



REALDOLMEN
to get there, together

CO-THINKING ABOUT THE FUTURE

#Co-creation



DEAR READER,

Welcome to the new Realdolmen SimplICTy magazine. This edition is all about co-creation and innovation. We start with a few articles discussing our 'Co-Thinking about the Future' event, where we held some fascinating roundtable sessions about various technological, economic and social issues.

These articles are therefore the result of very co-creative input from academics from Ghent University, our customers from the business world, the government, and experts from our technology partners and Realdolmen itself. Thanks again to all our participants for their enthusiasm and contributions!

Co-creation and innovation are very closely related these days. Organisations often look at digital and technological innovation as a driver for new developments in their business, but the rapid evolution and increasing complexity of these same technologies make them increasingly difficult to keep up with. This means the urge for innovation can often propel us into the arms of another.

At Realdolmen, one of our explicit values is that 'we make room for innovation'.

Innovation is the foundation for a company's growth and competitive spirit. As we've just mentioned, many companies nowadays look to technology, and ICT in particular, as the driver for this innovation, and will probably do so even more in the future. This makes innovation doubly important for Realdolmen – being innovative with our service provision doesn't just mean we improve ourselves; it also helps us create added value for our customers. Furthermore, as a trusted advisor, we don't just need to support our customers with their existing activities, but also to help prepare them for the future. We do this

by ensuring technological hypotheses are relevant, demonstrating the added value of ICT trends in practice, and ensuring companies have a technology platform they can use to manage their business in a stable way, while also being able to experiment with new developments safely without disrupting the business.

The co-creation aspect of innovation is achieved naturally at Realdolmen in our collaborations with technology partners. The main challenge here is finding the most useful and sensible ways for innovation to be profitable for our customers. Not technology for technology's sake, but always to help people and organisations reach their potential.

We also adopt an active innovative culture within our organisation. Employees are given the opportunity to contribute and develop innovative ideas. After all, the best way for an organisation to grow is through the creation of new products, services and business models, as shown in a recent study by McKinsey. This means co-creation and open dialogue with your own employees is essential.

And this is the essence of what we stand for as a company. Hundreds of Realdolmen employees work with our customers every day, using their collective expertise and creativity to work on solutions and innovation.

There's a good reason why our motto is: 'To get there, together'!

I hope you enjoy reading this magazine.

Thomas Verschuere
Marketing Manager

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CO-CREATION ENSURES SUSTAINABLE **GROWTH**

A WIN-WIN COALITION ACROSS COMPANY BORDERS

Technology is changing the world we live in at an ever-increasing rate, but ultimately it's just a tool to help people work together better. That's why, at Realdolmen, we focus on people – our employees and end customers – to help them and our partner organisations reach their potential.

Mutual understanding and complementary insights

Cooperation determines our success. It all starts with expert knowledge and ability, but you need more than that these days. We strongly believe close dialogue with your partners is essential as you work to find

the best solutions. And that's exactly why co-creation is becoming more and more important: creating new solutions through collaboration between departments within the organisation, but also across company borders – with suppliers, agents, customers, academic institutions and the government. Win-win coalitions create mutual added value.

In order to anticipate constant changes quickly and respond appropriately, coalitions need to be formed as you start looking to collaborate on new developments. This enables partners to find complementary insights faster and creates mutual understanding between the different parties more easily.

Change of mentality needed

This is easier said than done. In Belgium, collaborations like this are still largely uncharted territory. For successful co-creation, you need to be prepared – as an organisation – to enter into conversation with people outside your company walls, without knowing in advance what will be achieved or defining too definite a plan. This requires a change of mentality, and businesses need to learn how to manage this. Only then can co-creation become a fully-fledged part of your corporate culture and achieve the best results.



Beyond the technological aspect

We need to dare to reinvent ourselves at Realdolmen from time to time, and that's why we're very proud of our modest contribution to stimulating co-creation across company borders. Together with Ghent University – on the occasion of their 200th anniversary – we brought people from the business world, academic world and government bodies around the table to talk about various future-oriented matters. These talks often went beyond the purely technological aspect, because technological innovation is still just a resource and not a goal in itself.

Steps in the right direction

The 'Co-thinking about the future' event was a successful experiment for the more than 150 attendees, each with expert knowledge of the issues from their own perspective. We gave everyone a taste of what co-creation across company borders can be like, and together took significant steps in the right direction. It was the first opportunity for many of these people to enter into this kind of dialogue with each other, and it took a little while for some of them to get used to, but it was clearly a positive experience on balance. Now on to the next step.

**Tim Claes, Sales & Marketing Director
Realdolmen**



“For successful co-creation, you need to be prepared – as an organisation – to enter into conversation with people outside your company walls, without knowing in advance what will be achieved or defining too definite a plan. This requires a change of mentality”

Tim Claes

FOUR METHODS for successful DIGITAL TRANSFORMATION

Digital Transformation has become an umbrella term that people interpret differently according to their beliefs. But there are four important general conditions for digital transformation that enable your people and organisation to reach their potential.

1/ EMBRACE TECHNOLOGICAL INNOVATION



It's not the strongest who survive, but those who are best at adapting to change. This might be a cliché, but technological progress and disruption go hand in hand. So make sure you're up to date with the right technological trends, and that you know how they can help or influence your business. At the same time, you also need an IT landscape that allows you to experiment without disrupting your core systems.

2/ EMPOWER YOUR PROCESSES AND PRODUCTIVITY



Can you keep up with your customers' expectations? Are you supporting your employees adequately with IT? And ultimately, how do you measure and find out if it's all actually working? Change is the only constant, and it's best to use this as a motive to continuously improve your processes and productivity. Don't forget to gain new insights about what works and what doesn't, to be able to get started with the next change cycle. Above all, don't lose sight of the human factor, both internally and externally.

3/ EMBED CHANGE



It clearly all revolves around change, but nothing is as difficult as changing. If IT projects fail, it's very often because of a lack of acceptance by the users. So it's not enough just to build beautiful ships; you also need to make sure everyone's on board. Change management in all its facets helps you communicate and train people correctly, and so facilitate acceptance.

4/ ENGAGE A WISE COMPANION TO UNBURDEN YOU



It's best to galvanise technological evolution in collaboration with an ICT expert. The technological complexity means it's impossible to do everything on your own, after all. Realdolmen strongly believes that you gain the greatest benefits with a customised collaborative model. We can unburden you at every level, whether it's support for infrastructure, software development, sourcing or buying hardware and software licences.



‘AR will be the next platform where we will evolve into having a permanent digital overlay.’

Prof. Peter Lambert, Ghent University

@Realdolmen

‘Everyone is available and always connected, but when you really need someone, it doesn’t work’
Disappointment at #cothinking



Heard at the event

‘Anyone who says cyber home searches aren’t a problem because they have nothing to hide, has a very dull life.’

Hans Fraiponts, Digipolis



‘Innovation forces companies to make budgets available.’

Alain Grijseels, FSMA

@joren_bruninx

Realdolmen are advocating co-creation together with Ghent University, companies and governments #cothinking



Co-Thinking about the Future: een pleidooi voor buiten de lijntjes kleuren
Oms event ‘Co-Thinking about the Future’ is achter de rug en was een succes. Eind oktober verzamelden ongeveer 200 klanten, professoren, studenten,...

@dArchief - Diederik Decroix

‘Technology will play a part in every aspect of society over the next 20 years. There will be a lot of wows and exclamations’
@hinszen #cothinking.



‘Is Tesla more a car company or a software company?’

Geert Sinnaeve, City of Roeselare

@StevenRogge

Technology for autonomous vehicles at #cothinking. IPI research group #UGent. ipi.ugent.be/ipi/drupal/int...



‘Development of the internet doesn’t stop with the IoT (Internet of Things) and IoE (Internet of Everything), but will evolve more towards the IoS (Internet of Skills).’

Prof. Ingrid Moerman

‘Conceptual thinkers don’t enjoy administration.’

Dimitri Van Cauwelaert, Ghent University



‘Privacy and security are very much dependent on usage agreement. The new rules will be by design. Blockchain changes everything. It’s not the data anymore, but how you use it, that will be covered by legal liability.’

Prof. Bjorn De Sutter,
Ghent University

@ugent_fea

@ugent is ‘co-thinking about the future’ with @Realdolmen. Time for the roundtable sessions! #cothinking



‘If an innovation process fails, it’s rarely the fault of technology, but because people simply don’t want to change.’

Steve Stevens, The Factory

@Realdolmen

‘We’re seeing a clear shift for car ownership to car use. This has huge consequences for insurers.’ #cothinking



‘The healthcare market is still very fragmented in terms of technology, which makes it harder to share electronic patient records among healthcare providers.’

Dr. Ann Ackaert

@ugent

The power of collaboration: @ugent and @Realdolmen are actively thinking together about future technological, social and economic challenges, and co-creation for innovation. #ugent200 #cothinking ow.ly/YIVf30gLW2j



@Realdolmen

‘Robots won’t replace nurses in healthcare. But they can complement each other.’ Session from Filip De Fruyt = #cothinking



‘Good advice for policy makers: trust your people.’

Peter Lissack, Happy Mondays Training





@Realdolmen

'Nearly everyone around the table is wearing a step counter. We obviously want to stay active.' @JanLooy #cothinking



'The biggest question for mobility of the future: who's in charge?'

Prof. Christa Sys, Ghent University



'The future of mobility is mobility as a service.'

Hans Fraiponts, Digipolis

'The word "privacy" is often used wrongly.'

Frank Maertens, Hulpverleningszone Fluvia

@Realdolmen

'Giving #data control back to the people: is that (not) a good idea?' #cothinking



@Realdolmen

'How much of your privacy would you give up in exchange for unlimited free internet?' It suddenly goes quiet at #cothinking...



'Around 600 high school students are currently following cyber security courses, which isn't bad, but many more are welcome.'

Kurt Callewaert, Howest

'Big data gives us a huge number of possibilities, but at the moment ideas still often don't find their way to becoming concrete applications.'

Prof. Dirk Van den Poel, UGent

@Realdolmen

'GDPR could be more drastic and threatening for companies than hacking... Surely that's not the intention?' #cothinking



Is your organisation ready for change?

Everyone knows that traditional organisations with a strict hierarchy are a thing of the past. So how should they be organised? How do you change your organisational culture and what effects can you expect? And is it really a problem if you don't change your approach?

One thing is certain: organisations of the future operate very differently to their former versions. Not just because hierarchical structures are now old-fashioned, but also because everything has become much more complex: the world around us, the demands and requirements from internal and external partners and customers, and our ways of collaborating, processing information and communicating.

Breaking down borders between departments

The self-proclaimed 'management exorcist', Niels Pflaeging, talks about this in his very inspiring book, 'Organize for Complexity'.

In a complex world with complex organisations, it's better to organise yourself according to your processes with multifunctional teams, rather than working in separate departments. So it's important to be organised around a certain goal, which is usually the customer. This is a very efficient and effective approach, especially for more complex tasks.

'At Realdolmen Professional Services, we strongly believe we need to break down the borders between departments,' says Jan Graulus, Manager Professional Services at Realdolmen. 'We always need to use IT specialists to be able to answer our customers' questions. So we need to know who is available internally and externally, agree priorities with the sales department, discuss contracts, look at the required skills, and so on. This means there are lots of different departments involved in the whole process. If we continue to think in terms of specific roles per department,

we're not using all the expertise available, and running the risk of delays.'

Rigid structures versus a dynamic market

'Rigid structures are no longer efficient in a complex, rapidly-changing world,' explains Jan Graulus. 'You can't arrange everything in straight lines, for example. We receive around 160 requests a month, so we need to set priorities according to our customer

'Managing people is nonsense; you just need to let them do their work.'

Jos de Blok, founder of Buurtzorg in the Netherlands

requirements and available skills to be able to respond in the best way possible. In the past we used to define rules for this, but our market changes so fast now that these rules can stop being useful quite quickly.'

The world around us is indeed changing very quickly, with new questions, ideas and possibilities emerging all the time. If organisations continue to think traditionally in terms of departments and hierarchy, then the manager of each department becomes a kind of guru who has all the answers. But it's often the employees themselves who have the right knowledge to make faster decisions, because they're in contact with the issues in practice on a daily basis. The organisation of the future therefore consists of self-managing teams who can act quickly without always needing to seek approval.

Work towards an overarching goal

You can't scrap all the departments in an existing organisation from one day to the next, of course. So it's best to work in stages, for example by first creating virtual teams with employees who are all working towards an overarching project goal. 'We're working on this at Realdolmen now,' says Graulus. 'We also have a number of projects operating across departmental borders in the interest of the whole organisation, including a project about productivity – something that used to focus only on sales.'

More involvement improves motivation and satisfaction

Companies that stick to a traditional approach will find things very difficult, according to Graulus: 'It's a utopia to think that all innovation and new ideas need to come 'top-down' from the management.' A corporate culture where employees have more say certainly seems to work in shining examples such as the Flemish footwear chain, Torfs, and Brazilian energy company, Semco. They each pay attention to the involvement and satisfaction of their employees in their own way. This involvement results in motivated employees who

feel encouraged to think about new opportunities. At Semco, it goes even further: employees can choose their own working hours and decide how much they earn. They're also encouraged to contribute ideas and get things off their chest in regular consultation meetings. And they choose and evaluate their own managers. This unorthodox style has not done CEO Ricardo Semler any harm, and his management books with revealing titles such as *The Seven-Day Weekend*, still sell like hot cakes. But Semler's management style was still unheard of in the 1980s and 1990s.

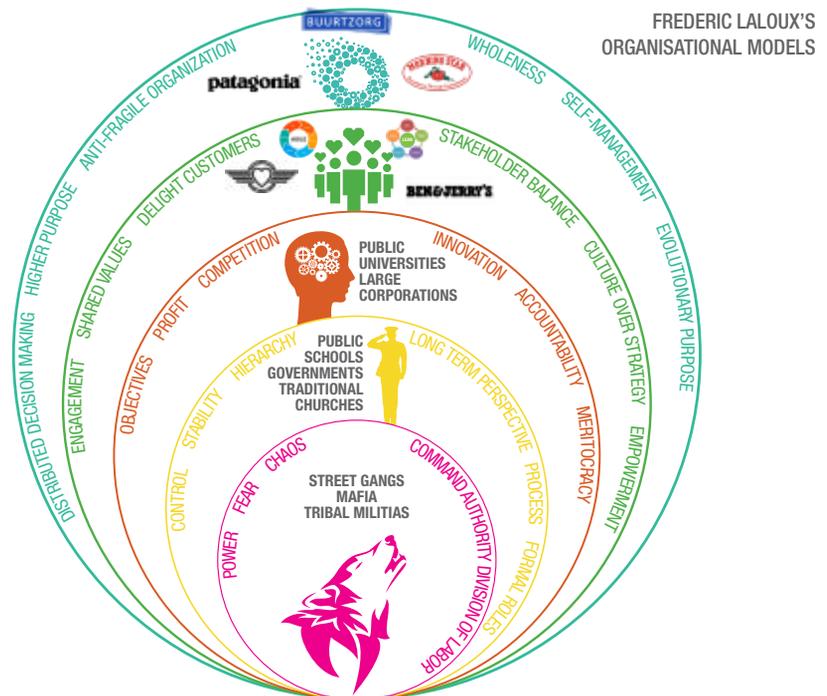
Hammocks at work

There still aren't any hammocks at Realdolmen, but employee satisfaction is still an important focus. 'We've been inspired by Frederic Laloux's book, *Reinventing Organizations*,' explains Graulus. 'He too believes in the principle of employee engagement and autonomy, and offers a number of steps for successful transformation into an organisation of the future, from concept to new

organisational model. At Realdolmen we have the Realdolmen Storyboard, which outlines our values. We always ask ourselves what corporate culture we're aiming for, and how we can place employees centrally in this. We're actively working to supervise people managers, to help them be leaders who think in terms of employee competences.'

Automating an organisation of the future

But what about the automation of approval processes? ERP systems assume a hierarchical organisation as standard, in which it's always the same people who need to give the green light before moving onto the next step. There might still be a gap here that software suppliers and IT integrators need to fill. But maybe it's time for companies and employees to shout louder about change, so that software producers can respond to the demand for automating new types of organisations.



21ST CENTURY SKILLS

Filip De Fruyt, Professor at the Department of Developmental, Personality and Social Psychology of Ghent University, doesn't paint a pretty picture when he talks about 'burnout, employees with a flat battery who need to drag themselves through the working week, companies that focus only on a minority of high potentials (HIPOs), and education that doesn't understand the development of important skills well enough to be properly armed for working and living.' But he does offer solutions.

'We can categorise the 21st century skills we need to help us to adapt to a changing, complex and uncertain world into five groups,' says De Fruyt, who performs research into the socio-emotional skills of young people, and advises organisations about personnel selection, talent development and workability. 'These skills aren't new, but they do provide a useful model. Other taxonomies can have as many as 120 skills, but then you can no longer see the wood for the trees. So it's advisable for an individual, department or organisation to work on just one or two skills at a time, to ultimately develop them for each of the five groups. You might take six months to develop a skill, for example, before starting on a second. It's also worth realising that we have already have these skills to a greater or lesser extent, but that we need to improve them.'

Skills groups

The skills that De Fruyt summarises are 'engaging with others' (social skills, assertiveness), 'amity' (empathy, having and building trust, respect), 'emotion regulation' (how to deal with emotions,

setbacks, frustrations, insecurities, stress), 'openness' (curiosity, inquisitiveness and creativity) and 'self-management' (decisiveness and perseverance). Problem-solving ability is another important asset alongside these socio-emotional skills.

'It's advisable to work on only one or two of these groups at a time – as an individual, department or organisation,' says De Fruyt. 'In the past, employees used to have to fit in with or adapt to a company, but the reverse also applies: you need to complement and stimulate each other to develop. I'm not looking for a copy of myself when I get someone new in my research group, but for someone who can do something better than I can. A group shouldn't be uniform, but a balanced whole with points of agreement. It's an illusion to think that everyone is going to master all the skills groups, so complementing each other is the message.'

Interwoven

'We can learn these skills from various places, such as at school. It seems sensible to me to interweave the development of these skills with the teaching of other subjects, such as mathematics or spatial awareness, in education. You can focus on empathy, respect, assertiveness and problem-solving in anti-bullying programmes, for example, and explicitly include the five skills groups when drawing up the curriculum. Then you can develop them further in a company or at home, in various ways, such as by using a coach, online or on a course, but also simply on the work floor by reflecting on your behaviour and performance.'

'These skills will determine how we deal with new technology and help improve our ICT, creating new possibilities and using them to collaborate and live better in general. Consider "openness", for example, and the importance of new ideas and innovation. If you earn your money by selling text messages, then you have a problem now because of WhatsApp.'

Measuring

How do we measure to what extent we already have these 21st century skills, and how we're improving them? 'That's not easy, and research into methods for this kind of measurement is still very much in development,' says De Fruyt. 'But it's a fact that we don't always work and live at the maximum of our ability. And we can cautiously state, based on limited comparative research, that Belgium scores



'The five skills groups help us adapt in a changing, complex and uncertain world.'

Filip De Fruyt, Professor at Ghent University

somewhere in the middle in terms of problem-solving ability.'

'Don't just look at what employees want when you hire them, but continue to do so afterwards too,' advises De Fruyt. 'A graduate will perhaps want to get stuck in straight away, but six years later they might have children and a divorce behind them, and so have a very different hand to play with. People need to develop both professionally and personally, and HR managers need to have a good eye for this. And what's more, just because someone is good at something doesn't mean they'll want to keep doing it. Ask them how things are going from time to time, and make sure you get together regularly. That's more important than a one-off appraisal or evaluation.'

No employee left behind

De Fruyt doesn't think it's a good idea for companies to focus only on the development of high potentials. 'If you spend your training budget mainly on sending a small group of HIPOs to follow

management training courses abroad, then everyone else will feel devalued, which will diminish their engagement. Then, when the HIPOs leave your company, you'll be left with personnel who are less well developed. Just like the "no child left behind" principle is applied in education, companies need to implement "no employee left behind".'

'It adds value to a company and society when we develop everyone from bottom to top. Even if the employee leaves your company, you're still part of their network, and they'll appreciate looking back on the opportunities they were given. So investing in people's development isn't a wasted effort. You need to all move forward together as a team. It's also not a good idea to keep changing this strategy, which is something that companies can tend to do.'

The fact that things aren't going well at the moment is beyond dispute, according to

De Fruyt: 'Research has shown that many people have no engagement or perspective. Many of them would take a pay-cut to have a different manager. But there have never been as many managers on training courses as there are now, and we've never had so many HR managers before. Too many employees don't feel good at work and are falling away. But the five skills groups will remain valuable for a long time yet, so we need to pay attention to making sure everyone remains employable.'

BIG DATA

William De Plecker, HR Director for Realdolmen, summarises three challenges in a VUCA world (volatile, uncertain, complex and ambiguous):

Managing the complexity paradox.

People have lots of information streams to process, at work and in their personal lives, partly because of social media. We also follow our friends at work and continue to be involved with our job after the working day is over, and our brains can't cope with it all. You'd think that handy apps and other technology tools would make life and work easier, but this isn't the case for the vast majority. One possible solution is being selective in the

technology we use.

If we fear missing out on something, we run this risk of missing out on even more by wanting to follow it all. So we need to dare to make a distinction between what really makes our work and personal life more enjoyable, and what leads to too much complexity. Select only the things that are necessary and useful, to protect yourself.

Cognitive flexibility and 'learning agility'

It can be hard enough hitting a fixed target, let alone a moving one. But when you do reach your set goal, you need to be able to use this learned skill to adapt to changing goals quickly and automatically. The better you can do this, the more you'll experience change as a new and enjoyable challenge, rather than a threat.

Leadership

We're evolving from being leaders who use analytical thinking to optimise production costs and processes, into a form of leadership that allows Big Data to analyse the right information to develop and sell new and better products and services faster than others. A clear vision, strategic focus and fast decision-making are vital for this.

De Plecker advocates making our education better at stimulating and supporting 'learning'. 'Why not see if teachers can be given high-quality training, during school holidays for instance, so that pupils can learn how to adapt to technological innovations in a VUCA world? This is important in terms of having a successful career afterwards, especially because this career, job content and wage evolution could become even more volatile in the future.'

INNOVATION
for the future

‘Technology means innovation can come from anywhere. IT isn’t simply an inevitable cost; it can and needs to inspire the business.’

Tom Callant, Manager Connected Company at Realdolmen



Increase THE INNOVATION success rate

First the bad news: there's no magic solution for increasing your innovation success rate. The good news: there are a number of factors that can help with the conception and implementation of innovative ideas. Innovations have related risks, but the same applies for doing nothing – just ask Kodak or BlackBerry. Amazon, on the other hand, is a good example of how it can be done.

How do you get your employees to come up with innovative ideas? Do they actually want to share them spontaneously, individually or in a group? Communication appears to be the key that opens the door to innovation. 'There are five conditions necessary for coming up with and implementing innovative ideas,' says Michaël Van Damme, Managing Partner for The Forge, a spin-off from Ghent University. 'Firstly, you need to make sure there's an obvious goal, a clear shared vision. Are you all on the same wavelength? This determines 40% of a team's creative output. Secondly, you need security. Do employees feel comfortable enough to say something? This determines whether they're inclined to share and to listen. A third aspect is support. Will you be supported if you formulate innovative proposals? Fourthly, there's quality. Is everyone striving to deliver the best work possible? Is it clear what 'good work' means, and is this monitored? And fifthly there's also the frequency of communication, formal and informal, which determines the innovation success rate.

Aim for a culture of innovation

You have a better chance of successful innovation when you as an organisation

purposefully aim to have a good culture of innovation. Innovation needs to be a part of the corporate culture for it to result in financial success. Compare this with buying an expensive racing bike. Somebody with a sporty lifestyle will achieve better performances from it and engage even more. But if you don't have this way of life already, there's a risk that the bike will go unused after a while. It's the same for a company: it's not difficult to buy tools, but they're no guarantee of achieving a good result in themselves.

Be constructive

More than coming up with ideas, selecting and implementing them is a problem. People and teams don't actually do this very well, and instead focus too much on executable ideas. A secure environment can help you not fall into this trap. Concentrate on innovative ideas first, and then think about how you make them feasible. Being critical is fine, but be constructive too. So don't say straight away that there's not enough time or money to implement an innovative idea; think about how you can free up the time or budget that you need. Or check what you can change about the idea to be able to implement it successfully.

The right associations

Employees and companies also aren't sufficiently aware of the negative associations we link to creativity: more thinking, greater risks and uncertainty, and extra work. Our behaviour is determined by these kinds of associations. So we say that we think innovation is important, but we don't always do

what we say. It's like someone who gives the impression to the outside world that they enjoy a healthy lifestyle, but who actually enjoys sitting on the sofa in front of the TV eating chips in the evenings.

Give feedback

You need to be careful you don't get stuck in one of the phases: conceiving, promoting, selecting and implementing an idea. So don't forget to give feedback. What ideas are expected and why is an idea not chosen? If you don't find this out as an employee, you'll develop a negative association and innovation will die at an early stage. An electronic suggestion box for gathering proposals isn't enough to keep motivation alive and kicking on its own.

Make the packaging convincing

The way in which you present an idea is three times more important than its content. This applies even more so for innovative ideas. There are certain tricks for selling ideas. It works better when you're perceived as charismatic, for instance. Professor John Antonakis from the University of Lausanne has shown that charisma isn't something that you either have or don't have; it's something you can train. He listed twelve techniques that determine how charismatic a person is observed to be by an audience. A manager or employer who makes a presentation to a group using these techniques will have more impact. We often think that good suggestions sell themselves, but this isn't the case. If someone with a wild hairstyle presents an idea, we consider it to be more creative because

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INNOVATION for the future



we rely on basic assessment systems. Someone who is very self-assured and scores highly on the narcissism scale is more convincing. You can even use these twelve techniques to predict if the Democratic or Republican candidate will become president of the US, for example.

Accept the risks

Even when your business is performing very well, you can't simply assume it will be doing just as well a few years from now. And innovation is also vital if you're having problems, although it's best to start being innovative when the coffers are well stocked and you're in a strong position. The entire organisation needs to underwrite this approach because engagement is absolutely crucial. When everyone is totally convinced about the importance of innovation, you'll naturally come up with more innovative ideas. But you're also choosing to take risks, so you need to be prepared for and accept some flops.

Persevere

If it's looking like you maybe won't reach your revenue target for the year, this doesn't mean you need to shelve your innovation

initiatives. Too much focus on the short term by the shareholders, CEO or managers can lead to an unbridgeable backlog. You need to dare to take a leap, just like you do in your career. Doing so means taking a risk, but not doing so is just as bad. There are always opportunities, and you're wasting money if you don't take your chances. Not doing something comes at a cost.

Added value

Bringing someone new into the organisation from outside, or regularly giving people from inside a new role, increases your chance of innovation. People don't usually stay in the same job for very long at Microsoft, for example. Internal rotation increases the added value of employees and keeps them motivated to continue helping to think about your innovation process.

Explore

Many organisations are organised completely in terms of their operations, to keep doing what they're currently doing that earns them money. But it can also be useful to let a team explore new ideas at the same time. This is certainly the case in very

competitive industries where there are companies that your organisation could possibly take over, such as the banking, media or IT sectors, where being open to innovation and change is a matter of survival.

Digitisation, a shorter or more unpredictable lifetime of products and services, and the ease with which you can switch from one supplier to another, means it's become essential to innovate faster in almost every sector. If you used to earn money from text messages, for example, your revenue has now been adversely affected by WhatsApp, Snapchat and Facebook Messenger. Law

**THE WAY IN WHICH
YOU PRESENT AN
IDEA is three times
more important than
its content. This
applies even more so
for innovative ideas.**

TIPS FOR MORE CHARISMA

A selection from the twelve charisma techniques to provide more impact when promoting an idea. It's still important that the idea is a good one, of course.

USE
personal
ANECDOTES

SPEAK
FULL OF SELF-
CONFIDENCE.



Make use of
METAPHORS



Use **variation** in your VOICE
with ANIMATED FACIAL EXPRESSIONS

ASK RHETORICAL QUESTIONS



USE
GESTURES

Set
HIGH
EXPECTATIONS



State moral convictions

Respond to
collective
sentiments



firms are reverting to chatbots to be able to focus on work with more added value. Young people are choosing who to bank with based on the quality of the app. Without an online store, a shop is now playing itself out of the game. And if you can't book a table at a restaurant online, you'll probably go somewhere else instead.

Inspire

'We're helping companies adapt their business models to the digital era,' says Tom Callant, Unit Manager Connected Company at Realdolmen. 'One of our customers is an inter-municipal waste company that recycles waste and uses software to generate its packaging declarations. Together, we're ensuring that other organisations, including from abroad, can pay to also use this same software. Consider what Amazon has done: from being just a bookseller to becoming a cloud provider, and more.

Technology means innovation can come from anywhere, and it's essential for IT and business to largely overlap in companies of the future. IT isn't simply an inevitable cost; it can inspire the business.'

Obstacles

'Make sure your company can receive ideas from every employee and is able to do something with them. All the managers' offices at Realdolmen, for example, including the Managing Director's, are open for every junior consultant to walk into. It's not always possible to simply miss someone out above you in companies with a traditional hierarchy, which means it takes too long for an idea to reach the boss – if it ever gets there at all,' explains Callant. 'But if you collect ideas through an online platform, you can build in next steps so that something can be done with them. You can even add a social aspect and then

substantiate it in more detail afterwards, or perform a SWOT analysis and leave comments.'

Reward

Provide motivation, appreciation and reward, and don't be naïve about it. Employees won't put ideas forward only for them to go to waste. So if you want people to make valuable suggestions, you need to make it worth their while, for example by allowing them to also benefit from the commercialisation of their idea.

Successful or not?

When can innovation really be called a success? You decide for yourself when a new innovation can be called or considered a success. The benchmark can for example be the financial result of an innovation, or how much your organisation learns from it.

Do you involve your customers IN INNOVATION?

The customer is central, and this makes perfect sense. No organisation in the world can allow themselves not to be customer-centric. And if you extend this even further, you involve the customer in the early stages of new product or service development. But how can this be achieved in practice?

The customer as the expert

A customer is the expert of their own needs, so it makes perfect sense to continuously check if you as a company are actually responding to their needs. This is why manufacturing companies are increasingly presenting new designs to customers more before bringing them to market. It enables you as a business to innovate without risking a completely misplaced move. 'But you can't rely on your customers too much for innovation,' says Michaël Van Damme, Managing Partner at The Forge, a spin-off from Ghent University that helps teams and organisations analyse and improve their innovation offering.

Involve customers in the design phase

Lots of big companies are working very hard on 'customer centricity': everyone in the organisation needs to consider the impact on the customer all times,' says Van Damme.

'Organisations in particularly competitive sectors, such as banking and telecom, can distinguish themselves from competitors by being more customer-focused. And that's of course why they invest so much time and energy in it. They often base themselves on data such as the NPS score, to see if customers are satisfied, when determining their strategy. And this in turn enables them to develop new services or procedures. Big data is also being used more and more to improve customer focus. Companies in the services sector don't generally present new offerings to customers in the design phase; this is more something that manufacturing companies do.'

'IT innovation often comes from projects that don't take the existing approach into account at all, because the existing approach leads to existing results.'

Stefan Smeets, Realdolmen

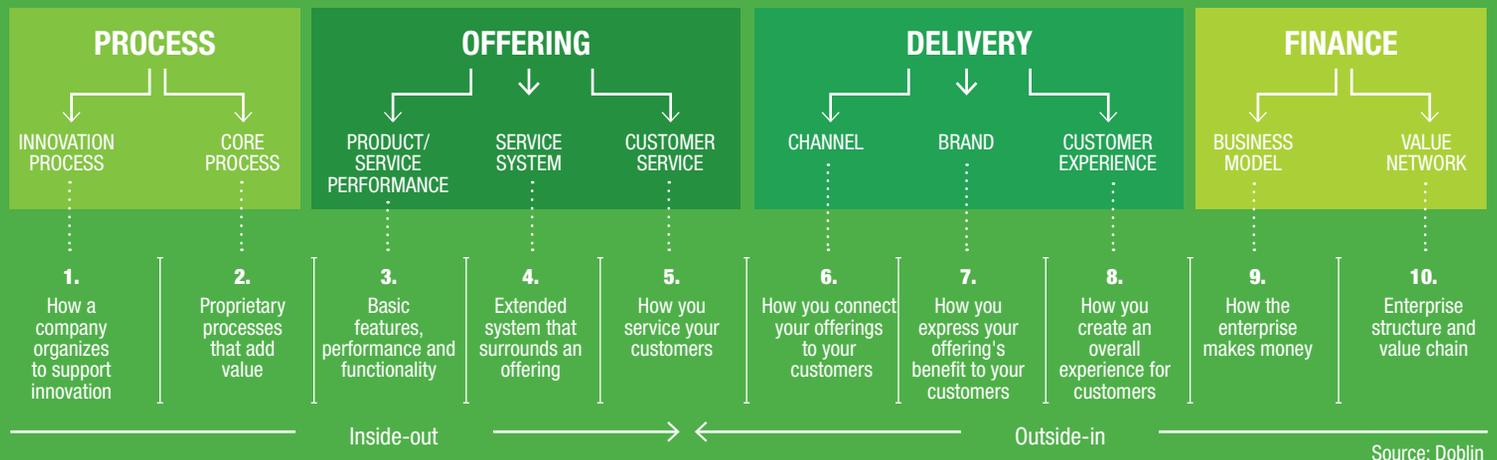
Internal innovation

Innovation doesn't only need to be focused on a new product or service, after all: the innovation could also be in the working method, for example. Innovation consultant Doblin goes as far as distinguishing ten different types of innovation. 'We're currently working with a banking and insurance company to help them develop a new, more Agile business approach,' explains Stefan Smeets, Enterprise Architect & Unit Manager Connected Company at Realdolmen. 'A new way of working such as this is a very big step forward for a company in this sector, so it can have a very positive impact on the flexibility and customer focus of its service.'

Beware of the Chief Idea Killer

Innovation always has a couple of basic prerequisites. First of all, you need to know what direction you want to go in, while at the same time allowing the management a certain freedom. All too often, the CEO is the 'Chief Idea Killer', as Peter Hinssen said during his keynote speech at the Co-thinking event. Secondly, you need to be aware as an organisation of the individual creativity of employees. Innovation is often considered to be a group process that you approach with workshops and brainstorming sessions. And it can indeed be

10 TYPES OF INNOVATION



Source: Dublin

useful to 'spar' with each other, but you mustn't underestimate the creativity of the individual.

Look for breathing space

To be able to take advantage of this innovative strength, you need to give your employees enough time and breathing space to develop their ideas. The right coaching and an atmosphere that encourages people to come up with new ideas are also crucial. Anyone who sees their ideas being rejected out of hand, or nothing being done with their innovative suggestions, is more likely to say nothing than try again the next time, so you effectively nip innovation in the bud.

Measure your innovation culture

'This is why we place the emphasis on the internal organisation processes for innovation at The Forge,' explains Van Damme. 'We use proven scientific tests to measure the innovation culture in an organisation, which enables us to map out exactly what

points they need to work on to be more innovative. One of these factors is security in the team. You need to be certain that your suggestion won't be disregarded internally, which is why we think it's better not to have customers on board your innovation team. If you actively involve external people such as customers in the innovation process, it diminishes the sense of security that enables you to speak more freely. It can of course be interesting and useful, however, to consult your customers first and then use this input internally when you're getting started.'

Innovation on an island

Innovation ideally takes place in a project or team outside the regular organisational structure, and this is certainly the case for IT projects. Gartner, for example, uses 'Bimodal IT': a two-track policy for IT. One track concentrates on the more predictable side and aims to improve the existing environment, whereas the second track provides room to explore and experiment with solving new problems.

'IT innovation often comes from projects that don't take the existing approach into account at all, because the existing approach leads to existing results,' says Smeets. 'In the best-case scenario, you even work completely separately from the existing IT infrastructure, so you're not hindered by all sorts of procedures, delaying factors or the size of the organisation. It's much better and faster to create new things when you work independently with a limited number of people.'

The outsider's point of view

A well-considered vision and active support from the management are also necessary. Innovation has little chance of success without this foundation. The ultimate intention is of course for the ideas to be introduced in practice. 'We can help with this thanks to our technological know-how,' says Smeets. 'And external service providers like Realdolmen also play a stimulating role because they can look at the existing situation from an outsider's point of view.'



HOW DO WE CLOSE THE GAP between the business world and universities?

All organisations like to think of themselves innovative, but this often seems to be counter-productive in practice. What can business leaders base themselves on when plotting an innovative path, and what role can or must science-based knowledge play?

The problem is that business leaders don't generally have easy access to university research. Not that this should be impossible, but research results are mostly only published in scientific journals. The articles they contain are written for an academic audience and aren't always easy for a layman to read. 'That's why business leaders prefer to reach for management books with all sorts of practical tips,' says Michaël Van Damme from The Forge, a spin-off from Ghent University. 'I myself have done postgraduate research into innovation psychology, and at The Forge we're trying to close the gap between innovation theory and practice, where there's still lots of work to be done.'

Afternoon naps at work

What? Some things that are written in popular management books aren't always consistent with scientific research. 'Everyone tends to regard companies like Apple and Google, where they take afternoon naps at work, as an example, but more generally applicable research results also need to be considered,' says Van Damme.

The value of management books

The gap observed between research institutions and the business world is a long way from being bridged. Van Damme believes the knowledge simply doesn't reach companies. Scientists themselves are logically mainly interested in their scientific research and publications for the academic world, whereas companies don't always question the value of commercial management books enough.

Looking for a go-between

'Access to science-based sources about innovation could be useful when it comes to bringing in people who can filter the information. But we can take a lead from medicine, where doctors have systematic access to the latest scientific findings,' says Van Damme.



KNOWLEDGE for the future

This go-between role ideally needs to be filled by a neutral party, which makes it easier to convince companies about working with scientific research. There are all sorts of possibilities here in terms of collaborations that can lead to innovation. Research that companies have collaborated on is still often viewed with scepticism, because findings might be considered less reliable as they're driven by commercial interests.

Guarantees of neutral research

'But there definitely shouldn't be any suspicion attached to university research that companies have invested in,' says Van Damme. 'Indeed, it's often necessary to look outside the academic world for more financial support. And it's very important that researchers don't offer any guarantees about the results. It is of course detrimental to fundamental research if this is considered an obstacle. Aside from that, I also think the university offers a lot more guarantees for neutral research: they're academically focused and so function as a sort of supervisory body. Companies usually know in advance what result they're hoping for, but researchers cannot take this into account because the results need to be academically correct.'

Innovation: thinking and doing

But how can you really be innovative as a company? Companies that want to be innovative first and foremost need to think about why they do something a certain way. Scientific research has shown, for example, that a clean desk policy isn't generally more efficient, just like annual appraisals or performance-related bonuses. But these are examples of approaches that many companies follow.

Professional leadership is crucial

Professional leadership plays a crucial role in innovation, and it's definitely useful to make use of science-based knowledge here. Academic studies always look for underlying mechanisms that are as universal as possible. Business leaders need to realise that there's already lots of valuable knowledge out there. There are loads of publications about innovative leadership, for example, gathering dust in university cellars all over the world. So there's already a wealth of unused information which we urgently need to make use of.



'University research that is supported by companies is still often viewed with scepticism, even though the academic input is nothing but a guarantee of neutrality.'

Michaël Van Damme, The Forge

WHO WILL HELP MAKE OUR CITIES SMART?

Smart technology can help us live comfortably with more people in a smaller area. But the smart city concept is still in its very early stages here. Who can help us?

EUROPE?



European governments have already formed several standards around privacy, open data and accessibility. But their effective implementation is actually causing more competition than collaboration among Belgian towns and cities. They're naturally trying to spread financial support geographically, so that everyone stays on their island. But there are economies of scale to benefit from by looking over the borders.

PILOT CITIES?



Of course, we can't fully copy-and-paste the Berlin model across for Antwerp. Large smart cities such as Copenhagen, Barcelona and Chicago are sharing their expertise and advice, however, with other local governments to help them get started faster. There is a role here for IT suppliers that are gradually gaining experience in different communities. They will eventually create best practices and templates for municipal authorities to choose from.

OUR NEIGHBOURS?



You'd think that a smart parking app from Roeselare would be quite easy to copy for use in Tielt. But most local initiatives appear to remain local. Are our communities currently operating in small islands? Just have a look over the fence at our neighbour communities; they often have the same needs, so you can share costs and knowledge.

FLANDERS?



With Smart Flanders, the Flemish government has been supporting thirteen cities with their development into becoming smart cities since the start of this year. They're focussing on open data and stimulating collaboration between cities. Local communities are also forming more regional clusters to create economies of scale, for example in South West Flanders. This will make Flemish towns and cities smart faster.



FLANDERS AS ONE BIG SMART CITY

Will Flanders soon be known as ‘Singapore on the North Sea’? This could happen if we merge all our urban projects around the use of technology and turn Flanders into one big smart city. But is this technically – and politically – achievable? And what benefits would it bring?

There are certainly some striking similarities between our region and the city-state in Southeast Asia. Both have around the same number of residents: roughly 6.4 million in Flanders compared to some 5.6 million in Singapore, although Singaporeans need to squeeze into just 716 square kilometres, whereas we have a lot more space with 13,500 square kilometres. And we’re more or less at the same level in terms of average income per family, too.

But there is one big difference: Singapore is almost always ranked as one of the most advanced smart cities in the world. And Flanders isn’t. Although maybe this is about to change...

Joining forces

Smart city projects are already running in various Flemish cities such as Antwerp, Ghent and Kortrijk. The aim is always to organise the city better, and make it more enjoyable and efficient, through the use of technology. ‘You can see that sensors or GSM signals are being used to try to help with traffic flows in large cities, for example,’ explains Tim Pots, Sales Manager Public Sector at Realdolmen. ‘This data is then analysed to be able to gain new insights, so that traffic can flow through the city more easily, and car drivers can find a parking space faster, possibly even in combination with services such as Waze.’

>>>

FLANDERS AS ONE BIG SMART CITY

MY TRAFFIC APP IS SMARTER THAN ME

Cars are gradually becoming smarter on their own than when there's someone in the driving seat. Smart apps map out traffic flows and can calculate the fastest route to your destination, even taking congestion and delays with the train into account. So the focus shifts from the means of transport to mobility. What does this entail and what benefits can be achieved?

MOBILITY AS A SERVICE

Imagine: you need to travel from Halle to Ghent. You enter the addresses into a mobility app and are given various options: you take the train that leaves in 15 minutes; you join a car driver who's making the same journey and want to carpool; or you can hire a car around the corner and then drop it off in Ghent. You choose the second option and pay automatically using the mobility budget you receive from your employer. This is 'mobility as a service': you don't own a subscription or means of transport, but you can still 'use' or 'share' one. Smart apps also calculate which situation will get you from A to B the fastest.

WHY DO I WANT MOBILITY AS A SERVICE?

Self-driving cars alone won't solve the traffic congestion problem. But if we use smart apps to make different choices based on journey time, ease or cost, we'll be more aware of how we're travelling in future. If you don't own your own car anymore, you're more likely to use other means of transport. The environment and your wallet will benefit too. Instead of providing a company car, employers can offer a mobility budget which their employees are free to spend on mobility as a whole.

Cities like Ghent and Kortrijk are of course small fry compared to some of the large smart city projects worldwide, such as London, Barcelona, San Francisco and Oslo, as well as Singapore, of course. Of these, only Oslo with around 630,000 residents is of a similar scale. And that's why there are increasing calls to combine all the individual, relatively small-scale projects into one big project, and so also to turn Flanders into one big smart city.

Technically achievable

'That would provide several benefits,' says Pots. 'Traffic monitoring is currently done at city level, for example, but it's clear that it's also a real sore point regionally. The many traffic jams result in stress and wasted time, and cause considerable harm to the economy. But it could also be very informative to investigate the impact regionally in terms of air quality – another parameter that you see emerging in various smart city projects.'

'The long-term approach adopted by the academic world can be a very welcome addition to the vision created by town and city councils, which often want to see concrete results as quickly as possible.'

Philip Leroux, IDLAB



This wouldn't be too technically difficult, suspects Pots: 'All the existing projects can continue as they are if the results of the many measurements that are currently taking place can be shared in a uniform manner. Flemish Minister of Home Affairs, Liesbeth Homans, recently allocated €4 million to guarantee this through an open data platform. In other words, it's not necessary for the same sensors to be installed all over Flanders, as long as the results are comparable. This means huge investments would not require all the existing projects to be combined straight away.'

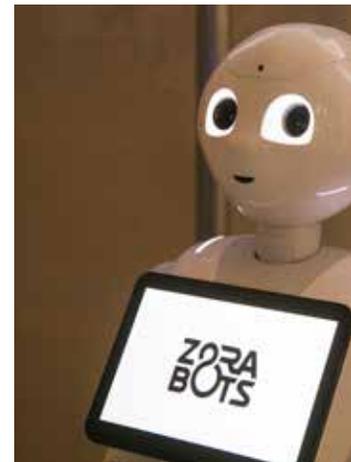
Co-thinking about the future IN THE PICTURE













HOW SMART IS A SMART LAB?

Organisations work together in a smart lab to be able to develop new technologies or applications faster. A 'smart lab' can be defined in various ways. Unlike the term might suggest, it isn't an inventor's laboratory and it doesn't even need to be in a fixed location. So what is it?

A smart lab is mainly concerned with co-creation: multiple partners creating something new together. This doesn't mean breaking down doors that are already open; it's always about the very latest technologies and possibilities, such as predictive BI, Artificial Intelligence, the Internet of Things and Blockchain. But before you start working in a smart lab, it's important to look at the added value that everyone can contribute. There's often an IT partner who can make a useful technology platform available as the basis for a new development. There can also be a partner at infrastructure or application level, or – at least as important – an organisation that frees up sometime for its employees. Finally, ideally there's also a customer with an interesting practical case.

Write a story together

The smart lab partners write a shared story together. They outline a scenario and use this as a basis for designing a Proof of Concept (POC) or minimum viable product (MVP) to be built for the customer. If possible, it's a good idea to involve the customer in the scenario phase already. It is after all important that a new development offers an answer to specific problems or demands in practice. But you also need to know what's going on with your customers. This isn't normally a problem, but it can be useful, for example, to hear what your customers have to say in user groups or meetings. Then you can also suggest new ideas – throw them open to the group – so that customers have the opportunity to help consider the concept and develop the idea. This immediately makes things more specific.



THE BENEFITS OF A SMART LAB

- No investment in building blocks that you haven't got.
- Based on existing resources (time and budget).
- You build more together than you do alone.
- Access to a bigger network of contacts.
- A shorter time-to-market for suppliers and customers.
- The (financial and other) risks are spread.
- You can expand the collaboration structurally, for example in a spin-off.

The proof is in the pudding

Why is this customer involvement so important? Simple: a smart lab isn't a playground for non-committal experiments – it needs to be focused on practicability. The customer makes their IT environment available to test the new concept too. If it turns out positive, then you have a new product that no longer needs to prove itself.

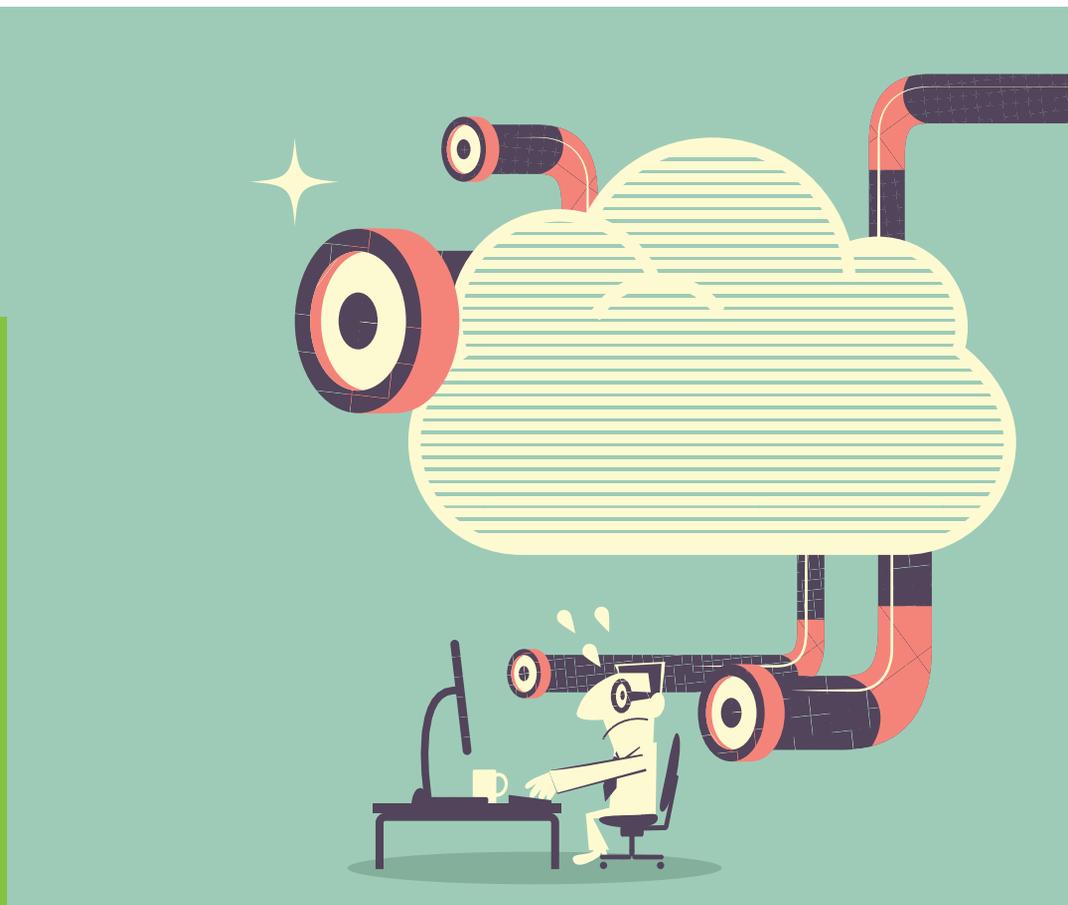
IS BLOCKCHAIN FOR YOU?

The rapid advance of digitisation, with different types of devices, and the fact that we want work everywhere with our applications and data, makes us much more vulnerable and dependent on networks, software and hardware.

Blockchain – a distributed database – can be a good alternative to a central database for more security and privacy protection. Regular databases will continue to play a major role in many cases, such as when the parties involved trust each other, for example internally in an organisation. But in other cases, such as for notaries or land registers, the blockchain can replace the third party because it is trusted by the other parties, who cannot afford to trust each other so readily, but still want to carry out transactions together. Blockchain can work very well in the airline industry, for example, where you can use it for cancellation insurance: the refund is paid automatically when the conditions are met, without any intervention from an insurance company.

You can also use it in elections, adding every vote to the blockchain, so you don't need to keep cast votes in a central database, which could be vulnerable to manipulation and falsification.

The core of a blockchain a distributed database that cannot be corrupted because it's too costly to mess with the data in the chain. There's also no central point of vulnerability, and no owner or manager of the data. The data isn't all stored together on one server, so it's not attractive to hackers.



product developers now think primarily about its performance and user-friendliness, with security seen as a kind of like a plaster stuck on afterwards to cover things up.

‘Using secure programming languages is something that can help software developers,’ says Prof. Bjorn De Sutter from the Computer Systems Lab at Ghent University. ‘The big software industry players are already using them. But there’s also a gulf between these developers’ knowledge and how it’s applied. The fact that they sometimes deliver suspect code can often be explained by them only being involved in or responsible for part of the process, and not the whole thing. They probably don’t see security and privacy as part of their responsibilities, or don’t know how their code fits into the greater whole. So it’s a good idea to use tools, just like a spell-checker for texts, to systematically verify that the code you’re writing is actually secure. Small Belgian companies like Sensei Security are taking the lead when it comes to developing these tools.’

Costs and benefits

Technology giants cannot afford to allow their security or protection of personal data to leave anything to be desired. It’s imperative for them to maintain a good reputation on this front. They also have large budgets to invest, so they don’t need to take any risks. The same applies for cloud computing providers: if you earn your bread and butter by making servers or applications available, you can’t afford any loss of data or harm to your reputation. IaaS and SaaS providers are already focusing on security to convince doubters, and have so many users that they can spread the cost of investments in security and privacy protection over a large number of customers.

It’s best to consider security from various perspectives. Are the network, hardware and software all sufficiently watertight? Because there are possibilities to break into a system at each of these levels. The thing that’s still holding



some people back from ‘privacy and security by design’ is the cost. But the cost can be much higher if you don’t do it. It’s no longer acceptable for there to be any chance of this data being up for grabs.

Responsibilities

The GDPR imposes responsibilities. You need to be able to retrieve the data you hold for someone with the click of a mouse. No more searching for where it might be. No more systematic and structured storing of data on personal PCs or employees’ smartphones. Especially as popular cloud services like Microsoft 365 and Office 365 are offering more and more GDPR-oriented functionality.

Customers are also taking providers’ reputations into account. Those that don’t appear in the press with negative stories about data theft or loss have a definite advantage over those that do become a victim of this. Any system or network can be broken into in principle, but you need to make sure the core – the information itself – is impenetrable.

Risk analysis

Roelof Van Steendam, Security Specialist for Realdolmen, has seen a dramatic increase in the number of companies appointing a CISO alongside a CIO on the management committee over the past ten years. The Chief Information Security Officer works on the high-level corporate vision and strategy around IT risks and security. We don’t see CISOs so often in some sectors and smaller organisations, but risk analyses with subsequent actions to reduce or exclude any threats are strongly recommended. The top dog can then decide whether to follow

these recommendations; it is after all the CEO who is often best placed for this in a small organisation, because security and privacy are a matter for many, and not just the IT department. Privacy-related data can for example involve contracts, bookkeeping, sales, support and marketing.

The architecture, technology and business processes in your organisation must conform to the GDPR, but you need to ensure your employees know about it too, and that they’re aware of their own responsibility and can adapt their behaviour if necessary. People are creatures of habit; they like to keep doing things the way they’ve always done them.

‘It can be good to collaborate with an external party such as Realdolmen, which works on a strategic, tactical and operational level, to carry out a risk analysis,’ says Van Steendam. ‘We list any existing risks, and outline a pathway for evolving from the existing to the desired situation. We check where the weak links are, what the potential harmful impact of this is, and which priorities we need to set. We give your employees the knowledge they need, and supervise the changes, so that they readily accept the GDPR-compliant technology and business processes, and act accordingly. We predict, for example, that the GDPR will result in us storing less data, because of the inherent risks this entails; you don’t need to keep stockpiling a lot of the data permanently.’

Tools

‘The Microsoft 365 cloud services offer a set of tools to ensure that the data which you do still save is GDPR-compliant, and Realdolmen can assist its customers in their integration. The operational monitoring of security breaches is also very important. Breaches often aren’t seen in time, and sometimes even go completely undetected, so it’s worth considering SIEM software (Security Information & Event Management) or paying for supervision-as-a-service from a security operations centre. Realdolmen offers this service to organisations that don’t want to implement SIEM or who prefer an OPEX model. You can liken this to surveillance cameras: if you want to intervene in time, the images need to be monitored by a professional who recognises that someone with bad intentions doesn’t want to be noticed.’

‘Unfortunately there’s no product that works as a universal cure to make everything GDPR-compliant,’ concludes Van Steendam. ‘But starting with a risk analysis and specific recommendations about how to deal with the technology, business processes and human aspect to make your organisation GDPR-compliant means you’ll avoid fines, harm to your business and image, and loss of operational efficiency, which would be much more expensive than continuous attention for security and data protection. Everyone prefers doing business with a company they trust.’

‘There’s a gulf between these software developers’
knowledge and how it’s applied.’

Professor Bjorn De Sutter, Ghent University



OPENING UP DATA WHILE ENSURING PRIVACY

Organisations such as hospitals share patients' personal information with doctors, physiotherapists and other hospitals. From 25 May 2018, the safeguarding of privacy will become even stricter with the GDPR. Thierry de Vries, Secretary-General of Realdolmen, explains the regulations and how you can prepare yourself.

What details are we talking about?

Thierry de Vries: 'We're talking about personal details and so not, for example, about data produced by the Internet of Things, on the condition that this doesn't include any private information you could identify someone with. The GDPR protects the personal data that an organisation processes or has processed by a third party.'

So what is personal data, exactly?

'Personal data is information which you can identify somebody with, such as a phone or ID card number, location information, or details about a person's physical, genetic, psychological, economic, cultural or social identity. In the case of a hospital, this includes data about current and former patients, employees, suppliers and directors.'

Who is involved in processing data?

'The processing of personal data includes, among other things, the automated collection, organisation, storage, updating, consulting, use, combining and making available of this data. There are often three parties involved in the processing: the 'data subject' – the person whose data is being processed, the 'controller' – who manages the processing, and a 'processor' (in GDPR terminology). The latter can be a company like Realdolmen, which saves the data in its cloud. And the controller is the organisation, for example the hospital, which determines the goal of the data processing.'

When is personal data opened up?

'Opening up data means that the controller has to share the personal data that they have with processors or other controllers, such as another hospital, doctor or

physiotherapist. This has actually been the case for quite a while already. Consider for example the sharing of information via EDI or 'electronic data interchange', which is a standard for exchanging orders, among other things. The emergence of the internet has increased awareness about privacy protection in Europe, and the European Commission wants to stimulate e-commerce but realises that citizens need to have confidence in companies that trade online. Problems in the past have made us more attentive to data protection.'

Have there been any evolutions in data sharing?

'Open data is an interesting development. Providing access to data that governments have can lead to innovation and economic growth. According to one European study, the economic benefits could be as much as €40 billion per year in the EU. The data is suitable for re-use in new products and services, for example in terms of mobility. This of course involves completely anonymous data, or when there's explicit permission that can be demonstrated.'

When can you open up your data?

'Data can only be opened up when someone has given their explicit permission for the purpose you want to share the data with a third party for. The person in question must be well informed before they give their consent. You always need permission if you want to share or process the data, or have it processed, for any other purposes.'

How do you ensure privacy isn't threatened when data is opened up?

'The controller is obliged to take appropriate

and effective measures, and must be able to demonstrate this. The nature, scope, context and aim of the processing, and the risk to the data subject's rights and freedoms, must be taken into account for these measures.'

How can IT help to open up data and safeguard privacy?

'This is possible on various fronts, for example with IT architecture consultancy, data management including data 'discovery' and classification into structured data sources, hiring an ethical hacker, identity and access management, the development of secure software, and by using a security operations centre.'

If you open up data, can the data subject have access to it?

'Data subjects always have access rights to their data, regardless of whether it has been opened up or not. As a controller, you're obliged to implement a procedure which enables the subjects to manage their data quickly, easily, and free of charge. The person can request their data to be corrected or deleted, or for its use to be limited.'

Why is it important to safeguard privacy for open data? Don't we give up too much privacy already?

'Guaranteeing privacy is always important. If someone provides their personal data to a third party, they must be well informed and do so explicitly. Controllers and processors, for their part, must be worthy of the trust that person places in them, and remain so.'

Tips for EARNING MONEY WITH DATA

Research firm IDC expects there to be at least thirty billion devices connected to the internet by 2020. Each of these Internet of Things devices stores data. What does this mean? The amount of data available is growing exponentially, and this is making companies salivate, because lots of them are sitting on mountains of data that can provide them with all sorts of new insights, which can in turn lead to new data-driven revenue models. But how do you as a company succeed in earning money with this data? We provide a few important tips and points for attention below.

Start small and build step by step

How do I get started? This is the question that lots of companies are currently wrestling with. We can't give you a general step-by-step plan, because the situation is different for every company. We do advise you to start small, however. Begin with a single project and clearly outline what you want to achieve. Once you've got a good picture of your goal in mind, collect the necessary data to then be able to analyse it comprehensively. Can't you just throw all your data in a big pile and let an analyst loose on it, in the hope something valuable will come out? No, there's only a very small chance that this would lead to relevant insights.

Go for the quick wins

The main advantage of starting on a smaller scale is that you can achieve several quick wins in the short term. This is necessary to keep motivation in the team high to want to continue with it. You can build further on the data from your first project in a subsequent project. This means you're always going a step further and thinking in the long term.

Create added value for your customers

When you're thinking about what you want to achieve with your data analyses, always think in terms of the customer. What do I want to achieve with my data analysis so that I can create added value for the customer? This added value very often comes in the form of a personalised offer. Netflix, for example, analyses which types of films and series individual viewers watch very precisely. This data is then used as a basis for making personalised suggestions of other films or series that their customers will probably enjoy watching. The added value? The customer receives personalised offers that they don't need to do anything extra for.

And the GDPR?

What about the privacy of personal data with the new GDPR legislation that comes into effect on 25 May 2018? Also in this context, it's all about creating added value for your customers. Customers are much more likely to give permission for their data

to be used if you can offer them just that little bit more.

For smaller companies too

We used a giant, Netflix, in the example above. But this doesn't mean it's impossible for smaller players to earn money from their data too. We often hear that they don't have enough data to be able to perform analyses on it. But small organisations' customers also leave lots of useful data in their wake. Just think of loyalty cards or clicks on an online newsletter, for example. Surely it would be a waste not to make use of this? And there's lots of data that's free to consult on the internet too, or you can even buy certain data. So a lack of information can easily be compensated for in many cases.

Don't wait any longer

What are you waiting for? Good question. Now is the time to get started, and there are several reasons for this. One main reason is the customer. They increasingly want a personal experience, so the more personal a company can be in approaching its customers, the greater the chance of success. Data is essential in this respect. And the technology is ready for this big data too. There are more and more software tools available to help you analyse data, and the emergence of the cloud means storage is no longer a financial stumbling block either, even for organisations with a smaller IT budget. Offering online services via a cloud infrastructure also means you can try things out much faster without having any financial hangover.

So now's the time to take the first steps. Define an objective, put people with a variety of skills together, and see what comes out. Do you get stuck? Then look for the right partners to help you. People and companies are often more open to sharing information than you might think. It's a question of knocking down the walls and creating a win-win situation.

THE SORCERY OF THE DATA SCIENTIST

Do you want to turn data into gold? Then a good data scientist who can convert all this data into meaningful insights can definitely come in handy. What can you expect from a data scientist and how do we see the role of data scientists evolving?

Linking analysis to insights

What good is data to you if you can't gain useful insights from it? No good at all. But how do you gain these insights? This brings us to the two core tasks of a data scientist: analysis and advice. First and foremost, a data scientist needs to be able to make analyses. They need to find correlations in huge amounts of data, so a statistical background or affinity with statistics is a prerequisite here.

Is your data scientist statistically inclined and able to find correlations in mountains of data? Great. Now you need to make sure they come up with relevant insights. A data scientist who can prove statistically that more ice creams are sold on a hot summer's day won't add much value. So knowing what's going on in the organisation and linking relevant insights to targeted actions is another very important requirement.

The impact of artificial intelligence

A few years ago, being a data scientist was still seen as a profession of the future. But what if artificial intelligence soon makes it

possible to build autonomous data models and find correlations without the intervention of data analysts? Research firm Gartner predicts that more than 40% of a data scientist's tasks will be automated by 2020.

Yes, AI will take over the data scientists' tasks. But these will mainly be the repetitive tasks, and human creativity is something that artificial intelligence can't offer us, yet. That's why we see AI as a tool that will help data scientists, rather than a machine to take over their role.

Data scientists' specialisation

There's no doubt that a data scientist's tasks will evolve quickly, and AI will definitely have a major role to play in this. We also expect that data scientists will specialise in specific sectors and domains more and more. So we'll have data scientists who specialise in the transport or retail sector, for example. But specialisation will also become the codeword within the organisation itself. Having data scientists who specialise in marketing, sales or HR is an evolution that we see happening quite soon.



REALITY
of the future



AR:

A DIGITAL LAYER over reality

You wake up and open your eyes. A lazy hand gesture or even a thought makes your diary appear in your left field of vision, with your Facebook feed on the right. Our mornings might start to look very different with augmented reality (AR). The technology still has a long way to go, but it's not pure science fiction either. You must remember all the hype about Pokémon Go, for example, when we still used our smartphones to project virtual monsters in our world. But with devices like the Microsoft HoloLens, we can now throw a virtual layer over our entire field of vision. Will we always have a digital layer over reality, wherever we go, in the future?

A logical evolution

The way we find and use all kinds of information with technology has changed dramatically over the years. From the first computers, which often occupied whole rooms and weighed several tons, to our 13-inch laptops weighing no more than a couple of kilos. Then the arrival of the internet enabled us to find information even more efficiently with our PC. Then came the iPhone, the world's first smartphone, which literally gave us all this information at our fingertips.

So we're always on the lookout for new ways to find information quickly and easily. And at the same time, the devices we use for this have got smaller and smaller. The smartphone gave mobility a massive boost, but our apps are actually still quite clumsy. And we also want to display digital information as realistically as possible; the graphics in video games are now impressively lifelike and we're using 360° videos more and more. Augmented reality is a logical next step in this evolution; it displays digital information in the real world, we can easily call up information with a hand gesture or even a thought, and ultimately we'll barely still need a device at all.

The possibilities for improving our day-to-day lives are endless

A permanent digital layer can literally improve our reality. You try on a new dress in the shop and a pop-up display in the corner of your eye shows the various colour options. Do you want to know if a particular colour suits you? Then you only need to select the one you want, and the dress you're wearing will appear in your chosen colour. You can also benefit from AR in the supermarket. Choose a product and you'll see extra information projected, such as its origin, best before date, or a recipe.



There are lots of applications conceivable outside retail too. Companies are constantly on the lookout for experienced engineers, but they're not always easy to find. Augmented reality can easily help less well-trained people perform maintenance on machines. The technology projects various instructions and animations on to the device to guide the person in question through the maintenance procedure. This can add real value, especially in a sheltered workplace where employees need lots of supervision.

The stone age of augmented reality

Even though we can already come up with lots of possible AR applications, there's still a long way to go. Lots of progress has already been made, but the technology is still in its early stages. Just think of the devices that currently make augmented reality possible, for example. They're often heavy, cumbersome headsets with lots of wires attached. You can't really call them mobile or handy. Ideally, just putting in a contact lens would be all that's required, but the necessary computing power, sensors, cameras and projectors aren't quite compact enough yet.

We also need to think more about the augmented reality interface, for example how to control it. At the moment, extra controllers are still being used which you need to carry round with you. Hand gestures, or even some kind of brain interface that responds to our thoughts, could provide an answer. But especially for the latter, there's still a lot of work to do in terms of having the right technology for everything to run quickly and accurately.

The way in which we'll display all our information and apps in the future is another hard nut to crack. We don't want to be overwhelmed with windows and messages; otherwise we won't be able to see what's going on around us. You might think this wouldn't be so difficult, because in contrast to a small smartphone screen, you now have a whole field of vision to play with – actually a big screen. But it's still a huge challenge because the amount of information we need to display is also increasing.



'We're still
in the **stone age**
of AR technology.'

Professor Peter Lambert, from Ghent University



HUMANS
of the future



‘Can’t we use
our time more
usefully and
enjoyably by
letting robots
create prosperity?’

Jonathan Van Beneden, Realdolmen

WILL WE BECOME ROBOTS?



That would make the Olympic Games fun in 2056, say, with athletes running the 100 metres in a couple of seconds, jumping fifteen metres high, or throwing javelins right out of the stadium. New developments in robotics will mean we could massively improve the human body in many ways over the next century. Good for fans, but not everyone will be happy about it.

Wanting to push boundaries is a very human quality. Not just in sport, of course; we're constantly trying to improve our performance on many other fronts, too. And we're not afraid of technology in this sense. We're seeing further than ever before with new telescopes, driving faster cars (traffic jams permitting, at least), and aeroplanes have long since fulfilled the age-old dream of being able to fly.

'But new developments in chip technology and robotics are creating completely new possibilities,' says Jonathan Van Beneden, who is researching the possibilities of Virtual and Augmented Reality technology at Realdolmen. 'It's becoming increasingly likely that we'll start to modify our bodies with these innovations to enhance our capabilities and performance. Cyborgs are gradually becoming less a character from a science fiction story, and more a realistic picture of the future. So it's high time we start to consider how to go about it.'

A computer in your head

A cyborg is a human being that has been improved with technology. So simply putting on spectacles doesn't turn you into one, because that's just compensating for a deficiency rather than making you perform better than an average person. And the glasses aren't actually a part of your body, anyway. Someone with a cochlear implant – call it a built-in hearing aid – comes a bit closer to being a cyborg, however, because with fine tuning, it can help them to hear better than others. There are also prosthetics that are stronger or more precise than the limbs they're supposed to be replacing, especially arms. And those blades that helped Oscar Pistorius run so fast – before he was sent to prison – count too, even though there's no electronic or robotic technology involved.

'It's not just limbs that can be replaced by improved copies,' says Van Beneden. 'There's also the possibility of lenses, for example, which can be placed on your eye and connected to a chip in your head. This would make it possible, in principle, to project extra information onto your eye – applications that the Google Glass and Microsoft HoloLens, among others, are now making use of.'

It will of course become even more impressive when you can build a whole computer – of course connected to the internet – into your head. You'd never need to remember anything ever again! Make outrageous calculations as quick as a flash! Speak all the languages in the world! The possibilities are endless.

If you can't beat the robots, join them

It goes without saying that such drastic adjustments could have very significant consequences. 'You can see lots of points for discussion straight away, especially on an economic level,' says Van Beneden.

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HUMANS of the future

'A technologically "improved" person can be much more useful to an employer than a non-rebuilt version. I'd surely be able to do certain jobs faster if I had eight arms. But this puts pressure on people who'd prefer not to have this technology in their bodies, of course. And this is where a line is drawn for me; wanting to improve yourself with high-tech equipment needs to be a personal choice, I think. It can't be imposed on you – not even for medical reasons. That's also why I think it shouldn't be allowed to alter unborn children, for example to make them more intelligent, stronger or faster, because they're not able to make that decision for themselves.'

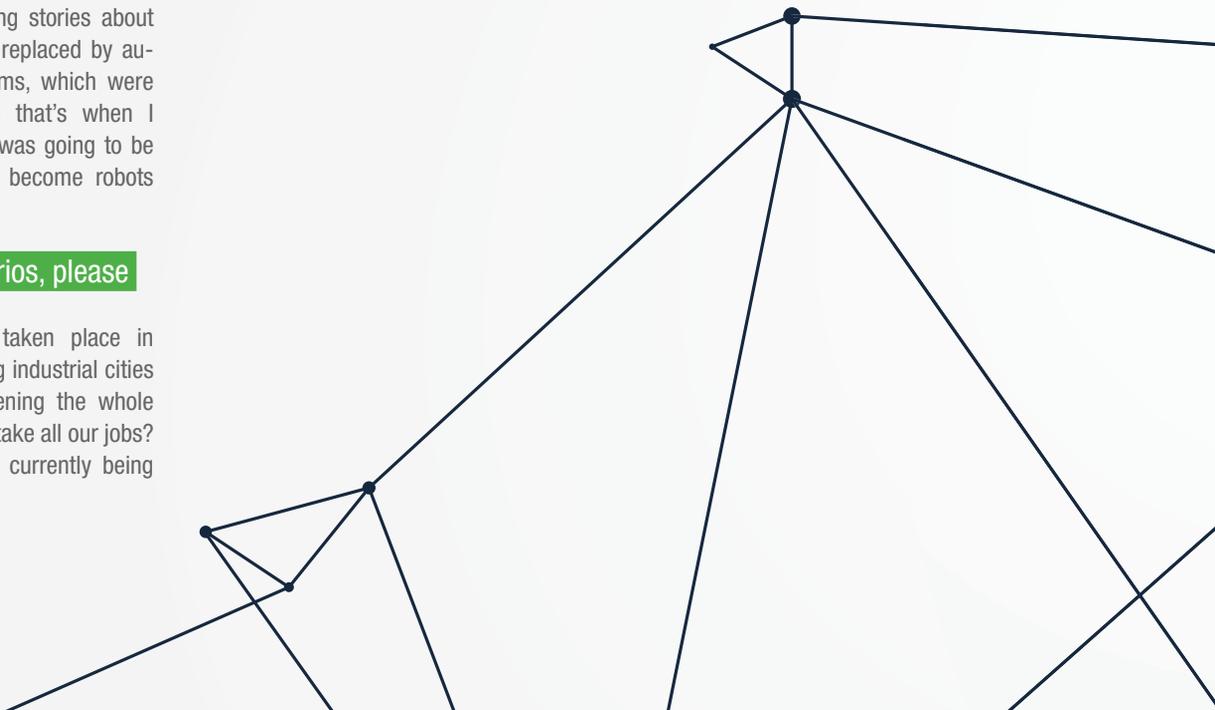
In the American city of Pittsburgh, Tim Cannon has set up a so-called 'biohackers' collective, with the aim of using all the possible technological innovations to overcome the limitations of the human body. The fact that this is taking place in Pittsburgh is no coincidence. 'This used to be a very prosperous city, which was made big by the steel industry,' he explains in a documentary about cyborgs. 'But when I was young I kept hearing stories about people being laid off and replaced by automated production systems, which were mostly called robots. So that's when I thought that if the future was going to be all robots, why don't we become robots ourselves?'

No doomsday scenarios, please

The evolution that has taken place in Pittsburgh and other fading industrial cities now seems to be threatening the whole world. Are robots going to take all our jobs? 'It's clear that many jobs currently being

done by people could actually be done better by robots,' explains Van Beneden. 'In ten years, for example, we'll need much fewer truck drivers because lorries will perhaps be able to drive to their destination autonomously. But jobs will undoubtedly be lost at consultancy firms, too. Complex audits, which now sometimes take weeks of work, could be processed much faster and more accurately by a powerful AI system.'

It greatly disturbs Van Beneden that people mainly believe doomsday scenarios about developments like this. 'Is it really such a disaster if these jobs are done by robots?' he wonders. 'Does this kind of work really make us happy? Couldn't we be using our time more usefully, and enjoying life more, if we let robots create more prosperity? The debate about this is only picking up speed very slowly, whereas the technology itself is evolving at breakneck speed. So we're in danger of not keeping up with the facts – and that's a much more dangerous development.'





SINGULARITY: BEYOND PREDICTION

There's a well-known saying: 'It's difficult to make predictions, especially about the future.' And it's becoming even harder if you listen to the current generation of futurists, who are all talking about 'singularity'. But what does singularity mean, and do you need to think about it?

There have always been advocates and opponents of new technologies, but recently the debate has become much fiercer than ever before. The reason for this is that some people believe new developments in robotics and AI could spell the end for humanity.

An intelligent supercomputer

One term that always crops up in these discussions is 'singularity'. But what does it mean? Thomas Verschuere from Realdolmen explains: 'Put simply, singularity is the point in time in the future when, with the best will in the world, we cannot make any more meaningful predictions. New developments will be so advanced that they will trigger runaway technological growth, making literally anything possible.'

We're mainly talking about developments in robotics and computer technology, but

there will be more new discoveries and inventions, for example in genetics and nanotechnology, too. Experts believe the crucial aspect will be predominantly in the possibilities of artificial intelligence (AI). Advancements in this field have accelerated dramatically over recent years, leading some people to start dreaming of AI with its own consciousness. 'Think of a supercomputer with unimaginable processing power and access to pretty much all the possible sources of information in the world,' explains Verschuere. 'Add algorithms to this, which enable technology to recognise all these data patterns,

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SINGULARITY: BEYOND PREDICTION

perceiving all problems and discovering opportunities, and you have something like Skynet from the Terminator films. Especially if that computer system is connected to a huge number of robots, who act slavishly – because that’s what robots do – to execute the system’s instructions.’

Nightmare

Widely respected scientists and entrepreneurs, such as Stephen Hawking, Elon Musk and Bill Gates, literally lie awake at night thinking about such a scenario, because it doesn’t leave humanity in a very good position. Humans can, after all, be considered the greatest threat to the planet, from a purely rational point of view. A judicious AI system could therefore want to delete us as quickly as possible.

But such a course doesn’t need to be taken, argues Verschueren: ‘In contrast to these pessimists, you also have experts who mainly see the good sides of current developments in AI and related technologies.



‘How can you prepare for the unpredictable?’

Thomas Verschueren, Realdolmen

You have the transhumanists, for example, who believe that humanity can and even must improve itself with the help of technology. Ray Kurzweil, who has carried out pioneering work in the development of scanner and speech technology, has pretty much become the face of this movement. In his vision, singularity is the point in time when humanity starts using technology to unlock our true potential, so we can resolve all our problems, such as hunger and poverty (and heavy workloads and traffic congestion). This vision of the future also includes us becoming immortal and colonising other planets among its possibilities.’

Not far away

Verschueren believes it’s as good as certain that singularity will happen: ‘Drastic



THE DAWN OF THE SINGULARITY
The following predictions were made by Ray Kurzweil in his book *The Singularity is Near*. Kurzweil has made 147 predictions since the 1990s and has maintained an astonishing 86% accuracy rate.

steps are now being taken at such a high rate in so many domains that the chance of unimaginable consequences is increasing all the time. Some scientists even dare to put a date on it; Kurzweil thinks singularity will take place around the year 2045. This calculation is based on new insights in Moore's Law, from which it can be concluded that the processing speed of computer chips will then be fast enough to emulate the human brain in real time.'

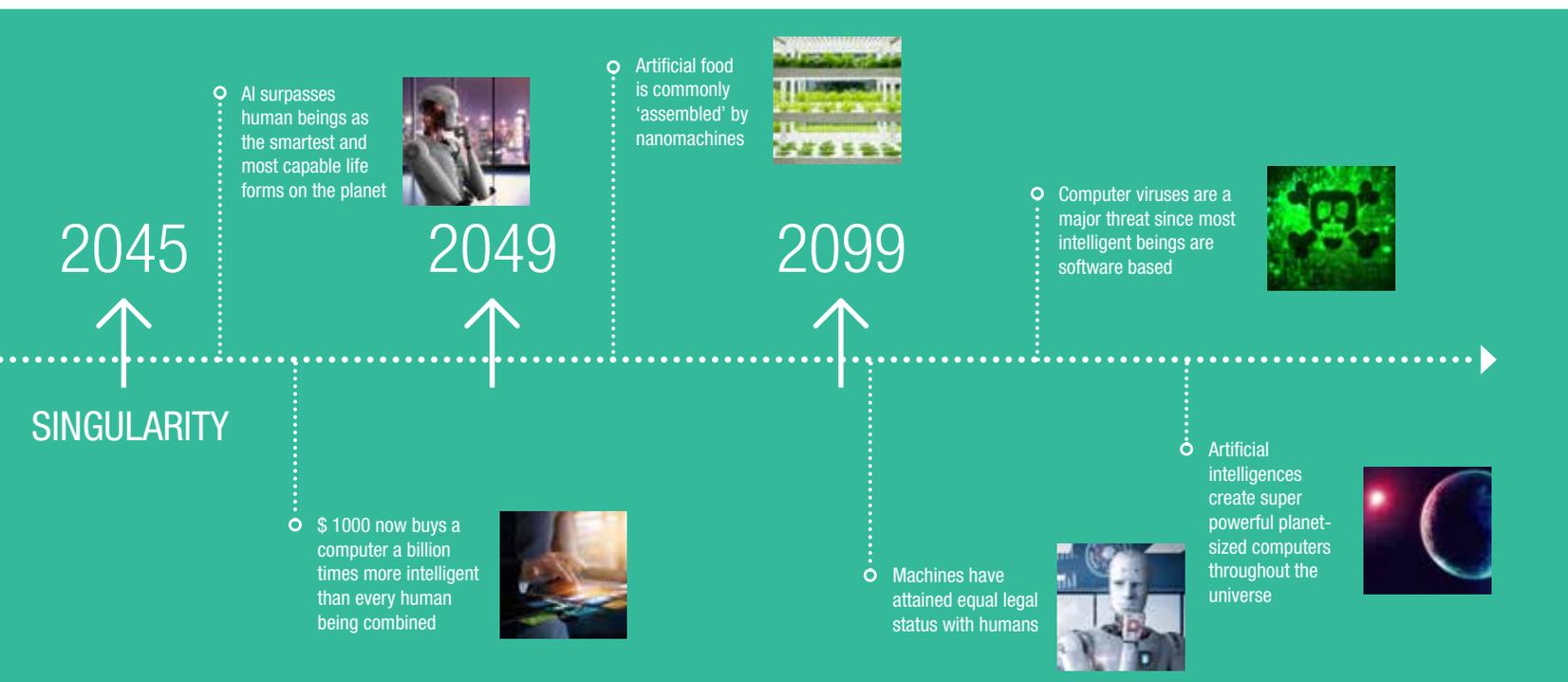
You might think 2045 isn't that far away, so it's already time to start preparing for it. But that's the main problem with singularity. 'How can you prepare for the unpredictable?' ponders Verschueren. 'There's nowhere to start. The only thing you can do is think up all the possible "what if?" scenarios and try to formulate responses to them. Maybe singularity won't

be caused by AI, for example, but by nanotechnology. It's not inconceivable, after all, that we'll one day reach the stage in this domain where we can reproduce any possible raw material. That would collapse our entire economic system, because it's based on the rarest raw materials. So creating an unlimited stock of raw materials would cause a huge shock, with incalculable consequences.'

Real world or science fiction?

Can we do anything except simply wait for an economic apocalypse to erupt? Verschueren thinks we can: 'It wouldn't do any harm for scientists and entrepreneurs to stop and think about the ethical and social consequences of new technological evolutions more. We need to be aware that every new stage of progress could set

singularity in motion, which means it could also happen by accident. These sound like science fiction stories, but the chance of them actually happening is more real than ever.'



IT DEPARTMENT
of the future

The IT department
opts for isolation

with an SLA

An SLA only says something about the status and availability of the infrastructure, but nothing about customer satisfaction,

which means an SLA isn't adequate for evaluating IT.

IT is central to the organisation of successful, innovative companies.

Consider large, traditional organisations such as Proximus, Delhaize or KBC, for example, and all the hopeful Belgian scale-ups which revolve entirely around IT.

The IT department isn't something they simply call in at the end of a project or process. On the contrary, they consider what IT can do for them in every decision they make. And lots of decisions actually arise out of ideas from IT.

This all sounds very obvious, and so it should be. Digital transformation without a central role for IT is inconceivable. But is it always like this? Have all organisations taken the decision to rescue IT from its island? Is the IT department itself ready to take up a crucial, strategic role? If so, then there's lots of work waiting to be done to really make this 'business & IT alignment' function properly.

Legal shrewdness

Everyone can already get started with an important part of this alignment: the Service Level Agreement. If you want an IT department that makes a difference, then the SLA needs to at least be thoroughly reviewed. Because as long as IT allows itself to be evaluated using SLAs, they can continue to prove anything, except whether the internal users and external customers are satisfied. An SLA is something that IT can very easily hide behind. One participant in our Co-thinking roundtable sessions called the SLA nothing but a declaration of war, a legally shrewd document designed to always be right.

An IT department that really wants to help the business, by listening carefully to what people want and being deeply committed to helping users, would therefore need to shred the existing SLA consisting of hundreds of pages, and replace it with a much thinner version. In return, it would be really good for management to invest in IT much more intelligently and faster. Mutual understanding is essential here.

IT isn't taken seriously

How do too many companies currently operate? Six weeks after a major fault, the incident report from IT is finally ready. The organisation's core application was down for more than three hours, hundreds of users were barely able to do anything, dozens of customers were on the line to the service desk, and there was a brief outcry on Twitter that fortunately didn't erupt any further. But according to the SLA, there was no problem because the fault was resolved within four hours and all the correct procedures were followed to the letter. And then ITIL is added together with another 23 acronyms and look how well everything works.

An approach like this only leads to misunderstanding on both sides and results in IT not being taken seriously. And if there are big investment dossiers on the directors' table, and you're not being taken seriously as a department, then you know what's going to happen.

Open communication with end users is much more important when it comes to always knowing if people are satisfied. Achieving availability of 99.9% and not communicating anything is worse than simply explaining what's wrong. Users need the certainty and feeling that you're dealing with them and fixing their problem. Even if you've achieved 99.9% availability, but there's one incident which infuriated a large group of users, then in their eyes, you as IT have failed. This means the SLA has become inadequate for evaluating IT, because the user doesn't want anything less than full availability, or at least the impression that something is being done about it.

Quality of experience instead of quality of service

An SLA therefore mainly helps you demonstrate the performance achieved and the availability of your IT from a technical perspective, which is useful for a CIO. But an XLA (eXperience Level Agreement) also evaluates customer satisfaction and experience, which is the focus of the business that IT needs to work on. The combination

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IT DEPARTMENT of the future

One participant in our roundtable sessions at the event called the SLA nothing but a declaration of war, a legally shrewd document designed to always be right.

of an SLA with an XLA is the best match for everyone. The SLA serves to evaluate if you're operating well technically, and an XLA helps you find out if the customer is also experiencing the service as they should.

Enter into dialogue with the user

Good IT can help the entire organisation move forward when it's clear to everyone what the business needs and what the external users' expectations are. A correct understanding of the core business and strategic processes will ensure more intelligent investments in the right resources. Setting the right priorities together will have a positive effect on the SLA and XLA, as well as the perception of IT.

And then you have the regular user. They don't understand an awful lot about IT, and the majority don't want to either. But there's one thing they'll all know for sure: if something almost always goes wrong with the projector or screen when someone wants to use their laptop to give a presentation, for example, or the laptop decides to install a big update just before a video conference. Try to convince them then that IT is anything more – we're exaggerating – than a huge mess.

A bit more understanding between IT and the average user would already make a big difference. IT staff are often heroes, but they're no magicians. They can fix all kinds of problems, but they need to ask questions to be able to find a solution. So, if the user isn't giving any relevant answers because they're half in panic when something isn't working, or sometimes because of a service desk employee's disdain, then you get stuck. Monitoring can help IT a great deal, but users often don't know what their last actions were. Be

transparent about it. IT professionals are there to resolve these problems, not judge what caused them.

Real communication about IT

Communication is therefore the key to everything, and this means communication at all levels. Start by looking at the operational level with the dialogue between the service desk employee and IT user, and how minor incidents are followed up. If this is open and clear, then IT creates a lot more understanding for everyone in the organisation. We mentioned it earlier in this article: achieving availability of 99.9% and not communicating anything is worse than simply explaining what's wrong. This is on the condition that IT is doing everything it can to prevent these same faults and incidents from happening again, of course. 'Zero recurrence' is perhaps the most important KPI for the IT department.

Even at the most strategic level, it's about real communication: involve IT at an early stage of all strategic decisions and in all new business models, so that IT and the business can analyse the risks and impact together, and coordinate with each other to find the best solution. Ensure there's a shared goal that everyone supports, with clear expectations. And then follow the adage from Steve Jobs: 'people first, technology second'.

The agreements about all of this are found in the architecture, software, IT projects, and an XLA. An XLA adds context to the SLA. Both are needed to measure the effectiveness of IT, with user experience as the other important KPI for IT.



IT of the future

UPDATE YOUR IT FASTER

Articles about hacking appear in the media quite frequently. And people who work in the industry know there's a lot more of it going on than gets reported. Cybercrime makes hackers money, and it's much less risky for them than robbing a bank or kidnapping a child with wealthy parents. That's why they'll steal your data or ask for a ransom to give you back your access to your own IT systems. All from their relatively safe place, somewhere in a dark corner of the internet.

So what can you do to make it more difficult to breach your systems and steal your and your customers' data? Adequate protection in the form of more recent hardware, which is more secure, and in particular by using up-to-date software versions, including in the cloud.

Newer is more secure

Since Meltdown and Spectre, we now realise we didn't know as much as we thought when it comes to secure hardware. And newer software can already offer us a solution. It's true that this comes at a cost in terms of performance in older systems, but at least the leak is sealed. Until the next leak is discovered, of course. The older your systems, operating systems and applications, the greater your risk of a leak.

This is one thing that's consistent in the reporting: it's mainly older systems that are affected. So why is this being ignored by so many organisations? What stops people from continuing to invest in better and especially more modern IT systems?

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With cars, almost everyone understands that you're much less likely to come away from an accident with an injury in modern cars than you are from the same model built ten years ago. The same applies for IT systems.

Make it difficult for hackers

If a hacker hasn't specifically targeted your company, but is aiming to trap as large a group of potential victims as possible, then the latest software version will definitely help. Hackers target weaknesses, and older

Thanks to huge R&D investments in IT, better isn't necessarily always more expensive. Anyone who wants to be innovative with their business will need to be innovative with their IT.

versions have more of them. They won't mind at all if you don't switch over to new systems quickly.

Don't assume that you won't be hacked, or indeed that you haven't been already without you realising, because you're not using SIEM (security information and event management). Sometimes hackers aim their attack specifically to go unnoticed, even when they know you're aware of the risk. Again, this risk increases if you're still working with devices and software that are no longer up to date.

Easier integration

Furthermore, you don't just modernise for security reasons; new versions of applications are mostly integrated in an eco-system together with other software, and this integration is an added bonus which is sometimes completely free of charge. If you want to integrate your own applications yourself, which you need to do now less than before, then it's simpler and cheaper than it used to be. Integration benefits productivity.

System and data protection isn't just a case of having up-to-date antivirus software as

far as the endpoint and advanced firewalls. If you're using new software which has patches that arrive soon after an incident, then the chance that a hacker will find a weakness they can use to break into your system or application is much smaller. If you're using an application that no longer receives any updates, then it's time to be concerned. Unless you're making great efforts to keep your older applications secure, of course. In which case you could be spending your time on much more useful affairs.

So how come – when there are only benefits linked to new software and hardware, and there's much less effort required to work with the latest and most secure versions in cloud computing – so many organisations are continuing to use their devices and applications until they start to fail too often? Why doesn't management intervene sooner, before it's almost too late?

Every company is a software company

One common explanation is that the average board of directors doesn't usually know that much about IT. But wasn't every company



supposed to become a software company? Haven't banks, airline companies and retailers already proven this? Modern boards of directors are very well informed about the almost limitless possibilities of IT, including the difficult aspects, such as the internet, which is now a curse as well as a blessing.

Thanks to huge R&D investments in IT, better isn't necessarily always more expensive. Anyone who wants to be innovative with their business will need to be innovative with their IT. There's no other way. This big migration to the cloud can therefore be factored into the next annual budget.

Why and how to change

People are creatures of habit. We like to carry on doing the things we've always done. One result of this is that you only start using new hardware and software when you're encountering too many drawbacks, with a loss of productivity in the meantime. And then you wonder why you waited so long in the first place.

Really strong IT security is still crucial to ensure you remain adequately protect-

ed. But the biggest risk factor is people. If they're not careful, and allow themselves to become trapped by social engineering, it can cost you. So you can't lose sight of change management and user adoption. IT service providers like Realdolmen and others take great care when transferring sensitive customer information by making sure their systems, applications and data are secure, but also by informing employees about what else they need to do, why, and how this benefits them and their colleagues, customers and company. When we're implementing a change, we adapt our behaviour accordingly. If we don't see the point of it, or think the change could be disadvantageous for us, we're not going to carry on doing it.

Avoid losses and fines

Trust is crucial for successful business, and this also applies in the digital world. You don't buy from an e-commerce site you don't trust. A company that isn't careful will be punished; its forward-thinking competitor will reap the benefits.

Be aware that your important information is more digital than it used to be, and often only stored digitally now. So if you lose this data, if a hacker demands a ransom to get it back, or if your people become exposed as a result of your stolen information being published, your company will suffer. If you can reduce the risk of this happening with new hardware and software, and this is possible by paying for it when you use it rather than actually buying it yourself, you'd surely do that, wouldn't you? The compulsory General Data Protection Regulation (GDPR), which comes into effect on 25 May 2018, also prescribes that you need to do everything possible to protect the personal information you store and process. Switching to the latest versions of software is one of the easier steps you can take to comply with this.

SYMANTEC CYBERSECURITY PREDICTIONS 2018

- 1** **Blockchain** will find uses outside of cryptocurrencies but cybercriminals will focus on coins & exchanges 
- 2** Cybercriminals will use **AI & ML** to conduct attacks 
- 3** **Supply chain** attacks will become mainstream 
- 4** File-less and file-light **malware** will explode 
- 5** Organisations will still struggle with **SaaS** security 
- 6** More **breaches** due to error, compromise and design 
- 7** **Financial trojans** will still account for more losses than ransomware 
- 8** Expensive home devices will be **held to ransom** 
- 9** **IoT devices** will be hijacked and used in DDoS attacks against us 
- 10** IoT devices will provide persistent access to **home networks** 



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