

The challenge in the medtech sector is that it is subject to strict regulations, and concentrating on these too much from the very beginning can hinder your innovation efforts. The first ideas should come out of a place where there are no restrictions and no external factors. Work on the idea. And iterate and test the product to see if it fits both the customers, and the market's needs. Generally, after these initial steps, other industries would follow with a minimum viable product and market validation. But medtech is different. For you, now is the time of regulations. Compared to other market segments, regulations and sensitive patient data must be considered relatively early. Because of the nature of this data, it is not possible to validate the product on the market. To prevent investing in the wrong innovative idea, we use simulations and customer panels to justify the ideas.

## Ideation and customer journey

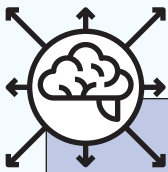


That is exactly the way we proceeded with the medtech hardware client. We supported our client through the ideation phase, customer journey phase and prototyping, and guided

them on the way to becoming a truly customer-centric company. After numerous workshops, our client had come up with five integrated business models with product ideas for services and software solutions that complemented their hardware business and opened future business opportunities.

With our medtech hardware client, we ran four such cycles and made the result even more specific by drawing some low-fidelity prototypes of the new software solutions.

# How to stay on top of the innovation game



1.

## Think differently

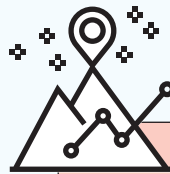
To get ahead of your competitors, you need to come up with new approaches, new ideas and new solutions. You cannot do this unless you let go of old paradigms and patterns of thinking.

### What to do:

Change your attitude to “why not” instead of “no, that can't be done” and see where it gets you. You can encourage your creativity and imagination by trying new things in your office – maybe changing the way you design meetings, maybe shaking up the schedule. You might find it helpful to think about the future of the company, and what products and services you would like to deliver. One of the most helpful exercises for enhancing creativity is trying something new in your company's life. Whatever it is, when you go out of your comfort zone, new ideas will flow.

### Our experience:

For an internal workshop, we made the attendees sit in a circle instead of around tables. Tables are like barriers between human beings, so we removed them.



2.

## Have a vision

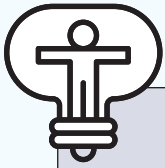
Changing the way things work may be a long-term goal and there will surely be bumps on the road. Don't get discouraged. Innovation doesn't happen overnight, so find a way to keep your vision and sense of direction alive.

### What to do:

It is helpful to imagine your company in the future. What will the business look like, what goals have you achieved and what does your company do? Visualise the answers and write them down. Or even better, sketch them and hang up them somewhere visible. It is also an absolute necessity to talk about your plans with your employees. Tell them about your vision, but listen to their ideas too. Only when your employees share the vision and work towards it can get you close to achieving it.

### Our experience:

One of our clients, a large telecommunications provider in Switzerland, wanted to become more agile in its way of working and wanted to implement a sustainable innovation process. We created the vision of having an innovation 'sprint' before every program increment cycle of SAFe, so requirements are clear before the PI planning. Also, we implemented a continuous innovation cycle, which enabled them to adapt to changing customer or market needs.



3.

## Focus on the customer

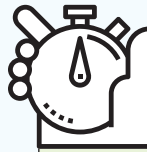
**Good innovation has to bring something to the market. How can you be successful if you don't ask what the market really needs? Customers are your best source of information.**

### What to do:

Create model customers and put yourself in their shoes. Who are they, and what are their qualities, values and problems? Why do customers buy your product or service, and what do they do with it? Where does the need to buy it come from? What do they do with it after purchase? You can also write down every step a customer has to go through from purchase to disposal.

### Our experience:

A customer in the industrial sector offering a service for renting tools on a construction site wanted to implement a new software feature without truly knowing whether the end customer would really use it. By prototyping a new feature that opens up a new digital business model directly at the end user site, we could detect a lot of pitfalls. For example, we could check if the user experience was simple enough even when it was in the field with a lot of dirt, and whether there was a fast checkout and locating function for tools.



4.

## Adjust and test quickly

**Any idea is best evolved and tested together with customers. Continually verify whether you are heading in the right direction and with the help of your clients.**

### What to do:

Prototyping is always a good way to start. Whether it's a presentation or a drawing, Lego bricks or a Styrofoam model, a prototype brings your idea to life. Remember, it's the first version, which is still open to discussion, so include only the most important attributes. Then test it with your customers. Do they like it? Do they show enthusiasm? Do they even understand the product the way you do? Do they think they might want it or need it? Would they pay for it? Talk about it, get feedback and be prepared to adjust and test again.

### Our experience:

We did business model ideation – generating a new business model – for a logistics supplier in the field of delivery of food. The supplier wanted to launch a shopping app where farmers could put in their products by themselves and end users could easily buy them and get them shipped by our client. We got insights from customers that showed that they not only wanted to pay by credit card but also they would like to buy on account. So we designed a new payment process by respecting customer insight and locating function for tools. We could also make sure that the app is responsive on different devices, because customers don't seem to favour a particular one.



5.

## Enable your employees

**Innovation is work for the whole organisation, not a single-person job. Realise that your employees might have better ideas than you and may know better what the product or service needs.**

### What to do:

Whether via innovation days, hackathons, pitching roadshows or other methods, encourage your employees to come up with new ideas and suggestions for improvement. Recognise them publicly for it by publishing it or rewarding

the author. Good ideas should be implemented. But remember that creating an open and transparent culture in your company also means allowing mistakes and failures.

### Our experience:

By implementing a specific innovation process, we ensure a continual idea backlog that enables future new services or products to be launched. It also secures the continual development of a company and has an impact on the way employees work, and their personal and organisational prosperity. This kind of new process implementation will always be accompanied by cultural measures such as training in design thinking, strengthening a culture of failure and rewording it as lessons learned, or creating dedicated sessions to such learnings (peer coaching, meet-ups, etc.).

# Innovative leaders let people try and fail

Holistic innovation needs to be carried out through the whole company, but it is also essential that the leader leads by example. Establishing changes in a company may be challenging, and the leader may encounter reluctance and fear from their teams. That's why it's so important to address these concerns. If you don't have a culture of leaders who encourage their employees to be creative and think outside of the box, you can expect resistance. From bottom-up to top-down, all the teams should always be engaged in the cultural change that is necessary for innovation transformation. People need to feel included and need to see that the innovation is not just one department doing some fancy stuff, but that they are all in their own ways contributing to the success of the company.

Leaders need to create an atmosphere of trust and openness. The employees must have the opportunity to try and fail. This is extremely important because if employees cannot fail, they won't even try, and won't innovate. Innovation is about everything – it can be about how you treat your employees, about the environment they work in, about bringing a new angle to look at your customers.

Holistic innovation is an attitude. It's a mindset in the company that accepts every person as an important part of the whole. It not only accepts diversity but also welcomes and embraces it.

Diverse teams are more creative, more open to new ideas and adapt better in the ever-changing environment. That is essential during iterative processes, especially when using Agile working methods. Diversity can also promote open-minded thinking, which leads to more ideas. According to research from business platform Cloverpop, gender-diverse teams that include a wide range of ages and different geographic locations make better business decisions 87% of the time, and decisions made and executed by diverse teams delivered 60% better results. A good innovative leader always keeps that in mind.

When innovating, you will always see two parts collide: the old processes and the old company (those that ensure the profit of today) and the new kind of people who are innovating for the profits of tomorrow. Leaders need to align those two parts as each is good in its own way and contributes to the result. Let's try not to say that only the new innovative way is good, and the old business approach is totally wrong, because the old approach is always the history and the basis for the future of the company. To really embrace the future potential, we need to do innovation, which means we need to align the old parts with the goals for the future, and help all departments reach these goals.



# Qualities of innovative leaders

- Ability to learn and improve
- Ability to embrace change
- Open minded
- Trusting employees and willing to play to their strengths
- Transparent and trustworthy
- Focused
- Good role model
- Aware of themselves and their flaws and transparent about it
- Desire to see the company grow, not just secure their own power
- Know their own strengths
- Know how to engage the whole team or whole company
- Have a vision aligned with the company's strategy
- Ability to embrace the future in a different way
- Willing to experiment
- Communicate and listen to feedback
- Support diversity
- Know how to hire good people



# B

## Innovation in numbers



### Switzerland

– the most innovative landscape

First place for the most innovative country belongs to Switzerland. It's the eighth time our country topped the list. Second place goes to the Netherlands, followed by Sweden, the UK, Singapore, USA, Finland, Denmark, and Germany. Tenth place belongs to Ireland.

Source: Global Innovation Index 2018

### Strong Europe



According to the Global Innovation Index, Europe is particularly strong in human capital and research, infrastructure and business sophistication.

# €1.8 trillion

#### Benefits of the Circular Economy

Adopting circular economy principles could not only benefit Europe environmentally and socially but also generate a net economic benefit of 1.8 trillion euros by 2030, according to McKinsey & Company.

# 80%

of managers see opportunities to improve the way their organisations innovate.

Source: HBR.org

# 84.9%

of strategy leaders consider innovation very important. 78% of innovation programs focus on continuous improvement rather than disruptive risks.



Source: CB Insights State of Innovation report

# 30%



of CIOs will include AI in their top five investment priorities, according to Gartner Symposium.

# 59%



of organisations are gathering information to build an AI strategy, according to Gartner Symposium.

# 46%



of managers think they are misaligned and rigid in their pursuit of innovation.

Source: Schaffer Consulting



# 9.043

patent grants were gained by IBM in the US market in 2017. Samsung Electronics followed with 5,837 patent grants and third place went to Canon with 3,285 patent grants.

Source: statista.com

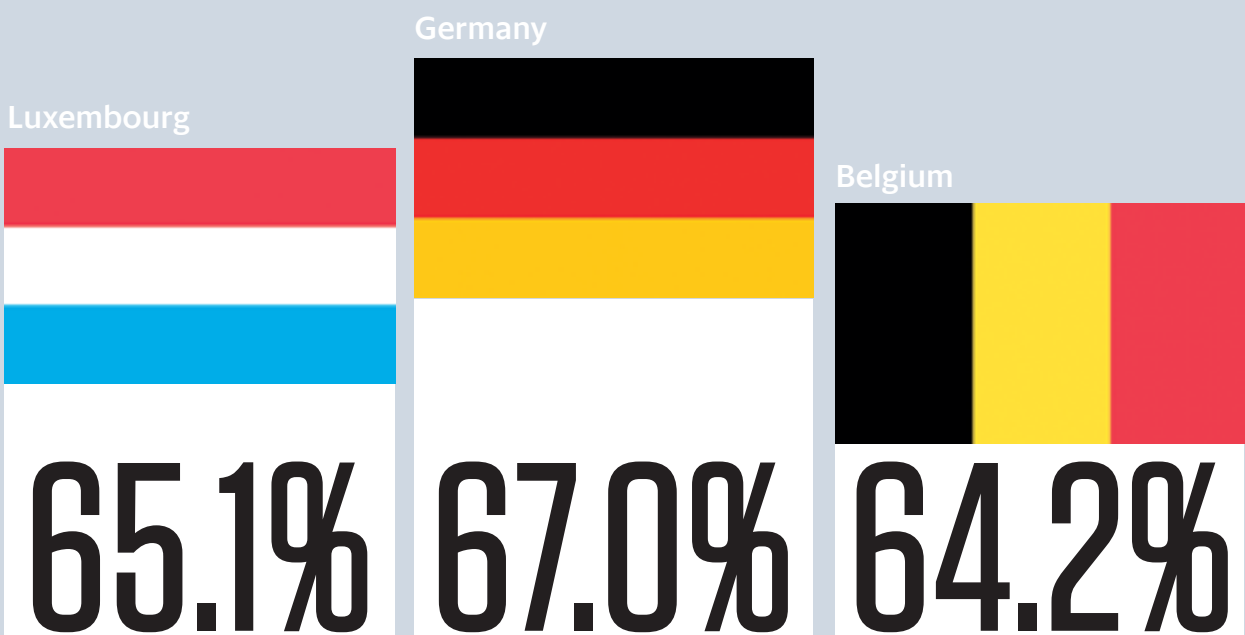
# 3%

annually

That is the growth in resource productivity that a circular economy would bring to Europe if enabled by the technology revolution.

Source: McKinsey & Company

## The highest proportions of innovative enterprises among EU member states. Study from 2017.



Source: Eurostat

# TOP 20

## most innovative companies of 2017

|                            |
|----------------------------|
| Amazon                     |
| Google                     |
| Uber                       |
| Apple                      |
| Snap                       |
| Facebook                   |
| Netflix                    |
| Twilio                     |
| Chobani                    |
| Spotify                    |
| Alibaba                    |
| Tencent                    |
| Xiaomi                     |
| BBK Electronics            |
| Huawei                     |
| Dalian Wanda               |
| AirBnB                     |
| BuzzFeed                   |
| Open Whisper Systems       |
| Illumination Entertainment |

Source: Fast Company



# 52.7%

of all innovative enterprises in 22 EU member states that provided Eurostat with data reported that their innovations had environmental benefits.

Source: Eurostat



## Type of organisational investments in innovation

# 55.9%

Company has an in-house innovation lab with dedicated enterprise resources

# 19.7%

Company has a corporate VC branch to invest in funds, startups and/or has acquired startups that could help them further innovate

# 52.7%

Company is building a culture of innovation within the organisation, mandated from the executive level

# 6.6%

Company has an informal innovation team within the organisation exploring innovation opportunities

# 37.5%

Company has toured innovation 'hot spots' in leading tech cities

# 1.1%

No formal investments in innovation have been made that the respondent is aware of

Source: Altimeter Digital Strategist Survey, August 2017



63% of customers like it when manufacturers offer a new product, according to the Nielsen Global New Product Innovation Survey.

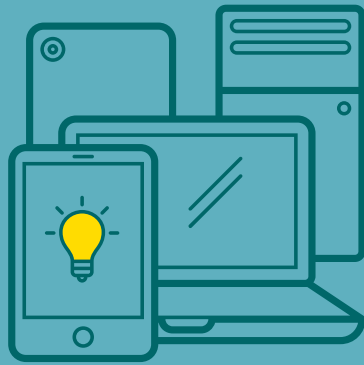
Source: Nielsen



It usually takes 3–5 days from idea to market validation with ERNI's help. It can expand by using high-fidelity prototypes (i.e. more realistic and detailed prototypes) and adding some iterations. In this case and with more complex ideas, it takes up to 2–3 months to get the product to market.

# 83%

of customers



indicate that they would pay more for innovation in electronics, according to research in 2015 from Lab42.



**92 days of work-shops run by ERNI from April 2017 to July 2018.**

**ERNI has reinvented nine business models.**

# 9

# +120

More than 120 ERNI consultants (innovation facilitators, coaches, consultants, business developers, UX and prototype experts, consultants with change management experience and others) are available for clients in Switzerland. And that's without mentioning the dozens of skilled software developers and project managers.



# Humans as the centre of everything

From the beginning, the idea of humans being in the centre of everything was popular throughout the history of civilisation. The anthropocentric idea that everything revolves around us has been replaced by other theories. But with innovation, and developing and designing products and services, we're getting back to the beginning. Let's put the human in the centre again.

## Story contributors



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What does it mean to be a human? To be a member of a species that has evolved over hundreds of thousands of years? A body made of flesh and bone with all its perfections and faults, powered by our brain, which is responsible for our actions and emotions? A soul with dreams and aspirations to live a happy and contented life? Or does it mean being a part of greater groups such as family and society that shape us, our behaviours, our opinions and our views of the world? Science offers a lot of answers, but the truth is that none are clear and definite. In business practice, being human means everything. It affects the way we work, the way we act and the way we think – and it should definitely influence the way we design products and services. Business is all about humans working for humans.

## **It's the same for everyone**

Behind everything we do is a human element. When we acknowledge the necessity of the people around us, our business becomes more profitable and effective, and closing deals will become easier.

Although specific industries differ in many aspects, human-oriented design has its place in every one. You might need to have a different approach towards research, regulations or market launch, but there are three things that always stay the same. First, you put the human in the centre. Second, you want to make profit. Third, you also want to bring innovation to the market. And to deliver the best possible product or service, you will need good processes. Now put it all together and you will find yourself taking the holistic approach, the one and only truly effective way to innovate.

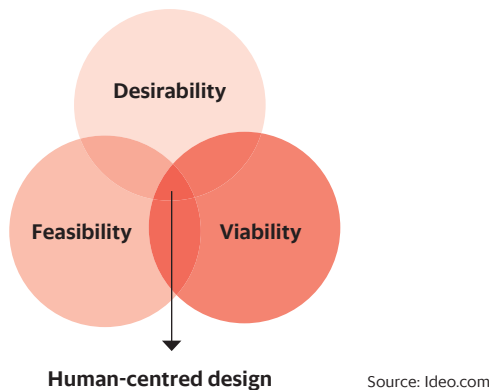
Not putting the human in the centre of your design process will most often lead to useless results, no matter how beautiful and well designed they are. Imagine a beautiful, minimalistic coffee machine with smooth and shiny surfaces, all joints perfectly hidden or integrated into the design, that also makes great coffee. Unfortunately, the start button is so well integrated that users do not find and recognise it as a button and thus can't use it. That machine will probably not sell very well. The same goes for all products, services and processes where humans are involved.

## **User centred, customer centred, human centred**

Let's talk words: user centred, customer centred and human centred are really close and there is a lot of confusion or different understandings about their exact definition. At ERNI, we generally prefer to be human centred in everything we do. Each customer and each user is a human before anything else, but using only these terms, it is rather easy to forget about employees, partners or any other people relevant to our offering. They might not seem as important as customers in the beginning, since we cannot directly earn money from them, but they are equally important – if not more. The major shift lies in the understanding that the people working for you are just as important as the customer they are working for. Employees, suppliers, producers, leaders, consultants and even yourself – everybody falls into the 'human' category. Customer experience should always be exceptional, but if your employees and everybody else involved in your company struggle to use the tools efficiently, clients will also see it no matter what. For example, if your employees have to work with tools that are very complicated, and they don't really understand them, or they don't know the product or service they are selling well enough, it will affect their interaction with the customer. The experience becomes painful for both sides. On the other hand, when your employees are happy and are selling useful products or services they know a lot about, the customer will pick up on that.

# Faster horses

Creating innovation where humans play a central role is based on three main aspects: desirability, feasibility and viability. Desirability means the solution that the customer really needs, feasibility means building on your technical capabilities, and viability means bringing the solution that creates profit and a sustainable business model. When you consider using this approach, you always need to think about these three words and your company goals need to fit into the definition of all of them.



What do people really need? Ask yourself this question over and over again whether you apply it to your customers or your employees. Does your idea of a product or service represent what they find most desirable? Will your idea make their lives better, their work easier, their experience more enjoyable?

To work successfully on your human-centred innovation, you need to understand all human parts of the process and fully comprehend what needs and desires are crucial for your target group. Put yourself in the shoes of the people you are creating the product for. Get familiar with their way of life, their habits, their pain points and wishes. Ask your customers, ask your employees, research, observe, get feedback, iterate and then find out what their needs are. One of the challenges is that nobody will actually tell you what they need, but only what they think they want, just as Henry Ford observed more than a century ago (“If I had asked people what they wanted, they would have said ‘faster horses.’”)

Remember that even though every novelty (especially in technology) brings new opportunities and reduces potential failures, it also creates new risks, challenges and insecurities for the customers. And most of the time, it's difficult to identify those challenges before a customer complains. One method to mitigate these potential failures is experience mapping.

## Experience mapping process

The first step to your experience mapping process is to get to know your customer better by creating an Empathy Map. (*More about this topic on page 27*). Then set yourself a clear goal of what you want to achieve with the experience map. Do you want to know how your new customers will interact with your product or service? Do you want to find out what the experience of your loyal customers will be? What are you looking for?

Then comes setting the scope of the process. Which part of the experience do you want to map and is there a specific problem statement you want to answer? Do you want to map the whole journey or focus on the onboarding process? Do you only want to see what customers will do with the product at the end of its lifecycle, or understand their experience during purchase? These are very important questions to ask yourself before you continue in order to keep your focus and achieve a concrete result that generates value.

After that, your next step is all about data. Collect existing data and do research to learn as much as you can about the potential experience and the setting in which it might happen. After you have collected as much information as possible, create a hypothetical map of the customer journey. Step by step, walk with the customer on the preset path from one interaction with the system to the next. Look at the people behind the processes too. Who is responsible for making the customer happy at every step of their way? Do they have enough skills and information to be of value to the customer? Are all important systems in place and ready in case they are needed? It is often surprising how many gaps and potential pitfalls can be identified by creating a generic experience map.

When you have your hypothetical map ready, test it with real customers, ask them about their opinion in the next round of research and then go back to your map and adjust it. With such a map, you can create a whole new experience for customers.

## We lead by example

At ERNI, we see a lot of companies that have great products but don't think about every step their customers need to take. This creates anxiety that can lead to later resentment towards the product or the whole company. When we support you in implementing the human-centred innovation approach, we usually start by talking to your people. We try to find out what your needs and agendas are, and what you really need. We often find that our clients are not satisfied, but they do not know why. They don't really see the reason behind their discontent. That's where we observe and talk to them to find out what the problem really is.

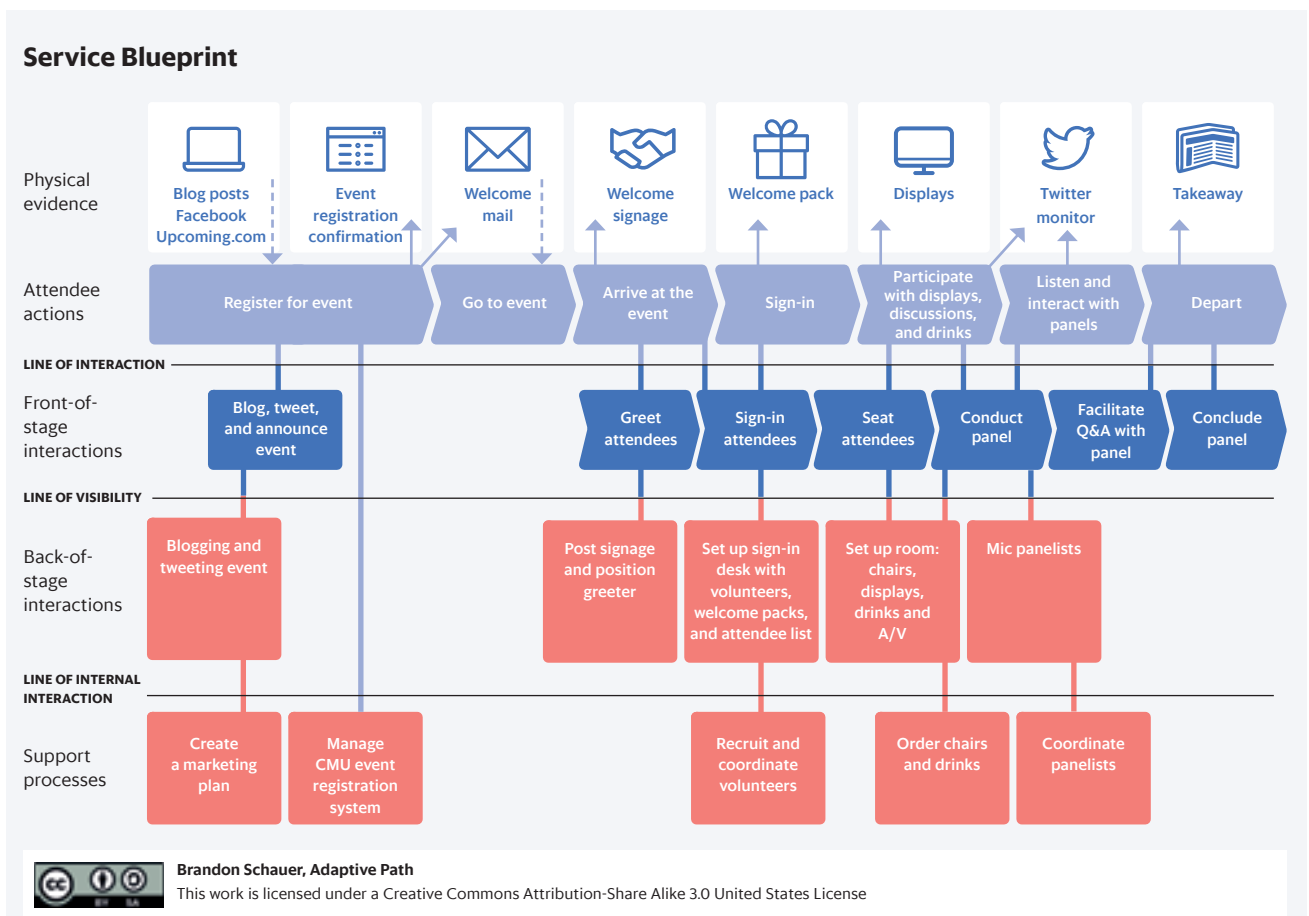


We believe in leading by example, so our approach to clients is also human-centred. We listen to you closely and consider every problem that is hidden under the table.

Imagine the following situation. A service employee of a company is out in the field, standing in a customer's living room. The customer has a problem and the employee needs to call the support desk, but nobody picks up. They are both standing in the living room, smiling awkwardly for a good 15 minutes and waiting on the phone. Of course, the customer gets angry, because he has to pay for the whole duration of the visit. On the other side, the employee is very unhappy because it's a very uncomfortable situation. So, what is the real problem here? It is the fact that the company has only one

support line, and everyone calling is waiting in line. Nobody considered this use case, because it was labelled as an internal process and considered less important than the customer experience. And this is the perfect example of what should be changed. The employee who is calling just as well be standing in the rain or be in a situation where he needs someone from the company to answer the question quickly. Nobody in the company thought about that. If only they had a special line for their employees to call for advice when they are with a customer or need something urgently.

These are exactly the situations where ERNI can help. We train our consultants to be empathetic with your employees and customers at the same time and support you in finding



### Customer journey mapping and its layers:

Picture description: Here's an example. Let's say we have a customer who uses the product for the first time (lightblue part). But there is also a second layer of the journey – the front desk. There's the employee who speaks to the customer about the product or has interactions with him

(darkblue part). And then there is yet another layer in case there is a system with which the customer or the employee interacts on behalf of the customer (red part). You see, it's not only a process of customer experience but also what is behind it. For example, if the customer has a question, the employee has to ask someone in the company while the customer is

waiting. The employee has to make a phone call and get back to the customer. Some processes are actually complex, so it's best to visualise them. That's exactly how to find the point where you have room for innovation. If the process is very complex, make it better and easier.

### Methods of human-centred design (HCD)

#### Observation

By looking closely at your end user, identify and analyse what your customer is going through. Understand who you are creating the product or service for. What does that person like and what could become a problem for them? Put yourself in their shoes over and over again and try to understand their way of thinking. And yes, you will need a whole lot of empathy.

#### Ideation

By observing, you have learnt some valuable information. Now use it to come up with ideas about how to improve your services and products. Throw around as many ideas as possible, but be prepared for the fact that most of them will never become a reality.

#### Prototyping

Focus on building prototypes that will enable you to test the product with your customers as quickly as possible. It doesn't have to be fancy or have all the functions you wish for it to have in the end, but it will help you get initial feedback.

#### User feedback

Asking people what they like and dislike about your products is the most crucial part of the human-centred innovation process. Their feedback will show you what to improve about your product or if you are headed in the right direction.

#### Iteration

Now that you know what your customers think, change the design accordingly. Then test it again. And then iterate...and test it again. Do this until you have reached the point at which you can say that the product or service is what your customers might need based on feedback.

#### Implementation

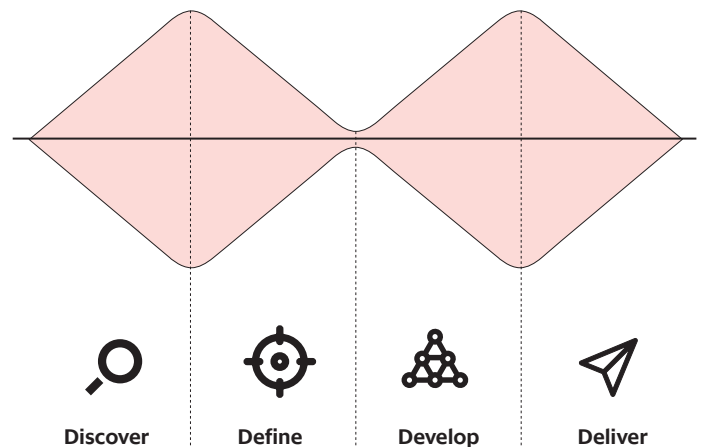
If you are confident that the product you have right now might be just what the customer needs, it's time to introduce it to market. But remember, anytime you want to update it, go back to the beginning.

Source: ideo.com

the best way to either fix the problem or to come up with a new solution. Implementing human-centred innovation is not a hot fix that can be done within three months; it is a long-term journey.

We see a bit of reluctance from many clients at the beginning, because the process takes time and resources and trust in people you might never have seen before in your life. Here's what we usually say: When you care about your employees while innovating, they feel appreciated and motivated, and are happier and more productive, which then leads to better ideas, products and services. (It may even result in a lower turnover rate. A paper from the Center for American Progress, which combines results from 11 research papers published over a 15-year period, determined that the average economic cost of turning over a highly skilled job is 213% of the cost of a year's salary for that position.) Better ideas will better fulfill customers' needs, which makes them more likely to pay for your offer and become loyal fans instead of one-time customers. ✕

### Diamond in disguise



When implementing human-centred design in your company, you might find that the simple diamond model describes the process well. You will start with a very broad way of thinking, collecting loads of data, researching material and understanding the current situation. This part is divergent. But then, when you have accumulated all the information you need, you will need to find meaning and reason in the data, so you'll be narrowing your focus back to the centre. And that is converging. But then, you will again come up with ideas to solve the problems you have identified by going broader still and coming up with as many solutions as possible and narrowing it down to the most viable option. This process needs to be repeated as many times as needed during the whole iteration process.

# What does your customer want?

## Find out through an Empathy Map

One of the most efficient ways to tune yourself into a client's mood and start your human-centred innovation process is to create an Empathy Map. It can be focused on customers, but if you also innovate inside your company, it allows you to map the feelings and thoughts of your employees as well. The Empathy Map is a qualitative visualisation method. It can uncover the hidden agendas of a particular group of users and helps you understand their needs as well as simplify the decision making. ERNI uses this mapping process in workshops with clients who are looking for better insights into customers' mindsets.

How does it work? After deciding what persona you want to map and what exactly the purpose of this process is, start gathering material – this can be done with the help of a whiteboard and post-its. Gather various research materials such as interviews, diaries and results from qualitative surveys. Then select which answers represent which qualities, analyse them and make a conclusion.

Source: <https://bmttoolbox.net/tools/empathy-map/>



# Fail fast, fail early, fail often. Because it's essential for innovation

*“I hadn't failed 10,000 times, but rather succeeded in finding 10,000 methods that wouldn't work.”*

*Thomas Edison*

It's unpleasant, uncomfortable and most of the time wrongly seen as a sign of weakness. The truth is that it is also one of the best tools out there to help you, learn and improve. Failure.

These days, we often hear or read about the importance of failure in business. But there has been such hype around this word that its true meaning almost got lost along the way. At ERNI, we believe that a truly innovative company needs to embrace failure as a natural part of innovation transformation. This means that companies need to establish a creative environment, and accept and embrace the courage to come up with new ideas even though there is a chance of an unsuccessful outcome or rejection. We believe that failure is always an opportunity to learn and improve and is crucial for innovation. Skills must be carved out of mistakes. Lots of them.

Our brain is hard-wired to learn from failure.

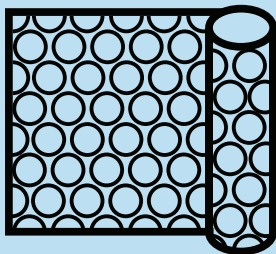
Mistakes are painful and unpleasant. It means we feel the need to analyse what happened to avoid it the next time. This gives us time to process and evaluate what is working in your business (or life) and what isn't. We are literally learning from our own mistakes, whereas when we only experience success, it's extremely difficult to learn a lesson. According to a study conducted by the University of Texas, our brain expands during the learning experience after a mistake and creates new neural pathways. Although it shrinks back again to its normal size after this experience, the new pathways remain. So it may sound like a cliché, but it really is better to fail than not to try at all.

History proves that even the worst mistakes can end up like worldwide success. Let's have a look at some.



## Plastic

Leo Baekeland was trying to find an artificial substitute for shellac. He combined formaldehyde and phenol, but the result failed to replace the natural material. Baekeland didn't give up and experimented with mixing in other substances. After a while, he created a material that was very moldable but still robust as well as non-conductive. Baekeland called the original method used for applying temperature and pressure on compounds the 'bakelizer' – it was a massive iron cooker, which is how the word 'Bakelite' was born.

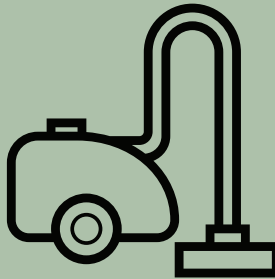


## Bubble wrap

You might not know that the popular bubble wrap was supposed to be a new trendy wallpaper. In 1960, an attempt by two engineers – Marc Chavannes and Al Fielding – turned out to be a complete interior design disaster until IBM used this not-so-trendy wallpaper to package its new computer during transport. And a success was born.

## Dyson Vacuum

If there is one story that says don't give up, it's the story of Sir James Dyson. It took him 15 years and more than 5,000 tested prototypes to come up with a working vacuum cleaner model. And even after that, Dyson couldn't find a company that would manufacture his product. After hundreds of rejections, he decided to manufacture it on his own and founded the Dyson company. Two years later, in the mid-1990s, the Dyson vacuum became a worldwide sensation.



## Post-it notes

It is possible that when you look around, somewhere in the room you will see a post-it note. These colourful stickers that helped us remember things and take notes long before smartphone apps are also the result of failure. Chemist Spencer Silver was trying to come up with super-strong adhesive. But what he ended up with were microscopic bubbles of mild adhesive that could be removed without damaging the surface.



### How to encourage failure

#### Lead by example

Employees need to see that the change begins from management. Leaders should not only come up with new solutions but they should also admit their failures and bad decisions, so people see it is as being okay to fail.

#### Be transparent

Talk about what is going on in your team or company. When everybody shares their ideas and their failures, nobody will feel the need to hide mistakes.

#### Create simulations

Get playful. To break the fear of failure in the real world, you can create artificial situations to test the ideas, products or services and find out what would work and what wouldn't in a safe environment.

#### Learn from every situation

After you experience a failure in your team or company, analyse what happened. Don't make it personal; try to get something good out of it for everybody.

#### Have support

Employees as well as leaders should have the feeling that there is someone to talk to when it comes to their work and their ideas. Sometimes even a brief conversation helps; all you need is to sit down with another expert on the topic and discuss the ideas that failed.

#### Screw-up nights

Sometimes there is nothing more to do about a mistake than to just accept it. Before over-analysing and beheading yourself for it, gather your team or some trusted allies tell them what happened, and share a pizza and some beers over it until you feel slightly better.

# Human-centred innovation keeps user experience in mind

## The 5S method by Jesse James Garrett

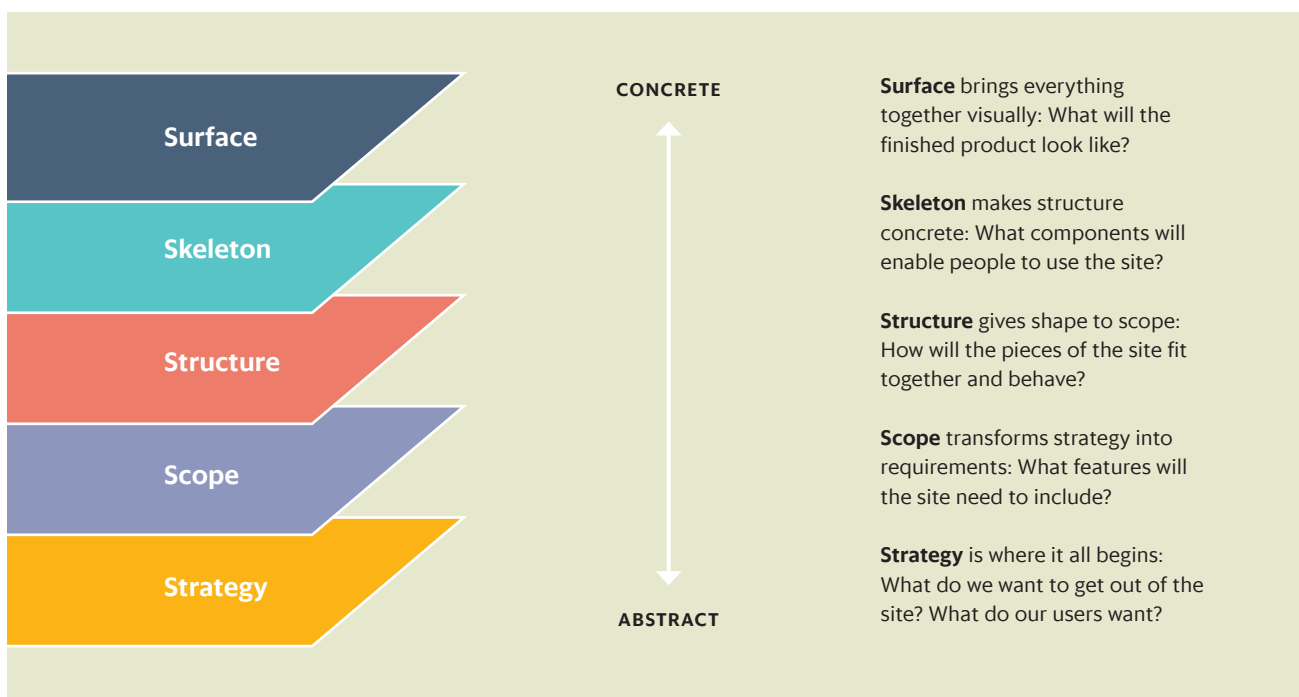
Human-centred design and innovation should go hand in hand. And wherever innovation is happening, there will be the need to think about user experience to a certain extent. User experience (or UX) refers to how any customer interacts with a product or service from the beginning to the end. Therefore, during every innovation process, you should think about every step your customer might take. Whether it's purchasing a book, booking a hotel or buying a holiday online, every service has a certain number of these steps that the customer needs to follow. To ensure the best user experience possible, you have to make sure that every one of these steps happens with your conscious, explicit intent. Making sure that you have taken into account every possible action the customer might take is a big part of your success. Observing customers and users helps you understand their real needs instead of making assumptions.

Moreover, the iterative approach helps you increase the quality of your product and reduce your problems. As with the innovation process, continual feedback from

users and customers is highly appreciated. With this approach, you're able to fail fast and also include the end user as early as possible.

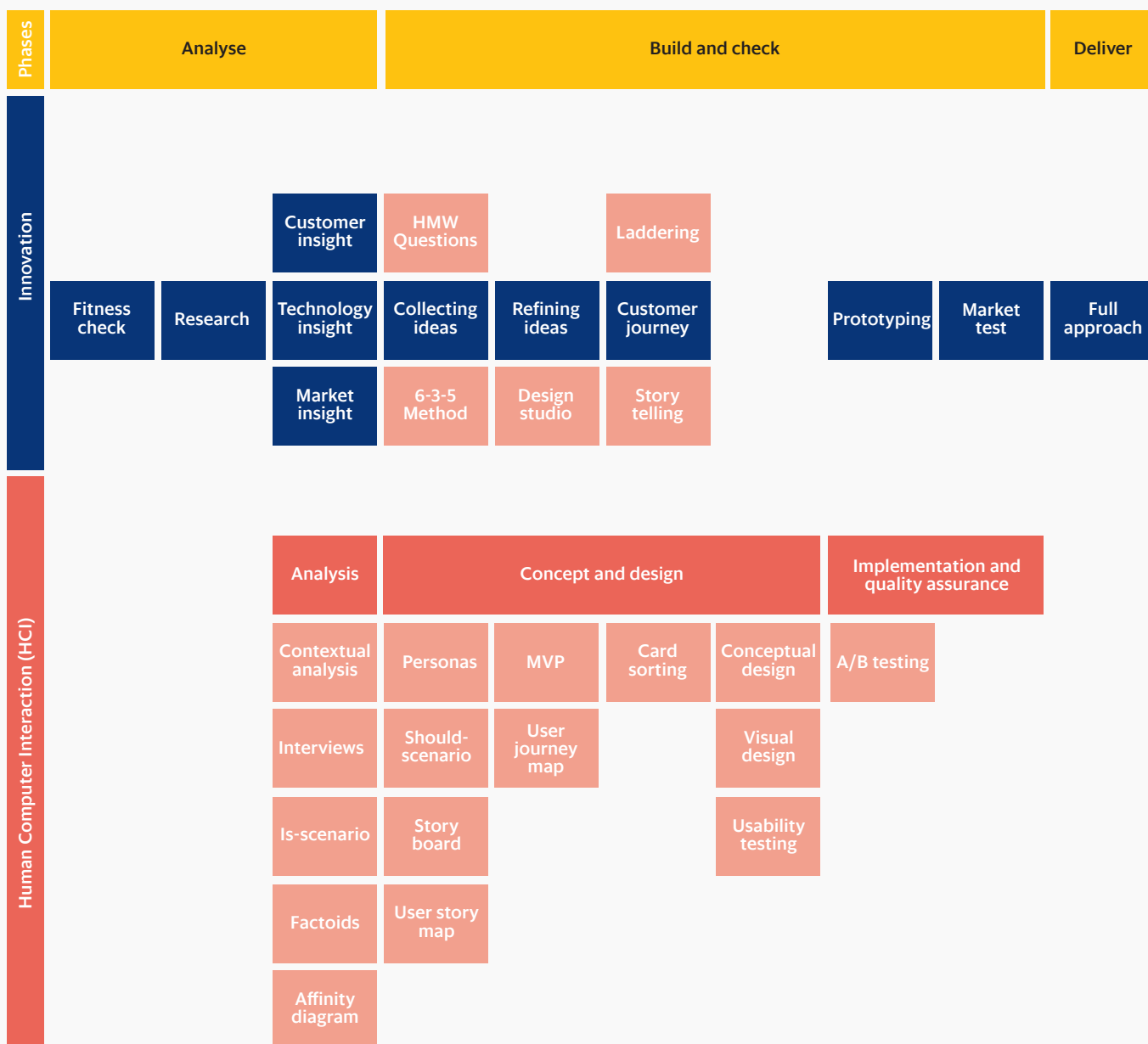
It is not an easy job, but breaking the whole UX into component elements makes it a doable one. The 5S model by Jesse James Garrett structures UX design into five planes that are built upon and influence one another. Making changes in one of them affects them all and subsequently the whole experience. You build your product from the bottom up, moving from abstract to concrete concept. In the beginning, you don't need to be concerned about the final shape of the site, but when reaching the surface plane, you need to think about every little detail of the site's appearance. You are moving from abstract and less detailed to concrete and detailed.

At ERNI, we don't just bring skills in one of these disciplines but rather a solid knowledge of both. ERNI is aware of the importance of close cooperation between the creation of innovation and having a good user experience.



# Innovation and human-centred design work best together

Innovation and human-centred design should go hand in hand. Each phase of the innovation process should be complemented by steps and methods of human-centred design to accomplish sustainable innovation transformation, taking everyone in the process into account. Let's have a look at how we at ERNI see the overlapping of these phases and methods.



Source: ERNI

# A transformation journey to an innovative future





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# Many of our customers want to be innovative. Without innovation, they believe, they are standing still, and when you as a company are standing still, you are actually moving backwards.

Story contributors



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Our customers are right. However, agreeing that the ability to innovate is essential to a company's success is a given today. But many leaders struggle to actually take the first step on this challenging journey. Granted, the journey to become an innovative company needs a lot of determination and yes, sometimes even courage. But, believe us, it is an exciting and rewarding journey.

The good news is that being innovative as a company is something that can be learned. Many people think that you are either born to be innovative or not, just like you are either a creative person or you are not. However, painters too have to learn about perception, composition, how to use different materials and colours. They have to try things out and learn their craft. They have to understand what they are good at and where they need to improve. Like them, your company needs to learn to be innovative. It must get rid of the processes that keep it stuck and learn the craft needed for innovation. Lean and Agile can be your enabler, as you will discover in the coming pages. And there is a clear path you can follow during your transformation journey.

## The infamous silos

When we as ERNI visit a customer for the first time and they explain to us how the company works and what their structures and internal conflicts are, we typically recognise the three infamous silos: Business, Development and Operations. They come in different shapes and colours, but the lack of alignment is typically very similar. Let's look at a typical scenario:

### Business

What we call "Business" in this context are the internal departments such as Marketing and Product Management. Business looks at the market and understands that the customers

have changed and that the company needs to become more innovative and reduce the time to market for new or enhanced products and services. Developing a product for years and years is no longer how things work today. You need to react fast, and bring out your product even faster, or someone else will make your customer happy instead. This is the reason why Business is slowly losing its patience with Development, the second silo.

### Development

Development is responsible for developing new products or services. They too want to react quickly to new needs and bring cool new products to market. But they understand that there are limitations. In the case of IT, for example, new systems need to be integrated in an existing environment, which often means they need to interact with 20-year-old legacy systems that were never meant for the job. There are concurring projects that fight for the same resources or want to implement conflicting changes to the same system. Finally, many internal processes set up to ensure high code quality make it hard to react quickly and release even quicker. This leads to higher cost and unwanted delays. Instead of innovating, Development spends time and resources on legacy systems that only hinder innovation. Their efficiency is measured on requirements, which the market does not need.

### Operations

Once a product has been launched in the market, someone has to maintain it and be there for the customer. This is what Operations does. This typically means that Operations wants a stable and performing product – one that makes the customer happy. If there is a problem with the product, they want to

solve it fast and cost effectively, but they don't always receive the necessary information from Development. Operations works under constant cost pressure, so when a new product introduces new issues, this can cause a lot of frustration. They are at the front line – unsatisfied customers will reach out to Operations, not to the organisation responsible for the issue. This can lead to frictions between Operations and Development and trigger the blame game for low quality levels and unhappy customers.

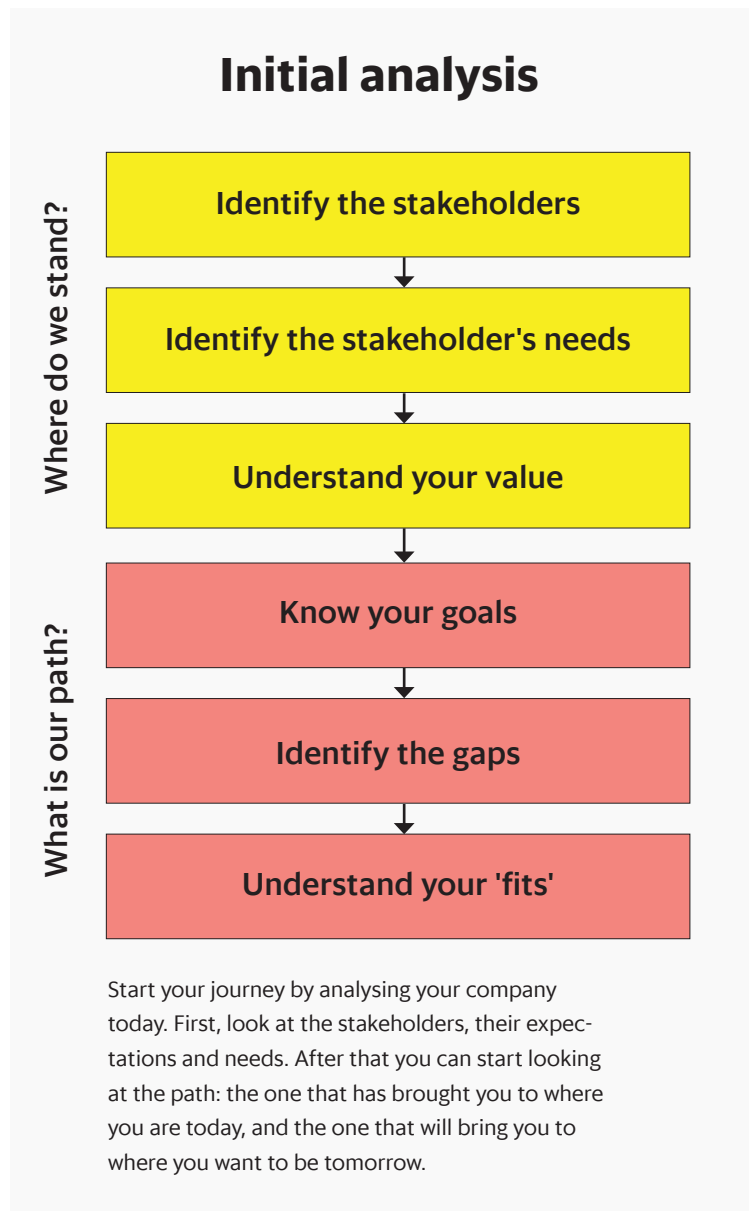
Silos are never healthy for an organisation, but there is more to lose than just the ability to innovate. One example is what happens when Business is so unhappy with their IT department and the cost it generates that the company starts buying IT services externally, be it at big companies or small, innovative startups. Core strategic services are no longer produced in-house because this seems too expensive. The company loses key capabilities and becomes dependent on others, which may or may not act in its best interest.

On the other hand, we often meet situations where the Development department has the ability and willingness to be more flexible and innovative, due to being constantly in touch with new technologies and methodologies, and the Business departments are lacking the understanding of the impact of these new approaches on the company and the market.

Apart from risking short-sighted strategic decisions, it is simply not healthy for a company to be at constant war with itself. And the reasons for the conflicts are as simple to describe as they are difficult to address: the silos do not see each other as part of a bigger process. Each one of them tries to improve itself and optimise its own cost structure, while looking at other silos as external forces to which they can adapt, but which cannot be changed. Challenges are addressed locally, never on a broader level. The full value chain is never looked at, which finally leads to sub-optimal services and products for the customer.

## Preparing for Lean and Agile

If you recognise your company in the description above, we might have got your attention. The conflicts will not disappear overnight, but there are companies that have overcome this silo thinking and have replaced it with Lean end-to-end processes that maximise the value for their customers. Where there was conflict, there is also room for improvement and for innovation. The first step in this transformation journey is the Initial analysis. It will help you understand where you are, where you want to be and what tools are available to start the journey. To be able to change the inner workings of your company, you need to understand how it actually works.



# Useful steps for the transformation journey

Our experience has shown us a pattern of useful steps for the transformation journey, which we want to explain. As each company is different, these steps have to be tailored and adapted to the current situation of every single case.

## 1. Identify the stakeholders and their expectations

The first and maybe one of the easier steps is to identify the company's stakeholders (regulators, investors, employees, customers, environment, etc.). Understand who they are and what their expectations of your company are.

## 2. Identify the stakeholders' needs

Each stakeholder has expectations of your company or very specific departments. These expectations might directly translate to needs and your stakeholder might be able to tell you what these needs are – but do not take their word for it. Take, for example, a customer visiting a DIY store and wanting to buy a drill. The representative at the store might just sell him the best drill currently on the market, or he might ask the customer what he plans to do with the tool. It might turn out that the customer only needs to hang some pictures, and a hammer and nails would be enough to fulfil this need.

Like the DIY customer, your stakeholder might not tell you what their actual needs are. Other times, they might simply not know (*more about this topic on page 38*). It is important you understand those needs.

## 3. Understand the value you deliver

After you have identified the stakeholder's needs, you are able to analyse the value you deliver to them. Typically, there are several needs your company fulfils with different services or products, but it's important to distinguish between needs you fully support and needs you can only partially fulfill.

## 4. Understand the value chain

After understanding the value and the several value streams, we look at the value chain – the steps or activities to fulfil the value. The value chain should focus on the end-to-end view and typically spans from Business to the technical areas like Development and Operations and back to the Business areas.

Each step in your value chain should be there to create value. Understand what that value is. What do you bring to the stakeholders and what do the stakeholders bring

you? Although that is important, too, this is not only about creating value for the end customer – your company's departments should generate value for each other. It is essential to get a proper understanding of what the departments are doing to deliver the services or products to the stakeholders. You need to understand who is involved and how the people interact (these are the people who will need to be brought together later on).

After following these steps, you should now understand your customers – internal and external.

## 5. Know your goals

Like everything in life, your transformation effort should have a goal. Think about where you want to see your company in the future. What are your business goals? Do you know your transformation goals? Are they aligned with each other? If cost reduction is your highest priority, the steps to get there are very different than if you want to shorten your time to market.

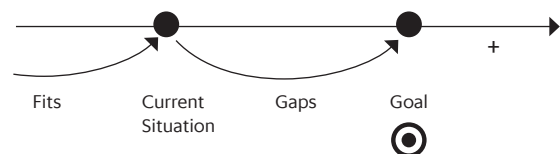
## 6. Understand your resources

To be able to reach ambitious goals, a substantial amount of resources is needed. In this step, the aim is to uncover these strengths and make them visible. Apart from the material and monetary resources that are typically well understood by firms, we are looking for the less tangible aspects such as team spirit, deep know-how of the market and the technology—all the things that have brought you to where you are today.

Understanding and honouring these strengths can give you something to build on during your coming journey.

## 7. Identify the gaps

After identifying the resources, the question is what is needed to reach the goals. As part of the gap analysis, you should discover in which areas you are not where you want to be, or where your performance does not meet your expectation. What gaps do you need to overcome as a company to reach your aims?



Once you understand where you are and where you want to be, you can think about what gaps you need to fill to get there. Also look at the resources that brought you to where you are today. They will be your strengths on your path to where you want to go.

# Start the journey

You have now analysed where you are and where you want to go, but how do you get there?

Your analysis will have uncovered many areas that need improvement. If your company experiences the silos described earlier, you will also have uncovered many conflicts, inefficient processes and inherently broken value chains. The Lean and Agile approach addresses these problems by bringing people across departments together. The focus will shift from “them versus us” to “let’s get this done together”; from “it’s your problem” to “how do we solve this together”.

## DevOps: Supporting the collaboration

DevOps is a practice supporting the collaboration of development and operations engineers participating together in the entire product lifecycle. This means working together from design through the development process to operations and beyond. Typically, operations staff and developers use the same tools and techniques, solve operational problems together, and plan and implement changes on common agreement. Staff become polyvalent, processes become leaner, service transitions flow more smoothly and dependency on single specialists is reduced.

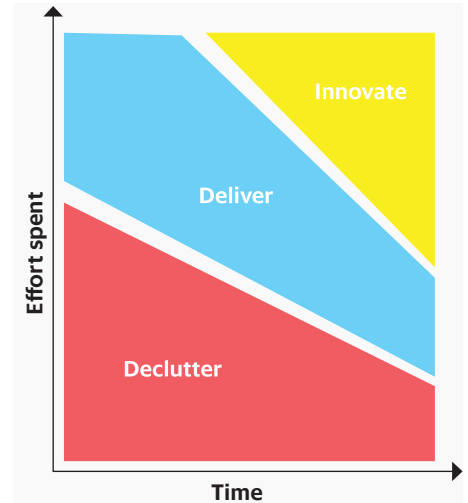
It is important to note that this is not about introducing Scrum to your software development teams. It is about changing the way people across departments and roles work together on a daily basis. How they

organise and plan their work. How the company will generate value in each step of the value chain, beyond the work of any single product team. This whole process can also be greatly enhanced by applying DevOps (see info box DevOps: Supporting the collaboration).

Three concepts form the basis of Lean and Agile: focus on value, continuous improvement and interdisciplinary self-organising teams.

## 1. Focus on value at every step

When, as part of the Initial analysis, you started looking at the processes and the interactions within your company, you most probably found a substantial amount of waste. In Lean, the term ‘waste’ (or ‘muda’ in Japanese) refers to everything not adding value to the customer. Waste builds up when you have unnecessary process steps and interactions that do not add any value to the company or the customer. It can create delays, additional cost and bottlenecks. It is not only detrimental to the motivation of your employees but it also limits their ability to deliver. On top of that, innovation is not possible when things move painstakingly slow and every day is a fight. To be able to deliver efficiently and effectively, and in a later step to be innovative, you first might need to significantly reduce waste in your processes (see graph). That is why Lean and Agile want you to focus on value. If an activity brings no value, get rid of it. Avoid doing things for their own sake. This could



At the beginning of your initiative, you will find a lot of waste, which makes it hard for your teams to deliver, even less so to innovate. After reducing enough waste, there will be room to breathe. The more you declutter by reducing waste, the more innovation will emerge.

also mean you should not work with a new technology just because it is hyped as the next big thing. Do not add clutter to your products because you like a new idea. Do not sell a drill when a hammer will do. Always first question if something adds value. Teams should organise around value creation and deliver value as quickly as possible. You need alignment across teams and throughout all layers of your organisation if you want to really remove waste and only keep what adds value to your processes. This is an ongoing process, as waste will build up again as soon as you stop rethinking what you are doing. That is why continuous improvement is the second driving force in Lean and Agile.

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## 2. Live and breathe for continuous improvement

Most people know the Scrum retrospective: a session held at the end of each sprint to look back at what went well and to agree on improvement actions for things that did not go well. The retrospective is just as much part of each sprint as the sprint planning. It is held in each single sprint, with no exceptions. It is also a commonly used good practice that teams work with an improvement backlog to increase the visibility on improvements and enhance the level of commitment in solving them. Again, improvement here is not something you do when there is time; it is a core part of the process. You have short learning cycles and you re-evaluate what you are doing to make sure you are still working towards the right goal. In Agile everything happens in cycles, meaning activities are performed in specific intervals (e.g., sprints in Scrum, Program Increments in SAFe) that ensure important events take place in a predictable and reliable manner. This applies to all activities, but most importantly to your own, the team's and the company's improvement.

## 3. Work in interdisciplinary, self-organising teams

With interdisciplinary teams, people who work on the same product, service or stream form one single team. Together, they bring in all skills needed to develop the final product throughout the whole value chain. The team is responsible for the whole end-to-end process. "You build it, you run it" is a common motto in DevOps. A team can no longer produce something and throw it over the fence for the next team to deal with. This forces the team to

consider the whole process and each team member to think of the next step in the value chain. These teams are self-organised, meaning that they organise themselves in terms of how best to deliver the items required by the backlog, and they should be as autonomous as possible. The idea is that the team knows their work best. When several teams are required to deliver a common product or service, they can be organised in an Agile Release Train as proposed by SAFe (*see more about SAFe in the PI-Planning info box*). Additionally, to the Scrum two-week cadence is added the Program Increment Cadence of typically 8 to 12 weeks with the Program Increment Planning, where the teams plan and align their work.

You will have understood by now that in order to apply these principles to your organisation, you need to change the way people collaborate. To be successful, it is important that a critical mass of people understands what the change means and what is expected. As with every change initiative, communication is key. We highly recommend searching for support from experienced people who have led a transformation of the magnitude that you are starting. Your employees – every single one – need to internalise the Agile mindset. And the only way is by doing it. Self-organisation and continuous improvement shall become 'the way we do things here'. Once this new way of working is normal to them, it will have become part of your new culture.

And in a change process it is essential that leadership takes the initiative to lead the change and act as a role model for the desired behaviour. You want to live what you preach, so that people believe in you and follow. You might also want to think about

whether the change should happen in many small steps, or in fewer bolder steps. This highly depends on the urgency for change and the ability of the organisation to change. This is where your Initial analysis will provide valuable input: is your company open to change? How big is the gap you want to cross? These questions will help you find the strategy that is right for you. ×

### PI-Planning

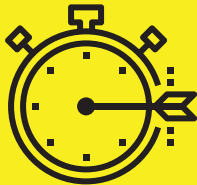
In the Scaled Agile Framework (SAFe™), several Agile teams together form an Agile Release Train (ART). Their sprints are all synchronised, so all teams work within the same cadences, just like trains are scheduled. Typically, five sprints form a Cadence of a Program Increment (PI) that fosters alignment and rough planning between the teams and on the ART or program level. The PI starts with the PI Planning event, which brings all ART members and the relevant stakeholders to align in a big room planning meeting. All participants then plan the content of the upcoming PI together. The idea of synchronising teams and having them plan their work together serves to foster transparency and identify dependencies early on, which increases efficiency and enhances collaboration. For more information on SAFe, have a look at [www.scaledagileframework.com](http://www.scaledagileframework.com)

# Doing it right



**You will encounter some challenges during your Lean/Agile transformation, and you will most probably not do everything right on the first try. Follow the Agile mindset, review your work, look at what you could have done better and improve. Other people have gone this way already, and you can learn from them before embarking on this adventure. One of the best-known names in the context of organisational change is John Kotter. In his book “Leading Change: Why Transformation Efforts Fail”, he describes the pitfalls. Unfortunately, they are very common and you have most probably observed at least some of them at some point in your career. The eight pitfalls are described below and applied to situations we observed at the customers we accompanied during Lean/Agile transformations.**

### 1. Not establishing a great enough sense of urgency



Your employees need to understand that this is not a fun experiment. It is something that is absolutely necessary so your company can

continue to be successful. Something needs to happen, and it needs to happen now. Do not be afraid to tell everyone that the consequences of doing nothing could be catastrophic. People often refuse change as they want to continue doing things like they always have. If they do not feel that something needs to happen, they might come up with reasons why in their specific role Agile will not work, or why right now is not the right moment. Establish a sense of urgency throughout the organisation, so people understand that something needs to happen now.

### 2. Not creating a powerful enough guiding coalition



You need people who go out there and win your employees. Leaders who understand how to excite others for the future. A good leader

does not make you follow; he makes you want to follow. Without a guiding coalition, your employees might follow the Agile methodology, but still think in silos.

This is the homework you have to do before starting this transformation: Who are the leaders within your organisation who can win people over? Who do you want to have on your side?

### 3. Lacking a vision



You need to understand the “why” behind your action. It is not about breaking the silos! It is also not about becoming Agile! This is the “what”. The “why” is

that you want to become more innovative, or you want your cost structure to remain competitive, or you want to better adapt to changing markets. Whatever the “why” is, make sure you and your employees understand it. It is easy to forget the vision in the heat of the moment, when everyone is excited about what is coming next. The risk is that people start following Agile for its own sake. They conduct sprint planning meetings, but do not really understand why. Or they think they are doing all this to fulfill some KPIs, which, let us be honest, is not really motivating.

### 4. Under-communicating the vision



Once you have communicated the vision, communicate it again. And then again. Scrum teams often write the product vision in big letters on the wall of their project

office. That is one way of reminding everyone where the journey is going.

Also, make sure everyone understands the vision. Repeat it with different words, through different mediums, until it has been really understood.

**5. Not removing obstacles to the new vision**



Few things frustrate employees more than being asked to change something but not having the power to do so. So, one very important step

in change initiatives is to remove obstacles and empower people. With Agile teams, empowerment becomes even more important. If you want your teams to work autonomously, you have to give them decision-making power. What we often see is that management has not really internalised the Agile principles and does not accept the team's decisions, or it interferes in the sprint planning with top-down demands. Obstacles such as missing know-how and organisational structures need to be removed early. This is where the vision comes into the game: if your employees understood and internalised the "why", they will be much more resilient against obstacles.

**6. Not systematically planning for and creating short-term wins**



Short-term wins are a double-edged sword: on the one hand, you want to keep the momentum alive. You want to feed into the excitement.

You also want people to be bold and move fast. On the other hand, you do not want them to achieve first wins and think the transformation is done. You also do not want to throw everyone off guard by changing their complete (working) life overnight. Find the right balance. Celebrate short-term wins, but do remind the teams that you are not done yet.

**7. Declaring victory too soon**



So, you have broken the silos, your interdisciplinary teams are already at their third sprint and your company creates value for the customer. You are Agile now.

Well, not quite yet.

This is a common misconception. Just because you successfully went through a couple of iterations does not mean that the processes are fully understood, let alone internalised. Agile is a mindset, and it needs time to settle. There is no room for complacency in Agile.

**8. Not anchoring changes in the corporation's culture**



If you want to anchor the change, you have to repeat in and repeat it until it becomes "the way we do things here". If the new way of working does not

become your new culture, you will observe things slowly moving back to how they used to be. This is where the cycles, in which everything takes place in an Agile world, come in handy. You repeat the process and repeat it again until you break old habits. Until the employees and the leadership live and breathe Agile. This is perhaps the toughest challenge, but the one that will ensure long-term benefits. However, it may also backfire if done poorly. If things are done for their own sake, because the methodology says so. If Lean/Agile start to become like a religion. This is when new walls emerge, when things are done because that is how it has always been done. That is contrary to the very principle of Lean and Agile. Keep teaching your employees why some things are done this way. But also keep questioning what you are doing.



# Why it's worth it



We have led various Lean/Agile transformations at our customers – and can confirm that the path is not smooth, but worth it. There are many pitfalls. You will encounter resistance, and sometimes maybe even have doubts yourself. However, we do believe it will solve the most common issues faced by companies today. The world is moving faster, and you want to move with it.

With Lean/Agile, you will enjoy a leaner organisation, one with less bottlenecks and a culture built around generating value. You will no longer sell drill, when all your customer needs is a hammer. And if you find out that the drill was what he needed after all, you will be able to bring it to market quicker. That is because your teams will understand the challenges within the value chain and will spend their energy on resolving impediments instead of finding the culprit when things go wrong. They will work together to bring new products to market, from start to end throughout the whole supply chain. This leads to better quality and higher stability of the products and services on the market: if a team will be responsible to fix any issues once the product is out there, it has more incentives for doing it right from the very start. Moreover, changes will face less resistance as the self-organising teams are involved in the decision making and understand the rationale behind those decisions. It is also easier and faster to make changes to a value chain if everything stays within the same team,

instead of impacting various, interdependent organisational divisions. This will reduce the time to market, as decisions can be taken locally. Innovations can get out there faster, and their reception is directly fed back to the team.

Your workforce will be the big winner. Your employees will no longer work against each other, in constant conflict. (Remember, it is “Let’s get this done together” now!) They will no longer depend on decisions made somewhere else, by people far away from the consequences of such decisions. They will be empowered to take decisions together in their team and will be responsible for the outcome. They can try out new ideas. They will work as a team towards a common goal. This will be more fun than fighting each other. Your customer will enjoy better, faster services and products that bring them value – developed by people who best understand the product and are passionate about it.

Finally, your company is now ready for change. If we look at how markets have evolved in the past few decades, we can only imagine how fast your customers’ needs will change tomorrow. Your old structures might be able to keep up for some years, but in the long term, something needs to change. There is agreement in the business world that the way companies are managed today, they can no longer satisfy the needs of the employees or the customers of tomorrow. Lean/Agile is one way to make your company ready for that future, while being more successful today. We cannot predict what the future will look like, but once your company is ready for innovation and change, it will no longer face this uncertainty with fear. It will look forward with excitement for what this future will bring.

# C

## Case study

# Solving the problem with Agile

## Living by the Agile principles

One of our customers, a medium-sized company providing software and hardware solutions for the transportation sector, introduced Agile methodologies in the form of a Scrum team. The Scrum team did not produce the expected quality, which internally led to a lot of resistance towards Agile. The customer asked ERNI for help. We held a workshop to understand the issues and conflicts between the stakeholders and invited people from various departments and top management. During the workshop, one participant presented a typical process that was causing a lot of friction. It quickly drifted into a “blame game” where each participant blamed the others for problems in the handovers. Most importantly, outputs from the Scrum team did not have the quality everyone expected, and people felt powerless because they were not allowed to interfere with the team’s inner workings. As the moderator tried to get to the source of the problem, it became clear that there was a deep misunderstanding of what Agile means. The company wanted to do Agile, but they didn’t live by the Agile principles. For example, we found out that the requirements that were fed into the system were not of sufficient quality, but there was no process in place for improvement as the requirements were coming from outside the Agile team. There was no way for the author of the

requirements to know of the problems these were causing. Introducing Agile in one team, but leaving everything around it intact, is typically bound to fail. Once the audience understood that Agile is not only for the software development department but also the business areas needed to contribute in the end-to-end value chain, they started to accept that being Agile is far more than what was being done.





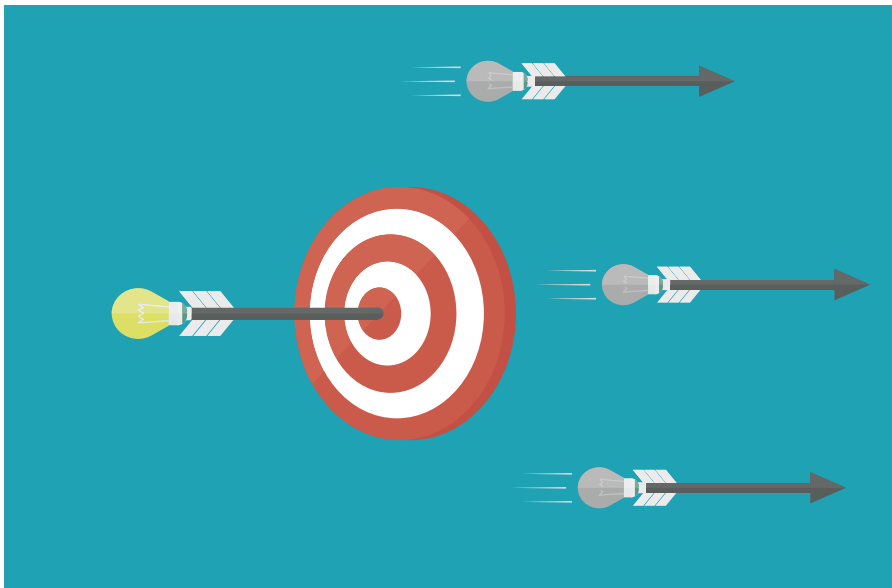
## Synchronising work and outcomes in a Scrum mode

A well-known Swiss insurance company had been working in a Scrum mode for almost ten years but were facing one major problem: even though all teams were Agile, they had difficulties with synchronising their work and outcomes. One of our Agile coaches proposed to support the company with a planning and synchronising event and by coaching management as well as teams on topics such as transparency and individual responsibility. Even though the teams did not have much time to prepare, not to mention learn theory, the planning event took a far shorter time than originally estimated. When the participants left, they were all motivated and had a clear plan for what to do for the next couple of sprints. Why? For the first time, even teams who were usually involved only very late, learned about the project vision and knew exactly who would be using their service at the end, which motivated them not only to work with the customer in mind but also to give their own input on the best solution instead of just following the requirements they were given.

Additionally, all teams got to know the other teams, which had several positive effects: the first, and most obvious, was that people would recognise each other in the hallways. Suddenly there were not just a lot of people working in their building anymore, but different teams, consisting of people they knew and could talk to. The teams started to exchange what kind of inputs they usually received from other teams and what their output looked like. They also found out that the team which provides the output only needs to deliver a part of the information. A typical case for reducing waste and doing continuous improvement.

Over one-and-a-half days, the entire project team finally knew their vision and had a common understanding of the plan, and was motivated to give their inputs and take responsibility for their actions. Perhaps most importantly, a level of transparency emerged that allowed progress and delay to be shared, as well as new ideas.

# The user first imperative: why prototyping and market validation are crucial stages of innovation



Anyone working in prototyping will give you a long list of reasons why it's such an important process for successful business. Our ERNI prototyping experts have a clear answer to the question of why to do it. Prototyping not only helps you find the root cause of your user's pain but also improves the overall communication in your team by aligning everyone's expectations. It helps validate or discard wrong assumptions and improve your ideas based on real user feedback. And last but not least, it helps convince your business stakeholders that the solution is suitable.

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## Prototyping reveals the root of the problem, not just its symptoms

Prototyping and market validation are important steps of the innovation process that do not stand alone. If you intend to plant innovation within a company successfully, you need to understand user context, the whole user experience and the issues your customers deal with.

Let's have a look at one case study from our practice to illustrate that. Our experts were hired by a project manager who wanted to solve an issue. But he had doubts about what the real problem was and wasn't sure of the best way to approach it.

In our experience, clients often don't come to us with correct problem statements, but rather describe its symptoms. To give you an example, they say, "This button with such and such functionality is too small and the users won't find it. Help us find a solution." But later, we find out that the real issue was not the size of the button at all but the function itself. That's the trickiest part of prototyping – finding these 'stumbling blocks', understanding the real issue and addressing it accordingly in the next iteration of the prototype. And that is why we always start with looking at the bigger picture.

Shortly after we arrived at the company, we commenced our observations. We literally looked over the shoulders of the employees and watched how they carried out their work. We made notes. We analysed. We conducted contextual interviews. Eventually, we got a good sense of the user context. The outcome of the initial analytical phase formed the basis for the next step (which is the conceptual phase) when we developed our first rough prototype.

Then we took this prototype to the users for testing and made an evaluation. Generally speaking, there are two possible outcomes of the market validation. If everything goes well with the users, you can go ahead and start developing the product. In case it does not go well, you have to start all over again, going back to the analysis and conceptual phase, doing a new iteration of prototyping and another round of evaluation.

Best practice in the prototyping process is to make at least two iterations. Why? No solution is perfect from the very beginning and each iteration allows you to go into more detail. That said, we repeated the prototyping cycle until we got it right in this case as well.

Prototyping and market validation can save you large sums of money. They also help you achieve better user acceptance. When shifting a company towards human-centred design, it is your team that generates new ideas and shapes them with rounds of prototypes or tests them against the market needs. Following the steps of this process allows you to always stay on top of things and be confident that the innovation process is going in the right direction. You create and evaluate your processes and solutions at the same time.

### Do it quickly and get your hands dirty

A lot of new ideas sound awfully great at the beginning, until you start sketching them out and really think through the end-to-end process. Discovering significant design problems and flaws in your concept only after you've already spent hours, if not days, working on a really nice (maybe even interactive) prototype can be very frustrating. Many people believe

that having a good-looking prototype means being very close to the end product, so they can be reluctant to make any big changes. That's why it's smart to first do some quick and rough doodles on paper and only then start working on the 'real' prototype. That's how we at ERNI usually proceed in our projects. We start sketching as early as during the time of contract clarifications and we continue adding details each time a new idea or requirement comes up. This way, we are able to make the first validation round straight away and independently of whether the concept as a whole will work out or not. Ideas that prove to be unfit can simply be thrown away instead of just being stored in a folder waiting to be used until who knows when.

Paper prototyping makes abstract ideas more real. It can sometimes prove to be a challenge, especially if we are doing prototyping for more complex software. Then we really need to boil it down to what the solution needs to fulfill as a minimum.

We may live in a digital era, but people still like to work with something tangible. During a prototyping session, we hand out papers and pencils and ask people to draw simple sketches of the most important screens of the software that will be developed. It does not matter if the drawings are ugly. This is rapid prototyping. Paper, pencil and glue are just tools to get the first impression of what the future solution could look like. The purpose of the first paper prototype is for the team to be on the same page so that everybody has the same understanding of how the solution should work. One picture truly is worth more than a thousand words. This very basic prototype is used mainly for communication and for giving people an idea of what the project is about and what the solution should be.

## Prototyping

The job of our consultants is guiding clients through the innovation process. We don't create the prototypes by ourselves. It's you and your employees who have all the ideas in your heads. And you have the final say on what the solution will be. We are there just to give you the right tools and to enable you to get your ideas out of your head and down on paper when the teams prepare the paper prototypes. After that, we take the paper prototype to the next visual level by drawing the first version with special prototyping software.

### Fail fast, fail cheap

The industries in which most of our clients work change incredibly fast and are influenced by many trends that can make working and thinking a lot easier. Prototyping is one such

trend that innovation brings. And it's becoming increasingly popular as more companies realise that this approach is much cheaper and smarter than developing new solutions without any previous tests.

When you think about it, it makes perfect sense. You don't want to start programming very complex software from scratch and only much later realise that doesn't work. That's a complete waste of your money, not to mention your developers' stress levels and demotivation. Compared to that, using prototypes is a cheap and fast method. You can draw as many ideas as you want and validate them straight away.

With the help of prototyping, we go all the way from a few basic drawings on paper to a highly interactive and good-looking prototype that we

bring to the end user for evaluation. The method is super easy and so are its rules – start as simple as possible, then work it out and test the solution with the real customers.

Prototyping also includes market validation – testing a product concept against a potential target market. In user-centred design, market validation is always used when a solution needs to be tested in the field. Make a first prototype without spending too much money on coding before it is actually tested with your users many times over. You need to be sure that the solution you are about to develop really works for the customer and all users. Evaluate early prototypes and get a good sense of what the customer acceptance would be without writing a single line of code. ✕

### Minimum viable product (MVP) – collecting insights from a product for early adopters

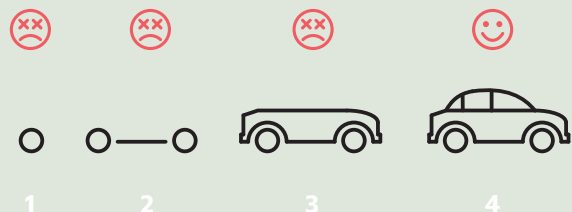
Prototyping and market validation lead to solutions that meet the expectations of the company and fulfill the needs of users.

A good practice is to create a minimum viable product (MVP) – a product with enough features to satisfy early adopters – and get helpful feedback for future product development. Collecting insights from an MVP is significantly cheaper than developing a full-blown product with many features and higher costs and risks should it fail.

A Silicon Valley entrepreneur who popularised the theory of minimum viable product, Steve Blank, says that the main point of an MVP in product development is that “you're selling the vision and delivering the minimum feature set to visionaries, not everyone.”

MVPs are often at the beginning of many aspiring startups and small businesses. Some of the biggest internet-based companies (such as Facebook, Twitter, Dropbox or Zappos) started as MVPs. Could this approach be one of the secrets to their success?

#### How **not to build** a minimum viable product



#### How **to build** a minimum viable product



# How to build and how not to build an MVP

## How some successful companies approach prototyping and market validation

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### Dropbox

Drew Houston founded Dropbox in 2007. Dropbox wasn't the first cloudstorage service out there, but Houston noticed one thing – many of the existing solutions were developed with a lot of annoying bugs and problems. He decided to create a simple and secure solution. Dropbox used the MVP method. They started off small and released a short explanatory video before placing the early product on the market. The result was thousands of comments and questions and more than 70,000 email addresses of future customers. This early customer research enabled Dropbox to validate their ideas and confirm that there truly was market demand for their product. Based on this feedback, Dropbox stepped up their development game and were ready to release the final product to the public.

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### Zappos

Zappos is an online shoe and clothing store founded in Las Vegas in 1999. Zappos' founder, Nick Swinmun, could not find a pair of shoes he liked in his local shopping mall, so he had an idea to sell shoes online. The original Zappos website had a very simple design with only a few photos of the products taken by Nick himself. He even promised the shop owners to pay them full price if he sold some of their goods, because his aim was not to make a profit but to test his idea and get an answer to his question of whether people wanted to buy shoes online. By building a simple yet effective website that showcased the idea, he provided users with a way to interact with the business. It also confirmed his assumptions about a gap in the market for e-commerce and shoes.

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### Spotify

Spotify is a Swedish music, video and podcast streaming service founded in 2006 that was officially launched in 2008. Spotify uses a four-stage iterative product cycle – Think It, Build It, Ship It and Tweak It. When Spotify launched, its landing page was focused only on a music streaming experience. With desktop applications, they first tested the market in a limited beta run and gained some valuable time for tackling the music industry licensing concerns (they planned on expanding to the US). They use Agile processes to help them scale. Each of Spotify's four stages is Lean as their small teams are always working smartly to test assumptions. The Think It stage tests the merit of conceptual MVPs, and the Build It stage releases a physical MVP after it's been tested for quality. The Ship It and Tweak It phases ensure long-term quality and customer alignment by releasing the MVP gradually, learning from feedback and iterating tirelessly.

# C

## Case Study

# ERNI's workshop for an IT service provider

The IT service provider is a Swiss company providing modern software solutions that cover all relevant business processes of road traffic management. One of their systems has been used by road traffic authorities in Switzerland for more than 10 years and tracks about 2.4 million vehicles.

Our ERNI team supported the activities of the customer with a workshop that was attended by the representatives of the customer's product owners, management and customers.

The workshop began with the analytical phase, in which our head of innovation, ERNI's workshop leader, introduced the ideas and mindset of innovation.

The analytical phase was then followed by contextual interviews that helped us get a better sense of the user context. The interview outcomes provided us with a relevant base for the next phase, which was the prototyping session.

The prototyping session was led by our UX consultants. The first thing we always do in prototyping is find out as much as we can about the company's work culture and how the innovation will be done.

During this workshop, our experts talked with the customer's team members about their usual workday, about what they are doing and when, and the environment in which they are using the software.

In the next stage, the team started to work on the first versions of the prototype. We made some paper prototypes, validated them and improved them based on our findings. The participants came up with different variations. Three versions of the solution made it to the last round where our experts discussed with the team which one was the best. The paper prototypes were welcomed and appreciated by the workshop participants because they helped them understand the design of the future concepts, but were not evolved enough to make them feel scared to simply dismiss them.

The customer was very happy with the workshop's outcomes, because they reached a consensus of what the future solution should look like relatively fast. That was one of the main advantages of this session – every team member got to say something about the future product.

### Customer voices on the workshop

#### Customer voice: the customer's CEO

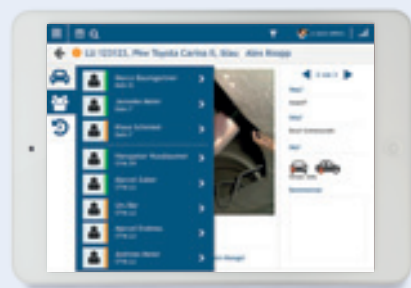
*"With a series of three whole-day workshops, we succeeded to create new – and partly astonishing – innovations in collaboration with our customers. Since we were accompanied by some customers, we immediately got to know whether these innovations also had a business value or if they were 'only' good ideas."*

#### Customer voice: a customer project leader

*"The biggest benefit I see is the opportunity to discuss the idea with users at a very early stage on the basis of a concrete example. In that way, the abstract idea is made tangible. The ERNI consultants asked the right questions to guide the discussion to the most important points."*

#### Customer voice: a customer employee

*"I had a great time seeing my concepts being challenged, take form and come to (paper) life. I am looking forward to turning the innovation into execution with the ERNI team."*





# .experience

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# How to navigate change within one's mind

Guest essay from  
**Jorge Cendales**  
CEO of HumanSpirit



Often employees or even entire teams say yes to a change while their subconscious is saying no.

Change starts in your mind. Companies are in continuous change. Those that don't innovate in today's world of fast and dynamic markets will probably be three steps behind the competition – as simple as that. But introducing change in a company is often an endeavour that fails. Instead of positive reactions and support, leaders frequently experience mistrust, lack of cooperation or even resistance from their teams.

What is it that makes one employee welcome innovation with excitement and another reject it? Are there methods that can help leaders successfully implement change in their teams? Neuroscience is increasingly providing unique knowledge and insights into how to conduct successful change.

### **Our brain is hungry for change**

Every second of our lives, our brain handles millions of micro-impulses. A key feature of the human cognitive system is its ability to learn how to deal with an ever-changing environment. From an evolutionary point of view, our brain's primary task is not to think, but to adapt to change and survive. Successful evolution means being able to react to continuous change.

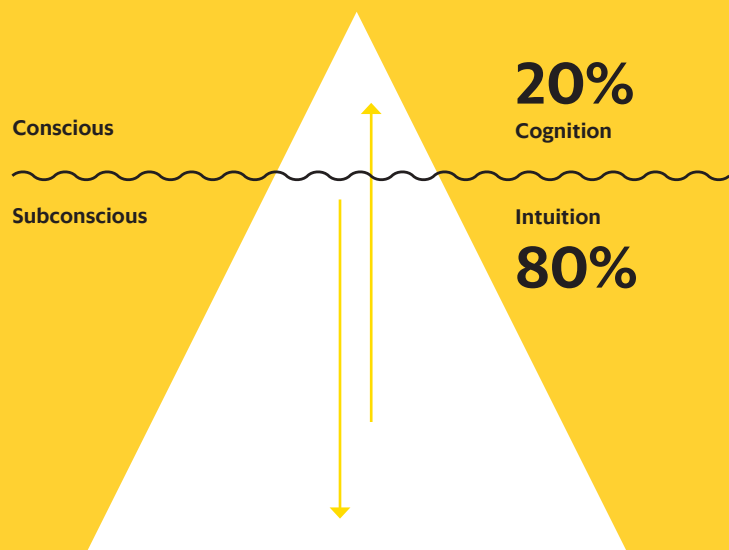
The belief that humans are rational animals who make their plans with foresight is an incomplete statement of human nature – our actions and behaviours are determined more by subconscious than by conscious motivation. Humans are driven by their autopilot: the subconscious.

The subconscious/intuition is far more active, purposeful and independent than we think. It's telling us what to do and what not to do without us being aware. As already mentioned, the subconscious/intuition is our autopilot.

What does this mean for change projects? Very simple: we need to 'talk' to the subconscious part of people's minds. Neuroplasticity is the term that neuroscientists use to describe how our brain evolves continuously – throughout our. Neuroplasticity enables everybody to change (even the most resistant and stubborn employees can change). The key is to invite minds to understand the purpose and need for change and empower them to make their own experiences regarding what the benefit of the change is. New neural networks are built constantly to understand things differently and create different behaviours. Change, from the neural perspective, is a natural process that always succeeds in achieving a brighter present and future.

## **Cognition and Intuition**

The 'tip of the iceberg' scheme is a simple model that describes our brain, the autopilot and 'intelligence'. Neuroscientists have a very simple description of what consciousness is: everything that we can either verbalise or write. The subconscious is the rest. Consciousness/cognition are 'less intelligent' (approximately 20% of our brain), slower and less powerful. The subconscious/intuition is 'more intelligent' (approximately 80% of our brain), faster and more powerful.



Source: Various authors / Derived from Sigmund Freud

# Making change happen

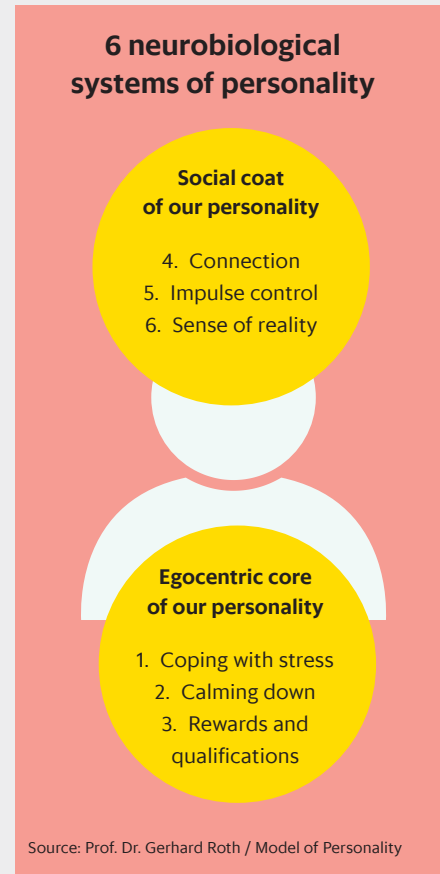
To invite minds to change, it's key to understand what is driving the autopilot, the subconscious. These drivers are described as personal psychological needs.

Two interconnected psychological models are extremely helpful to navigate through change and to define mind-changing actions: The 6 neurobiological systems of personality and the 9 psychological needs.

They help managers and individuals understand how a team handles

change: how fast they can adapt, how curious they are, how attracted they are to rewards and so on. The models offer managers and individuals guidance to understand what truly motivates their employees to change – or not to change.

Having the right tools means employees can understand their inner drivers (their autopilot) and makes neural patterns and subconscious motivations 'visible'. This invites people to reflect on their attitude and to evolve a new behaviour that supports change.



## 9 personal psychological needs – motivational dimensions of behaviour

|  | Body | Partnerships and social life | Job and power | Material safety | Sense |
|--|------|------------------------------|---------------|-----------------|-------|
| 1. Recognition and confirmation  |      |                              |               |                 |       |
| 2. Self-fulfillment  |      |                              |               |                 |       |
| 3. Connection: Safety and social contact   |      |                              |               |                 |       |
| 4. Autonomy and independence   |      |                              |               |                 |       |
| 5. Evolution   |      |                              |               |                 |       |
| 6. Self-affirmation  |      |                              |               |                 |       |
| 7. Security  |      |                              |               |                 |       |
| 8. Influence and control over others   |      |                              |               |                 |       |
| 9. Status, power, size (powerful)<br><small>(8 and 9 are usually a surprise for both the manager and team)</small> |      |                              |               |                 |       |

Source: Jorge Cendales, derived from "Operationalized Psycho-Diagnostik" (Cierpka, et al.) and "5-pillars of identity" (H.G. Petzold)

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# How to apply these models

The key success factor when using these models is to make everybody familiar with the principles of our brain and psychology, to let them reflect on the personal meaning, impact, benefit and individual solution to evolve (and change).

## Start with yourself

Conduct personal education and awareness training on yourself first to get an understanding of what motivates and drives you. If managers and employees understand the basics of neuroscience, psychology and the related processes of the human mind, they will be better able to work with the 'autopilot' to support change.

## The moment of authenticity

Leadership in today's agile and self-organised world means to be a good coach and to lead by example. Authenticity is a characteristic that our brain immediately assesses. Good leaders are authentic in expressing their conviction for change and also their emotional uncertainty about the change. By inviting employees to speak (speak = make the subconscious conscious) about their motivations and barriers (= autopilot and intuition), they will get the opportunity to develop their own authenticity (new neural networks) on how to handle and to evolve with the change.

It's important that employees understand what is authenticity, which parts of their personality support the change, which parts do not, as well as why and how to address their personal barriers.

## Teach the topics of cognition, then talk about change later

Hard facts, knowledge and science are a good invitation for people to reflect on their drivers, their autopilot (emotions) and what is in it for them to change.

Neuroscience and psychological

training has become the foundation for success in change endeavours. Run neuro-change-educational workshops with employees on the topics of cognition and give them tools on how to become aware of what parts of their deeper intelligence influence their behaviour and what their personal motivation is. Wait two or three weeks to give them the opportunity to reflect, talk and develop their own change strategies.

## Co-creation: invite people to participate and to define mutually the best way to change

Like the brain, change works best if neural networks connect – or, in other words, if you use the massive collective intelligence of the whole team on how to successfully conduct the change. Be completely sure that everybody in the company has the intelligence to develop and to find the correct path to achieve the change objectives. Let people be part of the process. This will not only lead to better, well-thought-through change initiatives but also, more importantly, participation and co-creation will promote a feeling of connection and the commitment of each team member. From a neural perspective, co-creation connects with the infinite wisdom of intuition and creates new neural networks in the autopilot (the subconscious, emotional brain) to develop new behaviour.

Without co-creation, people will feel they're being manipulated and will resist the change.

## Conclusion

By making people familiar with how the mind works and how successful change is a feature of the 'correct' mindset, change becomes something natural, evolutionary and therefore necessary to become better. Invite teams to use the infinite intelligence of the autopilot (the subconscious, intuition and emotions) to develop the best strategy and initiatives for change. And lead by example! Be authentic by speaking about your personal purpose for conducting the change, and what you fear, and invite teams to remove barriers together.

### Are we inheriting our ancestors' patterns?

Epigenetics is the study of heritable changes in gene function that do not involve changes in the DNA sequence. It explores intriguing questions such as the concept of modifying what's given in our DNA and learning new ways of thinking. Neural networks in our brain are being set up from the sixth week of pregnancy and influence our way of reacting during life. But how much of our behaviour is given by our DNA and how much is influenced by our environment and past experiences accumulated throughout life? There are theories that say part of our behaviour is influenced by the experiences of our ancestors, going as far back as three generations. This would mean that we can unlearn bad patterns of behaviour that we inherited from our grandparents if we manage to dive into our subconscious, find their source and consciously change them.

# Insurance and banking institutions need to move forward and build partnerships

**The insurance and banking sectors are facing difficult challenges. What do you consider the most urgent ones when it comes to innovating financial institutions?**

**Moska Miakhel-Stucki:** One of the biggest challenges for these two sectors that came with the new generation of millennials is the digitalisation of the business. The millennials are digital natives who don't look for personal, face-to-face interaction with their insurance or banking advisor. What they want is a fast, easy and custom solution based on their needs.

**Isabelle Rüthemann:** The younger generations are drifting away from the classical touchpoints. They want to do all their banking immediately and with as little effort as possible. Applications such as Twint or Apple Pay are good examples that fulfil these requirements. Similar solutions or partnerships for many large banks are, however, still missing.

The banking sector is still very much product -rather than customer-oriented. Certain financial institutions, for example, Money Park, have begun to optimise their processes and consulting services towards a more customer-friendly approach. In terms of customer centricity, banks are still in the first phases of

the process and must change this fast if they don't want to be outperformed by new market participants such as Hypoguide (CH) or Lemonade (US) that are catching up with them in the area of mortgage services.

**Is digitalisation and customer-oriented thinking enough or is it necessary for insurance and banking companies to change the way they think about the business and services they offer?**

**Moska Miakhel-Stucki:** Well, digitalisation alone is not enough. The insurance and banking industries must think about new services, products and ways to accompany their clients on their whole customer journey and how to position their brand in the customer's everyday life.

**Isabelle Rüthemann:** Getting in touch with the customers only when they are interested in a product or a service means missing out on many opportunities. Customers do their research about a company and its products and services long before they reach out to the company. They frequently ask their friends and families, which in return can spread it by word-of-mouth. And these are just some examples of moments in which the banks and insurance companies are not very present yet. An ecosys-

Interviewee



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tem that offers different products and services along the whole customer journey aims to cover as many of these moments as possible and create positive feelings towards the company or brand.

**Moska Miakhel-Stucki:** Developing an ecosystem that helps makes the life of a customer easier is certainly the right way to do this. However, an insurance or banking company is too small to be able to cover all the needs of the customer within the whole ecosystem. Therefore, they must think about new partnerships and collaborations with companies such as Amazon, Google or Facebook, which are able to offer much bigger ecosystems.

**Let's be a little bit more specific. A car insurer is trying to find a way to gain competitive advantage. What advice would you, as experts, give him? Where does he need to start?**

**Moska Miakhel-Stucki:** In general, car insurers need to think further than only selling car insurance to the customer. They must think about the pains a car owner faces today. Starting from the purchase of a car all the way to the daily problems of owning one, such as searching for a parking space during a shopping trip. So, the insurance company must really think through the whole customer journey and the customer experiences connected with owning a car.

**Isabelle Rütthemann:** Considering the pain points helps to understand where a car insurer can create an additional touchpoint for customers. This is especially important for insurance companies because the topic of insurance in itself is not a very attractive one for customers. Creating and offering an ecosystem that supports the customer in difficult situations may generate positive feelings and brand recognition. Just selling insurance is simply not enough anymore to give you a competitive advantage.

**You've already mentioned Google, Amazon and Facebook. Technological giants invest heavily in research and are very interested in this particular industry. How can traditional financial institutions compete with them?**

**Moska Miakhel-Stucki:** One of the competitive advantages of traditional financial institutions is their expertise in insurance or banking to the full

*Creating and offering an ecosystem that supports the customer in difficult situations may generate positive feelings and brand recognition.*

extent, including trust and the possession of data, for example, payment transactions.

The insurance and banking industries need to use this asset and collaborate with Google, Amazon and Alibaba in order to offer a broader ecosystem for their client. They should not see these companies as competitors, but rather as partners and welcome the opportunity to collaborate. In the end, it is important to answer all the needs of a customer – and those companies already play a major role in our life and cover a great deal of our daily needs. Furthermore, as fintech companies and insuretechs are very successful with their business model (due to technological advancement, data aggregation and process optimisation), the classical insurance and banking companies should consider collaboration with them as well. Some companies are already investing millions in collaboration with fintech and insuretech companies, such as Allianz with Lemonade, Baloise, Goldman Sachs and ING.

**Isabelle Rütthemann:** If partnerships with these giants are not an option, companies can try to get ahead and be faster with the launch of new ecosystems. However, this is not a simple challenge, given that Google, Amazon, etc. have huge resources and power that they can use to enter a market. If a bank or an insurance company decides to compete against these companies, they should aim for first-mover advantages. This means they need to implement and anchor their ecosystem successfully even before giants like the ones mentioned enter the market.

**How does an insurance company find the perfect match for a partnership?**

**Moska Miakhel-Stucki:** First, don't jump head-first into the newest and hottest thing. Think strategically about what opportunities are available



with the product you offer, and which synergies can benefit both companies. Then develop the necessary capabilities to define the opportunities – it can be anything from a partnership or a buy-out to a start-up. When you choose a partner, always make sure that your values and company philosophy do not differ too much.

**Isabelle Rütthemann:** Especially when a large insurance company partners with a small or medium-sized enterprise or a start up, their cultures are likely to be very different. If you want to start any projects in this collaboration successfully, a common understanding must be created. One way to do that is to create mixed project teams which will work together on new projects. It is also very important to set clear targets and to communicate expectations as well as responsibilities and who has the power to make decisions.

**We see a lot of new technology out there and AI, the IoT and machine learning are already influencing a lot of industries. How big a role do these emerging technologies play in the insurance and banking business?**

**Moska Miakhel-Stucki:** They play a major role and will change the current landscape completely. Many fintech companies are already using AI, the IoT and machine learning to offer faster and customised services to the customer. Fintech insurance companies such as Lemonade are using chatbots for the complete process of establishing an insurance policy, so that the customer doesn't need to hold on the line until an advisor speaks to them or make an appointment for simple car insurance. Everywhere in retail business and where the products are standardised, whether in the banking or insurance industry, processes are going to be automated and replaced by AI. Therefore, insurance and banking companies must think about new skills and the know-how of their employees that support and go hand in hand with AI.

**How will the new technologies affect data collection and analysis?**

**Moska Miakhel-Stucki:** AI will only function and be a real benefit when the insurance or banking company uses data from their customers efficiently and considers it a tool to bring added value to the customer. They must also be transparent and communicate openly with their customers regarding

their data, otherwise the customers will lose their trust in the brand.

**Isabelle Rütthemann:** This is especially true in this particular sector, since banking and insurance data count as very sensitive.

All three technologies work only with the intelligent use of data. The key words here are Big Data and Data Science.

**We talk about sensitive data, but all the mentioned emerging technologies raise the question of cybersecurity in this sector. How do companies address that?**

**Moska Miakhel-Stucki:** New technologies, such as the IoT, AI and blockchain, are ways to create more efficient and effective relationships between customers and businesses. They provide real-time



*Companies can try to get ahead and be faster with the launch of new ecosystems.*

interactions and more personalised content for the customers, which is primarily beneficial for them.

**Isabelle Rütthemann:** Data protection gains more and more importance as the companies are realising what potential lies within their customers' data. And the more sensitive the data, the more valuable it is. Sensitive data, such as the customer history or personal finances, say a lot about a person. The better a company knows its clients, the better it can take advantage of the customer's situation. The privacy of customers needs to be protected. Many people still don't know which kind of information is allowed to be collected from them and which is not, and are not aware of what they reveal to the companies about them, for example, by using an app like Facebook, WhatsApp, Google Maps, etc.

**Moska Miakhel-Stucki:** Insurance and banking companies must embrace transparency regarding the use of customer data and make sure that the use of data will enhance their services, products and processes in order to be more customer centric and to deliver added value. The right balance and





the transparency regarding the use and protection of customer data is crucial for companies.

**Isabelle Rütthemann:** The new technologies have the power to change whole business models. Let us think of the application of blockchain for financial services. Transactions are secured by the mass. But there is also another concern when it comes to new technologies. Insurers also have to think about how they are going to handle accidents and other issues caused by AI and machine learning. Let's take a self-driving car as an example. If such a car has been in an accident, who is liable? The not-driving driver? The car manufacturer? The software provider? What if a self-driving car gets hacked? These are all questions that insurers are currently occupied with.

### **The sector is subject to heavy regulations. Do they slow down innovation?**

**Moska Miakhel-Stucki:** Indeed, regulations slow down innovation as they do not allow companies that offer digital solutions – such as fintech companies – to compete with the insurance or banking sector. The insurance and banking landscape of Switzerland is highly regulated, which makes it difficult for fintech companies to enter the market. However, Switzerland needs to find a solution as this isolation could lead to serious economic consequences. Switzerland must ensure that fintech, insurance and banking companies can have a higher flexibility regarding their business models. They are therefore facing a dilemma: supporting fintech companies only in certain exceptions, or no exceptions and supporting them constructively? This leads to the question of how the insurance and banking sector can allow the development of this new technical world. Fintech companies also have to consider future compliance topics. They are currently out of scope because regulations are focused on the traditional banking and insurance sector. This might change sooner or later.

### **What will happen to the companies that miss out on the opportunities of the digitalisation era?**

**Moska Miakhel-Stucki:** They will be removed from the market and no longer exist. Kodak is the best example – it missed the moment to stand up and respond when disruptive development encroached on its market. Being blinded by success

# C

## Case study

### Instant insurance

One of our clients asked us for support in insurance innovation. After initial workshops and ideation, the company came up with a new idea to bring to the market: a type of insurance for the time you need it – and only for then. That meant creating an app that detects the moment when you leave your home country and enter another one – for holidays or a business trip, for example. The insurance is only active when you wish it to be, and the same goes for the fee. You only pay when you need to. The customer can choose which activities they consider dangerous, for example, skiing. The app will be able to recognise that you have passed a ski terminal and the insurance will be active. All this is possible thanks to machine learning and AI.

### Family butler

An insurance company was thinking about a new approach in the family context. The idea was to create an app that allows you to include the whole family and to have every insurance and medical appointment in one place. Having all the relevant information stored about the different insurances and add-on packages of your whole family in one place makes it easier to manage family health care. Thanks to machine learning and AI, the app provides reminders for upcoming check-ups for your kids and family members and also allows you to directly make an appointment at your health centre.







At ERNI, we practise precision in order to view challenges and solutions from the right angles.

**Marius Sălcudeanu, Billiard player and Managing Director**

better ask ERNI