



# How to succeed and accelerate your **DIGITAL TRANSFORMATION PROJECT**

Strategy guide for decision-makers  
The best practices to achieve the best results

Delivering Transformation. Together.

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# Editorial

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## Digital transformation

### Execution... and enjoyment

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In the face of today's many challenges, digital transformation represents the ultimate evolution for businesses or organisations and brings about change in needs, applications, offers and economic models. How can digital transformation be effected successfully? Tackling digital transformation involves embracing the digital revolution and even contributing to this revolution. The real problem is not about finding ideas because partners are never short of ideas; creation techniques trigger their emergence and start-ups provide impetus. As often, the main difficulty arises in the execution of a project: how to let ideas emerge organically, how to make mistakes, learn from them, move on and use what works?

**This White Paper gives the keys to articulate and combine strategy and execution.**

The first issue is how to define a strategy for genuine digital transformation: the issues and risks. It looks at the relevant technologies to explore to implement the right conditions for rapid deployment of new services or approaches. The second issue is how to structure an SI and SI projects so that businesses can develop their core services. The final issue is security enhancement, forging effective transformation teams, and the use of management 3.0 or other innovation methods.

This process is only possible with a holistic iterative approach which brings teams a sense of adventure and pleasure. The work lays out the best practices to understand and assess the important issues and create a successful transformation project.

Happy reading...  
And enjoy the transformation...

“ Best practices laid out to understand and assess the important issues and implement digital transformation. ”



**Jean-Claude Lamoureux**

DIRECTOR,  
SOPRA STERIA CONSULTING



**Olivier Gervaise**

TRANSFORMATION TEAM CREATOR,  
SOPRA STERIA CONSULTING

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*"Agility, speed of execution, operational excellence and pleasure: these are the major keywords for understanding digital transformation."*

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## **KEYS TO SUCCESS**

*Execution is everything. Each chapter provides a key to unlocking digital transformation: an initial assessment and digital strategy, the Digital Booster Platform to accelerate transformation, then advice for executing a digital project including best practices and insights from concrete examples.*

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NAB, HMCTS, Airbus, BBVA, KBC, Orange Business Services, AccorHotels, Media Markt

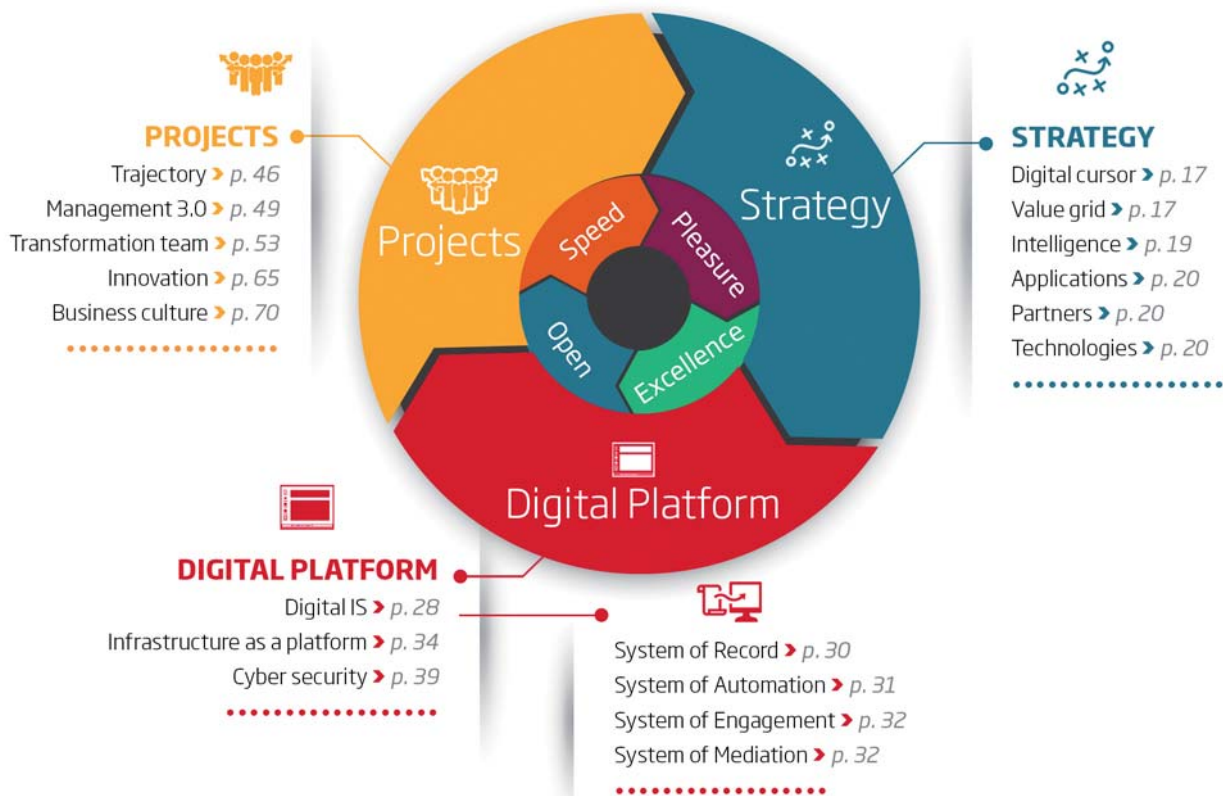
# DIGITAL: DRIVING COMPANY TRANSFORMATION

**Digital transformation** is a comprehensive strategy on which **our beliefs** have to be clear (p. 9). An operational strategy gives way to a **digital strategy** (p. 15), based on the selection of a **limited number of technologies**, on which the company focuses its investments (p. 20).

**Building a digital platform, or Digital Booster Platform**, is essential for facilitating and accelerating digital transformation. Information system architecture must be based on this platform approach (p. 27). Infrastructure as a platform opens the door to exploration at a lower cost, limiting the recourse to CAPEX (p. 34). However, the opening up of the IS demands greater security (p. 39).

**Project delivery** requires greater agility, and

controlling the trajectory of digital projects becomes more important than the precision of the target (p. 46). Project implementation requires management 3.0 (p. 49). It relies on a carefully chosen **transformation team** (p. 53). Innovative methods (p. 65) and new tools to manage change facilitate project ownership in business units (p. 70). This approach is not fragmented and isolated. Nor is it linear, deterministic and predictable (it is not guided by a timeline). It is **holistic, inherently iterative, organic** and, essentially, **human**. So there are as many approaches as there are digital projects. As shown in the illustration below, business projects can feed strategy and IS to form a virtuous cycle of continuous improvement.



In this publication, which is aimed at the directors of large corporations as well as business managers and CIOs, we have not tried to be exhaustive. Transformation is addressed here only from a digital angle, but it fits into a perspective which is broader than just technology-driven innovation. Technology is a lever for transformation but it is not the only one: changing client expectations, new HR challenges and the evolution of company ecosystems all boost digital transformation and are enriched by it.



## WHAT THEY SAID

*“ Digital transformation has to offer solutions to client experience, better tools for teams and easier relationships with partners. ”*

**Vivek Badrinath**

DEPUTY CEO,  
ACCORHOTELS

*“ The Court Store and Bench Solution has been key in enabling the modern digital courtroom and assisting the delivery of efficiencies across the magistrates' courts. ”*

COURT STORE AND BENCH  
PRODUCT OWNER,  
HMCTS

*“ Thanks to the implementation of a digital platform, the bank now has an agile and flexible engagement system, based intrinsically on APIs directly connected to the ecosystem. ”*

**James Bligh**

SENIOR MANAGER,  
NAB

*“ Understand customers and recognise their needs and behaviours in order to explore the full potential of the purchasing experience and become more aware of our brand. ”*

**Luca Luminoso**

FORMER CIO,  
MEDIAMARKET S.P.A. (ITALY)

## WHAT THEY SAID

*“ Digital transformation is not only about technology. It forces us to change our business models and to choose trustworthy partners. ”*

**Marc Fontaine**

CHIEF DIGITAL OFFICER,  
AIRBUS GROUP

*“ The arrival of the new mobility-information-cloud-social mix in telecommunications has meant that our customers have had to undergo their own digital transformation. We have to support them with this. ”*

**Laurent Herr**

VP OPERATIONS SUPPORT SYSTEM,  
ORANGE BUSINESS SERVICES

*“ Innovation generates resistance. So as we have built a new way of thinking, we have also sought to foster acceptance for change. ”*

**Ingrid Creten**

HEAD OF CHANGE AND COMMUNICATION,  
KLANT 2020,  
KBC BANK

*“ The future of banking lies in digital transformation. It is about the way we live, breathe and work. We wish to be at the spearhead of digital transformation. ”*

**Marisol Menéndez Álvarez**

OPEN INNOVATION MANAGER,  
BBVA GROUP





# OUR BELIEFS

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# Digital wave

# Organic enterprise

## IN BRIEF

*There are certain keywords which are essential to understanding digital transformation: agility, speed of execution, operational excellence and pleasure. A new business paradigm has been born. The digital revolution has swept aside everything in its path while placing people at the heart of projects.*

# The Digital Revolution 2.0

## (Real) digital change

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In the wake of changes brought about by computer technology, the web and web 2.0, digital technologies have swept throughout all business sectors. Companies are now seeking to achieve their own digital transformations, capitalising on the innovations and tools made available by the new technologies. So, what is crucial to effecting such a major change? In this chapter we present our beliefs and vision on the sometimes unusual approaches which deliver genuine digital transformation.

### THE DIGITAL WAVE

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#### All-embracing change

In the space of just a few years, the traditional economy has been turned upside down by the giants known by the acronym GAFA (Google, Apple, Facebook and Amazon). At the same time, we have witnessed the birth of an increasingly horizontal society, accompanied by Generation Y's rejection of a top-down system and the arrival of a 'first world generation'. This is a huge upheaval which forces companies and organisations to reflect deeply on the evolution of their own business

models. Ultimately, it leads to digital transformation, the must-have avatar of a new wave in digital technology which dramatically changes everything.

Given that the term digital transformation is becoming highly commonplace, almost to the point of over-use, it is worth taking a look at its origins. In concrete terms, digital transformation can be seen to represent the most comprehensive degree of change. It is a transformation that is based on technology and yet is human-centred. It is a transformation which is likely to change a company's offer, procedures, client interactions and management

methods, and is achieved by completely reinventing methods and organisational structures, strategies and even values.

In short, it is an entirely new state of affairs, something of a revolution! And this time, rather than the incremental changes we saw during successive new waves in computer and web technology, it is profound. This 'post web' transformation is far-reaching. It assimilates all the latest technological advances, puts innovation in the driving seat, shakes up governance and nourishes the company cell-by-cell.

### A NEW STAGE IN CORPORATE DEVELOPMENT

#### The birth of the 'organic' enterprise

Anyone taking on digital transformation will face increasingly rapid changes in applications, technologies and requirements, the sudden emergence of new competitors and the quasi-spontaneous generation of new business models such as Uber and novel transactional formats such as blockchain. A new business and organisational paradigm is emerging: one that is swift, agile, virtually indefinable and continually shifting. We are witnessing the birth of the 'organic' enterprise.

Digital transformation affects each and every area of business activity. Companies must revolutionise the way they conduct their projects. As mentioned earlier, this means relying on technology, but that is not all. Companies must make themselves more transparent and, above all, put human beings back at the heart of the business.

*“ A new paradigm: swift, agile, virtually indefinable and continually shifting. We are witnessing the birth of the 'organic' enterprise. ”*

### FIVE TYPES OF PROJECT LINKED TO DIGITAL TRANSFORMATION

#### From disruption to digitalisation

On the ground, good practices are beginning to emerge and an analysis of these makes it possible to improve transformation. For ease of readability, the Gartner Group has distinguished five types of project linked to digital transformation.

PROJECT TYPE	IMPACT	COMPANY TREND
REINVENTING THE BUSINESS MODEL (STRATEGY)	"Disruptive, I'm reinventing the business"	Transformation
TRANSFORMING THE OPERATING MODEL	"I'm reinventing one way to do the job"	Transformation
OPTIMISING THE BUSINESS PROCESS	"It's simply a question of optimisation"	Transformation
DIGITALISATION	"I can produce paperless bills, for example"	Digitalisation
MANAGING DIGITAL OPERATIONS	"It's the way I handle digitalisation"	Digitalisation

Source: Digital Services Framework, Gartner Group

*Categories for five types of digital transformation project according to the level of impact and transformation of the company. Given the fuzzy notion of digitalisation, this table provides greater readability and clarity for digital transformation.*

This modelling does not exclude the fact that there are as many projects as there are companies. In all cases, agility and an iterative method are essential, as opposed to a single, deterministic approach. This method involves the following: firstly, aligning in the short-term the digital strategy to the corporate strategy by identifying

## The digital transformation approach for a large company

Any consideration of digital strategy, the building of a Digital Booster Platform and transformation projects should be conducted **jointly and in an agile manner**.

**Strategic considerations** lead to a redefinition of strategies in the light of (new) business objectives and scanning the technological landscape, while choices are made according to client use.

**The construction of a Digital Booster Platform**, carried out in accordance with the four laws of digital information systems, is presented as a service infrastructure alongside an integrated approach to cyber security.

**Implementing digitally-linked business projects** requires project management using a management 3.0 approach. The role of transformation teams, new innovation methods and managing change within the business will need to be addressed.

**The key words in digital transformation** are agility, speed of execution, client-centred excellence and pleasure.

Business projects are supported by a Digital Booster Platform, which itself is likely to evolve as the project takes shape. The whole project is driven with speed and agility; the aim is client-centred excellence, and so there is no fixed starting point.

input from new technologies and, secondly, by defining and building the company's Digital Booster Platform while at the same time conducting different business projects.

### UNUSUAL METHODS

#### An 'adventure' approach

Digital transformation demands a highly distinct approach in order to manage uncertainties and for step-by-step implementation rather than V-model or batch approaches.

But despite the fact that digital transformation can be extended across all scales and for every link in the corporate chain, some invariables remain. On the ground, there is a pressing need for ceaseless speed: new technologies are adopted with great speed and competitors are constantly innovating. This calls for new methods and

approaches, and requires the management of client service provision and back-offices at different speeds (a bimodal approach). Time to market is increasingly short.

In addition, certain other issues cannot be ignored. These include the ability to accept failure in order to move forward more quickly and to ensure security in information systems which are increasingly open. In addition, there is the need to fully integrate front and back-offices, each of which develops at a different pace, and effectively incorporate partners in increasingly multi-supplier services. However, this is not a one-size-fits all approach and should be carefully adapted to each context for further development. All relevant stakeholders need to be taken on board - business stakeholders in particular will be ever-present - and input from those involved in decision-making will be demanded (legal services, management control etc.). Increasingly, clients themselves will be involved.



## OUR BELIEFS

In order to successfully carry out digital transformation there should perhaps be a shift to 'adventure' mode. Innovation is, by definition, uncertain and this could well mean the end of the traditional business case as we know it!

Digital transformation is deeply holistic, requiring the consideration of the whole, alongside dynamic design. As such, its philosophy can be summarised as follows:

THE JOURNEY TO DIGITAL TRANSFORMATION	
BEFORE	AFTER
PROGRAMMATIC	UNCERTAIN
PROJECTS	SHORT CYCLES
CONFLICTS	HUMAN ADVENTURE
GENERIC PROCESS	PERMANENT ADAPTATION
CORE SYSTEMS - SILOS	PLATFORMS
VERTICAL (TOP-DOWN)	HORIZONTAL (FLAT HIERARCHY)

Finally, we should not overlook the main causes of failure or delay. For example:

- Questionable project governance or slow decision-making
- Cultural obstacles and negative responses from teams
- A lack of reactivity in infrastructure projects.





# STRATEGY

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## DIGITAL IMPACT ON CORPORATE STRATEGY

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- # Digital strategy
- # Choice of technologies

### IN BRIEF

*Deploying a corporate strategy which incorporates digital transformation projects unlocks the possibility of using technologies to meet business challenges. In this chapter we explain how, based on a digital (or operational) strategy, appropriate transformation projects can be selected and how the right technologies to support this approach can be chosen.*

**WHO?** EXECUTIVE MANAGEMENT

# Defining a digital transformation strategy

## Putting agility at the heart of transformation strategies

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In today's business environment, companies must have the capacity to adapt their overall business and digital strategies as one, at pace, to meet challenges such as major change or market uncertainties caused by agile competitors and new entrants. These strategies must be agile in order to set, or even adapt iteratively, the targets which need to be hit. Here we explain how, beginning with a strategy, digital projects capable of delivering real benefit can be identified.

**IN BRIEF** The discovery phase before implementing a digital transformation project is crucial. It is essential to begin by redefining the strategy in terms of (new) business objectives. It will then itself be agile and iterative.

A digital strategy is derived from the over-arching corporate strategy and is designed to put the company in a position to ensure rapid execution. This could be in response to increasingly rapid changes (in the market, amongst competition, in customs etc.), the emergence of new threats or the arrival of technologies offering new offensive opportunities. Speed is key and is aided by more horizontal organisations, more agile transformation management and an IT platform which can rapidly change the services offered to clients or customers.



In concrete terms, a digital strategy is simply a business strategy that relies very heavily on digital technologies to identify the operational transformations which should be made. These transformations can be achieved through several digital projects simultaneously.

## WIDESPREAD IMPACT

### No sector is spared

Research from the Gartner Group, shows that digital technologies already generate nearly 20% of corporate revenues and this could reach 41% by 2020! It's a development which impacts all business sectors, including telecommunications, insurance, banking, distribution and transport, as well as the public sector.

*“ A digital strategy is simply a business strategy which makes it possible to identify digital transformation projects. ”*

A company's activities are themselves affected: supply logistics through the implementation of the extended enterprise, manufacturing through computer-aided design, the IoT and 3D printers, marketing logistics through phygital approaches. And, of course, marketing and sales are being revolutionised through multi-channel retailing and digital marketing.

Support services are also affected: the corporate infrastructure (operational intelligence, fraud, data quality), human resource management (company social networking, COOC), R&D (development of digilabs and hackathons) and purchasing through the creation of dedicated portals.

The first task is therefore to define, in line with the corporate strategy, a strategy to address these digital impacts.

What are the challenges? What are the risks? And are the opportunities that digital technologies present to allow the entire business model to be changed?



To set a digital strategy, every company needs to assess the impact of digital technologies on its operations, and then to establish the necessary level of transformation. Company strategists will place the **digital cursor** somewhere between the existing process and transformation.

## DIGITAL TRANSFORMATION TOOLS

### Digital Value Grid (DVG)

The Digital Value Grid (DVG) is a methodology used by Sopra Steria Consulting to construct a grid of digital transformation projects based on the characteristics of the company and of the market in which it operates.

In practical terms, it's a tool for providing a matrix of examples of the technologies which could be selected to meet a company's objectives or used in its projects (see article p. 20).

It's a facilitation tool to help select the areas in which to focus efforts in accordance with the specific business challenge and the range of technologies available. Combining these two fields, it's possible to translate the overall strategy into issues, which are then broken down into possible digital projects. It acts as a decision support tool as the user can then make a judgement on the possibilities offered (see the following page for a partial example of the Digital Value Grid).

ACTIVITY	THEMES	SUB-THEMES	PROJECTS	DIGITAL TECHNOLOGIES
SALES	Increase in current activities	Loyalty development	Enhancing products and services Improving client perception of services Densifying termination barriers	IoT, UX/UI, segmentation, OAV Selfcare, UI/UX experience, cyber-security IoT, UX/UI, platforms
		Equipment development	Improving sales efficiency Motivating sales forces Developing cross-sell/up-sell Developing bundle strategies	OAV, workstations, phygital Data, HR, distribution OAV, market place, data, AI Segmentation, sales process
	Creation of new revenue	Opening up new market sectors	Identifying new segments Customising new products/services Improving client perception of services Rethinking sales/segment approaches	Data, intelligence, partnerships, social innovation Segmentation, UX/UI, social, social innovation Multi-channel, social OAV, mobility, platforms, AI
		Proposing new products and services	Designing new products and services Improving client perception of services Reviewing distribution strategy	IoT, mobility, platforms, OAV Selfcare, mobility, gamification OAV, UX/UI, platform

*A partial example of Sopra Steria Consulting's methodological tool, the Digital Value Grid.*

In parallel, work will certainly be necessary to provide market, business and technological intelligence.

**Different perspectives in digital transformation**

Each business can also conduct different co-design sequences to identify and prioritise digital transformation initiatives and projects. This approach creates an often innovative development process for a product or service, which not only involves but is centred on the end user (see the article on co-design p. 69). It takes into account the views of the end client or user and of the company, working methods, technologies and new applications.

» **Customer perspective**

This approach helps detect projects which better respond to new customer demands: a simplified and optimised customer experience, transparency, proximity,

personalisation, omnichannel, speed and quality of execution, security and, of course, the right price.

» **Company perspective**

This approach also helps identify projects which meet a company's need for internal change to match the new norms of digitalisation: there is a heavy impact on company employees, management needs to develop and implement new governance, the company culture must change to incorporate digital culture, and there is also the requirement to constantly evolve and to welcome new talent.

» **The contribution of new technologies**

In the past, technology was managed by IT professionals grouped in teams at company HQ or in specialised companies. Today, a broad range of different professions and clients are learning to master the technology - at the very minimum as a user - in order to identify the new

business opportunities they create. The next chapter, Technologies, presents a few of these and their contributions to new applications.

» **New applications**

This perspective is just as important as it allows projects concerning new applications to be identified. We group these in five categories:

- 1 Customer experience:** offering new ways of connecting with a company's products and services. These experiences can impose constraints on companies.
- 2 New relationships** between a company and its ecosystem generate constraints and opportunities which must be incorporated in the digital transformation strategy.
- 3 Collaboration,** along with mobility, means employees can connect with the company whenever they want. It creates favourable conditions for developing, placing and advancing employees who engage with the company's internal communities.
- 4 Offering new applications** across a broad range of business sectors.
- 5 Taking cognition** into account opens up many applications for increased operational efficiency.

These new applications are explored through creative methods which can lead to the implementation of selected ideas in the form of start-ups (such as the lean start-up).

**The innovation method**

To move beyond feedback from measures which have already implemented or to find disruptive ideas, an innovation approach is essential (see article p. 65).

**The co-design/MVP cycle**

The co-design/MVP (Minimum Viable Product) cycle makes it possible to select an idea and validate a project with a go/no go verdict within two months. Reassurance

for the project's launch is provided by the initial involvement of all stakeholders in the co-design sequences, and the collective advice of a focus group representing target users. This cycle is conducted by a multidisciplinary transformation team (see article p. 54).

We see this agile, iterative strategy as essential, the cornerstone for digital transformation. It provides answers before proceeding to implementation.

**EXPERT OPINION**

“ *In fact, one could say that there is no more a digital strategy than there is a non-digital one, but rather there's a corporate strategy which develops digital transformation projects that open the door to technological opportunities for meeting business challenges. My advice: what will always be the same is valuing the company's staff as well as the P&L; what has changed is that technologies can more easily release ambition.* ”

**Emmanuel Gambart de Lignières**

**PARTNER AND HEAD OF SOPRA STERIA GROUP'S DIGITAL TRANSFORMATION PROJECT, FRANCE. WITH HIS TEAMS HE CREATED THE DIGITAL VALUE GRID DECISION SUPPORT TOOL**



# Which technologies?

## Selecting and integrating digital technologies

How do digital technologies actually fit into new IT environments? Digging deeper, there are effects on the user or client and digital transformation changes the relationship between a business and technology. Here we present a strategic road map for selecting and integrating technologies in the right place at the right time.

Creating the right conditions for technology management which can evolve ever faster is essential. How do we organise ourselves for this?

### Developing technological intelligence

Much as a company will monitor markets or other key aspects of its business, a similar approach to technology is required. To produce technological intelligence it is essential to have good sources and to establish solid partnerships with market analysts (such as Gartner Group, Forrester Research etc.) which offer a forward-looking and comprehensive vision of emerging technologies and the companies which market them. Other important sources are specialised software publishers (start-up, FinTech) which develop the latest technological

innovations and strategic publishers, who often consolidate the market and offer use of the technology in the longer term. We must also listen to influencers, venture capitalists and opinion leaders.

*“Technologies are emerging at a rapid pace and this requires the capacity to quickly identify and assess them. This is achieved through technological intelligence, used in the form of a road map.”*



Considering this intelligence over several time frames (one to two years, three to five years and more than six years) is essential in establishing a lucid technology road map.

### From Proof of Technology to Proof of Use with a digilab

Technological intelligence must be supported by a system for validating these technologies in terms of their implementation in new business applications. Creating a digilab (an in-house digital laboratory) is a way of demonstrating and developing technologies in business transformation scenarios and in new applications, making it possible to move from Proof of Technology to Proof of Use.

It's also necessary to choose the right partners, based on cycles and time frames, to feed the digilab, whose final objective is to estimate the integration/acquisition costs and benefits associated with the use of each technology.

### Identifying the best technology acquisition strategy

Finally, beyond the choice of technology, the acquisition strategy and technology management are crucial issues. Among the key principles which need to be explored as a priority are:

- Should we internalise or outsource the solution or skills (In/Out)?
- Should we make or buy the solution (Make/Buy)?

These are important questions and the responses may be different in each business scenario. Nevertheless, in light of the major digital market successes, we can see that the most powerful and most agile players have all developed and fostered ecosystems and partnerships to build their information system.

#### EXPERT OPINION

“ One of the keys to digital transformation is success in transforming technological innovations into innovative applications or businesses. What counts here is a **good speed of execution**: identifying and testing the best technology at the right time, integrating business processes at the right pace and having enough agility to re-evaluate and go again! ”

**Stéphane Berger**

DIRECTOR INNOVATION AND DIGITAL BANKING, SOPRA BANKING SOFTWARE, FRANCE



## FIVE GUIDELINES FOR SELECTING AND MANAGING TECHNOLOGIES

**B**ig Data, business intelligence, mobility, cloud, API, Artificial intelligence, IoT...How can we integrate these technologies in digital transformation strategies? And we must remember that this process changes the relationship between businesses and technology, with an increasingly fast pace of change.

With the introduction of applications, multichannel and multi-device approaches, Big Data and connected objects there is a move towards open architectures which provide APIs with access to different business services. And this 'web and mobile vacuum' raises crucial questions about the governance of digital projects.

### WHAT? Promoting operational excellence

**Companies need to make major changes to their processes, both for efficiency reasons and to differentiate their offer. While business knowledge and the ability to imagine new approaches are essential, technological knowledge is equally vital in integrating new devices.**

### HOW?

For forecasting, decision support and, in the near future, prescribing some decisions, connected and **intelligent objects** (sensors, 3D printers, 3D scanners, various interaction systems etc.), **analytics** and artificial intelligence are becoming indispensable.

Operational excellence also depends on the ability to adapt to customer needs and making the best use of technology to provide the best service: **analytics** and **machine learning** make it possible to match a company's offer more closely to customer needs.

Here we demonstrate how to structure the choice of technology based on five major IT transformation challenges: promoting operational excellence, providing new tools to collaborators, data enhancement, creating relationships with ecosystems and serving the customer and user.

In the following section we draw on the link between technologies and business needs and prioritise emerging technologies.

### WHAT? Providing new tools to collaborators

**The introduction of digital technology has profoundly changed the way collaborators work.**

### HOW?

The creation of multi-functional teams integrating the company, developers, site architects, designers or even partners has led to new working methods such as **design thinking** and **co-design**.

Agility, which until this point was limited to a physical platform, is therefore evolving into a **distributed agility approach** using multi-site virtual teams.

The increasingly weak separation between development and production and shortened time span between two versions of a product or service underline the need to use new approaches, such as **DevOps**, **containerisation** or **AB testing** techniques.

In a world where collaboration between developers is becoming increasingly important, sharing components through **forges** or the use of **open source** material is essential, despite the intellectual property or security issues which may arise. Given this, communication tools and collaboration platforms are an essential component of the spectrum of tools available to collaborators.

**WHAT?** Data enhancement

Given the explosion of sources, diversity of origins, the arrival of the cloud and increasing computing power, how can we draw the maximum benefit from data?

**HOW?**

Data enhancement involves transforming it into information, using it for support and anticipation and eventually for decision making. It is valuable not just for the bottom line but also for operational excellence, customer knowledge and, more generally, for the ecosystem and the evolution of business models.

**Machine learning** and **deep learning** techniques can improve operational efficiency by identifying and correcting the causes of quality failures.

Logistics and stock management: **real-time analytics** tools and **prescriptive algorithms** redirect logistics flows and provide valuable assistance in stock optimisation.

Customer behaviour: the combination of **sentiment analysis** and **sentiment recognition** tools makes it possible to adapt a company's service to specific customers.

New models for products and services: the arrival of the **IoT** and **wearables**, **artificial intelligence** and **machine learning** accelerate the arrival of new services.

**WHAT?** Creating relationships with ecosystems

Beyond the growing importance of embedded technologies (biometrics, 3D printers, pattern recognition etc.), **digital technology now includes very different stakeholders, whether they be suppliers of products, services or hardware. Today's need to deliver solutions quickly means system suppliers integrate internal and external components produced, for example, by start-ups.**

**HOW?**

Cloud and SaaS have also been introduced into the ecosystem of partners. It is therefore necessary to heed the following advice:

- Architecting systems based on **microservices**, where components are loosely coupled.
- Understanding the **ecosystem** at a functional or technical level and expanding partnership approaches beyond the major players in the market.
- Using **platforms** which provide basic services in order to accelerate the deployment of solutions.

**WHAT?** Revisiting the user experience

**Long reduced to issues of ergonomics or the 'fluidity of the human-machine interface', the user experience is currently undergoing great change due to the influence of new technologies. Moving from a monolithic approach (screen-keyboard-tablet), the trend now is for interactions to be more multifaceted while remaining continuous: a task begun on a smartphone continues on a computer, tablet or other connected device, and in various forms of interactions.**

**HOW?**

More than 90% of communication is non-verbal: **gesture recognition**, **speech to text**, **eye tracking** and **wearable devices** increase the nature of interactions and open the door to the Perceptual User Interface.

The user experience will increasingly include the analysis of the user's verbal or physical reactions to respond, for example, to feelings of annoyance, joy or frustration through the use of **sentiment analysis** and **emotion recognition**.

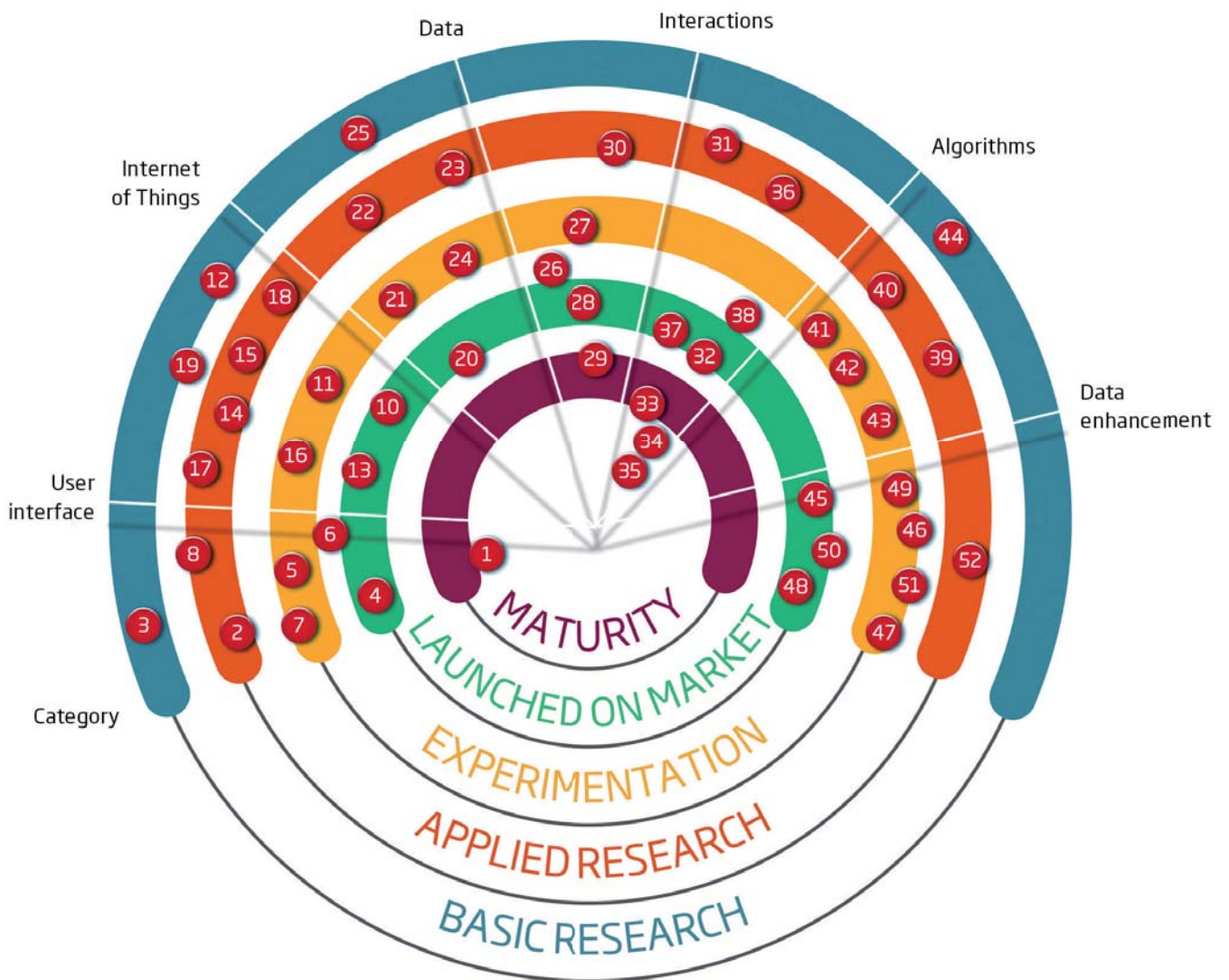
Beyond the human-machine interaction, other interactions are more total: virtual reality is a key element in the user experience.

We are witnessing the emergence of **collaborative robots** that can adapt to the context in order to offer assistance. The progress of **artificial intelligence** and **machine learning** can anticipate user needs and adapt its interface.

## THE RANGE OF TECHNOLOGY FOR IT DECISION-MAKERS

The infographic below classes technologies according to their function and utility across a range of needs and according to market maturity.

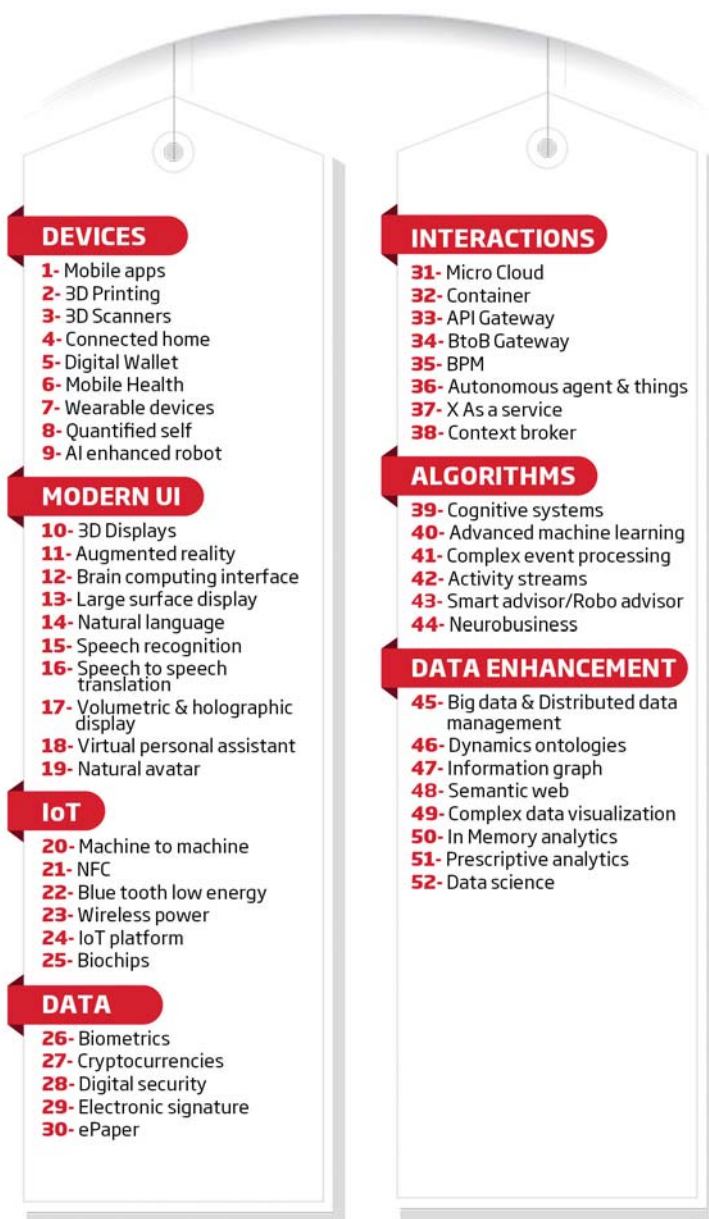
The various technologies available for digital transformation are here positioned and weighted according to their maturity and degree of market adoption. In the centre are the more mature technologies, which are





more easily integrated. On the outer fringes are emerging technologies, reserved for early adopters.

Technologies are arranged by group: devices, IoT, data etc.



## Selection glossary

Definitions for the main technologies to be explored

### | AB testing |

Procedure for measuring the impact of a change in one variable on achieving a goal

### | Analytics |

Automated analysis and interpretation of data

### | Co-design |

Also called co-conception, involves a development or creation process which includes end users

### | DevOps |

A method for aligning all the information system teams around a common business objective

### | Emotion recognition |

A method for automatically identifying human emotions

### | Eye tracking |

Gaze and eye behaviour monitoring techniques to measure the point of gaze and motion

### | Gesture recognition |

Computer technology for interpreting gestures

### | Artificial intelligence |

Discipline seeking to recreate or simulate intelligence

### | IoT (Internet of Things) |

Connected objects

### | Machine learning |

Giving computers the ability to learn, part of artificial intelligence

### | Microservices |

Architecture software in which a complex group of applications is broken down into specialised independent processes to complete a task

### | Virtual reality |

Interactive simulation and immersive environments

### | Sentiment analysis |

Also known as opinion mining, sentiment analysis of dematerialised textual sources across large amounts of data

### | Speech to text |

Automatic voice recognition

### | Wearable devices |

Connected objects that are worn on the body





# DIGITAL PLATFORM

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## BUILDING A DIGITAL BOOSTER PLATFORM

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- # The four laws of digital IS
- # Infrastructure as a service
- # Integrated cyber security

### IN BRIEF

*Speed is essential to digital transformation and the digital platform, or Digital Booster Platform, is the accelerator. It's the constant connection between the company and its partners. It includes a new information system (IS), integrating security at every stage, and is designed to evolve during project implementation. Everything is conducted with agility: we can start anywhere, with the twin objectives of speed and openness.*

# The Four Laws of digital IS

## IN THIS CHAPTER

- > System of Record
- > System of Automation
- > System of Engagement
- > System of Mediation
- > API
- > Producer/distributor model
- > Distribution channels
- > An agile method
- > Software packages

Of course, an information system (IS) is at the heart of digital transformation and must be robust, sustainable and secure. But there is more. In a rapidly changing world, the IS accelerates transformation and in this chapter we present a breakthrough: a new segmentation of the IS into four separate systems and the emergence of an innovative System of Mediation.

**IN BRIEF** With regards to company information systems, digital transformation presents a paradox. The classic company system is tuned to the longer term, while the new digital system must be more responsive and oriented to the short term. This paradox can be solved with the introduction of a new kind of information system called the digital IS. The digital IS comprises four parts. The System of Record is a more robust version of that found in traditional IS. The System of Automation offers real-time exploitation of information from robotics and IoT. A swift and agile System of Engagement provides customer service. Finally, there is a digital System of Mediation which handles the exchange of information and orchestrates services, and is available to the wider world through its APIs. This is the real accelerator in digital transformation.

## Profound changes for information systems

Classic transactional information systems responsible for recording a company's activities and processes have enjoyed a long run. But the digital IS is a very different beast and requires a company to move to a 'digital nervous system', a system which extends to its customers and collaborators, including partners, suppliers, the State, other institutions and the financial sector.

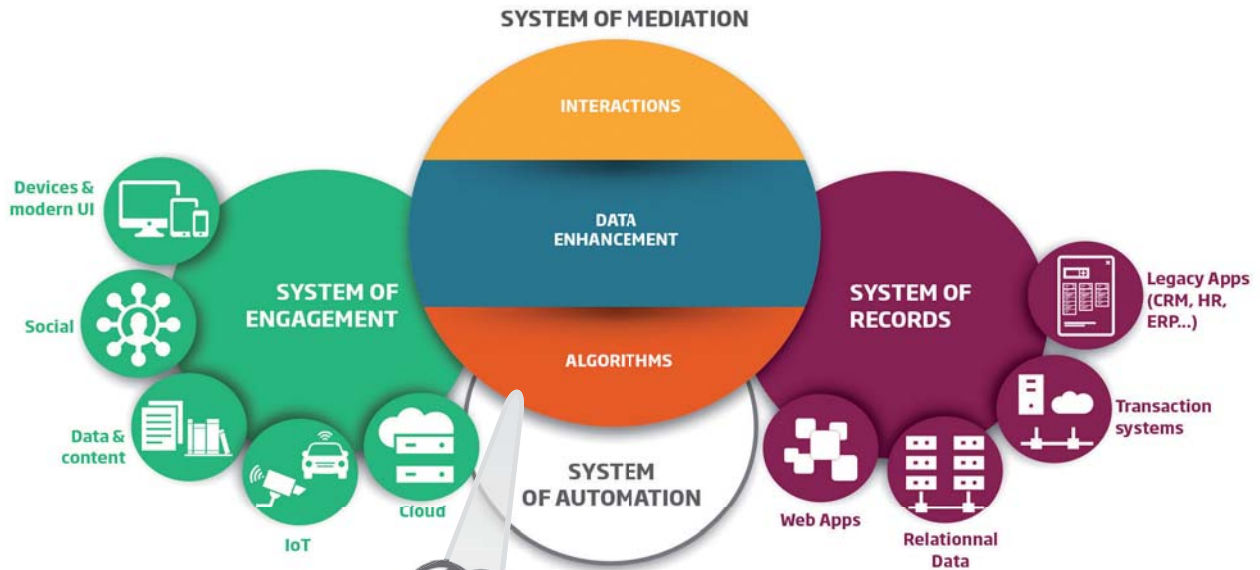
To create such a system a company has to segment its digital IS into four separate sub-systems, each contributing to meeting digital challenges, while relying on a robust and durable technical base. Each system works at its own rhythm, has its own governance and space, and is crucial to a digital company's value proposition.

*Authors' note: we have taken Geoffrey Moore's vision of a gradual evolution from a System of Record to a System of Engagement in the digital universe. This view, shared by many information systems practitioners, including Forrester, is used to describe an IS implementation trajectory in digital transformation.*

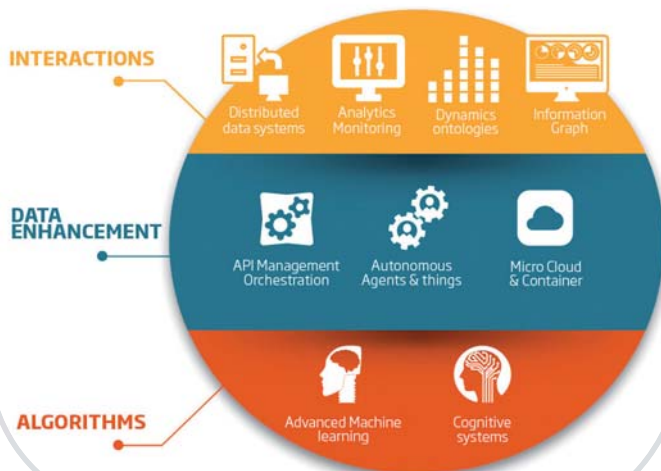


## BETWEEN BUSINESSES, CLIENTS AND PRODUCTION: THE NEW SEGMENTATION IN DIGITAL SI

### MODEL OF DIGITAL SI EVOLUTION



### SYSTEM OF MEDIATION



#### 1 / BUSINESS

**System of Record:** highly secure and high availability level, it hosts critical business data and, in general, the legacy of the company or producer factories.

#### 2 / PRODUCTION

**System of Automation:** very real-time, it collects information and controls various production machines and the different IoT.

#### 3 / CLIENTS

**System of Engagement:** very flexible and agile, it is central to digital transformation.

#### 4 / CENTRE

**System of Mediation:** the interface between the above three systems. The System of Mediation is the backbone of a digital IS segmented into three. It exposes both internally and externally modular and open business services through APIs, and orchestrates applications in the transactional system, providing a business with digital agility.

### **RULE 1 / BUSINESS**

#### **SYSTEM OF RECORD: legacy of the historical system**

**A System of Record needs to incorporate stability, security, an ability to work in real-time and robustness. This is achieved by building it around software packages or vertical business solutions, which must demonstrate their particular strengths.**

##### » **Conducting precise and standard functions within the company**

The System of Record can run software readily available on the market and exploit standard functionalities. It is divided into components performing a specific function. In the banking sector, for example, it will handle the creation of a bank account or provision of credit facilities. Within a telecommunications company it will provide SIM card management. The functions it performs are often standardised in the sector and have no direct impact on a company's marketing differentiation or distribution channels. Existing IS, sometimes still built on mainframe technology, fulfil this role.

##### » **Storing and maintaining a centralised and unified view of master data and processes**

The System of Record is the centre of the company's own business modelling. As such, it centralises, maintains and hosts master data, product catalogues and user data. Master data should be stored and maintained in a single repository (possibly synchronised with partners).

##### » **Applications designed around the company's business model, independent of distribution channels**

Another important function of the System of Record is the support it provides to all company activities. As such, it must be durable in cases where distribution channels are merged or reorganised and must not model a view on data as a function of distribution channel or interface. Rather, we seek to transform IS business applications so

they allow all distribution channels to rely on their information and unit processes.

**Note:** even though it may be constructed on the base of the existing system, the System of Record must also adapt to meet customers' immediate needs. Again taking the banking and telecommunication sectors as our examples, the hosting of bank accounts must, of course, run in real time, and telecoms operators must activate the services requested by customers in real time.

#### **BEST PRACTICE**

In a banking IS the application process offered by the System of Engagement uses the APIs of the System of Mediation which, in turn, sequentially activate the building blocks of the System of Record for account creation, the creation of payment method, the opening of a credit line and the creation of the customer in the bank database. The System of Mediation is responsible for the proper sequencing of these actions and ensures a smooth process based on the information flowing back and forth in the blocks of the System of Record.

### **RULE 2 / PRODUCTION**

#### **THE SYSTEM OF AUTOMATION exploits in real time information from automated production machinery and IoT**

**Just like the smartphone that connects customers to companies in real time, the industrial internet is targeting the same revolution in manufacturing processes through the integration of IoT technologies, Big Data and RFID in production facilities.**

##### **» Sensors connected in real time to optimise industrial maintenance**

The factory of the future will be more responsive and efficient thanks to the use of sensors connected permanently to the IS and technologies from the IoT. These advances introduce the possibility of exploiting data for preventive maintenance. Preventive maintenance, traditionally based on calendar cycles, can then be improved and adapted to actual equipment use. Using Big Data technologies to exploit data from sensors provides new information useful for maintenance. Taking the transport sector as an example, trains and aeroplanes can now communicate continuously, detailing wear of each of their vital components. This means maintenance can start at the most appropriate time and safety levels raised.

##### **» Comprehensive integration of the System of Automation for real-time adaptation of production tools and on-demand manufacture**

Real-time communications between the systems responsible for order taking and automated manufacturing machinery make it possible to automatically and directly adapt production on demand. Furthermore, this reactive capacity can be tailored to requirements. The program for automatic production machinery can be adapted in real time, according to the configuration required by a client upstream in the chain.

##### **» RFID technology connects products to industrial processes throughout their life cycle and eases logistics**

With the emergence and more widespread adoption of RFID technologies the life cycle of products from manufacture through to distribution can be better managed. RFID chips are capable of registering much product information and can improve traceability and product maintenance, while reinforcing their safe use or guaranteeing authenticity. Promoting the exchange of information between each partner in the supply chain means products can be quickly located and stock more finely managed.

### RULE 3 / CLIENTS

#### THE SYSTEM OF ENGAGEMENT provides agility

**Naturally digital, open and agile, the System of Engagement ensures the company and its business concerns are closer to customers, partners and employees.**

- » **Development teams rely on agile organisation and user-centric experience to produce new digital tools in the System of Engagement.**

The first step in conducting an IS digital transformation project is to envision the product or service that needs to be delivered, in a process which is resolutely focused on the user experience. Indeed, in this digital world, users, whether they are customers, partner or employees, are more important than organisations. The System of Engagement relies on APIs, microservices and processes exposed by the System of Mediation to orchestrate the necessary back office functionalities.

### RULE 4 / CENTRE

#### THE SYSTEM OF MEDIATION, conducting the orchestra

**The System of Mediation System is the backbone of the digital IS. It provides a company with digital agility through its exposure both internally and externally of modular and open APIs, and orchestrates the different business services of applications in the System of Record.**

- » **Exposing APIs both in the company and externally, and orchestrating business processes**

The System of Mediation provides orchestrated business processes, bringing together the best of two worlds: the strength of the transactional system and the agility of the System of Engagement. Whatever the existing IS,

whatever its complexity, history or technical roots, the System of Mediation offers an impartial, open and service-oriented vision of the process.

- » **Well-equipped APIs constructed for IT industrialisation and open to the company and its ecosystem**

The System of Mediation is the authentic backbone of the IS, **connecting the company to its ecosystem**. It provides the transversal functions of the company's IS in the form of APIs focused on microservices. It is essential that its deployment and development follow the principles of advanced industrialisation. The system should therefore use components based on open technologies which are interoperable, able to interact in real time and can orchestrate and expose the business services in the System of Record. Different versions of APIs must be managed to limit upstream impacts in the System of Engagement and among partners.

- » **A set of real-time metrics on functioning: load, response time and availability**

API entry points are designed and equipped with the aim of real-time management of their use by different channels and for real-time prioritisation if needed. For example, it may be necessary to give preference to one distribution channel over another as part of a specific marketing campaign.

*“ The System of Mediation brings together the best of three worlds: the robustness of the System of Record, the agility of the System of Engagement and the real time of the System of Automation. ”*



## IMPLEMENTATION OF A DIGITAL BOOSTER PLATFORM

### Agility is essential to building digital IS

To meet the challenges of digital transformation, a company must put into operation agile, multidisciplinary teams which have a clear vision of the service required and are committed to its delivery.

Agile organisation makes it possible to progressively build a digital platform, integrating the priorities identified in the first business projects. This agile organisation brings together business and IS teams. The technical teams, who are up to speed on technological intelligence, provide business teams with information on the

#### CASE STUDY

The Norwegian Labour and Welfare Administration (NAV) administers a third of the national budget through schemes such as unemployment benefit, sickness benefit, pensions, child benefit. NAV sees great opportunities for automation and user-friendly systems. In order to achieve these NAV had to modernise its infrastructure, architecture and systems. Their overall digitalisation project aims to improve user experience and manage cases more efficiently. Sopra Steria have been the main strategic partner in this modernisation programme and has directed many key projects such as process enhancement, benefit creation, organisational change, architecture, testing, user journeys and IT project management.

technological innovations available on the market ahead of implementation. In turn, during the construction of the digital platform, business teams are directly involved in the development cycle to alter the target when needs have changed and validating the functionalities developed as rapidly as possible.

Consult  
Brian Hopkins'  
System of Insight



#### EXPERT OPINION

“ *One of the most instrumental roles for a **System of Mediation** is the development of the company's ecosystem. The quality of the services created, their cost and ease of integration must guarantee the platform's appeal to talents. It must especially drive new innovative players to our platform and liberate the Company's own creativity. Its API must follow a precise service definition, controlled accessibility and fair pricing that is relevant to the company's strategy so that it can become an essential building block for the new services or business models.* ”

Yoann Yvon

HEAD OF INNOVATION,  
SOPRA STERIA, SPAIN



# Infrastructure as a Platform

## IN THIS CHAPTER

- > Agile infrastructure
- > Public Cloud
- > Private Cloud
- > Legacy
- > Service catalogue
- > Portal and self-service
- > DevOps
- > End-to-end management

Over time IS infrastructure has come to be seen as a mere technical service. But it gets a new lease of life in digital transformation, becoming an accelerator of the process. Required to communicate with the legacy, new services and external services, IT infrastructure needs to be transparent and easy to access for company users. This can be achieved through implementing an infrastructure project, using the concept of infrastructure as a platform.

**IN BRIEF** IS infrastructure is a genuine accelerator in digital transformation and especially so with the arrival of that cornerstone of digital transformation, the cloud. Good infrastructure should be transparent to businesses, enabling them to employ an infrastructure as a platform approach and accelerate transformation while taking into account the specifics of each population.

## Digital transformation places demands on infrastructure

To support digital transformation, infrastructure must demonstrate the following characteristics:

- > Extreme flexibility and agility due to the high level of information exchanged between systems and applications both internally and externally.
- > Speedy provision of resources and deployment of application components at all stages of the application lifecycle (proof of concept, development, testing and evaluation, pre-production, production), each

with a level of service that is appropriate for digital transformation.

- Flexibility in IT services thanks to a service catalogue which constantly evolves through the integration of components from both within the company and from the exterior (legacy, private and public cloud).
- The ability to provide autonomy to users and the same comfort level they experience in their private environment: multiple devices, fixed or mobile, portal for services and self-care tools. Finally, they must provide pay-per-use.

## **Towards a pay-per-use services platform**

Despite the huge demands placed on availability, performance and security, over the past 20 years, IS infrastructure has been regarded as a more technical service. These demands are now even greater, with IT infrastructure and the emergence of agile infrastructure approaches such as the cloud becoming a prerequisite and accelerating force in digital transformation.

These new technological approaches are being accompanied by changes in financial models, in particular, pay-per-use pricing, which offers a clearer view on the infrastructure consumed. It is a genuine breakthrough because this modern infrastructure means that IT costs

BEST PRACTICE

### **Empowering the user**

Introducing an IT portal for ordering services is key in the new approach to infrastructure consumption. Depending on their profile, users can control the IT resources they consume, order shared applications through an in-house company 'app store' according to their needs and particular role, and contact support services using self-service tools connected to cognitive engines, complementing the traditional support centre approach.

become progressive. It becomes possible to innovate and launch new services without CAPEX, to move forward with the right to make mistakes. It is essential for the implementation of digital projects and crucial to digital transformation.

All this means that the old infrastructure is transformed into an open services platform and the legacy is opened up with no disruption in service.

## **IMPLEMENTING INFRASTRUCTURE PROJECTS**

### **Essential steps taken with agility**

We must develop agile infrastructure to conduct a digital transformation infrastructure project and, simultaneously, give more autonomy to business units to control the resources it provides.

Logically, we can break the infrastructure project down into steps: introducing an IT platform which is available to users; optimising and ensuring security in the underlying infrastructure in exchange and business systems; providing autonomy to users through self-service tools adapted to the purpose and, finally, bringing agility to IT infrastructure deployment projects.

### **Using a service catalogue to highlight the infrastructure components vital to digital transformation projects**

These are the business needs, in other words the uses, which alter the way IT resources are consumed in a lasting manner. The user must 'naively' specify their needs in terms of the related infrastructure (availability, security, nature of data, range and duration of use).

In this approach, the IT department becomes the provider of a platform which is available to the company's business units.

With this arrangement, business organisations can access a service catalogue and, in a single click, have access to

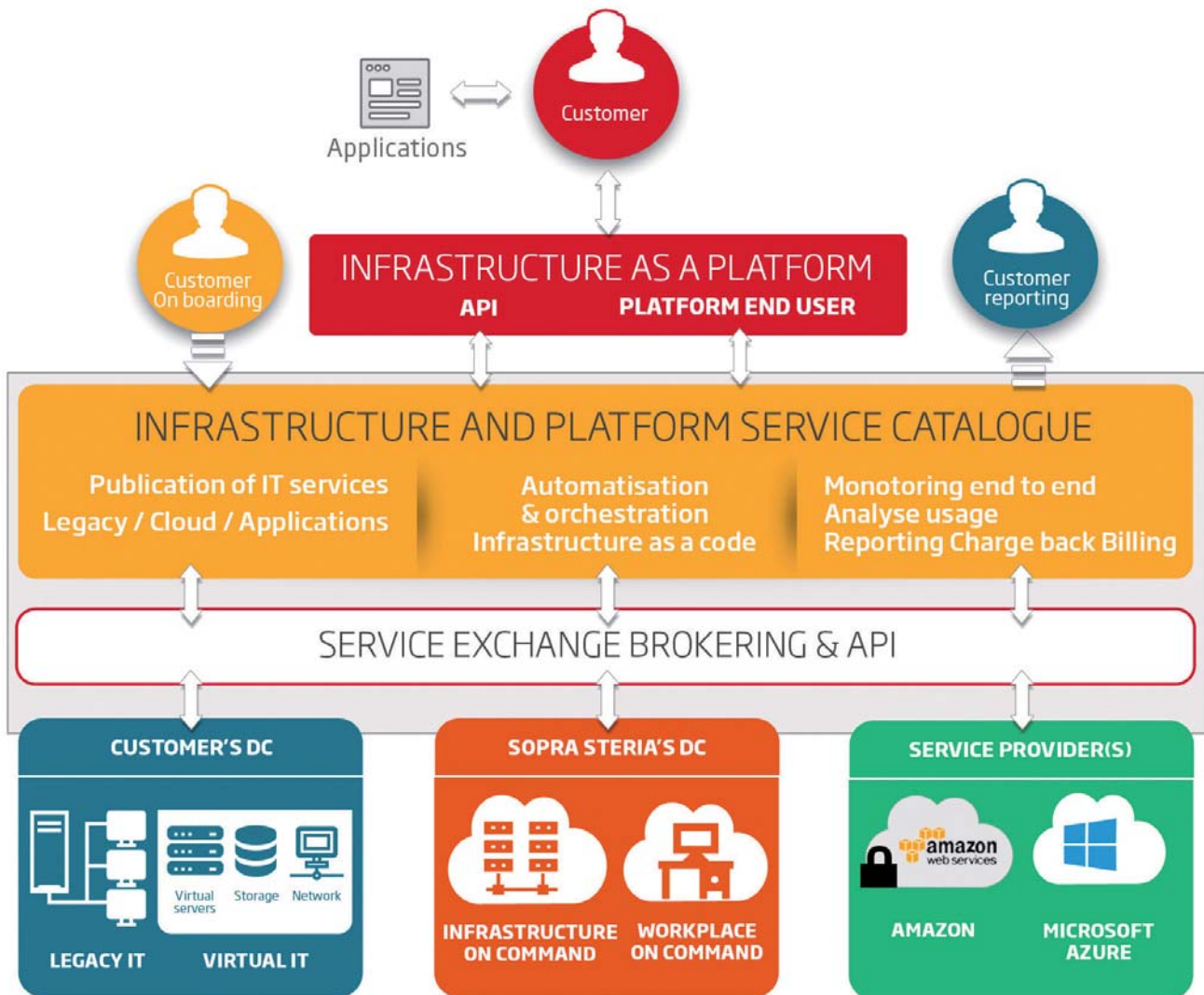
## BUILDING A DIGITAL BOOSTER PLATFORM

services published by the IT department at a level which allows them to rapidly develop their applications.

This platform provides access to IT services and manages the resources made available by the IT department to businesses at all levels:

- Infrastructure, computing, networking and storage
- Platforms, databases, middleware, data flow services
- Horizontal office applications
- Pre-packaged and ready to use components for business applications

*“ IT infrastructure has led to the emergence and development of digital uses which were impossible to imagine just a few years ago. ”*



*A platform available to businesses for access to IT services and for managing the resources made available (DC = Data Centre).*



With this approach, users and developers are autonomous. The service is available with a single click through a self-service system on a portable device or via API. The consumption model is linear, both technically (it accompanies use) and economically (the user pays for what they use). The service is monitored and reporting is available at any time. Users know what they consume and how the service functions.

Billing is based on consumption and chargeback to the unit which uses the service. The platform is also secure, security is inbuilt, just like resilience, and technical obsolescence is not a problem for the user.

### **Industrialising and strengthening the system for information exchange**

Given these developments, there has been significant growth in the demand for the exchange of information between internal and external systems, particularly with regards to opening the information system to providers in the public cloud.

For transformation projects this requires reflection on three points. The first is defining infrastructure networks which can adapt more quickly to demand and offer real-time response time optimisation for resources such as IaaS, PaaS and SaaS hosted in the public cloud. The second is implementing a platform which facilitates the management of information flows in the IS and the orchestration and automation of different services. Thirdly, we have to rethink security from end to end, integrating cloud access and decompartmentalisation (see Cyber Security p. 39).

### **Optimising and securing business system infrastructure**

The accelerating effect of the uses discussed here has a major impact on the business information system, which needs to be transformed and made more agile, disregarding infrastructure per se: automation, virtualisation and cloud services have emerged to better serve applications (agility, cost, and resilience).

#### **CASE STUDY**

Canal+ is using the public cloud to provide agile infrastructure. Establishing a single repository available to all subsidiaries has halved the time required for the provision of infrastructure resources and produced economies of scale. Operating costs have been reduced by around 50% with project payback in three years.

The 'business' constraints placed on infrastructure are considerable and it is essential these are considered upstream. These constraints are:

- The capacity to rapidly modify the applications produced (agility, DevOps, App Store)
- The need for security and the volume of data processed (infrastructure hosting data should have high availability to meet demand)
- Access to the consumption of user-oriented infrastructure, in other words Infrastructure as a Service (IaaS)
- Cost reduction since 50% of infrastructure is currently unused and virtualisation makes optimisation possible
- Compliance (software, regulatory, environmental etc.)
- Establishing reliable services and automation for service continuity, storage and efficient handling of unexpected events

And ongoing changes will rapidly combine for the mass arrival of uses requiring even more agile and available infrastructure, such as the Internet of Things (IoT) and Big Data.

### **Monitoring and analysing application use**

To provide a DevOps approach, teams have new tools for real-time monitoring and analysis of application use:

- How popular is my application (and who uses it)?

## Towards an agile and sustainable infrastructure?

Currently, there is a trend to save energy. With 24/7 availability demanded for infrastructure, we need to use it differently. Infrastructure consumes energy and precious resources so why not adopt a more sustainable approach? After all, we do not hesitate to turn the light off when we leave a room. Among the levers for reducing costs and environmental footprints, is the possibility of reducing service levels, access and some unnecessary uses - typically development or testing teams do not need 24/7 IT resources. Agile infrastructure management tools can control this use.

- What new developments in use can be envisaged with the production of a new version?
- How is the application 'consumed'?
- Which branches are heavily used and so require elasticity in infrastructure or, conversely, are not used and could be decommissioned? Here we see the emergence of new services such as in-app tracking.
- How does the application perform?

IT infrastructure is a key element in digital transformation approaches. And like any project, can be subject to major change, which requires different approaches to implementation.

### EXPERT OPINION

“ Digitalisation is changing the application landscape and requires a flexible and scalable infrastructure. Traditional legacy applications need to be available combined with 'software as a service' and Cloud-based delivery models. This challenges the IT department in both their processes and from a technical perspective. Drivers going forward are Infrastructure as a Platform where services are consumed on demand, self-service to accelerate new business needs, and pay-as-you-go. In addition, a user centric approach is necessary to support the mobile workforce. ”

**Atle Rønningen**

HEAD OF INFRASTRUCTURE  
TRANSFORMATION,  
SOPRA STERIA, NORDICS



**WHO?** IT DIRECTORS

# Cyber security integrated

## into the Digital Booster Platform: a comprehensive approach

With regard to cyber security, digital transformation creates new requirements and new risks. Cyber security therefore needs to be addressed through a comprehensive approach that allows users to benefit from these new services in total confidence, while ensuring effective IT risk management for the company. Quite simply, security levels must be high enough to match the new challenge of digital transformation.

### IN THIS CHAPTER

- > Data protection
- > Privacy protection
- > Identity management
- > SOC
- > Secure by Design
- > Secure authentication systems
- > End-to-end approach

**IN BRIEF** Digital transformation has major consequences on security at all stages of project implementation. The information system (IS) is much more open, data is unstructured and increasingly less compartmentalised and arrives in ever greater volumes, there is a larger and more diverse user population and older applications sit alongside new technologies. Conventional compartmentalisation strategies no longer work. We need to adopt a comprehensive approach.

### Traditional security thrown into question

For many years a compartmentalised approach has been employed for IT security: securing infrastructure, compartmentalising data, limiting the number of users and their rights. However, digital transformation throws this 'traditional' approach into question because systems are increasingly connected and data flows throughout the IS.

More specifically, applications and business data are now available to clients and suppliers using networks and machines which the company can no longer control, including smartphones and personal computers, connected objects, the networks of sub-contractors and suppliers etc. In addition, there is a change in the nature of data, which is becoming less compartmentalised, less structured and appears in ever-larger volumes, making it harder to analyse suspicious behaviour. Another factor is the coexistence of older applications alongside new

technologies. The wider connections to the IS also make identity management and authentication more complex due to large and highly diverse user groups. The arrival of connected objects, many of which collect personal information and can create new vulnerabilities, also raises questions about privacy protection. In addition, the proliferation of SaaS applications brings added risk.

Given these new challenges posed by digital transformation, it is essential that an adequate level of security is implemented. And in a situation where everything is being transformed, the traditional approach is simply not enough. A comprehensive and fully redesigned security strategy must be implemented for successful digital transformation.

*“ A comprehensive and fully redesigned security strategy must be implemented for successful digital transformation. ”*

This requires real vision, taking into account all aspects of the transformation and providing a coherent approach to security. The process from strategic choices through to implementation in processes, applications and infrastructure needs to be managed.

The end-to-end approach targets two main objectives: protecting the privacy of clients and employees (personal data), and protecting the business (IT resources and production data). The introduction of the General Data Protection Regulation in the EU will go in this direction.

### IMPLEMENTING SECURITY

#### Developing an end-to-end approach

Given the circumstances, it is essential to employ an end-to-end approach which is comprehensive, coherent and based on risk analysis. By taking into account the impact digital transformation has on information

#### CASE STUDY

##### SQL injection at the UN

In December 2015, a group claiming to be from Anonymous hacked a UN site containing a list of the participants at COP 21 and revealed the personal data of more than 1,400 people (name, email, phone number, security question to change the password etc.). Yet, according to the press, the hackers used an SQL injection, a classic attack which is usually easy to block. A simple risk analysis would have shown that the data on the site could be of interest to 'hacktivists' or less scrupulous governments, and that the raised risk level required appropriate security measures such as not storing personal data on the site.



systems, risk analysis provides insight into the most dangerous events and the introduction of an appropriate strategy.

Since the IS is increasingly interconnected, solutions should be considered with a global vision. The approach must be rigorous and methodical, taking into account every single asset which supports the process and raising security levels for each of them.

This end-to-end approach requires solutions adapted to the new requirements which digitalisation brings such as high-volume, unstructured and indirect data etc. It should also clearly identify critical business processes and categorise data according to its sensitivity. For each level of criticality, appropriate security measures must be defined. We need to pay special attention to the data path in the IS and increase vigilance on the email system, DNS and Active Directory (which generally supports all of these processes and is therefore a prime target for attacks).

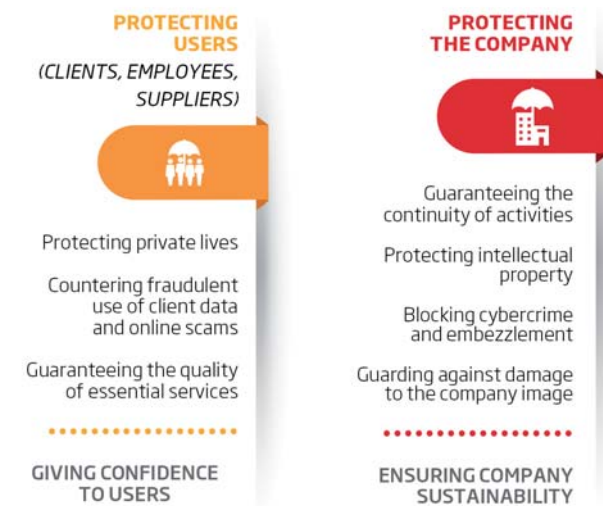
## Secure by design

A characteristic of digital transformation is the arrival of new technologies and new applications for existing technologies. These have often been developed following an iterative prototyping model and new applications often suffer from security vulnerabilities, both in their architecture code and hardware. In short, security came too late.

Often developed internally, it is rare to find applications that are adequately secured because developers still receive too little training in writing secure code. However, code reviews and 'vulnerability scanners' make the most classic flaws easy to identify. Training is required to ensure the tools are used effectively in the search for these loopholes.

Once an application is deployed, it can be very difficult to secure if the architecture was not conceived with security in mind or if the technology used is flawed.

## THE 2 MAIN OBJECTIVES IN BOOSTING SECURITY IN DIGITAL TRANSFORMATION



Building robust architecture capable of withstanding attacks is a prerequisite. The method for achieving this is secure by design, an approach which takes into account identified risks from the moment of conception.

## Follow these guidelines

### » Identity and access management: a recurring weakness

This is a real challenge in digital transformation because the number and diversity of users increases, while authentication systems remain a weak point. It has been shown that even biometric solutions have their limits.

Therefore particular vigilance is required to ensure security in authentication systems and identity management. There are some measures that can be taken to help achieve this. First, minimise as much as possible the number of high-privilege users and accounts. Second, separate those profiles with rights to create sensitive data (such as money transfers) and the profiles which validate these actions. Third, establish regular reviews of access rights. Finally, have a demanding policy for password management and introduce a multi-factor authentication system for sensitive processes.

### BEST PRACTICE

It is essential that possible identity theft scenarios are systematically taken into account during risk analysis, as is the introduction of systems for analysing suspicious behaviour among high-privilege users.

#### » **Managing application portfolios**

Application portfolios are sometimes highly heterogeneous because they use technologies designed at different times. As new applications need to communicate and be integrated into this portfolio, priority should be given to obsolescence management and the technological heterogeneity of the application portfolio.

Sometimes it will be necessary to isolate vulnerable systems because they were not originally designed to deal with new security issues, to protect them specifi-

cally and, especially important, to trace all breaches of security instructions for these systems to ensure they are treated appropriately.

#### » **Threat management: how can we supervise security?**

Every day new vulnerabilities are discovered in commercial software and hackers are constantly devising new attack strategies. These vulnerabilities, for which a patch is not yet available (Zero Day vulnerability), are sold for small fortunes on the darknet and provide a gateway into even the best protected IS. Simply ensuring security levels reach industry standards, while absolutely necessary to limit risk, is therefore insufficient.

To detect and treat the most sophisticated attacks, it is best to establish a SOC (Security Operating Centre). The Security Operating Centre brings together a team of experts that analyses in real time all IS activity (traffic logs, emails, various flows etc.), in search of 'weak signals' to detect suspicious activity, such as an administrator

## Privacy protection presents particular challenges

The management of personal data is subject to strict regulations and companies are obliged to implement the appropriate safeguards. Case law shows that the notion of what personal data comprises is very large (an IP address) and any leak of personal data is very poorly viewed by clients and employees.

Big Data and connected objects are used to collect large amounts of private information about clients and employees (name, address, health, family, location,

bank account etc.). This should be taken into account when designing new applications or there is a risk of it being particularly difficult to subsequently manage privacy issues. For example, how do we govern the right to access and rectify client information when data is scattered throughout the IS?

Among the solutions to limit risk is the anonymisation of data, which can then be used for testing datasets and Big Data

applications. However, while anonymisation may appear simple in principle, it requires experience to ensure it is irreversible (simply hiding the surname is not enough) and that the new dataset offers functional and statistical coherence.

There is one last subject that also needs to be handled with care: reconciling privacy protection with the need for user traceability (for obvious security reasons).

## CASE STUDY

### DDoS Websites Attack

On 21 Oct 2016 a cybersecurity attack, described as the largest Distributed Denial of Service (DDoS) attack to date, affected 80 major websites and was blamed on the Mirai botnet that was used to execute an attack via millions of largely unprotected IoT devices, including: cameras, printers and baby monitors. Those devices were used by unknown attackers to overload servers at Domain Name System provider Dyn, whose clients include: Twitter, Paypal, Spotify, Amazon, and CNN. IoT devices often ship with default credentials and lack automatic security updates to fix known flaws. This made these devices an easy target for the hackers to use to perform the DDoS attack.

connecting from an unusual computer or the exfiltration of sensitive data, and to react accordingly.

#### » Keeping users up to speed

Finally, it should be borne in mind that users themselves are often the weak point because hackers exploit their naivety. It is therefore essential to regularly inform and train users on hacking practices and how they can avoid falling victim. Equally important, applications should be designed in a way which limits the capacity of a victim to cause damage or harm.

### Digital trust is essential to success

More broadly, digital trust, which encompasses all of the above, is at the heart of digital transformation.

Alerted by security breaches, which are growing in number and pounced on by the media (see the SQL injection at the UN, p. 40, and the DDoS Attack), clients, staff and shareholders can become distrusting or even opt out.

This means digital transformation will not be a success unless it is accompanied by digital trust, in other words, the certitude that security issues are being dealt with through constant vigilance and the highest level of professionalism.

## EXPERT OPINION

“*Digital transformation produces a complex environment with new requirements and results in significant risk factors that cannot be mitigated without a comprehensive approach. Digital Trust, encompassing all elements of security, must be at the heart of the digital transformation to provide defence in depth protecting the needs of the User and the Business. The required outcome is a guarantee that security issues are being addressed at all levels and at all times, along with the confidence that incidents will be addressed effectively and professionally in a timely manner.*”

**Graham Blondel**

HEAD OF DIGITAL TRUST,  
SOPRA STERIA, UK









# BUSINESS PROJECTS

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## HOW TO STEER COLLABORATIVE PROJECTS TOWARDS DIGITAL TRANSFORMATION

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- # Steering the trajectory of digital projects
- # Management 3.0
- # Transformation teams
- # Innovation management
- # Managing change(s) within the company

### IN BRIEF

*Once a digital transformation strategy has been established and projects identified, they can be simultaneously implemented in a fashion that is intricately linked to the construction of a digital platform. So, which navigational model should be used? And which management styles and team structures should be implemented?*

# Steering the trajectories of digital projects

## IN THIS CHAPTER

- > Principle of evolution
- > Agile approach
- > Project typology
- > Preparation
- > Reframing
- > Testing

We have to steer business projects towards digital transformation while simultaneously dealing with strategy issues and the construction of a **Digital Booster Platform**. So the first step is choosing which model we use to help guide project trajectories.

**IN BRIEF** Trajectory is key to transformation, describing the general approach taken at each phase and at all levels of implementation. Typology, preparation and reframing are crucial to form the bedrock for the kind of transformation in which the human element is a central feature. Five types of trajectory are available, chosen according to company status and the nature of the teams involved. Each one is implemented using an agile approach which empowers stakeholders.

## ANALYSIS

How can a software publisher make the transition from an economic model based on licensing sales to a SaaS model? Or a book publisher move to a form of online

distribution that generates advertising revenue from a model based on publishing, page setting, printing and circulation of copies? Beyond the question of which strategy to adopt lies the issue of which trajectory the transformation should take when changing to a different economic model, whether it be for an IS system (see p. 28), infrastructure (see p. 34) or business (see p. 45).

## SELECTING THE RIGHT MANAGEMENT MODEL FOR DIGITAL PROJECT TRAJECTORIES

### Five options possible

Ranging from the charismatic leader to the Chief Digital Officer, here we present the main options available to management teams seeking to drive forward digital projects.



### **The charismatic leader** **The digital centurion, aka total commitment of executive management**

The principle behind this model is that digital transformation is both inevitable and must be total. The leader and his team are the leading advocates and authorising officers for digital transformation. This option is not without risk, since it leads to cutting all ties with the past in search of a destination which is not yet clear. Back in the 1990s, the Vivendi teams were on the right track but were way ahead of their time. A success story closer to home is the management team of a large transport group which chose to employ an executive from the telecommunications and media sector to drive their complete transformation.



### **The digital department** **Star Trek and The Starship Enterprise, aka the creation of a department dedicated to digital transformation**

This model is used to organise and consolidate the digital offer and digital initiatives in situations where the business model might well be disrupted by other business activities. Accommodating or regrouping a dedicated department means the incubation stage can be jumped. So Captain Kirk at the helm of The Enterprise can boldly go in search of new cosmoses to develop new markets. In the banking sector, executives at a number of large French banking groups have launched online banks (wholly owned subsidiaries) which allow them to develop new products as well as create new methods of distribution and production. Meanwhile, other executives have chosen to create a digital department to bring together and incubate existing initiatives.



### **The chrysalis,** **aka transforming the whole organisation from within**

Executive management provides the initial impetus and, gradually, all the internal forces take up the baton. Initiatives are conjured up in one department and rebound in another. This type of transforma-

tion is almost under sufferance and is characteristic of business cultures made up of autonomous departments which are close to their market. General Electric's shift to digital and Samsung's industrial transformation are perfect examples of an environment which shapes changes in the company model.



### **Transforming through adoption** **aka buying a start-up to give the old man a makeover**

This model is like a speeded-up crash course in transformation, allowing a company to claw back ground on competitors. Executive management opts to integrate one or more start-ups, revitalising the company with an injection of more youthful DNA. However, as in botany, this kind of grafting can provide variable results. See, for example, what happened at Europ@web, the incubator of the LVMH group, and Legrand's investment in Netatmo. In this approach, external conditions (markets) and internal factors (the company culture) play a decisive role.



### **Organised cannibalism** **aka constructive destruction** **organised by the Chief Digital Officer or the Digital Transformation Officer**

This model is nowadays recommended in the financial services sector and has been implemented by a number of companies. Within such a highly competitive environment, FinTechs (financial sector start-ups) are attacking entire sections of the banking model. Organised cannibalism involves setting up an internal team assigned the task of responding to this threat and introducing new offers and new models - before it's too late.

*“ The final choice of model depends not only on the willingness of the management team and the competitive environment, but also on how well these teams are accepted. ”*

## GOOD PRACTICES FOR AGILE MANAGEMENT OF DIGITAL PROJECTS

### » Integrating permanent evolution principles into project preparation

Establishing the basics, putting the **principles of evolution** into place and allowing creative freedom to flourish are key tasks. Preparation is vital to a digital project: it is essential that the first 'agile sprints' contain a description of the business process, a list of workflow between partners and the definition of an initial 'data model' (which describes the presentation of data within the business organisation). And, finally, the expected functionalities should be ranked according to what they bring to the business and their stage of development.

We can then design the work breakdown structure for developing the Digital Booster Platform, with these sub-divisions underpinning the different production versions. Yet care is needed on a fundamentally important point here: success at the first attempt can be deceiving. A reiterative model is therefore recommended. Versions can be monthly because it may be necessary to change

### BEST PRACTICE

Methodologies are available which enable developers to create new functionalities and develop tests to evaluate them almost immediately. While this increases development time by 20 to 30%, it reduces testing time by 70 to 80%. It also produces a similar improvement in time to market for new functionalities. To achieve a rapid return on the quality of new developments, this approach needs to use the new features offered by friends and family. This accelerates implementation and generates a stream of new functionalities and almost weekly updates. With such methods, the notion of a 'major release' of a main final version tends to disappear. And, in management terms, it requires the empowerment of developers.

developments - and even the Digital Booster Platform - two or three times before hitting the right level. Since it is difficult to admit failure, it is essential to consider the possibility of disappointment from the planning phase.

Aided by technology, this approach means we can work in alternative ways. For digital projects, it is useful to think differently about programming and to introduce the principles of delayed differentiation and permanent evolution.

### » Predicting the need to reframe projects How to drive major change

Similarly, the work breakdown structure is free to evolve over time. Each element is designed to produce a deliverable which can be put into production with operational functionality throughout. All project stakeholders need to be aligned in a coherent work breakdown structure to ensure that every package delivers a result which can be put into service. Each package brings its own business values.

### EXPERT OPINION

“ *Whichever model an organisation chooses, the most important factor is its willingness to learn and try new approach. Failures are inevitable and even necessary to conquer new lands. One tactic is to instigate 'Failure Friday' - an honest discussion of the week's failings.* ”

Markus Linde

DIRECTOR,  
SOPRA STERIA CONSULTING, GERMANY





WHO? BUSINESSES

# Management 3.0

## The human element and collective intelligence at the heart of projects

Digital transformation puts the human element back at the heart of projects. Whether they are from IS departments, business units or management, all collaborators are given the means to develop effective collective intelligence. Transformation also requires the application of manager 3.0 principles.

### IN THIS CHAPTER

- > Collective intelligence
- > Visual management
- > Project platforms
- > MVP methodology
- > AB testing
- > Transformation teams
- > Manager 3.0

**IN BRIEF** Digital projects cannot be managed in the same fashion as a 'traditional' project. Agility is at the heart of all processes and methods, and project organisation should be just as adaptable. As seen in the development of new technologies, management 3.0 creates new links for a truly liberated company. It is crucial that management 3.0 be encouraged at all stages of the transformation.

### Project governance needs to change

We have identified the keywords in digital transformation: agility, speed, continuous adaptation and pleasure. But to meet these aims, a transformation project cannot be managed in the same way as a 'traditional' project (such as those based on the V-cycle, for instance). Project working methods and governance present their own

particularities. More specifically, agility is required not only in processes and methods but also in organisation and the role of the manager needs to be reconsidered.

For speedy decision-making and to avoid setbacks, it is important to establish a new organisational system based on individual responsibility, multidisciplinary teams, lightening the load of checks and procedures and shortening reporting lines.

Manager 3.0 gives each team member greater autonomy in decision-making and organisation of their workload. It marks the end of surveillance, procedures, checks and pyramid-like chains of command. It is replaced with more transversal and transparent exchanges of information, experienced staff trained by their juniors, and an even greater amalgamation of talent.

Manager 3.0 helps explain the 'why' of a project and provides a shared view of its purpose. It allows project team members (from business, IT and support teams) to throw off the shackles of hierarchy and encourages the creation of communities of practice, where each participant brings their own expertise to the table (they are no longer merely the boss's mouthpiece). Removing the supervision of collaborators brings a major boost to reactivity. Manager 3.0 offers a framework favourable to the emergence of collective intelligence.

Using collective intelligence is particularly well-suited to digital transformation projects. Innovation stimulates creativity and the co-construction of scenarios for change or rupture. Further, it encourages everyone to become involved and promotes a good working atmosphere.

*“ Applied to the working methods of a digital project, the use of collective intelligence facilitates transformation management. ”*

### PRACTICAL ADVICE

**1 | Promoting collective intelligence**  
Large-scale transformation projects can sometimes involve hundreds of collaborators. As such, it is essential to ensure good coordination between the intelligence of a smaller team and the organisational intelligence of a large transformation project. This can be achieved by organising the project into sub-projects, each led by a small team using collaborative approaches. It is also useful to capitalise on knowledge at the global scale by sharing good practices across all levels. Given this context, HR management of the project will be transversal.

Generally speaking, lean project management will need to be implemented: autonomous teams, short and swift decision-making processes, continuous improvement, visual management and an extended project platform.

#### » **Extended project platforms and visual management**

The traditional project platform enables IS teams, businesses units and internal and external resources to be brought together in one place. In a large project, an extended project platform complements this arrangement by facilitating multiple locations, albeit with a standard platform where everyone meets on a weekly basis. The platform is therefore made up of several sites, one of which is the reference site. It takes shape through the use of collaborative digital tools that facilitate task-sharing, such as Asana, a project management application that enhances email-free collaborative working.

#### BEST PRACTICE

##### Sopra Steria's distributed agility kit

It is vital that agility be applied to all project stakeholders, including teams that are working remotely. Sopra Steria's distributed agility kit allows projects to be developed across geographical areas, distributed through domestic or international service centres. It is a technological and methodological approach that provides remote access to expert platforms and agile developers, whilst maintaining the advantages of proximity to users, external experts, students, clients and so on. Business teams, even those working remotely, have a tool providing them with daily visual contact with the team, as well as a management environment that allows them to track the progress of their projects.

Visual management relies on indicators which are analysed daily, providing a 'physical view' of key information to all project stakeholders. Its principal aim is to track activity and priorities. This visual readout,

which often takes up an entire section of wall, facilitates negotiation and helps identify the impact of unexpected developments.

## The era of manager 3.0

### Digital transformation redefines management methods

#### Managing through relations

Work is often conducted at a distance, across multiple sites, while travelling and across time zones. Project members, sometimes on the move or teleworkers, but they become autonomous individuals who are well-connected, well-equipped and networked. They sharpen their tools, hone their methods and increase their know-how and commitment through these professional experiences.

Such developments, however, can sometimes lead to tension. The challenge for the manager is to nurture relations and to understand how to foster relationships and help them thrive by employing a management rationale based on trust.

Digital tools are essential in this management approach, but this is often a complex issue since not everyone shares the same views and expectations. Hence the temptation to use new technologies simply as tools for

data and knowledge transfer, without using them as leverage for integrating emotional and relational processes. When used as a motivational tool, they should constantly be adjusted to take into account the expectations of collaborators: Can they do the job? Do they want to do it? Are they interested in doing it? Are they given the opportunity to do it?

#### The transversal manager - no hierarchical management

Whether it is for leading a project, as an organisational process or for working as part of a network, the manager needs to learn how to motivate without hierarchical management. This 'transversal management' provides a horizontal view of the company. In other words, one that goes beyond the functions of top-down management. It favours decompartmentalisation, and combines and links the businesses, skills and resources necessary for a shared outcome designed to produce results.

The main skills of a 3.0 manager comprise collective intelligence, agility and the ability to motivate teams, thereby inspiring confidence and trust.

This style of management requires a broad knowledge base, the smooth flow of data and the capacity to work as a team. The horizontal approach also involves the decentralisation of responsibilities, greater flexibility and the development of transversal competences. As a consequence, it becomes possible to transcend a project's hierarchical structure and to reconsider roles, jobs and the functions of different project team members.

The manager's role is evolving ever closer towards leadership. It is no longer a question of 'who knows best'. Rather, it is someone who points the way and brings the team on board. This is often achieved when there is a greater collective drive and less individual ambition involved.

BEST PRACTICE

**The right size: the pizza team**

The ideal size for a team is generally agreed to be between five and 12 people, basically a group that can be fed on two pizzas. This is how Jeff Bezos, CEO of Amazon, envisages the organisation of meetings. With less than five participants, there is a noticeable lack of creativity and a greater vulnerability to unforeseen events. More than 12 and communication and cohesion are lost and dissention will be heard. The challenge here is to have access to a group of individuals motivated by common issues and objectives.

» **Decision-making processes: MVP methodology and AB testing**

The Minimum Viable Product (MVP) approach helps to identify the best route to shorten cycle times and reach final users more quickly. It helps shorten the reiterative process, thereby meeting one of the key demands of a digital transformation project. Similarly, by creating two versions of the same item (a product or web page etc.) and asking users to vote on their efficacy, AB tests - also known as split testing - allow two versions to be compared. New methods like these really accelerate decision-making and optimise the cost/quality/delivery equation.

**2 | Anticipation and a new role for managers**

Each of the tools described here, and particularly the extended project platform, demand greater anticipation and assign a new role to managers. This role is that of manager 3.0: someone who communicates to every member of the team the project's significance, the issues and the objectives. They also provide a clear vision of the 'cathedral' under construction. Managers are therefore an essential link for sharing meaning and uniting stakeholders. They can call on new digital tools to convey this

information. Their role will clearly evolve within a project that is 'free' and where top-down management no longer exerts its authority but instead embodies the vision and raison d'être of the group. Manager 3.0 combines different energies, inspires teams to put their agility to the test and foresees future changes.

**EXPERT OPINION**

“ *Digital transformation will not happen without a transformation of working practices and project management methods. Within increasingly client-centred organisations where cycles are shortened and client interaction more frequent, the ability to rapidly share information whilst ensuring its reliability, is a basic requirement. The manager, now more of an orchestral conductor than a supervisor and expert, liberates and channels the team's energy in order to expand collective intelligence and enhance efficacy.* ”

**Loïc Lemoine**

SENIOR MANAGER, EXCELLENCE HR,  
SOPRA STERIA CONSULTING, FRANCE





# Transformation teams

## The strongest link in digital transformation

The main support for digital transformation comes from its teams, a new type of which is emerging: the transformation team. This ad hoc group is created specifically for and by transformation. Here we examine its profile and characteristics.

### IN THIS CHAPTER

- > Reference system
- > Incertitude
- > Short cycles
- > Coaching
- > Emotions
- > Openness
- > Commitment

**IN BRIEF** At all stages of digital transformation, whether for business, IS or infrastructure, and during the implementation of each iterative or agile cycle, these specially created, temporary transformation teams have a mission: importing new working methods from a reference system applied to digital transformation.

### The need for a new kind of team

To facilitate and speed changes in governance and working methods, companies must draw on a new set of methods, concepts and processes. Very often these are externally sourced because the company looks elsewhere in the search for ways of renewing itself.

If this kind of grafting process is to flourish, it is essential that the new approach is embodied by a team whose mission it is to introduce new working methods, hence the transformation team.

### WHAT IS A TRANSFORMATION TEAM?

#### Uncertainty and short cycles

The ad hoc, temporary nature of these teams is leading to new working methods that allow participants to launch themselves into the project.

*Read more p.56*

## SELECTED PROFILES

Here we present a selection of profiles showing how the core of a transformation team could be assembled.

### THE SCOUTS

These are movers and shakers. They are non-conformist and bring a fresh, inquisitive eye to the introduction of new methods. They build and reconstruct teams in unexpected ways and apply agility at every stage.



#### Ola H.

Strategic advisor  
47 years old |  
DIRECTOR DIGITAL  
TRANSFORMATION |  
NORWAY

**MISSION**  
Project director for  
business consulting  
delivery projects.

#### MY ROLE IN TRANSFORMATION

*"Digital enterprises operate in transparent value networks, connecting the dots in a complex heterogenic environment.*

**Technology enables fact based customer insight and operational overview in real time** through data collection and predictive analysis."

*"Digital transformation is less about technology and more about new ways of working to create value."*

#### Norbert B.

Delivery manager,  
digital banking projects  
32 years old |  
PROJECT DIRECTOR  
BANKING SECTOR |  
FRANCE



**MISSION**  
Implementation of  
BforBank offering  
everyday banking  
products and services  
online (accounts  
creation, web and  
mobile client space,  
CRM tool).

*"An iterative approach involving all actors, from operations to services."*

#### MY ROLE IN TRANSFORMATION

*"Implementation of shared visual management among teams and client, and iterative steering with short cycles to integrate feedback in real-time".*



**Paul M.**  
Transformation  
Manager  
47 years old |  
ACCOUNT MANAGER  
| UK

**MISSION**

Providing the enabler technology and services to support the transformation of the UK Ministry of Defence (MOD) Logistics business.

**MY ROLE IN TRANSFORMATION**

*“Leading the team through design, build, testing and implementation of the largest MOD Logistics Business Transformation Programme in decades. Focusing on customer culture, understanding their challenges and demonstrating agility by responding to an ever changing operational landscape.”*

*“Customer trust in transformation requires us to demonstrate an understanding of their people, their culture and their customer vision.”*

**Markus L.**

Digital driver  
49 years old | DIRECTOR OF  
BUSINESS UNIT CONSUMER AND  
AUTOMOTIVE FINANCE | GERMANY

**MISSION**

Driving the cultural change of digitalisation and reactivating the creative potential of an agile organisation.



**MY ROLE IN TRANSFORMATION**

*“Together with my team driving and supporting the agile digitalisation of our customers.”*

*“Go for big change and drive revolution instead of evolution.”*

**BEST PRACTICE** Taking the first steps with a transformation team

The rapid introduction of an initial iteration provides a learning experience and allows the transformation team and its initiatives to adapt.

In specific terms, collaborators will see that the new practices, which have been publicised and discussed, are actually easily and effectively applicable to their context. This is very much 'business not as usual' and drives the silo effect out of businesses. It inspires the creation of a new toolkit which is the fruit of the vision of the transformation team and the company's initial context.

The expertise of the transformation team is both numerous and diverse, both in terms of management skills and specific expertise: the capacity to manage uncertainty and work in short cycles, strong managerial skills through coaching and emotions, but also in defining a suitable approach or, more technically, opening the IS to platforms etc.

*“ Introducing an ad hoc and temporary team truly creates a new way of working which allows collaborators to launch themselves into a project. ”*

### BEST PRACTICE

#### Characteristics of team members

Soft skills are the bedrock for collaborators in the transformation team. The keywords are:

- > Teamwork
- > Putting ego to one side
- > Listening
- > Commitment
- > Capacity to think outside the box
- > Keen to learn
- > Empathy

In the field, there is no question of the transformation team settling on a standard approach that does not chime with the company culture. Rather, the team must adapt to each context and work in synergy with the project, in particular by pre-empting its evolution, reallocating resources when priorities change and proactively suggesting solutions.

## PRACTICAL ADVICE

### How to choose a transformation team

Essentially, choosing the right team members is down to ensuring they have the right values: innovation, capacity to learn and work as a team, and performance. Organising co-innovation workshops can create new links, drawing in committed collaborators from start to finish.

### The transformation team's expertise

- > Managing uncertainty
- > Working in short cycles
- > Emotion management of the team, coaching
- > Defining a suitable approach
- > Opening the IS to platforms



SELECTED PROFILES (cont)

# THE INTERFACERS

They customise the answers given to partners, creating the appropriate interaction between new technologies and users to generate optimised and engaging digital solutions.

## Marion C.

Understanding user contexts and the needs of SI end-users

28 years old  
I HEAD OF UX  
OFFER STUDIO  
AND ERGONOMICS  
I FRANCE



### MISSION

Overhaul of traveller information in SNCF train stations.

### MY ROLE IN TRANSFORMATION

*"This was a typical digital transformation project where travellers now access information automatically via a multi-channel support."*

*“ Revolutionising the user-experience of digital projects. ”*



## Emily W.

Strategy and integration  
34 years old I HEAD OF  
SERVICE DESIGN I UK

### MISSION

To integrate service design into IT by designing strategies and tools to enable the successful design and delivery of experiences at scale to create better outcomes for people and business.

*“ Quick adaptation and innovation are essential to respond to shifts in the market. ”*

### MY ROLE IN TRANSFORMATION

*"I manage a team of great people across the UK, delivering engaging experiences for customers by **creating scalable solutions to empower businesses and users.**"*

# THE BUSINESS PEOPLE

They revisit the company's operational strategy by accelerating digital transformation, while ensuring flexibility and co-creation with the different sections of the business.

## Markus L.

Reducing the stress of change

31 years old | MANAGER BUSINESS CONSULTING INDUSTRIES | GERMANY



### MISSION

Supporting the transition of companies into the digital era.

### MY ROLE IN TRANSFORMATION

*"Championing agile and digital methods in companies to trigger transformation potential and always*

*including all relevant stakeholders in the digital transformation. In a digital context, silo thinking between departments is fatal."*

*"Never underestimate the need for management changes to tackle the transformational stress experienced by 'digital migrants'!"*



## Marc T.

The voice of the customer

44 years old | DIGITAL TRANSFORMATION CONSULTANT | SPAIN

*"Digital transformation means overall cultural transformation."*

### MISSION

To help companies undergoing transformation to make the most of new digital opportunities.

### MY ROLE IN TRANSFORMATION

*"Digital transformation means strategic organisational change, I help companies to reinvent their organisations and strategies through the use of digital technologies, while remaining focused on the customer's needs and perspectives."*

## THE CHANGERS

They keep watch on current digital practices, support novices and reassure the more recalcitrant to ensure the digital approach is embedded in the culture of companies and public organisations.

### Rémi M.

The expert in digital content and digital experience



51 years old | DIRECTOR CONSULTING AND INNOVATION | SWITZERLAND

#### MISSION

Deliver digital roadmaps to help my customers to adapt their organisation, tools and mindset to get the most out of digital transformation benefits.

*“To be able to inject innovation into existing es, and make this mechanism sustainable in time to create an adaptive organisation.”*

#### MY ROLE IN TRANSFORMATION

*“I bring the vision, the digital approach and the road map to the new digital destination. I try to generate enthusiasm and commitment for the fantastic opportunities generated by digital transformation.”*

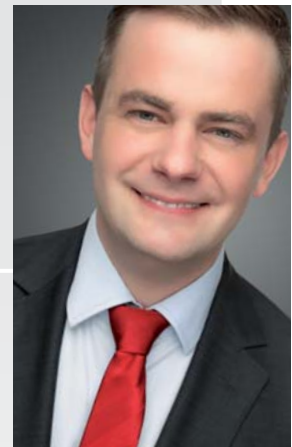
### Julius S.

The pilot of potentiality

37 years old | HEAD OF BUSINESS CONSULTING INDUSTRIES | GERMANY

#### MISSION

Unlocking potential as a trusted advisor through digital strategies and successful transformations.



#### MY ROLE IN TRANSFORMATION

*“From strategy to action and through creative spirit and innovative technology, we transform ways of doing business, focusing on customer needs, in order to ensure economic value and sustainable growth.”*

*“Potential and openness are the two turbo-jets of the digital transformation aircraft: to move forward, they both have to thrust together.”*

## THE GUIDES 3.0

They administer the deployment of digital solutions, managing teams' appropriation of new technologies to ensure the new infrastructure remains agile.

### Philipp S.

Hands-on transformation clairvoyant

36 years old | PRODUCT MANAGER IAM AND API MANAGEMENT | GERMANY



#### MISSION

Shaping and guiding Axways product strategy for identity and access management as well as API management.

#### MY ROLE IN TRANSFORMATION

*"Understanding the implications that*

*digital transformation may have for our clients and ourselves as well as **detecting trends, finding solutions to current and future needs** and also getting my hands dirty and getting something done."*

***"As digital identity was so crucial, we created a new ID service which enhanced customer satisfaction while lowering costs."***

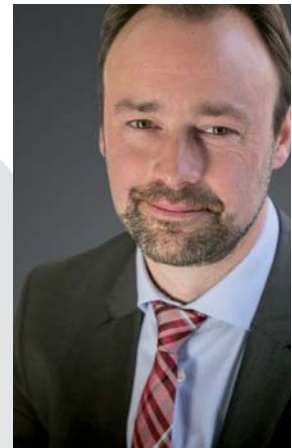
## THE THINKERS

They adapt like chameleons and move forward with agility to change the classic user experience to a powerful and innovative one.

### Alexandre G.

The heart specialist

40 years old | HEAD OF SOPRA STERIA CONSULTING | BENELUX



#### MISSION

Transformation incubator.

***"Digital transformation places people back at the heart of the company."***

#### MY ROLE IN TRANSFORMATION

***"Identify the right tools and approach leading to a successful transformation."***

*Help people to understand the way they contribute to the definition and the execution of the company strategy."*





**Max R.**

The innovation guide

45 years old | HEAD OF DIGITAL | ITALY

*“ The word ‘digital’ will become redundant. Instead we shall focus on creating new interfaces to interact with smart machines. As in human life, dialogue will become central again. ”*

**MISSION**

Devise and support transformation via a human-centred, technological approach.

**MY ROLE IN TRANSFORMATION**

*“Helping our customers and colleagues to innovate: in terms of their communication, proposals, processes, the way they share ideas and content via a holistic, user-centred and natively digital approach.”*

**Tina G.**

Work differently

45 years old | PROJECT MANAGER | GERMANY



**MISSION**

Account manager for Deutsche Bank IT.

**MY ROLE IN TRANSFORMATION**

*“We support our client in introducing new methods of working together by using DevOps, thus enabling them to react faster, deploy*

*changes more frequently to production and above all collaborate in a new, target oriented way.”*

*“ Collaboration is key - organisations need to change the way they work together to take full advantage of the new possibilities arising from digitalisation. ”*

# THE MAKERS

They develop easy to use digital solutions and design modern architecture to construct intuitive mobile applications.



## Jocelyn N.

Passionate about development

29 years old | ARCHITECT AND ARCHITECTS COMMUNITY MANAGER | FRANCE

### MISSION

Implementation of BforBank's digital daily banking service. Design of the architecture for web applications for general use.

### MY ROLE IN TRANSFORMATION

"By developing adaptive sustainable architecture, **I laid down the technical foundations for modern online banking.**"

*"The key for successful digital transformation is to let customer experience guide decision-making."*



## Ben A.

General integration master

31 years old | SENIOR ENGINEER | UK

### MISSION

Digital Transformation at National Savings and Investments (NS&I).

*"Our long term goal is to reduce the time between an innovative idea and an implemented project in the wild."*

### MY ROLE IN TRANSFORMATION

"Technical Architect responsible for overall architectural integration of the Sopra Banking Platform into the NS&I eco system. We have upgraded to version 3 of the Sopra Banking Platform as a first phase of introducing a service based dynamic digital banking platform. The next phase is the **introduction of an API Gateway to allow dynamic consumption of banking services.**"

**Elvira T.**

Mobile applications technician  
26 years old | MOBILE DEVELOPER  
IN DIGITAL TRANSFORMATION |  
FRANCE



**MISSION**

The creation of the BforBank bank account mobile application.

**MY ROLE IN TRANSFORMATION**

"In the banking field, mobile applications are an essential element of digital

transformation. They are the bank's showcase. **In close liaison with the client, my role was to develop the whole application, from screen design to store publication, and provide maintenance.**"

**"Mobility isn't just about mobile applications. It plays a central role in digital transformation."**

**EXPERT OPINION**

**"Autonomous responsible human-scale teams ready to innovate and experiment. Agile and responsive, they provide short cycle made-to-measure solutions. Over five years we have developed the maturity to effect large-scale transformations using agile approaches with greater chances of success than the traditional V cycle. This is what a transformation team can bring."**

**Olivier Gervaise**

**DIRECTOR OF DIGITAL BANKING AND TRANSFORMATION TEAM CREATOR, SOPRA STERIA CONSULTING, FRANCE**



# THE GEEKS

They open the door to digital transformation for conventional information systems, while ensuring access is secure.

## Jeroen C.

The data expert

39 years old | BUSINESS AND INFORMATION MANAGEMENT CONSULTANT | BENELUX

### MISSION

Advising clients how to: use data assets effectively to enhance business; make their organisations data-centric; and drive their business on their knowledge potential.



### MY ROLE IN TRANSFORMATION

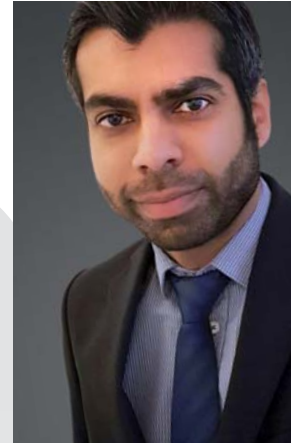
*"Ensure that the critical value of data is recognized by the organisation and a data culture is established which allows both business processes and decisions to become largely data driven."*

*“Data is the lifeblood of the digital world. Let’s get it in shape.”*

## Manoj B.

The Cyber Security superhero

35 years old | HEAD OF SECURITY PRE-SALES | UK



### MISSION

Ensuring that our customers embark on a secure Digital Transformational journey with cyber security in-built throughout.

*“Every day we should all wear our cyber security superhero cape!”*

### MY ROLE IN TRANSFORMATION

*"We all have a responsibility to consider cyber security in a world where we are all exposed at both an individual and corporate level to the increasing threats of cyber criminality. **Cyber security is about providing protection to our customers, their data and their systems.**"*



# Innovation

## What steps should be taken and which tools should be used?

Whether disruptive or incremental, innovation nurtures digital transformation. Here we describe how to approach 'good' innovation in a transformation project based on structured procedures and well-known tools.

### IN THIS CHAPTER

- > Collective intelligence
- > Co-design
- > Rapid Design Thinking
- > 3.0 customer experience
- > Agile Prototype
- > Experimentation
- > Lean start-up

**IN BRIEF** Innovation is key to digital transformation, encompassing not only the product or service, but also customer relations. In a phrase we need to "renew the customer experience." But we also need to go further. Innovation must be found at all levels of the organisation and processes if we want to deliver effective customer performance. How do we achieve this? Here are some rules for 'good' innovation.

### Innovation is essential to meet new challenges

Emerging challenges act as drivers of transformation and company priorities have to be revisited.

To be truly transformative, an innovation approach is needed to support digital transformation. All business

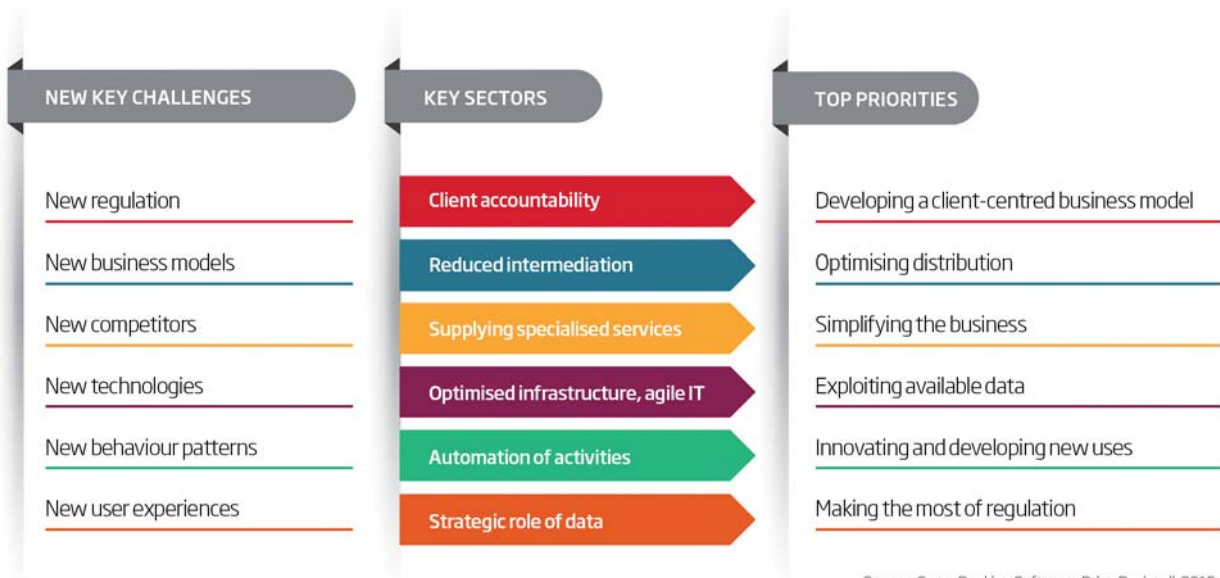
sectors are affected: business models, product offers or customer services, certainly, but also organisation, processes, means of communication, forms of management, the technologies used... even workspaces.

## USEFUL ADVICE

### An iterative approach to innovation

Because we are searching for creativity does not mean that the innovation approach should be void of structure. On the contrary, innovation specialists have developed methods and tools to promote and accelerate creativity, to compare ideas and select the most pertinent ones. Implementation is based on iterative cycles in order to structure the conception and creation process, and to quickly develop and test concrete viable prototypes under the Fail Faster principle.

## DIGITAL TRANSFORMATION BANK CHALLENGES & CONTEXT



Source: Sopra Banking Software, Brian Bushnell, 2015

### 1 | The innovation MIX: a trajectory incorporating company DNA

Finding the right paradigm in company innovation is paramount. This cannot be done in isolation but all of the experiences in the particular business sector must be used as an inspiration, alongside experiences in other lines of business. In this type of approach, it is necessary to analyse what is already being done. More than that, it is important to understand the DNA of the company, take it into account and enhance what already exists. Among the methods to be adopted is to establish the company's 'digital record', the key elements of the corporate DNA and identify the preferred strategic orientation.

In terms of low-cost air transport, the Ryanair or EasyJet type models rely on comparable tools: tickets sold online, paid-for on-board services, quick stopovers, point to point routing, use of secondary airports. By offering innovative services, another low-cost giant, Vueling, has succeeded in developing a high-end model while maintaining aggressive pricing: serving large airports,

increasing flight frequency, serving more destinations, a hub in Barcelona...A key differentiation: a Premium offer for business people with meals and on-board wifi.

This disruptive creation approach is a good example of key points:

- An innovative and simple offer
- Aggressive pricing
- Real-time, can be used anywhere or not
- Customisation for target clientele or universal

**“ Whether disruptive or incremental, an innovation approach is necessary to generate and support digital transformation. ”**

## 2 | Methods based on co-design

The co-design concept combines collective working methods used to co-design products, services, practices, new organisations or processes and to build a vision and strategy, all in the form of collaborative approaches. It draws on collective intelligence.

The principle of this group work is to enable stakeholders (including users/consumers/end customers where appropriate) to co-design, co-create, efficiently, over a short period of time, and it aims to be 'fun'. It allows itself to boost and channel collective creativity and reach consensus.

Co-designing brings stakeholders together in workshops and group working sessions which are conducive to mobilising collective intelligence for a shared outcome. In order to reach its goals, it uses specific facilitation techniques that often involve a degree of fun.

Finally, it is an established fact that successful change comes from the involvement of all stakeholders, right from the word go. Stakeholders must be able to actively contribute to creation, adaptation and implementation. Co-design achieves this because, firstly, it creates a collective experience that enables collaborators to become engaged in the project and move it forwards. It is a method which is particularly effective for ensuring that 'real' priority needs are covered, and that transformation projects progress smoothly, in particular for change management.

### BEST PRACTICE

Agile development in short-cycles is essential to avoid getting lost in the wrong direction. Thanks to lean start-up, a company focuses only on the essence of the project. It dwells only on what is essential. For fast innovation, the re-use of components and technologies helps to accelerate the production of a prototype.

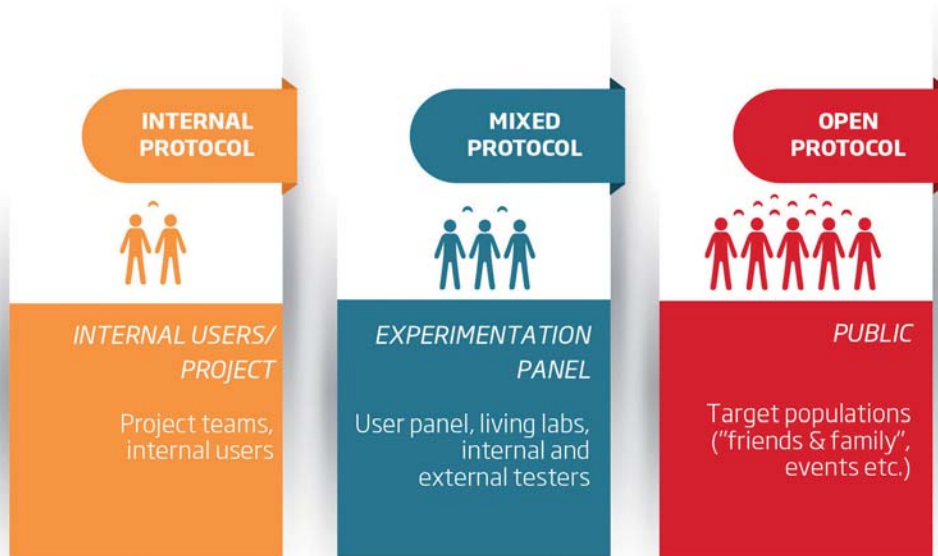
## 3 | Prototyping : an agile, streamlined approach

Today, the problem is not finding ideas, it's selecting, classifying, and then testing them. Even if it means failing with the user.

Indeed, in order to be relevant, innovation must be user-centred because:

- It is based on the relevance of the customer journey and a successful customer experience (CX/UX)
- It exploits all modern means of communication (enriched interfaces, omnichannel etc.), while paying close attention to the form throughout the design and ergonomics of the user interface.





#### 4 | Experimentation: the importance of the user

The user must be included in the each phase of a disruptive innovation project. The target of the experimentation must be understood before the launch of the prototyping phase to in order to identify the functionalities that need to be developed, as well as the level of robustness and completion expected of experimentation.

#### EXPERT OPINION

“ The digital transformation or the transformation of the digital requires a shift in the way to answer customer expectations. Innovation, involving to the right partners, combined with the required agility is a key asset to stay on course. Innovation enables company to solve key problems while engaging the entire company. ”

**Alexandre Goeffers**

DIRECTOR, SOPRA STERIA CONSULTING,  
BENELUX





**FOCUS: CO-DESIGN**

## CO-DESIGN METHODS FOR COLLABORATIVE PRODUCTION

Co-design methods create a collective experience that encourages the confrontation of different viewpoints and creativity ('1 + 1 = 3!'), while ensuring that decisions are taken and that proposed solutions are effective.

### Focus on Rapid Design Thinking

Rapid Design Thinking takes its inspiration from different fields (arts, social studies, science and technology, philosophy etc.) to find new concepts, and enable innovation by focusing on existing uses or by indirectly involving the beneficiary. A development process is led for a product or service, often innovative, by implicating the end user or the beneficiary. Here are the key points.

**1 Finding concepts:** starting with simple ideas, search for related concepts, borrow illustrations from external disciplines, sometimes far-flung. Rapid Design Thinking helps us to step outside of the given framework for current practices by stimulating the creativity of a group.

**2 Putting yourself in users' shoes:** beyond the classic approach to identify uses and needs, it is about surveying everyone's experiences, by putting yourself

in their place and thinking like they would. Human beings have a natural tendency to adapt to uncomfortable situations and can then lose sight of the initial problem. Therefore, the only way for design thinkers to detect a real need and respond to it with relevant innovation, is by putting themselves in the users' shoes in an empathetic way. Personas can be used.

**3 Establishing a diagnostic and formulating a problematic:** the synthesis of user experiences involves making a simple and relevant formulation of the needs of the change's target population, which may even be unconscious. This problematic is a response to the question 'why' change which comes long before we think about the 'how'.

**4 Searching for possible solutions:** it is essential that the team can express themselves with complete confidence in order to speak freely and compare points of view, which results in the birth of creative ideas.

**5 Designing and testing selected solutions:** there must be room for error during this stage. In fact, the freedom to make mistakes should be a given. Experimentation and prototyping help to validate one or more solutions before final implementation.

**6 Deploying solutions:** communication plays a fundamental role here by making the change understandable and desirable.

**7 Expanding the sphere of the co-construction change.**



**WHO?** BUSINESSES

# Introducing change into businesses

**IN THIS CHAPTER**

- > Change
- > Business vocabulary
- > Service management
- > Client relations
- > Service continuity

Digital transformation has a significant impact on HR and operational management. The transformations which should be implemented challenge sociologists, HR departments and social organisations. Digital transformation projects also directly affect the way operational services see their profession and conduct their work. Delivering a new service or introducing innovation changes the profession. Here we present a state of play and the rules to follow for businesses in the process of transformation.

**IN BRIEF** IT and infrastructure projects serve business projects, but they also offer new opportunities to business departments through the provision of new technologies. In this article we examine permanent change, speed, deployment of new vocabulary, constant and more frequent change for business teams, the paramount importance of client relations and service continuity.

The ongoing digital revolution has a considerable impact on life within companies: on company culture, HR management and management methods themselves. It also raises questions about regulation.

Here, we will focus on the impact of projects on operational services, or business units. What will change for them? What does digital bring to facilitate change management? What rules should be followed when conducting these business transformations?

## 1 | Transformations driven by digital projects

All transformation projects are designed to make business processes evolve, including how professions are conducted, and sometimes will require new skills.

But the changes brought on by digital transformation are a response to other requirements and are of a different order. They deeply affect how operational services work.

These requirements fall into three categories:

- Speed and immediacy
- Excellence and consistency
- Integration of new concepts.

### COLLABORATIVE PRODUCTION



#### » Speed and immediacy: transforming quickly and reducing response times for customers and users

Time is precious and business services are influenced by the speed at which they have to make changes. For example, taxi companies' responses to Uber must be immediate, just like those of banks faced with FinTech.

In the past, profound changes in businesses appeared only every 10 or 15 years. Today, businesses must conduct ever faster changes. The role of the manager is

no longer just to fine-tune the operation of their service. The manager is now an actor in the permanent transformation that business services must tackle. As an 'owner', managers are deeply involved with their associates in agile transformation projects.

#### » Maintaining excellence and consistency in a context of rapid change

The service provided to customers and users must be excellent in order to dodge disintermediation and obtain good feedback. Faced with competition from companies such as Booking.com, TripAdvisor and Uber, hoteliers and taxi companies are opting for excellence and introducing loyalty schemes. All of the company's value chain, along with those of its partners, is put to good use.

The generalisation of omnichannel approaches requires the entire customer journey to be consistent in every respect. How might a customer react, for example, if they are offered a service via the web but cannot find it in-store or in an agency?

The real challenge in transforming business is to successfully maintain consistency and quality of service despite the fast pace of transformation.

*“ Changes brought on by digital transformation respond to requirements that differ to those habitually addressed by business services. ”*

#### » Integrating new concepts: avoiding digital divide

No business is immune to the arrival of digital and a new vocabulary needs to be employed to interact both internally and externally. Lots of terms marking a break

with past practices have to be absorbed: e-reputation, community manager, omnichannel, co-working, chat, hangout, tag etc. Associates have to integrate totally new concepts (files out of the window!) to acquire new digital tools.

## 2 | Accelerators of change

Changes induced by the move to digital are fast. It is essential that management remains in control and simultaneously supervises the quality of the service it offers and the changes it has to make.

Fortunately, digital offers a whole range of methods and tools that contribute to the acceleration of change.

### BEST PRACTICE

Operational services must be actors in transformation, meaning that they need to be involved at a very early stage and throughout the entire project. Digital methods and techniques can be used to accelerate change.

### Barometer and online survey

Monitoring and survey tools have always been part of the standard arsenal in change management for controlling and adjusting the actions that are to be implemented. Today, online surveying tools are increasingly broadly available, enabling active listening, interaction and harvesting of perceptions.

- App. Change Readiness Assessor: smartphone and tablet application for assessing the acceptance level for change in a given project.
- Doodle: makes participants vote for trends, options.
- Google Forms: one of the easiest and most intuitive eSurvey tools (online questionnaires). Use for running acceptance barometers regarding change online in an anonymous fashion.
- U-STON/HR: social listening 2.0 mode (freedom, simplicity, responsiveness).

### Crowdsourcing

This concerns participatory production using the creativity, intelligence and knowledge of a large number of people, with work which can be collaborative or tackled simultaneously. It gives collaborators the opportunity to become agents of their own change. It is intended to facilitate the adoption phase of new uses.

### Digital Working

This includes applications that enable people to coordinate and work together, such as video conferencing and telepresence applications or document sharing applications such as Google Drive.

### E-workshop

Several users interact remotely in a problem solving logic using participatory workshop techniques and a facilitator. All the exchanges



## Numerous contributions of digital tools

are drawn up and addressed to the participants in a collaborative fashion.

The Workshop Factory is a software tool bringing together dozens of participatory and digital e-workshops, quizzes and a live tweet to allow a group to comment and ask questions live.

### **MOOC (Massive Open Online Courses), virtual classes, webinars and serious games**

The user undergoes distance learning interactively and when they wish, either synchronously or asynchronously thanks to different tools such as collective mental maps, educational wikis, blogs and micro-blogs created in an educational setting etc. Digital approaches promote fun and interactive teaching.

The learning process itself can be punctuated using digital tools that engage not only learners but also line managers before and after training. Creating communities of learners is an accelerator for inculcating and extending learning.

### **Semantic analysis engine**

Semantic analysis is an automatic interpretation technique for texts written in natural language. Text mining, also known as text data mining, is an important application for automatically extracting structured information from texts. In change management, it helps to analyse texts and predict levers and expectations of writers beyond traditional information searches, terminology extraction, automatic summary, monitoring etc.



### **Internal or external social networks, collaborative workspaces (communities, blogs, wikis, chats)**

Embodying collaborative work par excellence, the company collaborative network is a social tool used in 80% of large companies. It is a central tool which can be more or less focused on knowledge management (KM), productivity and business challenges, communication and social links etc.

## SIX RULES FOR STEERING A BUSINESS PROJECT

### 1 Accepting uncertainty

*"We cannot always do everything, straightaway and flawlessly."*

Unlike a conventional project, digital transformation has a moving target making uncertainty an inherent part of the process. Digital helps deal with this through an agile approach. Here, immediate perfection is an illusion: it is built over time, while accepting that the initial vision is not necessarily complete and accurate, and that the target can shift.

#### OBJECTIVE

#### BUILDING IN UNCERTAINTY

Accepting that targets evolve and ensuring others accept this too.

### 2 Managing the complexity of digital transformation

The world of transformation is not stable and speed is paramount. Digital transformation is a multidimensional project with various possible impacts and, sometimes, extensive challenges. It is essential to know how to manage this complexity and take into account the business's culture and maturity to conduct change, especially in its managerial and human dimension.

#### OBJECTIVE

#### MANAGING COMPLEXITY

Learning how to grasp and tackle the inherent risks in digital transformation.

### 3 Working in a network with varied internal and external business resources which can be united or connected

Digital transformation requires the creation of the right conditions for real cultural and human transformation since it is, above all, a process with people at its heart. In this regard, nurturing and managing talent is both an opportunity and a major challenge. But, after the initial rush of transformation, we need also to know how to reposition them in the organisation, in the right place and position, and with the right level of recognition.

#### OBJECTIVE

#### NURTURING TALENT

Making the company undergoing transformation a real 'learning' organisation.

### 4 Dedication to manager 3.0

Digital transformation seeks to put the initiative of collaborators at its centre. Given this, younger generations who have grown up with technology facilitate immersion in the digital world for collaboration, networking etc. Management style needs to evolve, and manager 3.0 is required. It is the 'soul' of transformation, ensuring all specific issues and managerial, human and social impacts are taken into account.

#### OBJECTIVE

#### CONDUCTING CHANGE

Putting people at the heart of the system.

## 5 No linear approaches!

The overlaps may be numerous but technology means agile approaches are possible.

### OBJECTIVE

#### MANAGING INTERFACES

Treat with care the interfaces and overlaps between different sites and themes in digital transformation.

## 6 Building on islands of digital initiative and quick wins to 'inseminate' businesses

The solidarity and commitment of the managerial line shapes the success of digital transformation. Two main approaches are available: the internal start-up or embarking troops to 'inseminate' through experimentation.

### OBJECTIVE

#### INSEMINATING A DIGITAL CULTURE

Progressively tackling all businesses and ensuring management cohesion and consistency.

Change Management for the transformation 3.0



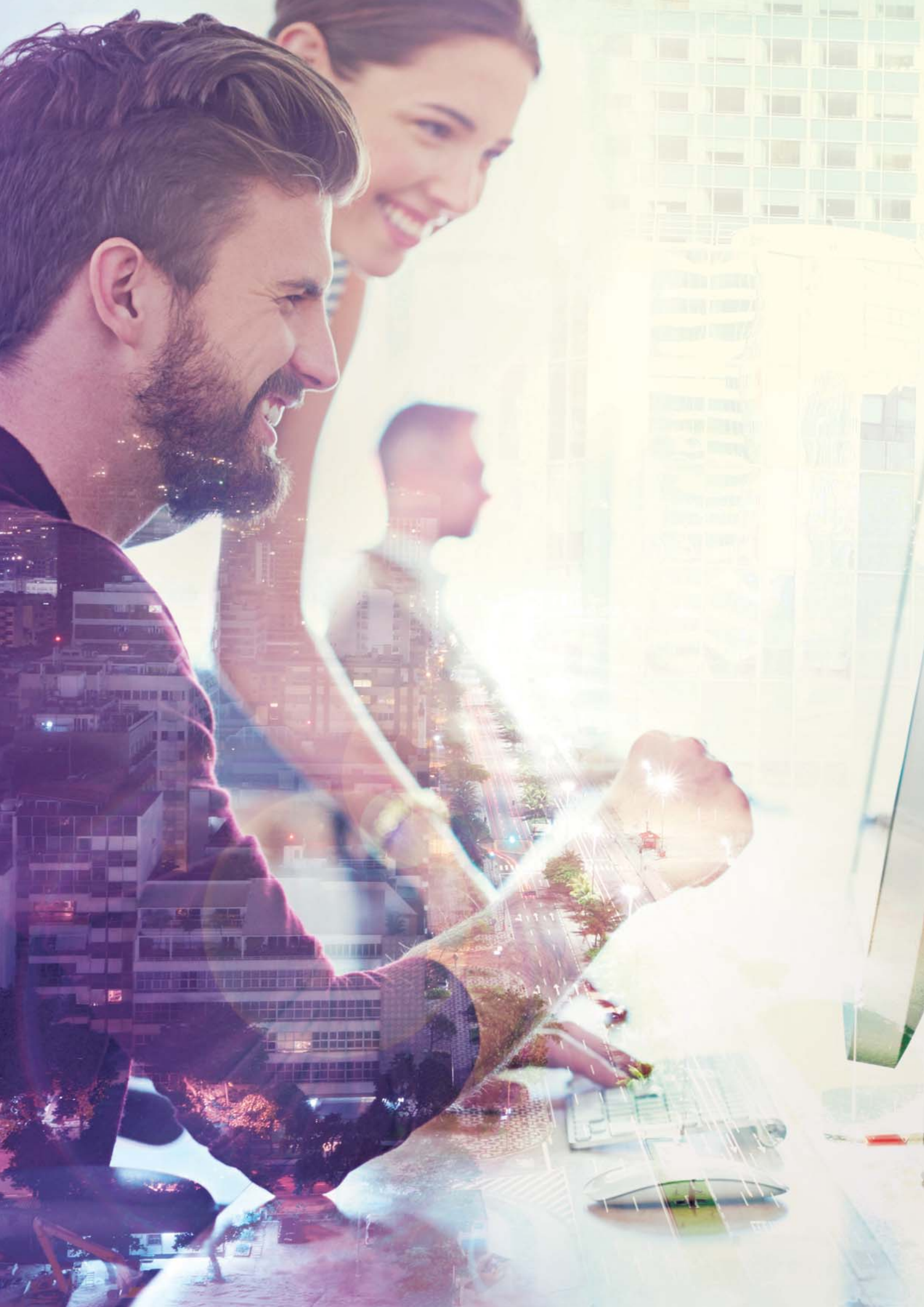
### EXPERT OPINION

“ Digital transformation can in some businesses involve ongoing change over a long period, while in others facing fierce competition, it will involve rapid and dramatic change. Knowing how to manage and develop the business culture and human side in both scenarios is essential. ”

Elin Vik

DIRECTOR,  
SOPRA STERIA CONSULTING, NORDICS







# TESTIMONIALS

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- # National Australia Bank
- # Her Majesty's Courts and Tribunals Service
- # Airbus
- # Banco Bilbao Vizcaya Argentaria
- # KBC
- # Orange Business Services
- # AccorHotels
- # Media Markt

## IN BRIEF

*There are as many approaches as there are digital projects. Every business is eager to bring about their own digital transformation - whether to retain their place as leader, to appeal to new clients, to modernize their partner's tools or quite simply to adapt to inevitable innovations.*



**KEYWORDS**

**TECHNOLOGICAL  
INNOVATION  
AND CREATION OF AN  
ECOSYSTEM**

**ACTOR**

**National Australia Bank  
(NAB)**

**THE NATURE OF TRANSFORMATION**

**Increasing competitive advantage  
through innovation**

## A NEW ENGAGEMENT SYSTEM BASED ON CLIENT EXPERIENCE

### THE CLIENT CHALLENGE

Founded over 150 years ago, The National Australia Bank (NAB) is a historic institution with over 12 million clients, 750 agencies and 42,000 employees. Like most traditional banks the NAB has felt pressure from more agile, new competitors, offering user-friendly services such as on-line bank account creation, attractive account and transaction charges, better functions and broad on-line accessibility.

Although in recent years NAB invested in service-focused architectures for its IT system, its bank distribution channels were created as need arose and were based on a range of different technical silos. Their question was: how could they offer mobile services accessible at any moment? And how could they offer a multi-channel experience for clients based on an all-round vision of the client?

### THE SOPRA STERIA TRANSFORMATION SOLUTION

Using Axway technologies (Sopra Steria's Preferred Partner), NAB underwent global digital transformation: using the API, the IT system was opened up via an overall digitally-based strategy: for example, the creation of an engagement system based on a selection of tools and solutions that open up the IT system and offer services in a controlled and secure way capable of managing high volumes, in accordance with regulations.

The first stage of digital transformation was to define its foundations: the creation an engagement system based on client experience, the need to foster innovative approaches and the cooperative creation of values via the testing of new business models. The engagement system is based on an efficient, secure and above all agile technological platform that facilitates the implementation of new services within the API. One major change for NAB was this: the API was treated as a bank product, marketed and monetized.

*“ Even with a  
product-focused project,  
permanent improvement is  
essential. At each stage,  
higher standards are set. ”*

**James Bligh,**  
SENIOR MANAGER, NAB

The second step of their digital transformation involved the implementation of a technological platform, an API management platform (Axway solution), offering a wide range of functions: for example the deployment of existing back-office services in a secure and virtual form to be readily absorbed by the ecosystem; an API catalogue was also made available for commercial partners and internal and external developers to be able

to build new applications. The community is now managed via a portal enabling developers or commercial partners to sign-up for services and trigger monetisation principles. Finally, real-time analytical viewing tools have been made available to analyse and monitor the way services within the ecosystem function as well as to assess their adoption.

The nabAPI, a new NAB bank product, can be used on different channels (web, mobile, NAB internal applications) and serves a wide range of users - from client, to commercial partners to development communities eager to create user-friendly mobile applications.

For marketing purposes, NAB wanted to focus on efficient real-time payments, traveller debit card management and health. By organising events involving developers from all horizons (known as "hackathons"), mobile applications were created based on nabAPI. The NAB Flik application for the transfer of money in real-time was dreamt up during a hackathon. Using this application, a NAB client can lunch with friends and, when the check arrives, divide the amount equally. Mobile transfer is instantaneous. Short debts make long friends.

### **THE TRANSFORMATION APPRAISAL**

By seizing the initiative via innovation, NAB was able to maintain its competitive advantage and satisfy an ever more demanding client-base that expects bespoke services. NAB also diversified its activities by attracting third parties and encouraging cooperative value creation. Thanks to the implementation of a digital platform, the bank now has an agile and flexible engagement system, based intrinsically on APIs directly connected to the ecosystem, vastly reducing integration costs and improving operational efficiency.

**KEYWORDS**

**OPEN-SOURCE SYSTEM  
USER-CENTRIC  
APPROACH**

**ACTOR**

**Her Majesty's Courts  
and Tribunals Service  
(HMCTS)**

**THE NATURE OF TRANSFORMATION**

**A smarter system delivering  
efficiencies for the magistrates'  
courts**

## ENABLING THE MODERN DIGITAL COURT ROOM

### THE CLIENT CHALLENGE

The UK Criminal Justice System (CJS) aims to be fully digital by 2020 in order to strip costs out of the system, improve efficiency and effectiveness, and provide better access for citizens.

As an executive agency of the Ministry of Justice, Her Majesty's Courts and Tribunals Service (HMCTS) is responsible for the administration of criminal, civil and family courts and tribunals in England and Wales. As part of this, HMCTS administers the work of the magistrates' courts, which manage over 1 million cases per year.

Virtually all criminal court cases start in a magistrates' court, and more than 90 per cent will be completed there. More serious offences are passed on to the Crown Court.

### THE SOPRA STERIA TRANSFORMATION SOLUTION

Sopra Steria worked in close collaboration with HMCTS and other partners to deliver digital transformation within the UK Criminal Justice System via the Court Store and Bench Solution: a new digital repository and document management system primarily for use within the magistrates' courts.

The principal objective of this project was to deliver a data store that is accessible from different devices and by individuals across the Criminal Justice System, and is capable of storing both structured and unstructured data.

The Court Store project has been crucial in helping HMCTS to move away from a heavy reliance on paper, and towards working digitally in the court room.

The Court Store and Bench Solution is a reusable, open-source system that was developed using an agile, iterative and user-centric approach. It is scalable, to cope with changes in user-numbers and case loads, flexible to meet changing needs and processes, and accessible.

### THE TRANSFORMATION APPRAISAL

Many in-court processes have now been automated and administrative costs reduced, while a single data store has created greater transparency and accuracy. Court Store also provides the 59 Crown Courts with access to documents, allowing relevant information to be retrieved for Crown Court proceedings. The Court Store and Bench Solution delivers the right information at the right time, easing work-flow and enabling informed decisions.

*“The Court Store and Bench Solution has been key in enabling the modern digital courtroom and assisting the delivery of efficiencies across the magistrates' courts.”*

**Court Store and Bench Product Owner**  
HMCTS

# THE CLIENT'S EXPECTATIONS OF DIGITAL TRANSFORMATION

## ACTOR

Airbus

*“ Digital transformation is not just about technologies. It also drives us to change the way we work. ”*

### THE CLIENT CHALLENGE

Airbus invests heavily in each new aircraft program. But aerospace isn't like other industries. Products last 30-35 years, so it's not just a case of investing every two years. Airbus faces specific issues relating to the lifecycle of the aircraft already in service.

The Group has to deal with a huge volume of data, from the design of aircraft to their exploitation, not forgetting data around support and customer relations. All this mass of data is disseminated both internally and externally, the stakeholders are many but are not necessarily used to working together. Big Data, for example, is a key issue for the whole of Airbus Group. Each entity has had to speed up the development of their own business models because with data, the boundaries between manufacturers, partners, suppliers, OEM and clients break down. In the forthcoming years the major issue will be: who actually owns the data of an aircraft in service?

In this context, digital transformation has a direct impact on the Group's business practices, activities and even markets. For a sensitive sector like the aerospace industry, the technological revolution requires end-to-end control and consistency, agility and transversal interaction across the board.

How can new technologies be harnessed to respond to business issues that have always existed? How can data be exploited across the organisation's various silos? How compatible is it with existing systems? What changes have to be brought to staff and management training? All these questions become the driving force of digital transformation as a strategic imperative.

Digitalisation enables to enhance relations between the Group and its partners, clients and subcontractors. It has also led to increased turnover and created wealth.

### WHAT WE EXPECT FROM TRANSFORMATION

*“Above all, digital transformation means we have to understand the potential of new technologies and how they can be applied to industrial processes. Ultimately, digital transformation is not only about technology. It forces us to change our business models and to choose trustworthy partners.”*

**Marc Fontaine,**  
Chief Digital Officer, Airbus Group

THE CLIENT'S EXPECTATIONS OF **DIGITAL TRANSFORMATION****ACTOR****Banco Bilbao Vizcaya Argentaria (BBVA)**

“*Openness is a condition for digital transformation.*”

**THE CLIENT CHALLENGE**

Banco Bilbao Vizcaya Argentaria, S.A. (BBVA) is a multi-national Spanish banking group, formed from the merger of Banco Bilbao Vizcaya and Argentaria in 1999. It is the second largest bank in Spain and a component of the Euro Stoxx 50 stock market index.

The challenges facing BBVA were similar to those of many banks: how to react to the downturn, how to respond to changes in customer habits and how to tackle new entrants. In the post-downturn period, laws and regulations became tougher in the areas of good practice requirements, control, and capital ratios, leading to finer margins, higher costs, and lower earnings. As for its rivals, digital transformation was crucial to remain competitive.

Customer habits have also changed and the banking sector is faced with the challenge of providing relevant services to the 'millennial' generation - those who have grown up with the internet for whom online transactions have become second nature. BBVA however were also interested in emerging markets, where banking habits are less culturally ingrained, making them more open to rapid technological change.

The digital wave has brought its own wave of new competitors: new online banks, fintech start-ups and operators outside the traditional financial services who began providing cheaper products, more transparent processes and mobile accessibility.

BBVA are unlike other banks however and they have always been open to harnessing technology to promote banking. In 2013, for example, they became the first

financial group in the world to launch a mobile NFC payment solution with the BBVA Wallet a popular mobile application offering a number of functionalities, such as payments and secure management of card transactions through cell phones.

So for BBVA, the challenge was not just about surviving as a bank but about getting ahead as leaders in the digital transformation of banking. Their goal? Innovation: to help their core services flourish; to create collaborative strategies that can interact with all sectors of the global economy; and to change the whole industry at all levels from products and services to anti-fraud measures. In the process, they would transform the whole company.

**WHAT WE EXPECT FROM TRANSFORMATION**

*“The future of banking lies in digital transformation. Digital transformation is about the way we live, breathe and work, we wish to be at the spearhead of digital transformation. We are in fact a technical company giving financial services.”*

**Marisol Menéndez Álvarez,**  
**Open Innovation Manager, BBVA Group**



## THE CLIENT'S EXPECTATIONS OF DIGITAL TRANSFORMATION

## ACTOR

KBC

*“ Our customers’ needs are changing, so we’re changing too. It’s going fast, very fast! ”*

## THE CLIENT CHALLENGE

Belgium-based bank-insurer KBC has felt the challenge of the new paradigms created by the digital wave, which have not only set lower entry-levels for new entrants but have also changed customers' expectations.

Their response in Belgium is the Klant 2020 program for digital change and innovation (klant means 'customer' in Dutch). This 'client-centric' strategy is crystallized in an omni-channel approach to offer clients the solutions they want in an easily accessible and direct way. In the last two years, KBC has invested extensively in seamlessly interfacing its branches, insurance agencies, advisory centres, websites and mobile apps. Information from a variety of channels is integrated so that clients get a fast, optimum, targeted response to their specific needs.

In Belgium this omni-channel approach has met with great success: a net growth of over 27,000 clients; 1,100,000 clients now use KBC's digital platform Touch and 500,000 use the mobile applications. Overall, there has been a rise in client satisfaction and trust and higher NPS. (source 'KBC embraces the digital future', KBC press release 08/04/16)

Such change however is dependent on culture and, as the saying goes, 'Culture eats strategy for breakfast'. Innovation generates resistance. So as KBC have built a new way of thinking, they have also sought to foster acceptance for change. Rather than transform through adoption, the Klant 2020 strategy involves an important and innovative internal communication mission to nurture change from the inside.

Among a few of the initiatives their Change and Communicate campaign has launched are: 'Inspiration Days', full-day sessions where innovative external businesses are invited to share their stories; 'Inspiration Sessions' with strategy updates for personnel as well as talks from external speakers; an 'Innovation Fair', bringing together start-ups, companies, entrepreneurs and colleagues to exchange ideas; a direct line with senior management for employees; and a single portal 'Sharepoint' containing all information relating to the Klant 2020 vision.

In November 2016, the Klant 2020 change and communication approach was awarded with the European Association for Internal Communication (FEIEA) Award for best internal communication event.

## WHAT WE EXPECT FROM TRANSFORMATION

*“Delivering 'new stuff' clearly isn't enough to win the battle. We need to invest more in internal skills and competences.”*

**Ingrid Creten,**  
**Head of Change and Communication, Klant 2020,**  
**KBC Bank**

## THE CLIENT'S EXPECTATIONS OF DIGITAL TRANSFORMATION

### ACTOR

Orange Business Services

*“ The arrival of the new mobility-information-cloud-social mix in telecommunications, and in communications more broadly, has meant that our customers, businesses, have had to undergo their own digital transformation. We have to support them with this. ”*

### THE CLIENT CHALLENGE

Orange Business Services (OBS) provides IT and communications services to businesses in 220 countries throughout the world, with a Telecoms and IT department with teams numbering several hundred staff, located across France and India.

The telecoms market is in a consolidation phase, and in particular, is undergoing significant upheaval with the arrival of new competitors like Google or Apple, as well as other OTTs (over-the-top services, services that deliver content by bypassing the usual channels or using alternatives). This has altered the stakes for OBS, as it has for all the traditional telecoms specialists. Customers see new services arriving, in the wake of the mobility-information-cloud-social mix for example, and a BtoB player such as OBS has to be able to support businesses in managing these trends, which entails the consumption of large volumes of information. We therefore have to help businesses manage the impact of these changes on their business.

This leads to us to supporting our business customers through their own digital transformation. In this context, Sopra Steria are an important partner for OBS. They decided to focus on five main themes: connectivity, the workstation, the cloud, tools and security.

On the other hand, OBS refuses to compromise on the quality of service. Within our own organisation, OBS also strives to reduce its internal IT costs especially those linked to legacy, so that we can launch new projects more easily and develop new generation IT, in particular with the virtualization of services, which will offer businesses greater flexibility and speed.

### WHAT WE EXPECT FROM TRANSFORMATION

*“Digital transformation is not only a cost optimisation factor but a real way of identifying new technologies and new organisation, application and business opportunities.”*

**Laurent Herr,**  
**VP Operations Support System,**  
**Orange Business Services**

## THE CLIENT'S EXPECTATIONS OF DIGITAL TRANSFORMATION

## ACTOR

AccorHotels

*“Solutions for enhanced customer experience, better tools for partners and easier relationship with partners.”*

### THE CLIENT CHALLENGE

Despite its traditional nature, in terms of skills and processes, the hotel industry is at the heart of digital transformation.

In the space of a few years, there have been major upheavals in the industry and the sector has been confronted with three disruptive influences from external actors who have captured all or part of the value chain: platforms intervening between hotels and clients (Booking.com for example offers 500,000 hotels online); online feedback and ratings sites (like TripAdvisor) which have provided leverage for smaller brands; and the collaborative offer, actors such as AirBnB, where price is a major consideration. The hotel industry has responded by thinking outside the box.

The Accor Group has 18 brands in 92 countries dealing in 140 different currencies launched a series of measures as part of a five-year strategic plan. To enhance control over distribution, AccorHotels now owns a series of independent hotels. The group has turned online feedback into an advantage by developing a broad-based feedback data harvesting tool, which in some instances works in real-time and which has provided a new and effective indicator of hotel performance. In the collaborative accommodation range, AccorHotels took the decision to invest and gain a foothold in the service sector.

Behind this, the group has undergone huge transformation and an overhaul of its IT infrastructure and operational processes. AccorHotels' whole restructuring

process is part of a broader digital transformation strategy, involving investment of 250 million euros over five years.

### WHAT WE EXPECT FROM TRANSFORMATION

*“Digital transformation has to offer solutions to client experience, better tools for teams and easier relationships with partners, like hotel owners. This is an accelerating force, but digital transformation, which also creates new data-related roles, cannot be implemented without close collaboration with the CIO.”*

**Vivek Badrinath,**  
Deputy CEO, **AccorHotels**

## THE CLIENT'S EXPECTATIONS OF DIGITAL TRANSFORMATION

## ACTOR

Media Markt

“Our challenge is to achieve the same precision for in-store tracking as browsing online.”

## THE CLIENT CHALLENGE

Media Markt is a German chain of stores selling consumer electronics with numerous branches throughout Europe and Asia. It is Europe's largest consumer electronics retailer, a position it constantly strives to retain through innovation, modern management and a customer-focused approach.

In the wake of the deep changes the retail industry has undergone in recent years, retailers have had to transform their business models, and radically differentiate themselves from rivals to forge medium and long-term competitive advantages. Naturally reducing costs and achieving efficiency is crucial, but so is being proactive and customer-focused.

Media Markt's response has been to develop its single customer view by connecting their bricks and mortar retailing to ecommerce and thus create a seamless customer experience: a consistent and well-integrated offer applicable to all sales channels, both physical and digital, which enables customers to choose their channel and switch smoothly from one to another. This is quite a challenge for a pan-European company looking to maintain the local identity of its stores.

Media Markt's strategy is already very familiar with the multi-channel approach, especially in Italy, and Media Markt was one of the first companies to invest in digital channels. Created back in 1995, its innovative website Mediaworld, has evolved over the years, offering expanded content, innovative graphics, promotions,

services etc. 1999 saw the creation of e-commerce with Media World Compra Online and 2001 the inception of the first internet discount voucher, for printing-at-home and using in stores.

Media Markt's single customer view (SCV) approach naturally involves expanding their existing ecommerce but also putting greater emphasis on customer relationship management (CRM) and store digitalisation, creating tools to support sales. Service optimisation and system integration have been crucial, as has the creation of a customer data-warehouse to support the CRM system. Technology has been combined with logistics and operational activities and a more centralized distribution network has been developed to manage purchasing, stocks, pricing and logistics, never losing sight of geographical specificity and its impact on market share.

## WHAT WE EXPECT FROM TRANSFORMATION

*“We are working on the convergence of the physical and the online world. Convergence means understanding customers and recognising their needs and behaviours in order to explore the full potential of the purchasing experience and become more aware of our brand.”*

**Luca Luminoso,**  
former CIO, **Mediamarket S.p.A. (Italy)**

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Sopra Steria Blog

## How to succeed and accelerate your digital transformation project

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## About Sopra Steria Consulting

Sopra Steria Consulting is the consultancy arm of the Sopra Steria Group. With more than 38,000 employees in over 20 different countries, the Group achieved revenue of €3.6 billion in 2015.

Our aim is to speed up the development and competitiveness of large companies and public bodies. Today, the Group has over 2,000 consultants supporting the digital transformation of our clients in Europe.



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