Exploring Digital Transformation

HYPE INNOVATION REPORT

by **Paul Hobcraft**

HYPE

www.hypeinnovation.com

Exploring Digital Transformation

by **Paul Hobcraft**

Advisor and Facilitator on Innovation Transformation
www.paul4innovating.com
www.agilityinnovation.com
www.hocaconsulting.com

Paul researches across innovation, looking to develop novel innovation solutions and frameworks where appropriate.

His aim is to provide useful knowledge about innovation that builds understanding and supports individuals, teams and organizations in their innovation activity so as to apply what I have learnt to further develop the readers core innovation understanding.

Introduction

This is a meta report on the recent developments in digital transformation. It offers a selection of key visuals and overviews from 14 reports, which in turn were shortlisted from an original data set of 140 reports on the topic, published over the course of the last years.

The intention of this report is to provide data for orientation for people dealing with this difficult topic. The report should give innovation managers in particular an opportunity to find connecting points for their innovation program – after all, you won't find a better tool for tackling digital transformation than an agile, solidly rooted innovation initiative.

The amount of data is considerable, so we sorted it into different sub-topics for you, which you may access directly via the links provided in the table of contents on the next page.

Digital transformation =
the realignment of, or new investment in, technology and business models to more effectively engage digital customers at every touchpoint in the customer experience lifecycle.

—Altimeter Group

Content

Overview

Transformation is very hard at the best of times

Digital transformation forces us to work with mostly emerging, constantly evolving technologies, and then apply these in an integrated way into an existing business. This stretches our abilities significantly.

Beyond making a series of incremental improvements to become cloud-ready, we are supposed to reflect social, mobile and digital technologies. We need to fundamentally transform our processes by opening up and engaging with customers. On top, we have to deal with a broad range of communities, across platforms and in different ecosystems at speed, scale, and scope. However, we must do all this to reposition all our businesses towards the digital world.

Business entities are forced to open up

Digital transformation happens at a scale and scope that makes many reluctant to take it on; it seems overwhelming in its complexity and risk. The business returns seem hard to quantify in traditional metrics. Thus it is hard to convince deciders to support this, whether they are just sceptical or lacking technology adroitness. Yet for others, who recognize the future lies in technology and the power of networks and community engagement, it is the opportunity to radically alter their way of doing business; the opportunity to forge new competitive positions that have engagement at their heart.

We have to embrace new technology – or leave the stage

The buy-in to this means undertaking a disruption to the existing organization, to the way you go about business.
When considering this, you begin to understand the magnitude of the speed of change demanded. It implies a competitive need for opening up, for responding to and connecting with all external parties who are ready to collaborate.

We all need to think mobile, digital, cloud, and social far more than we did to date. We need to become comfortable in the analytics of big data. If we are not willing to accept that, we should step aside and allow those willing and digital savvy to take the reins and set the pace for the transformation journey.

Digital transformation is an event of historic impact, challenging what we believe to know

Technology is becoming an integral part of our lives, for us personally, as consumers or employees, but equally for businesses, the government and our educational institutions. It is pervading everything.

Look at digital transformation as an investment. Investments always take time to show results, and digital will demand a lot. It is shaping the ways we will work in the future, on how we are going to connect, communicate, and learn. Often, we have been caught up in a specific device we use. This time, it is different though. It is *how* that set of devices allows us to become connected, how they interact and form a system to tackle a need or task.

Digital transformation will keep pushing us to become more efficient and effective, to become more adroit and innovative. It erodes and eats into our time that in the past was taken up by so many other things. We will need a new reset in our values and beliefs.

Individuals are ahead of businesses

Transformation is coming at us in rapid waves. Its scale and complexity is either seen as amazing or simply accepted, with a shrug of the shoulders. Many are expecting it to be a seamless experience, powerful and adaptable, allowing the individual to make it highly personal.
However, business is lagging in exploiting the opportunity, whereas we as individuals seem to have embraced the social digital world already. Companies want technology to transform their business; but they struggle to find ways towards opportunities that offer true growth.

We don't know what the "end game" will look like

We don't know how the digital transformation will turn out in the end and we have to accept that. Much will come towards us as we adapt, learn and experiment, with many emerging technologies, all in different stages of their evolution.

You get a sense of survival pervading the boardrooms, a sense of growing concern, when they recognize the threats and the magnitude of change this transformation will demand of them. They will be required to find resources for this journey, and be it just to stay competitive in this new digital world where demarcation is blurring and industries are agonizing in continuous disruption. The "survival of the fittest" will be determined by how successfully and how fast deciders manoeuvre through this shift. Transforming established businesses has become an imperative today.

However, there are three strategic goals to justify the transformational journey:

1. Providing a better, systematic customer experience, leading to greater loyalty and fostering a community of advocates
2. Internally, digital transformation can improve the operational efficiency
3. New business models, which were not feasible before the time of the connected world, offer new markets and growth opportunities

Customer engagement and why senior executives fail

Of those strategic goals, achieving customer engagement, in the sense of a sustainable partnership, is the most valuable one. Digital transformation enables you to engage your customers along their journey across various products, services and communication channels. Digital has become truly pervasive in people's lives now and this forces businesses to think about how they can become a consumer-technology company, irrespective of what they offer.

The challenges are massive. Companies are struggling to see clear business benefits in traditional ways of managing return on investment. Senior executives have been trained in a curriculum that didn't prepare them for this world of digital technology. They lack the new tools of engagement, which are table stakes already in the world beyond their own corporate offices. They consider technology as something for others to worry over. Increasingly, they also lack the relevant exposure and experience to handle the new game successfully. Driving an effective digital transformation through technologies, which are constantly adapting and evolving, is not the prediction-model based experience they are used to and that got them to the top. A new mindset is required, with solid risk judgement, replacing hard facts with soft instincts, and incomplete data with structured experimentation.

We must overcome the barriers for digital transformation

As outlined above, we face plenty of barriers for digital transformation: a lack of vision, not understanding the urgency, holding on to traditional measures for growth, and a host of organizational constraints that restrict decisions.
Cheap and agile experimenting, pivot-or-persevere decisions, allowing products and services to evolve in real time, as presented, e.g., in the Lean Startup by Eric Ries, is a total anathema to many. Predictive investment based on past data, cherished and lovingly nurtured over years, is being turned on its head.
It is imperative that companies, and especially their senior management, recognize that it is ok to fail as long as you learn from it, that it is ok to ask customers to point out to you weaknesses. A true two-way relation with the customer, including collaborative innovation and feedback loops are emerging to form a new trust equation and value proposition.

How do we best start off?

The toughest part of any transformation is actually recognizing you have to challenge your own past assumptions and be prepared to strip them down and rebuild them. Once you have accepted that, the answer to the questions is as simple to say as it is difficult to carry out. You have to understand and potentially fix your customer relationship, adjust internal operations and create a data collection workflow for business insights you can base your decisions on. And you have to do all this in a concerted way, as much as possible. So the actual starting point will be to come up with a detailed plan of coordinated actions.

What's the goal to keep in mind?

Simply put, you need a picture of how you will (eventually) make money when you start your journey of digital transformation. Create a clearly outlined set of value propositions, and define how you will engage and interact with your customers, partners, and suppliers.
Your business will revolve around what customers really want, a seamless experience where speed, time, performance and response become dominating values – far beyond a specific job-to-be-done.
In general, business is moving towards a culture of experience. Whether in communications, development, or delivery: everyone's time within the organization is pivoted towards the outside world. And the most important change in perspecitve is about being different, about carving out our own uniqueness.

Welcome to the digital era where we all are learning to transform ourselves!

In this report, I have attempted to extract a selection of what, how and why digital transformation needs to be top of every business person's mind. This report is designed to help you to trigger your thinking, and make you aware of challenges and opportunities you may encounter on this journey.

The backdrop of digital transformation

Digital transformation is now omnipresent, and has the potential to reshape the way all organizations operate. The customer becomes central to this transformation and the 4th Industrial revolution is driving this wholesale across industries.

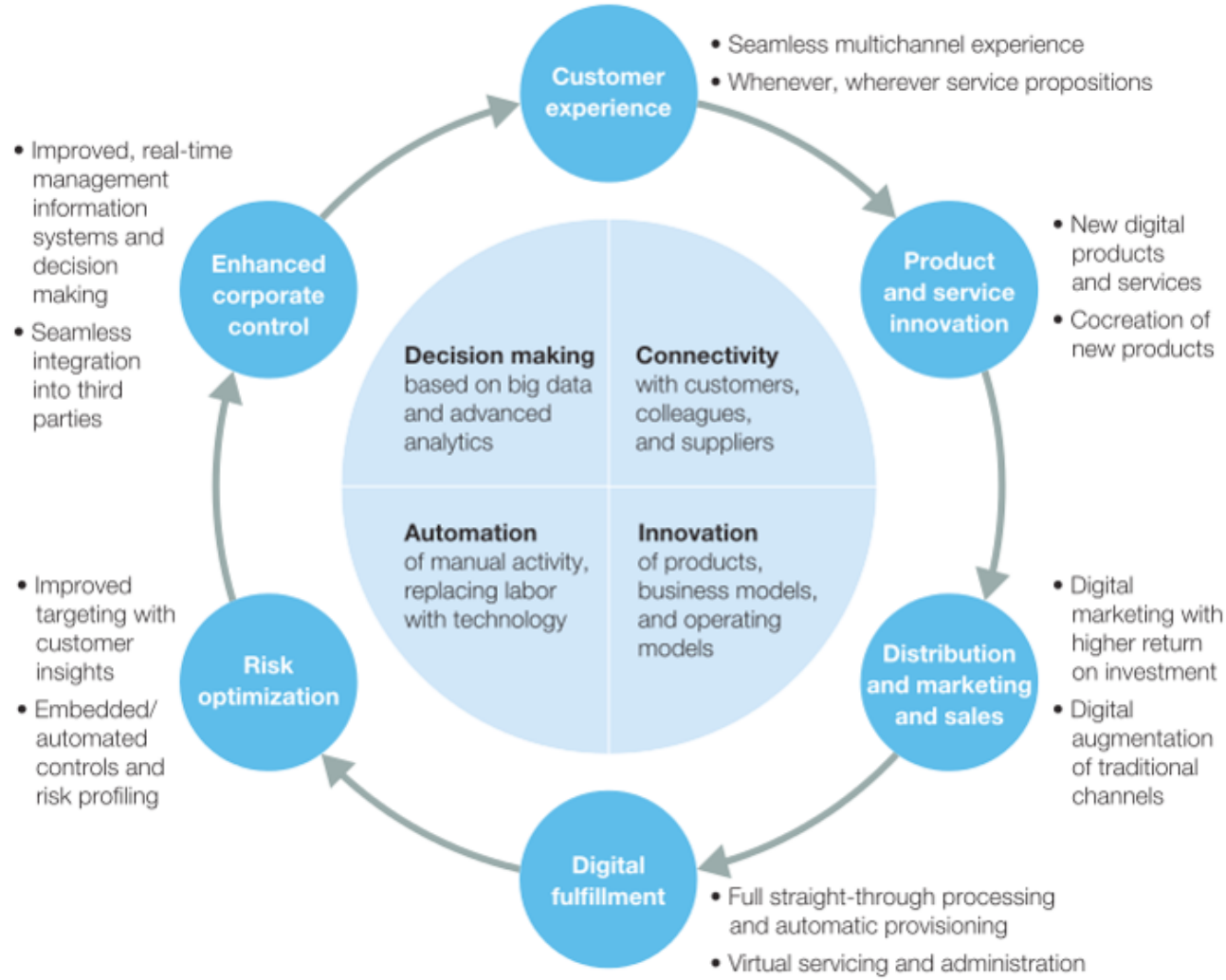
Nearly all the major consulting companies offer some overview of the digital transformation journey and set the scene for it. As I provided much of this bigger picture in my opening summary, I didn't want to duplicate this.

However, I searched for visuals that could be sufficient to grasp this quickly. Arthur D Little, McKinsey, Altimer & PwC offer four key strategic framing visuals.

Source: Digital Transformation Study, Arthur D Little, 2015

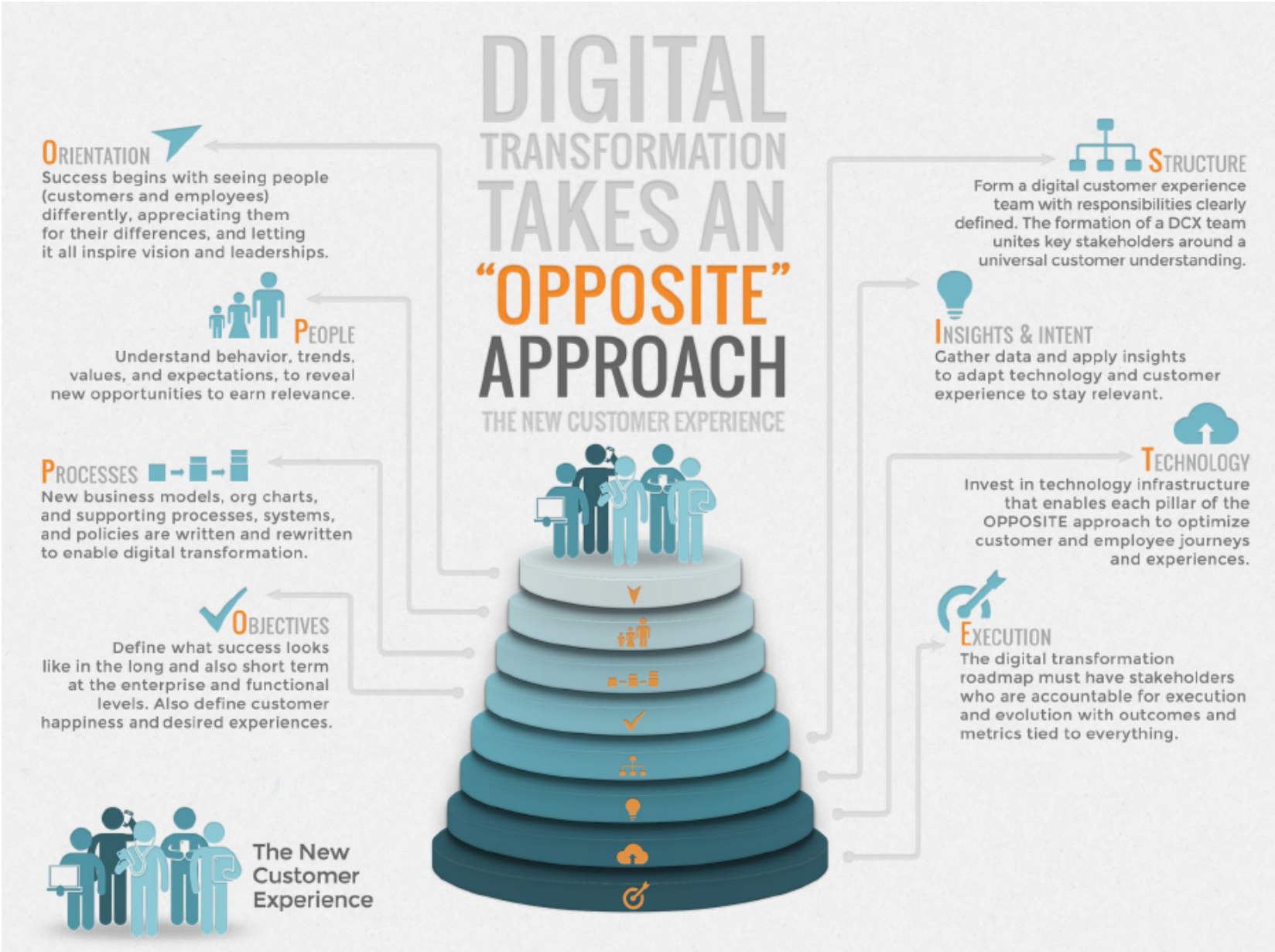
An excellent summation of why we have to take digital transformation seriously.

Digital can reshape every aspect of the modern enterprise.



Source: Expert interviews, McKinsey analysis, 2013

Areas of business that will be reshaped by digital transformation.



Source: Digital Transformation, Altimeter, 2014

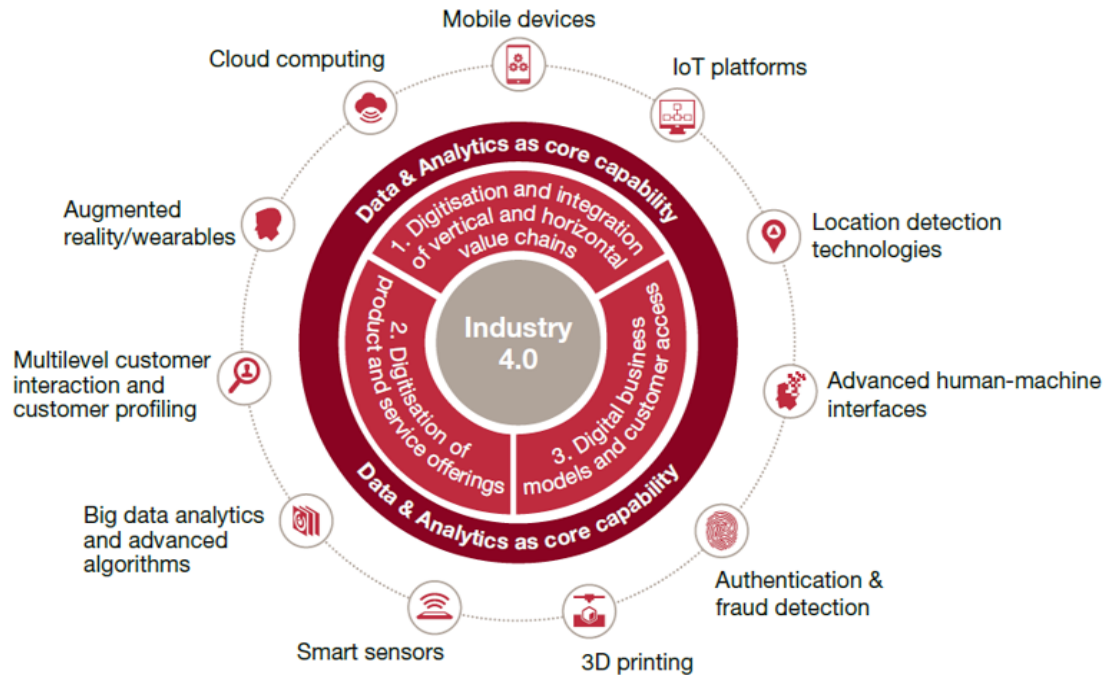
Customer experience is the goal for digital transformation.

Box 1: The Fourth Industrial Revolution

We are at the beginning of a global transformation that is characterized by the convergence of digital, physical, and biological technologies in ways that are changing both the world around us and our very idea of what it means to be human. The changes are historic in terms of their size, speed, and scope. This transformation—the Fourth Industrial Revolution—is not defined by any particular set of emerging technologies themselves, but rather by the transition to new systems that are being built on the infrastructure of the digital revolution. As these individual technologies become ubiquitous, they will fundamentally alter the way we produce, consume, communicate, move, generate energy, and interact with one another. And given the new powers in genetic engineering and neuro-technologies, they may directly impact who we are and how we think and behave. The fundamental and global nature of this revolution also poses new threats related to the disruptions it may cause—affecting labor markets and the future of work, income inequality, and geopolitical security as well as social value systems and ethical frameworks.

Adapted from Klaus Schwab, *The Fourth Industrial Revolution,* 2016.

Industry 4.0 framework and contributing digital technologies



Source: Industry 4.0: Building the digital enterprise, PWC, 2016

The 4th industrial revolution requires us to adopt new technologies as they are going to change the way we act and who we are.

KEY FINDINGS

1. Social, mobile, real-time, and other disruptive technologies are aligning to necessitate bigger changes than initially anticipated.

2. Digital transformation is quickly becoming a priority for many leading organizations.

3. Mapping and understanding the customer experience is becoming critical in guiding transformation efforts.

4. While gaining momentum, digital transformation as a formal process is still in its infancy.

5. Digital transformation is driven partly by technology and also by the evolution of customer behavior.

6. Three key elements form the compound upon which digital transformation efforts are built:

   - *It is most effective with pointed vision and supportive leadership.*
   - *Optimizing the digital customer experience becomes the initial objective.*
   - *Change materializes through the formation of a digital transformation team.*

7. A list of best practices will serve as a checklist to help strategists take the next steps to beginning digital transformation or optimizing current efforts.

Source: Six Stages of Digital Transformation, Altimeter 2016

Framework and areas of focus

You would expect multiple frameworks to deal with digital transformation. Four of the analyzed reports offer a particularly helpful view in this respect:

I found the Deliotte University Press and its transformation roadmap to be a great comprehensive framework, while IBM framed the different routes you can take to transform. Cap Gemini in association with MIT Sloan Management offer an extensive study that I felt has been the benchmark reference for many others. In this study, they provide a useful view of the three critical areas for digital transformation and an excellent framework to orient to.

Without doubt, one of the obligatory references for digital transformation is the MIT Center for Digital Business, and both Cap Gemini and subsequently Deliotte partnered with them. The building blocks for digital transformation can be well explored whenever the MIT has been involved in a way, and their work will be relevant for most of the sections ahead.

Figure 2. A transformation roadmap

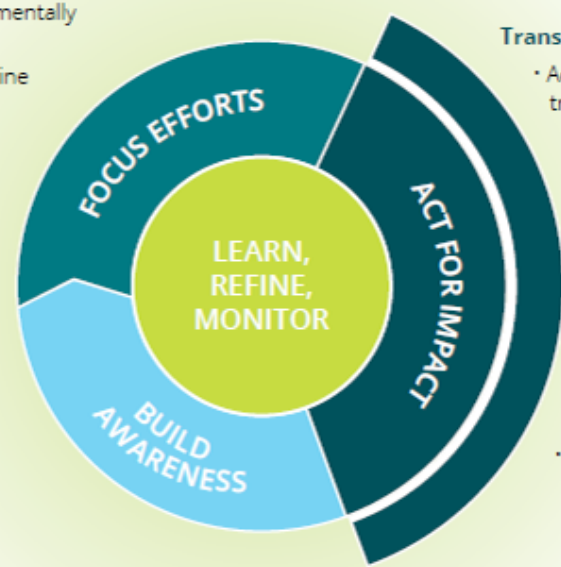
FOCUS EFFORTS

Align on a point of view on the long-term direction of your industry, market, and business.

- Consider implications for how we fundamentally need to change
- Assess our current position, and determine performance gaps
- Set strategic direction

ACT FOR IMPACT

Identify initiatives that deliver near-term impact and accelerate transformation.



Transform from the edge

- Accelerate movement toward long-term transformation
  - Shorten the lead time required to generate revenue

Strengthen the core

- Harness the near-term business potential of emerging technologies
- Accelerate growth through leverage

Restructure to free up resources

- Shed underperforming assets

BUILD AWARENESS

Understand the nature of disruptive change.

- Identify technologies and trends reshaping the business landscape
- Identify key vulnerabilities and promising opportunities
- Cultivate the necessary commitment to transformation

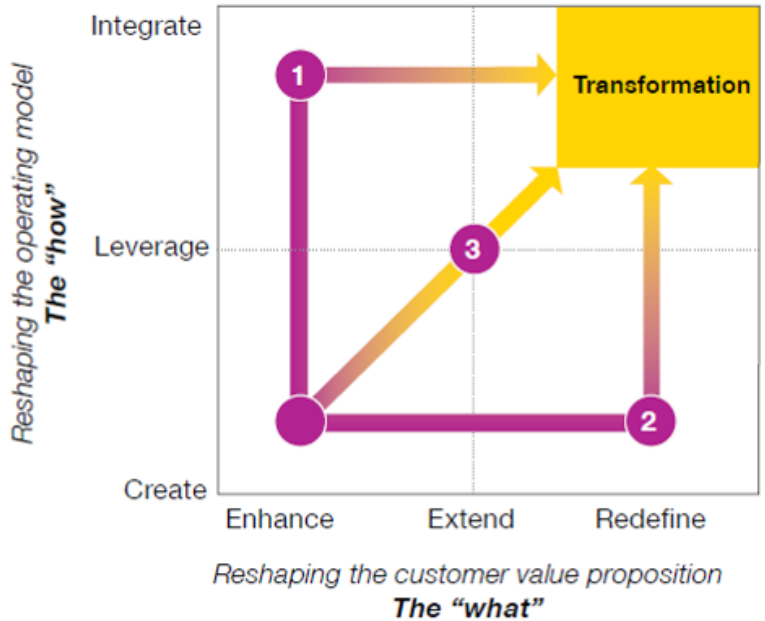
LEARN, REFINE, MONITOR

Amplify impact and accelerate learning through rapid iteration.

- Develop a constant feedback loop and capabilities to track the rate of learning and improvement
- Zero in on the metrics that matter
- Create faster iteration cycles

Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

Paths to digital transformation



1 Path 1
Create and integrate digital operations first. Then address the customer value proposition to achieve full transformation.

2 Path 2
Enhance, extend or reshape the customer value proposition with digital content, insight and engagement. Then focus on integrating digital operations.

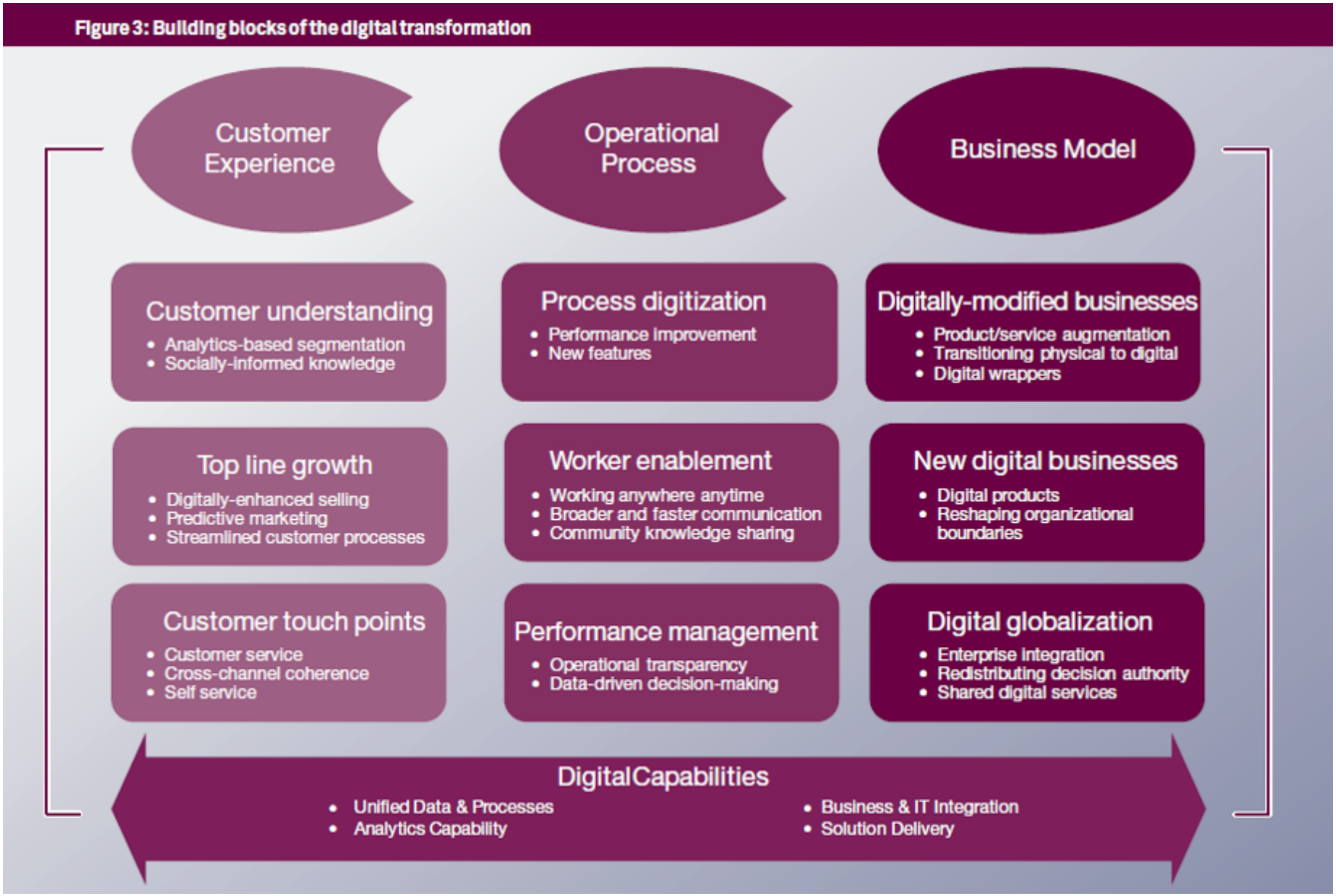
3 Path 3
Build a new set of capabilities around the transformed customer value proposition and operating model in lock-step.

Source: IBM Institute for Business Value analysis.

Figure 4: **Digital transformation requires strategic development of the value proposition and the operating model.**

Source: Digital transformation – Creating new business models where digital meets physical, IBM Institute for Business Value, 2011

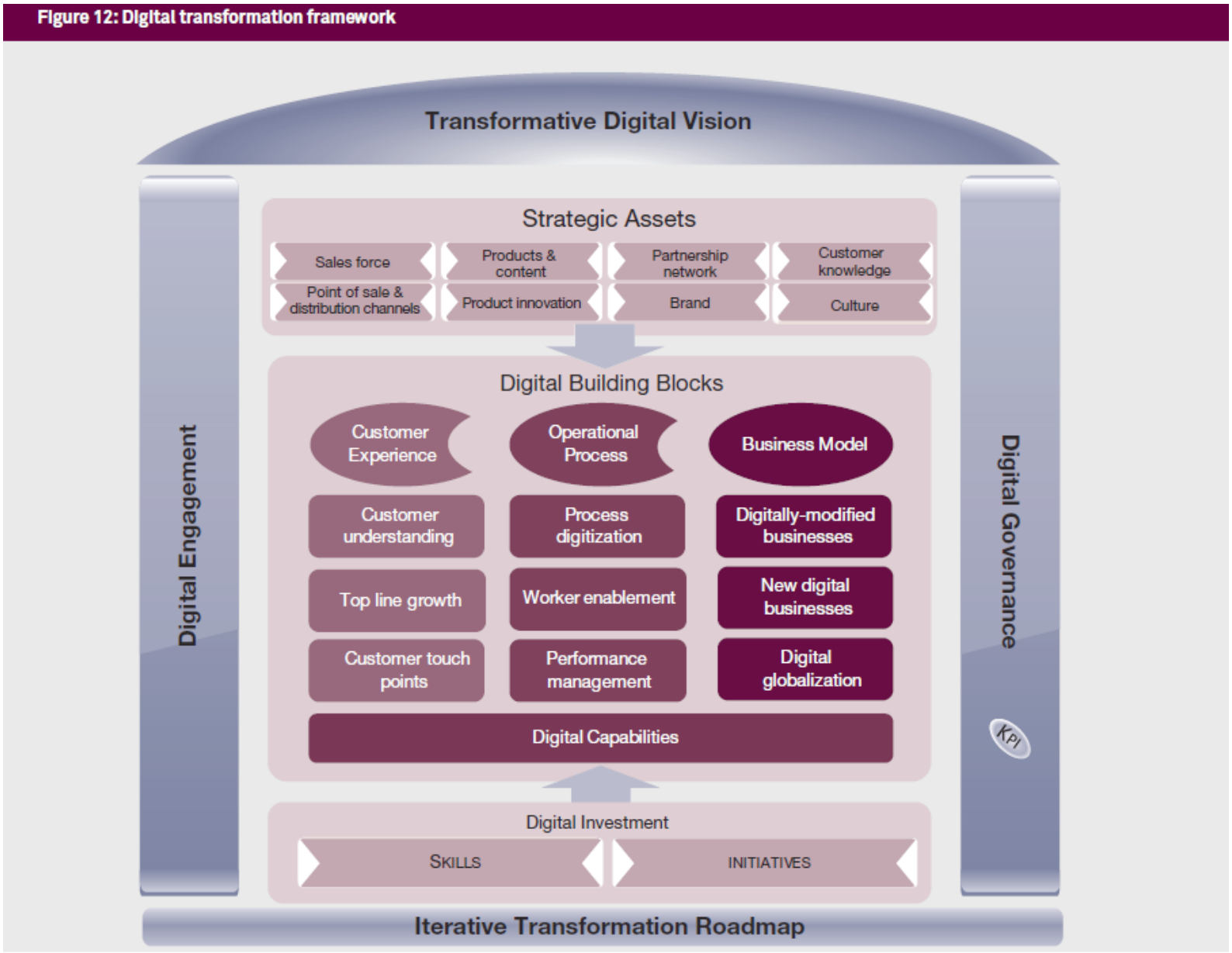
A short summary of what digital transformation means today and its three areas of focus



Source: Digital Transformation: A Roadmap for Billion Dollar Organizations, MIT Center for Digital Business & Cap Gemini Consulting, 2011

The three focus areas for digital transformation and their building blocks.

Figure 12: Digital transformation framework



Source: Digital Transformation: A Roadmap for Billion Dollar Organizations, MIT Center for Digital Business & Cap Gemini Consulting, 2011

For me, this is the best digital transformation framework to work with.

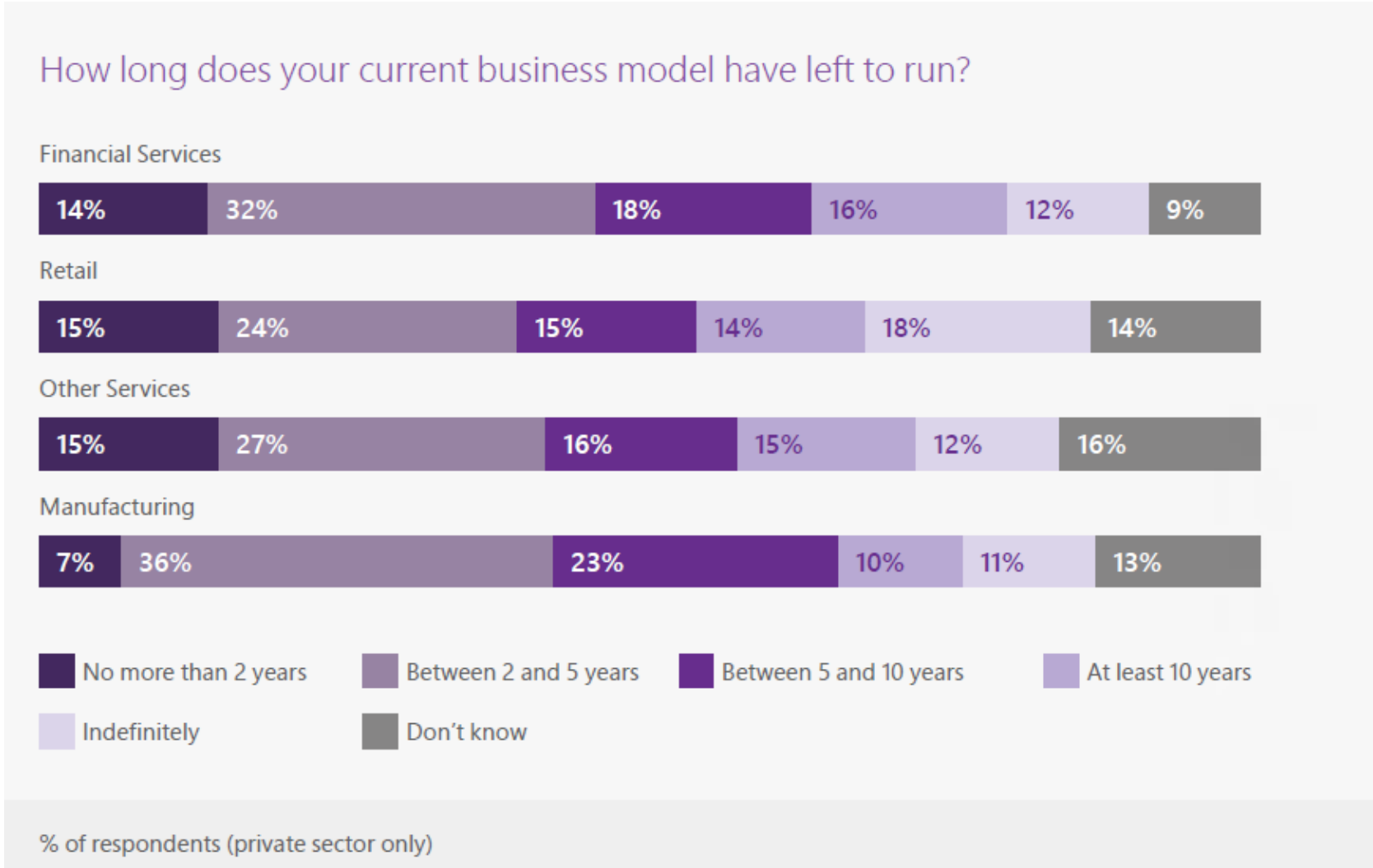
Justifying to invest in digital transformation

In 2016, Microsoft completed an extensive study of how companies are embarking on their digital transformation journey within the UK. Much of its output and findings can certainly be applied in most countries. They sought out 1,000 leaders and conducted some in-depth interviews. They find the 4th industrial era to be a critical impetus to digital transformation.

They summarized their findings as follows:

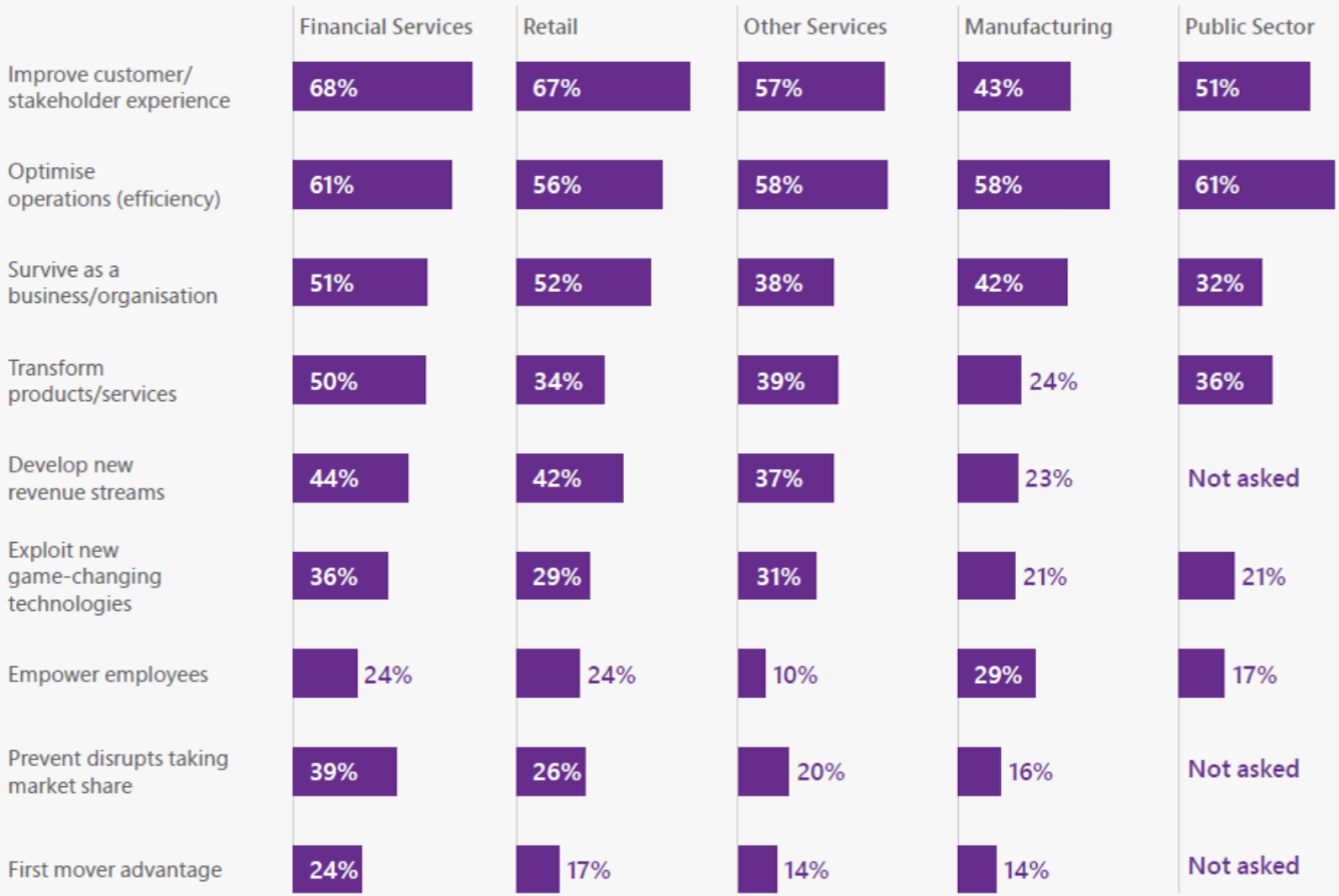
1. **Disruption is real** – nearly half of all business leaders (44%) think their existing business models will cease to exist within the next five years.
2. **It's happening quickly** – half of all organizations think that their industry will be disrupted within the next two years.
3. **Taking action is the only option** – yet almost half (46%) of business decision makers think their senior leadership are unwilling to disrupt their existing businesses in order to grow and compete more in the future.
4. The business drivers are significant, **yet respondents don't necessarily understand the full value digital transformation can deliver** to their organizations. The top three drivers were cited as:
   - An improved customer experience
   - Optimized operations
   - Survival as a business

I found this study especially valuable in understanding practices, thinking and the threats of disruption if we don't transform.



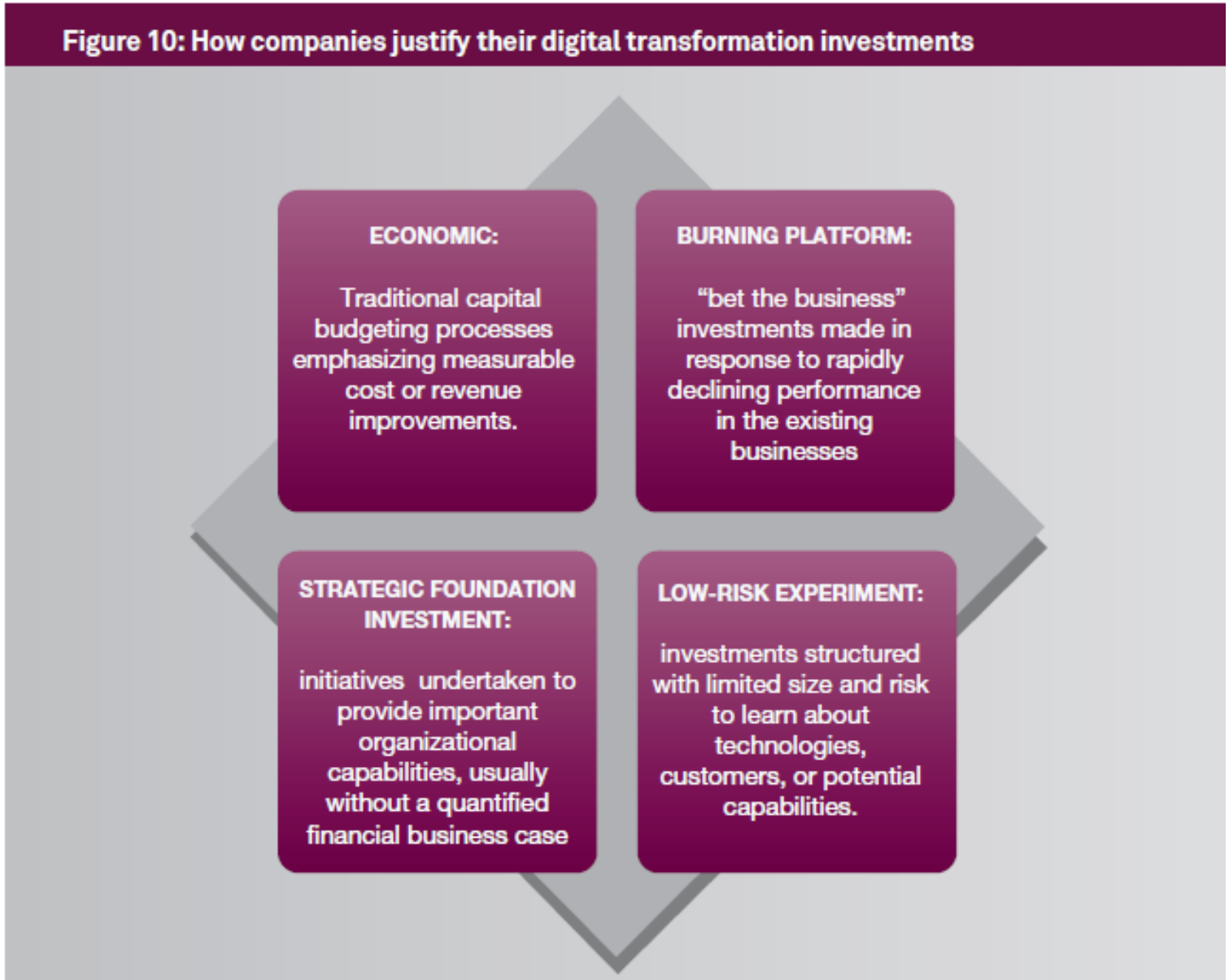
Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

What re the main drivers behind digital transformation initiatives?



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

Figure 10: How companies justify their digital transformation investments



Source: Digital Transformation: A Roadmap for Billion Dollar Organizations, MIT Center for Digital Business & Cap Gemini Consulting, 2011

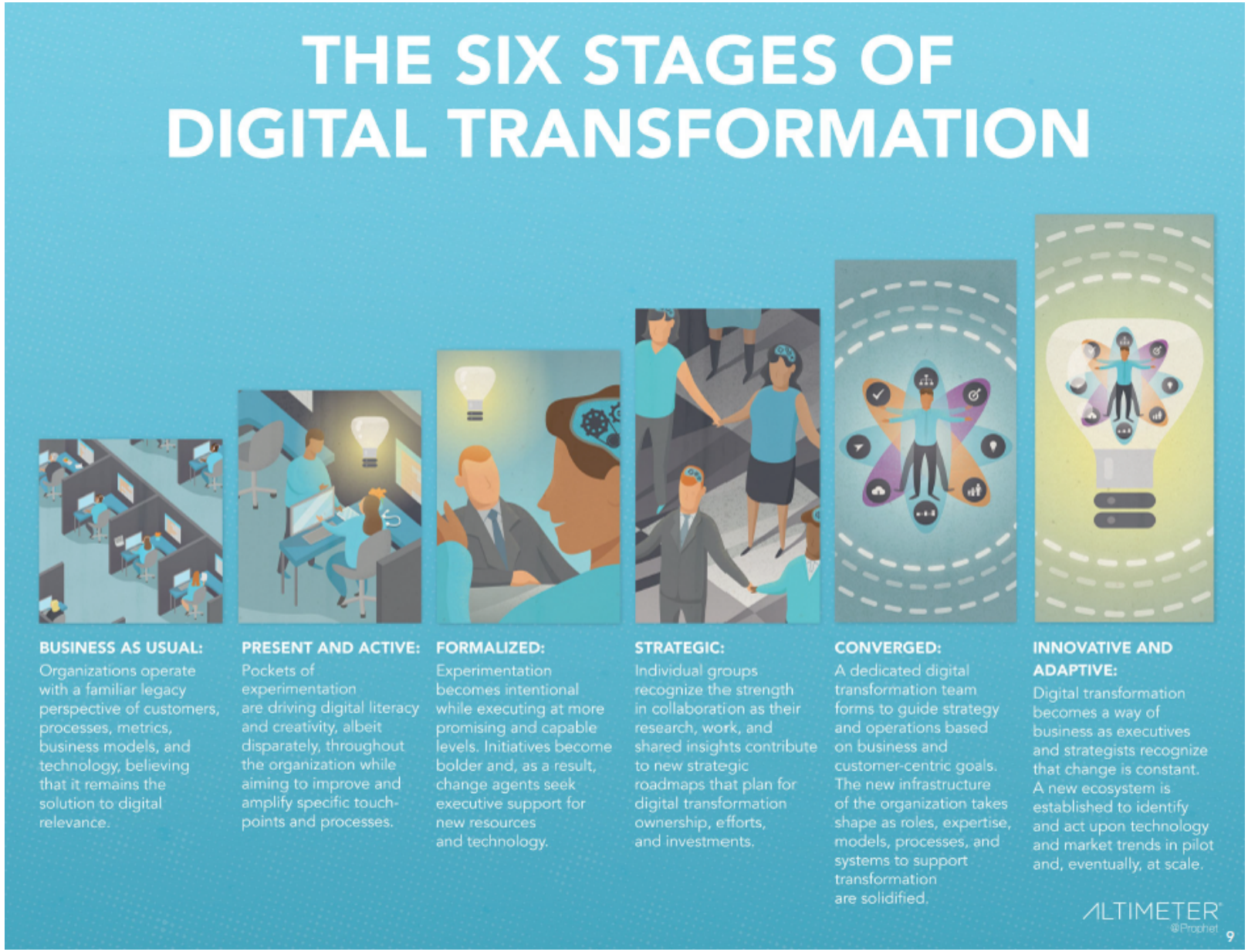
Stages of the transformation journey

Altimeter, and in particular Brian Solis, are another "go-to" resource for digital transformation. They believe this is the age of “Digital Darwinism” and focus on exploring the customer experience needs and opportunities arising from digital transformation.

For Customer Journey Mapping, Altimeter provides great insights. They found, "whether it’s digital first or digital back, bringing about meaningful transformation depends on understanding the needs and expectations of digital customers to inform your next steps."

They relate to the “human side of business transformation” – the catalyst for heading on a new journey as the strongest justification argument. Their extensive research has resulted in two reports, one in 2014 and one this year, in April 2016.

Both are excellent reads for any digital transformation journey.



Source: Six Stages of Digital Transformation, Altimeter, 2016

ELEMENT #1

VISION AND LEADERSHIP

- ✓ Document the factors that are disrupting your market. Assemble data and proof points that help you make the case to the C-suite or decision-makers.
- ✓ Clearly articulate why this is critical to your business, using examples of other companies and the benefits they've realized. Develop a SWOT that assesses your actual position for transformation.
- ✓ Draft a sample vision statement and supporting narrative for what digital transformation looks like in the end, the topline advantages it carries, AND how it enables business goals and improves customer experiences in the process. Document and articulate short-term and long-term purpose.
- ✓ Seek out an executive sponsor to help rally support and act as a leading champion of digital transformation efforts.
- ✓ Ensure that executive sponsors communicate the vision for digital transformation and the benefits and updates throughout the effort to rally employees across the enterprise.

ELEMENT #2

DIGITAL CUSTOMER EXPERIENCE

- ✓ Identify past research related to your customer journey and map the digital customer journey, as it exists today. Interview stakeholders about digital customers to assess challenges and opportunities.
- ✓ Document the differences between the current journey and that of digital customers. Observe persona traits or characteristics that are unique to your digital customer.
- ✓ Chart a sample journey around what the right experiences for the right customers could be, based on digital behavior. Organize the journey by channel and screen.
- ✓ Observe the gaps in touchpoints where investments are and are not today.
- ✓ Assess the processes, policies, and systems that prevent success in engaging the digital customer. Pinpoint what it would take to overcome hurdles.
- ✓ Continue to study the "ultimate customer journey" every six months to adapt investments in relevant digital customer experience strategies.

ELEMENT #3

DIGITAL TRANSFORMATION TEAM

- ✓ Identify candidates for a cross-functional transformation team.
- ✓ Develop a RACI model for the cross-functional group and an ongoing collaboration schedule and reporting process. This enables for prioritization of projects and delegation of projects.
- ✓ Build a strategic alliance with IT (they must be part of the workgroup).
- ✓ Form a data collection and insights team as part of the digital transformation workgroup. Create new role/s necessary to collect, analyze, and storify data.
- ✓ Measure impact of transformation at the enterprise level and at each touchpoint to document progress and benefits. Establish a reporting process to the workgroup and ultimately to stakeholder groups.
- ✓ Develop a training regimen to bridge the gap between existing and required expertise for transformation processes and technologies.

Source: Digital Transformation, Altimeter, 2014

A helpful checklist to work through

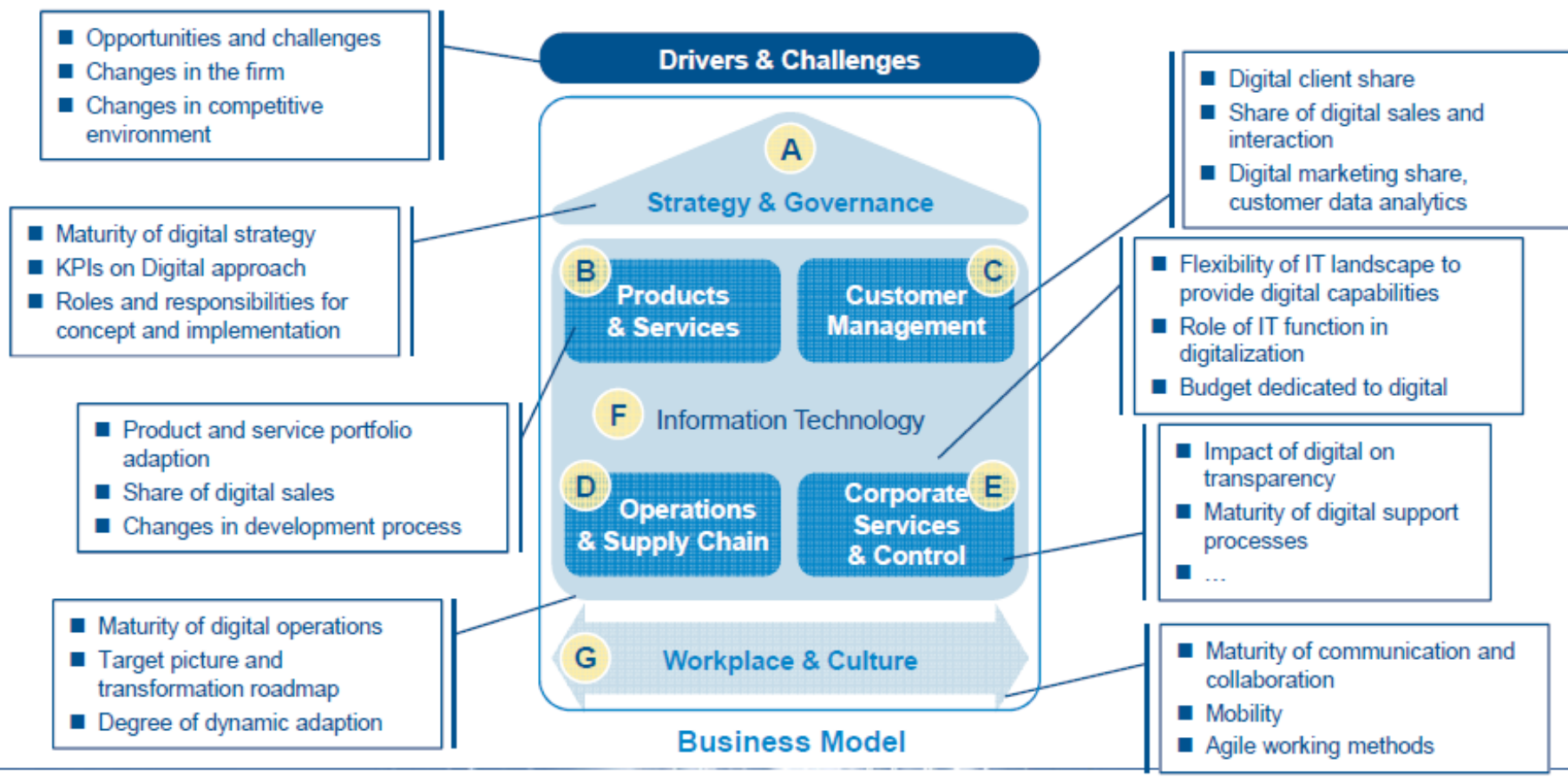
Pain points and opportunities of digital transformation

Digital transformation is going to provide significantly different opportunities in products, services and business model designs, depending on where you leave your traditional business boundaries. PwC quite rightly suggest:

“Actively plan an ecosystem approach. Industry 4.0 needs to extend far wider than horizontal and vertical integration within your own organisation. First movers achieve breakthrough performance by going a step further to understand consumer needs and use digital technologies to create and deliver value to the customer in an integrated, innovative solution.”

As Arthur D Little and others point out: “All industries are “digital adaptive” only; however, each industry contains “digital-oriented” companies, whereas only two industries contain one “digital-centric” company”. MIT Sloan Management Review and Deloitte’s 2015 global study relates confidence in leadership to the digital maturity of the company.

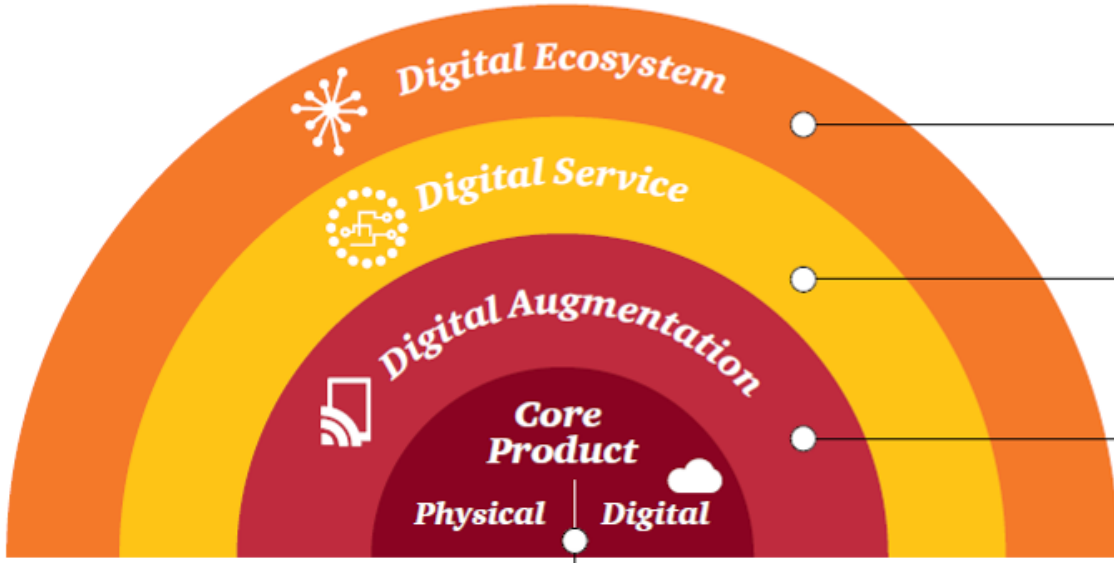
The survey followed a holistic approach to analyze the relevant sections for digitalization; the questions raised have been mapped to these sections



Source: Digital Transformation Study, Arthur D Little, 2015

Business sections and how to apply digital transformation to them.

Moving from a product-oriented to a platform-focused approach



Source: Industry 4.0: Building the digital enterprise, PWC, 2016

Digital Ecosystem: With interfaces to suppliers, partners & customers the product is embedded in an ecosystem for co-creation and additional/ new value capture

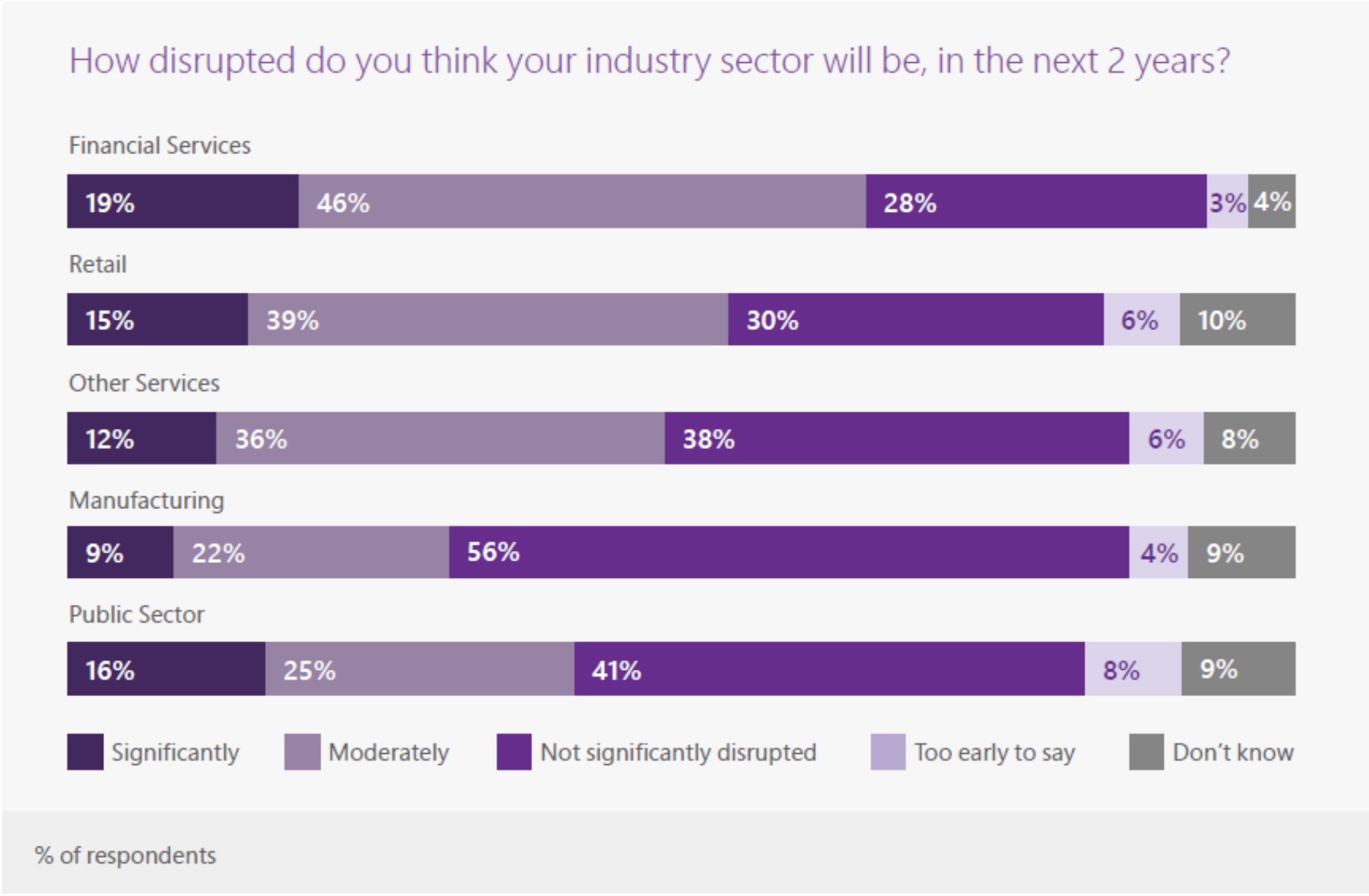
Digital Service: Digitally enabled services which, in combination with a physical product, can provide an end-to-end solution to a broader customer need

Digital Augmentation: Digital customer interfaces, visualisation, touchpoints and channels augment the experience and allow a variety of interaction models

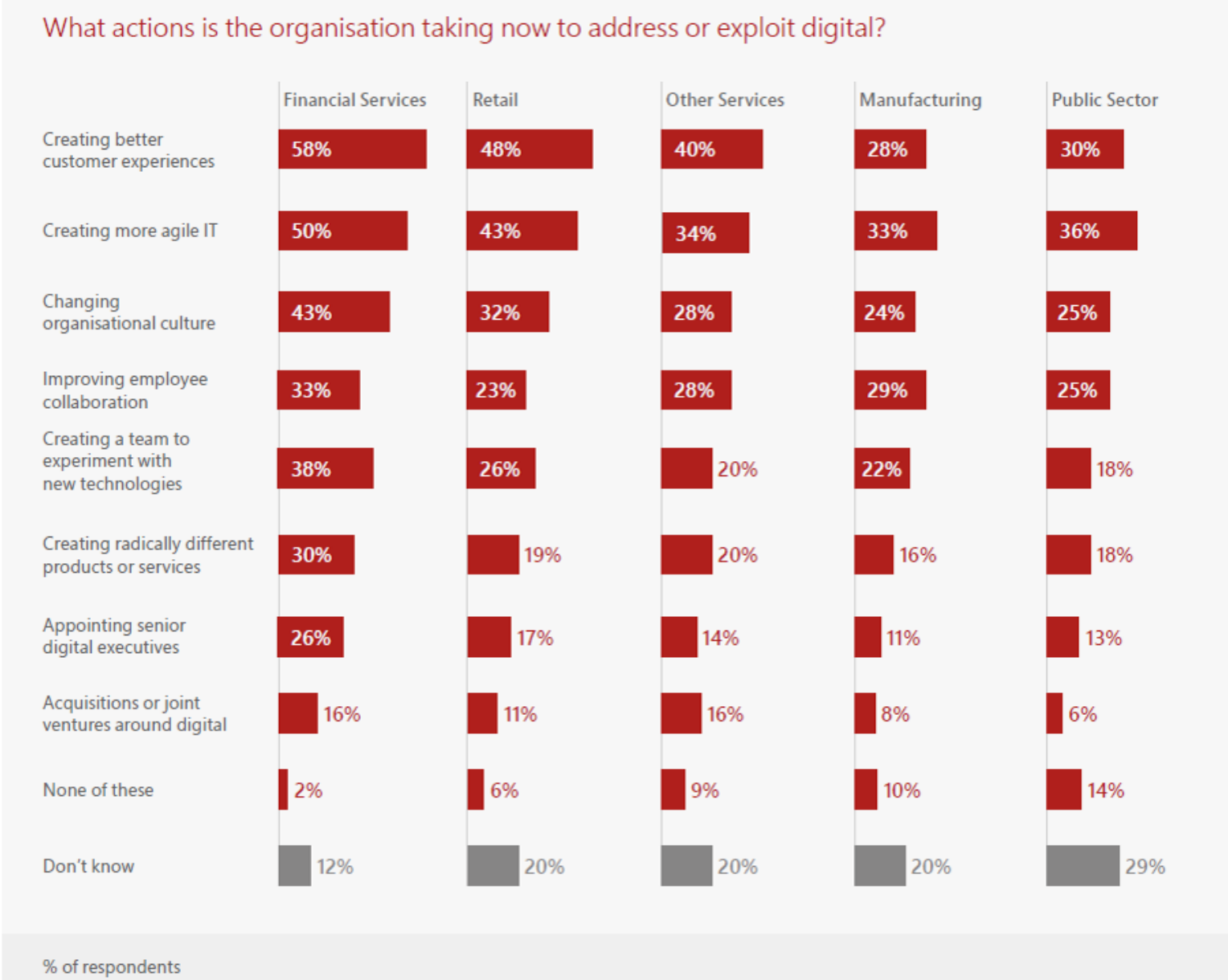
Core Product: Two possible options at the core

- **Digital:** Data and IT define the product's value proposition and generate standalone revenues
- **Physical:** Traditional base offering, which can be 'digitised' by adding digital layers around it

In the near future, digital platforms and ecosystems will become critically important.



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

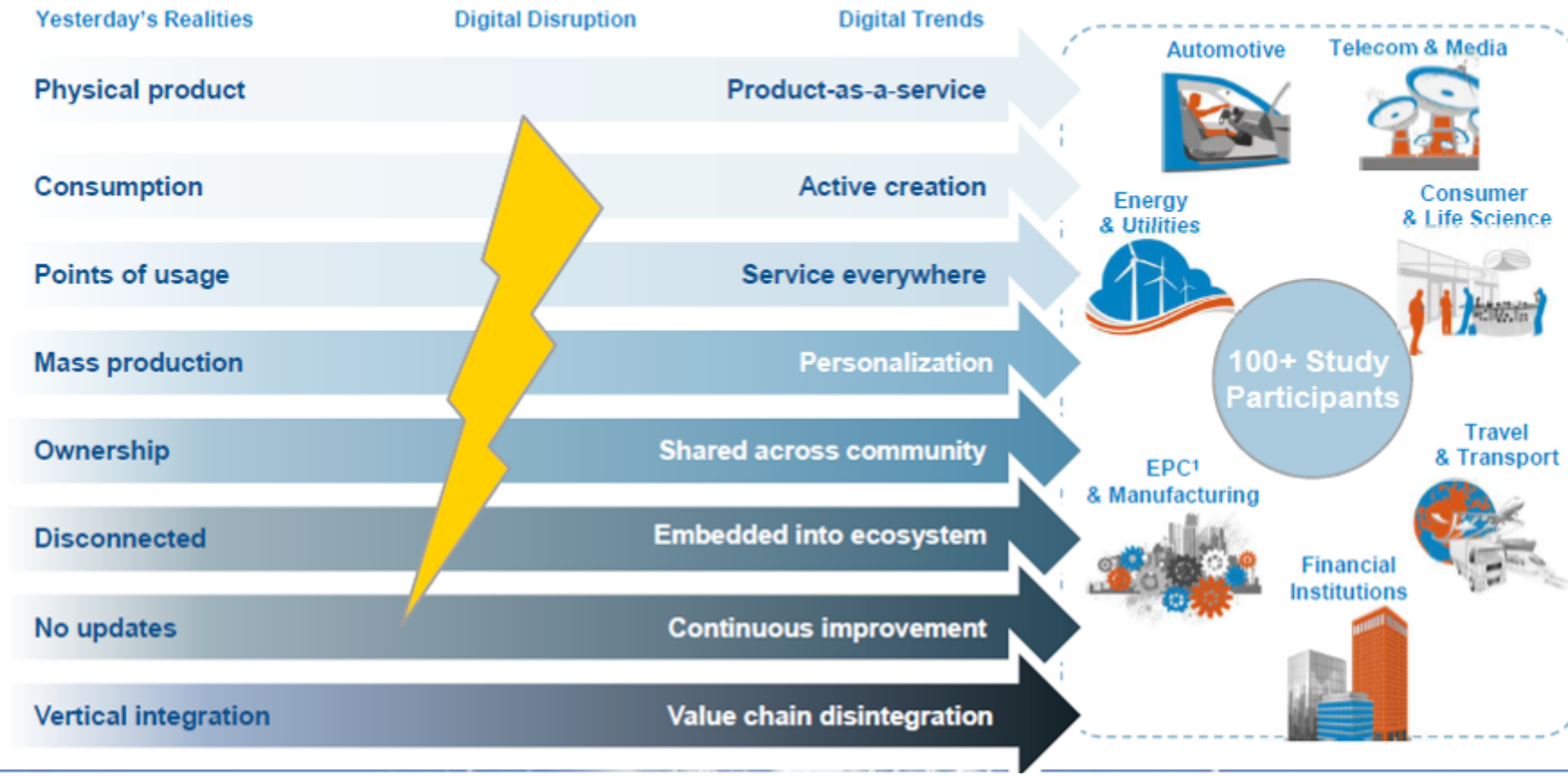


Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

Arthur D Little

Executive Summary – Trends

Some major digital trends change yesterday's realities – these "game changers" facilitate great opportunities and will inevitably generate some highly digitized champions



Source: Digital Transformation Study, Arthur D Little, 2015

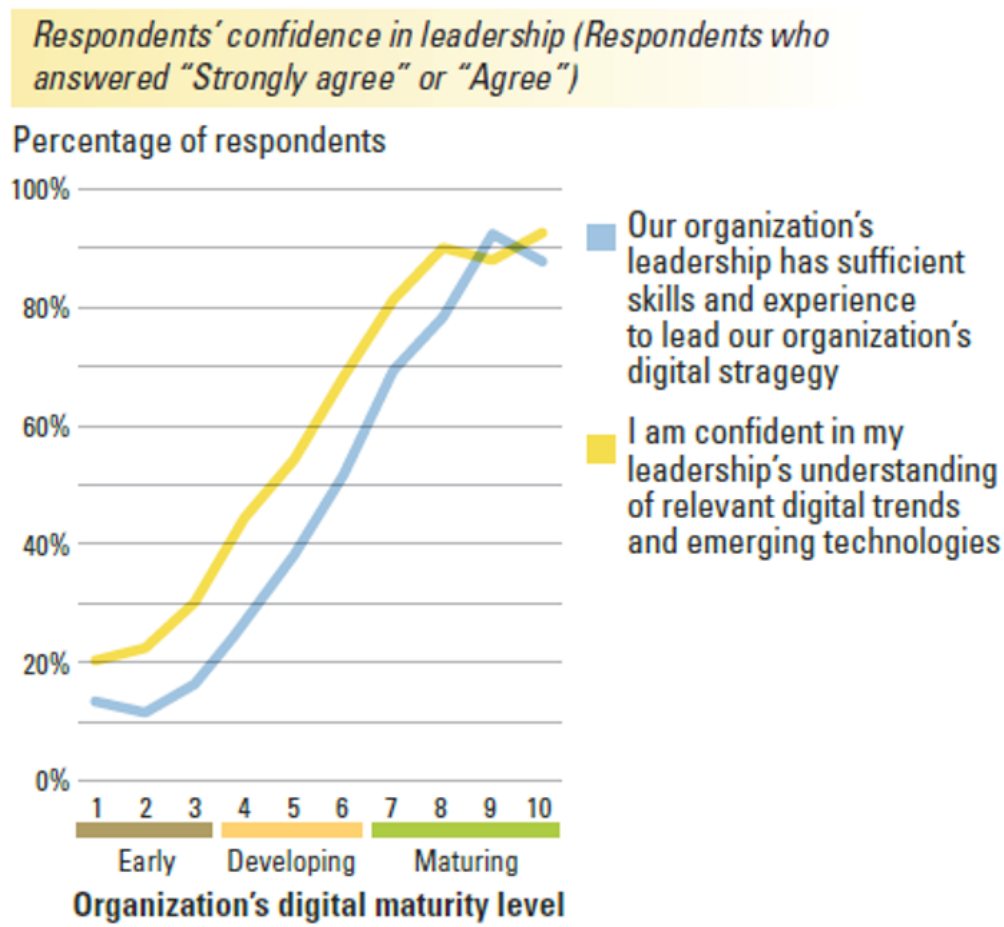
	EARLY	DEVELOPING	MATURING
Barriers	*Lack of strategy* More than half cite "lack of strategy" as a top-three barrier	*Managing distractions* Nearly half indicate "too many competing priorities" is a top-three barrier, "lack of strategy" still a challenge for one-third	*Security focus* Nearly 30% cite security as a top-three barrier; managing too many competing priorities remains a top concern for 38%
Strategy	*Customer and productivity driven* Approximately 80% cite focus on customer experience (CX) and efficiency growth	*Growing vision* CX and efficiency growth; over 70% cite focus on transformation, innovation and decision making	*Transformative vision* Over 87% cite focus on transformation, innovation and decision making
Culture	*Siloed* 34% collaborative; 26% innovative compared to competitors	*Integrating* 57% collaborative; 54% innovative compared to competitors	*Integrated and innovative* 81% collaborative; 83% innovative compared to competitors
Talent Development	*Tepid interest* 19% say their company provides resources to obtain digital skills	*Investing* 43% say their company provides resources to obtain digital skills	*Committed* 76% say their company provides resources to obtain digital skills
Leadership	*Lacking skills* 15% say leadership has sufficient digital skills	*Learning* 39% say leadership has sufficient digital skills	*Sophisticated* 76% say leadership has sufficient digital skills

CHARTING DIGITAL TRANSFORMATION

Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

Depending on your company's maturity, you will experience digital transformation differently.

FIGURE 8: Respondents who rate their companies' digital maturity higher are more likely to indicate they are confident in their leaders' digital skills and understanding.



Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

The relation of confidence in the leadership's skills and the organization's digital maturity level.

Best Practice to Next Practice

We do need to think beyond “best practice” as today it is “wrong practice”. It is all about knowing and experimenting with “next practices” as we are moving from “pre-connectivity” to “post-connectivity”.

The Cutter Consortium have argued, it is not complicated to drive effective digital transformation, it is complex!

There are many dimensions and multiple scales, ranging from individual activities to overall industry ecosystems, all caught up in digital transformation. You cannot afford to look back or try to compare and copy, you need to proactively formulate your needs in the next practice.

In this section, we'll take you through Cutter Consortium's next practice thinking in the four main dimensions of businesses: leadership, organizational & behavioral, operational, and technology. However, this is not a wholesale replacement for good and established practices, they suggest next practice thinking to help creativity and continuous learning and allow common sense to prevail.

Arthur D Little

Executive Summary – Case Examples

We collected many best practices for each section to share with you

Business Model

A Strategy & Governance

- Nike x-functional Digital Sports Division
- Coca Cola "Co-Founders" Network

B Products & Services

- Cyber-Physical Product
- Service with Peer-to-Peer Component
- SBB GoodBox Rail-Transport Smartization

C Customer Management

- Burberry Integrated Customer Experience
- Real-Time Dynamic Pricing for Profit Maximization
- Quicksilver Personal Pricing & Rewards

D Operations & Supply Chain

- adidas Speedfactory In-Store Production
- Vision Picking using Augmented Reality
- Cold Chain Quality Management

E Corporate Services & Control

- Coca Cola Brand Dashboard
- Digital Business Launch Factory
- Cloud-Based Project Staffing

F Information Technology

- Layered IT Architecture for Quick Process Implementation
- ICT to Support Industry 4.0

G Workplace & Culture

- Gamification in Project-based/ Knowledge Environment

Source: Digital Transformation Study, Arthur D Little, 2015

Best practice examples from different companies, applied to the aforementioned business sections.

Best Practice *Managing the Complicated*	Next Practice *Embracing the Complex*
• **Assumption is that the system is closed.** Strategic plans assume certainties, with management focus and resources prioritized on "delivering the plan," which will often be multiyear in duration. Failure to deliver the predetermined plan is not an option. • **Internal focus dominates.** The majority of management attention is on internal factors (e.g., overseeing internal resources). • **Metaphors and inspiration are drawn from engineering and the physical sciences.** Terms like "engine of growth," "software factory," and "the machinery of the business" dominate, reinforcing a mechanistic, reductionist mindset and diminishing the attention and focus on human factors in the business. • **Strategy defines challenges (*a priori*).** Strategy — that is, where we play and how we win — is deterministic. The business is focused on analyzing and then answering the questions it sets itself.	• **Assumption is that the system is open.** Strategic plans assume uncertainties and emergence, with management focus on delivering the next part of the plan, deliberately assessing feedback, and constantly tuning resource allocation to deliver the part. "Pivots" are allowed as new evidence is discovered that challenges the initial hypothesis. • **External focus dominates.** The majority of management attention is on external factors (e.g., customer and market feedback). • **Metaphors and inspiration are drawn from biology and the natural sciences.** The notions of emergence, memes (ideas and concepts that can self-replicate across the organization), and discovery are favored over invention. • **Challenges define strategy (*a posteriori*).** Strategy is emergent based on real-world feedback, even if it doesn't fit with the prevailing mental model the business has of its world. The primary strategic questions to be answered emerge from a wide-ranging survey of data and insight and are unknown or only partially known before the analysis.

Table 1 — The business leadership dimension.

Source: Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, 2015

Moving from best practice to next practice: the leadership dimension.

Best Practice *Managing the Complicated*	Next Practice *Embracing the Complex*
• **Command and control.** Management always knows best and tells staff what to do, often in highly prescriptive ways with close scrutiny. • **Hierarchies and chain of command.** Decisions are made by the most senior person. Activities are directed and delivered through individuals that are perceived to be wholly under the control of the organization. • **People thought to be totally rational, calculating machines.** Ways of working and KPIs assume people are totally rational (based on management's view of what "rational" looks like). • **Staff seek permission.** Permission is required to undertake an activity that is not preordained or tightly defined; responsibility is held by the few.	• **Influence, enable, and empower.** Management creates overall direction and principles and then empowers people to use their talents to deliver the best outcome in an emergent and often unpredictable set of specific circumstances. • **Networks and shared incentives.** Decisions are made by the most qualified person. Activities are delivered by a network of individuals with widely differing levels of direct control from the organization but with aligned incentives to ensure coordinated, win-win outcomes. • **People thought to be predictably unpredictable.** Ways of working and KPIs assume the business is more like an economy than a factory, and that human factors (such as those defined by behavioral economics) dominate. Individual actions may not be precisely predictable, but the sum of activities is stochastically reliable. • **Staff ask for forgiveness.** Staff are encouraged to use initiative to achieve goals but also to take responsibility for actions; responsibility is held by the many.

Table 2 — The organizational and behavioral dimension.

Source: Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, 2015

Moving from best practice to next practice: the organizational and behavioral dimension.

Best Practice *Managing the Complicated*	Next Practice *Embracing the Complex*
• **Stability and predictability.** Management culture, KPIs, and incentive systems are all based on predicting the future and then precisely delivering to that prediction. Change is seen as disruptive.	• **Agility, emergence, and adaptability.** Management culture is based on delivering value early and often and accepting emergent phenomena. Self-disruption is seen as not only to be expected, but as a positive.
• **Procedures, rules, and routines.** All activities are broken down into discrete elements, with staff then expected to precisely follow specific procedures (although they don't always seem to). Staff often view procedures as centrally imposed and feel they "get in the way of getting the job done."	• **Algorithms, checklists, proxies, and heuristics.** Rules of thumb and tried-and-tested shortcuts are used to guide decisions, along with checklists for specific activities. Proxies are used to allow early insight into the performance of a system. Staff view tools as helpful and take personal ownership of their ways of working.
• **What has worked in the past.** Actions are based primarily on prior experience and learned behavior.	• **What could work better in the future.** Actions are based primarily on expertise and continuous learning, even if this challenges habits and prior successful ways of working.
• **Measure and manage.** Management is based on what is known as well as retrospective analysis and reviews (e.g., month-end reviews).	• **Sense and respond.** Management is based on continuously seeking out what should or could be known and reacting in near real time to emerging situations.

Table 3 — The operational dimension.

Source: Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, 2015

Moving from best practice to next practice: the operational dimension.

Best Practice *Managing the Complicated*	Next Practice *Embracing the Complex*
• **Established enterprise solutions.** Technology strategy is primarily based on well-known enterprise solutions and technologies. Governance is applied via rules and regulations that direct which technologies can be used and how they are implemented.	• **What would the Web do?** Technology strategy is primarily based on emerging technologies and consumer-style solutions. Governance is via principles and patterns.
• **Change management.** People are told what the new ways of working are, and the assumption is that staff will adopt them rationally once they have gone through required training and familiarization.	• **Adoption engineering.** Focus is on influencing changes in habit and being in the shoes of the recipient, not mandating change centrally; techniques like MINDSPACE[1] and SCARF[2] can be used to allow users to self-adopt. Adoption of change is driven by "path of least resistance" and mimics users' experience with consumer technologies.
• **Up-front grand design and big-bang delivery.** Large-scale programs follow significant periods of design, without usage; team size can be 100+.	• **Emergent requirements and incremental delivery.** Smaller programs deliver early and often; team size tends to be 15 or less.
• **Legacy as millstone to be replaced.** The assumption is that legacy *is* the problem and needs to be replaced wholesale to allow major changes.	• **Legacy as lodestone to be leveraged.** The focus is "What problem are we solving for whom?" and the assumption is that legacy may be part of the answer. Teams ask the question "What is the minimum we can change and still deliver the benefit?"

[1]"MINDSPACE Behavioural Economics." Institute for Government, updated 15 April 2015 (www.instituteforgovernment.org.uk/our-work/better-policy-making/mindspace-behavioural-economics).

[2]Rock, David. "SCARF: A Brain-Based Model for Collaborating with and Influencing Others." *NeuroLeadership Journal*, Vol. 1, 2008 (http://scarf360.com/files/SCARF-NeuroleadershipArticle.pdf).

Table 4 — The technology dimension.

Source: Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, 2015

Moving from best practice to next practice: the technology dimension.

Source: Digital Transformation, Altimeter, 2014

Handy overview of practices of emergent leaders in digital transformation.

› **Follow seven best practices of successful organizations in order to achieve success with DTM:**

1. **Excite your executives about customer experience.** Executive sponsorship is critical to optimize the organization's culture, processes, and technologies across roles and customer touchpoints.
2. **Think big; move fast.** Determine a vision for DTM that aligns with your business' strategic imperatives. Then start the process off with quick wins that will help to gain momentum and foster organizational buy-in.
3. **Embrace user-centered design.** In order to optimize efficiency, DTM must be implemented with a keen understanding of end users' workflows.
4. **Restructure processes to take advantage of digital innovation before automating.** It doesn't help to digitize a bad process. As one respondent said, "You have to challenge why you are doing something before you automate it."
5. **Include customers in the design process.** A key driver for DTM is improving customer experiences; therefore, your process redesign must include an understanding of the end customers' desires for interacting with your company.
6. **Invest time in education.** Understand your organization's requirements for DTM technologies, and research how the solution you are implementing can meet those requirements. Addressing this with stakeholders will speed adoption.
7. **Align with partners with deep expertise in digital transformation.** The right trusted partners that offer expertise and transparency and are invested in your company's success are critical to accelerate and expand your use of DTM.

Source: Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, 2015

Seven emerging practices to consider for success

The why, what, and how of digital transformation

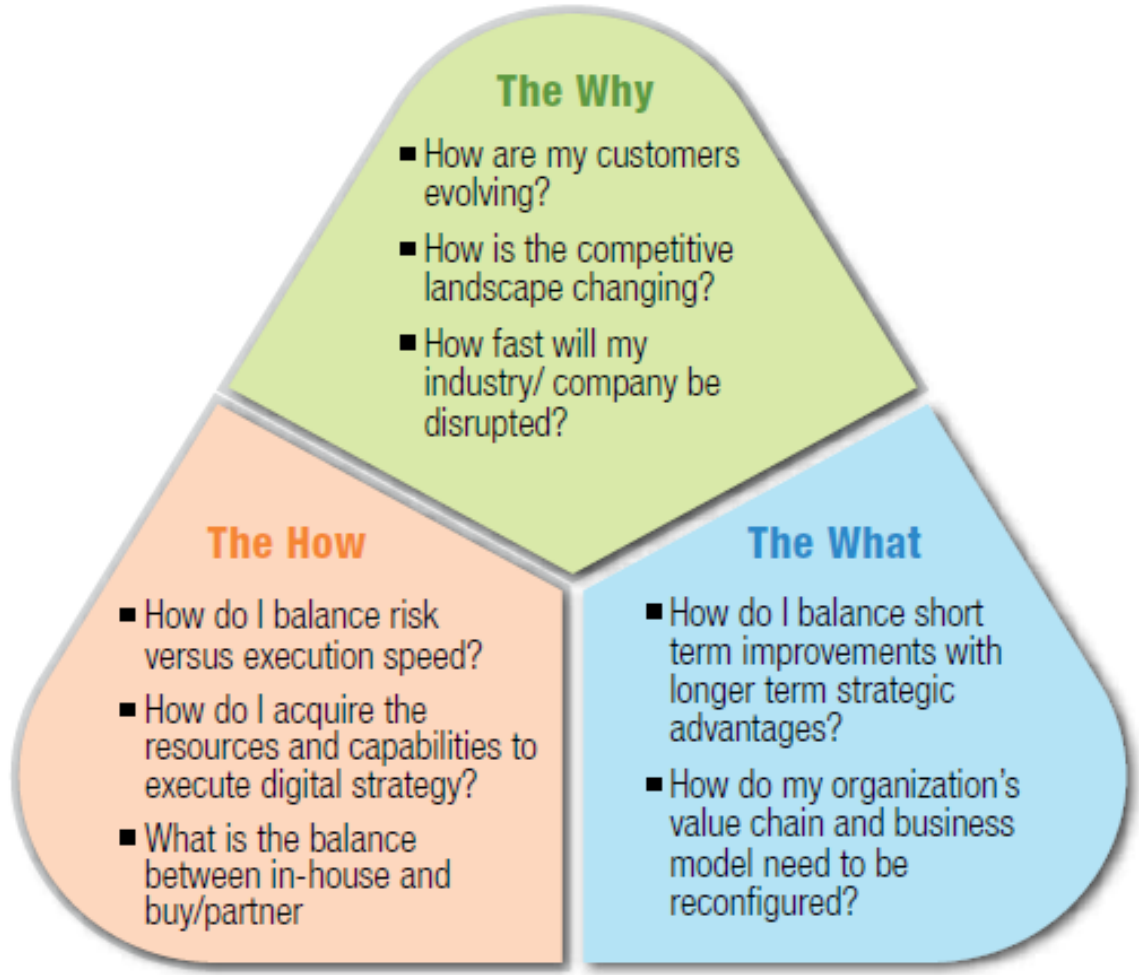
Cap Gemini have outlined A Portfolio Strategy to Execute Your Digital Transformation in a recent 2016 report.

The Why – Insight and foresight about how the competitive digital landscape is affecting your industry and your business. This is about new sources of value creation as well as threats to your current position.

The What – Designing a portfolio of initiatives that will balance the need for short-term improvements with longer term strategic and business model evolution and allow you to respond within a risk profile that you and your stakeholders are comfortable with.

The How – The ability to execute on your strategy at the right tempo, balancing risk with the need for speed, and making the right trade-offs between in-house and external capabilities.

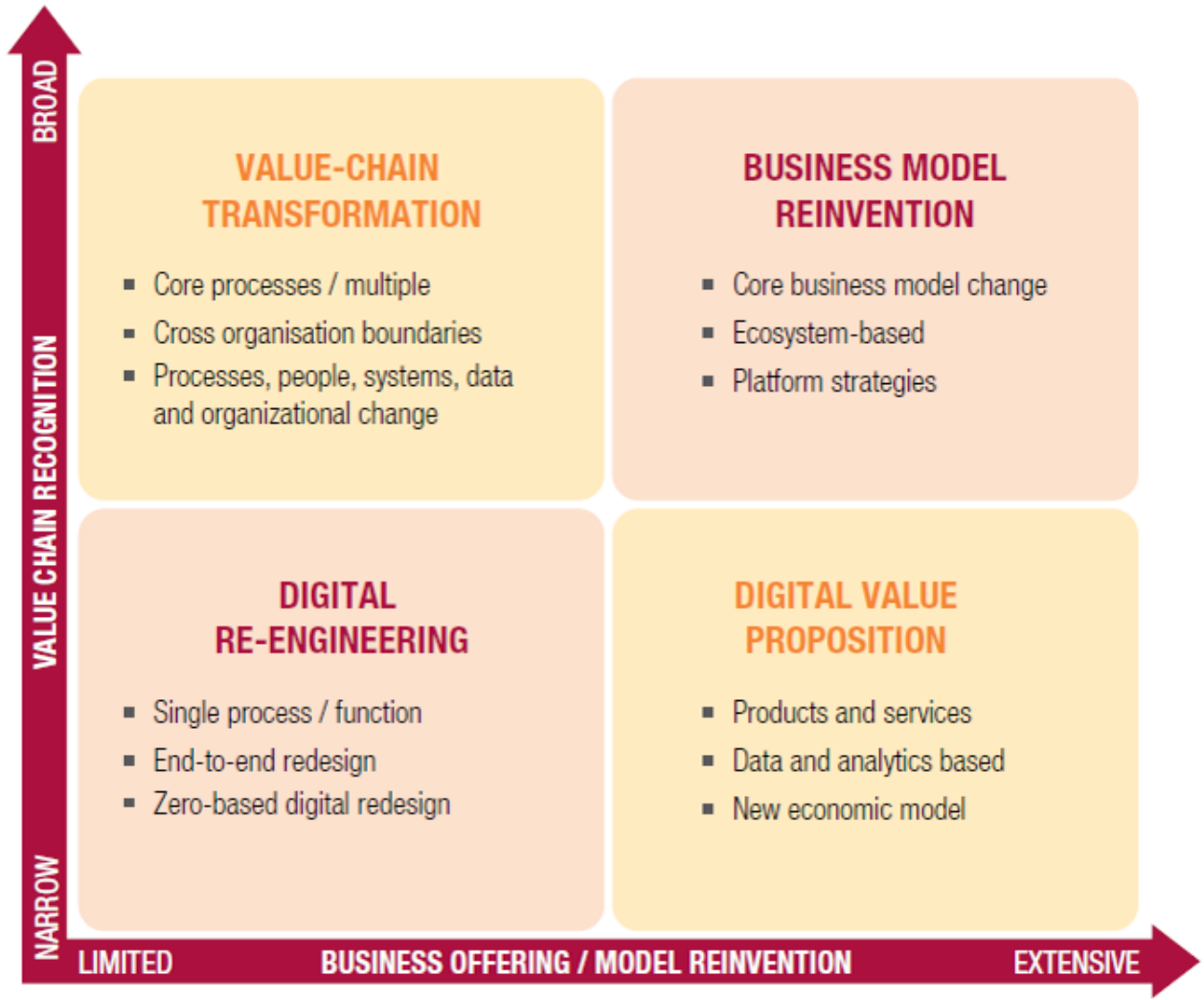
Formulating and Executing Your Digital Transformation Strategy



Source: A Portfolio Strategy to Execute Your Digital Transformation, Cap Gemini Consulting, 2016

The Handy Why, How & What

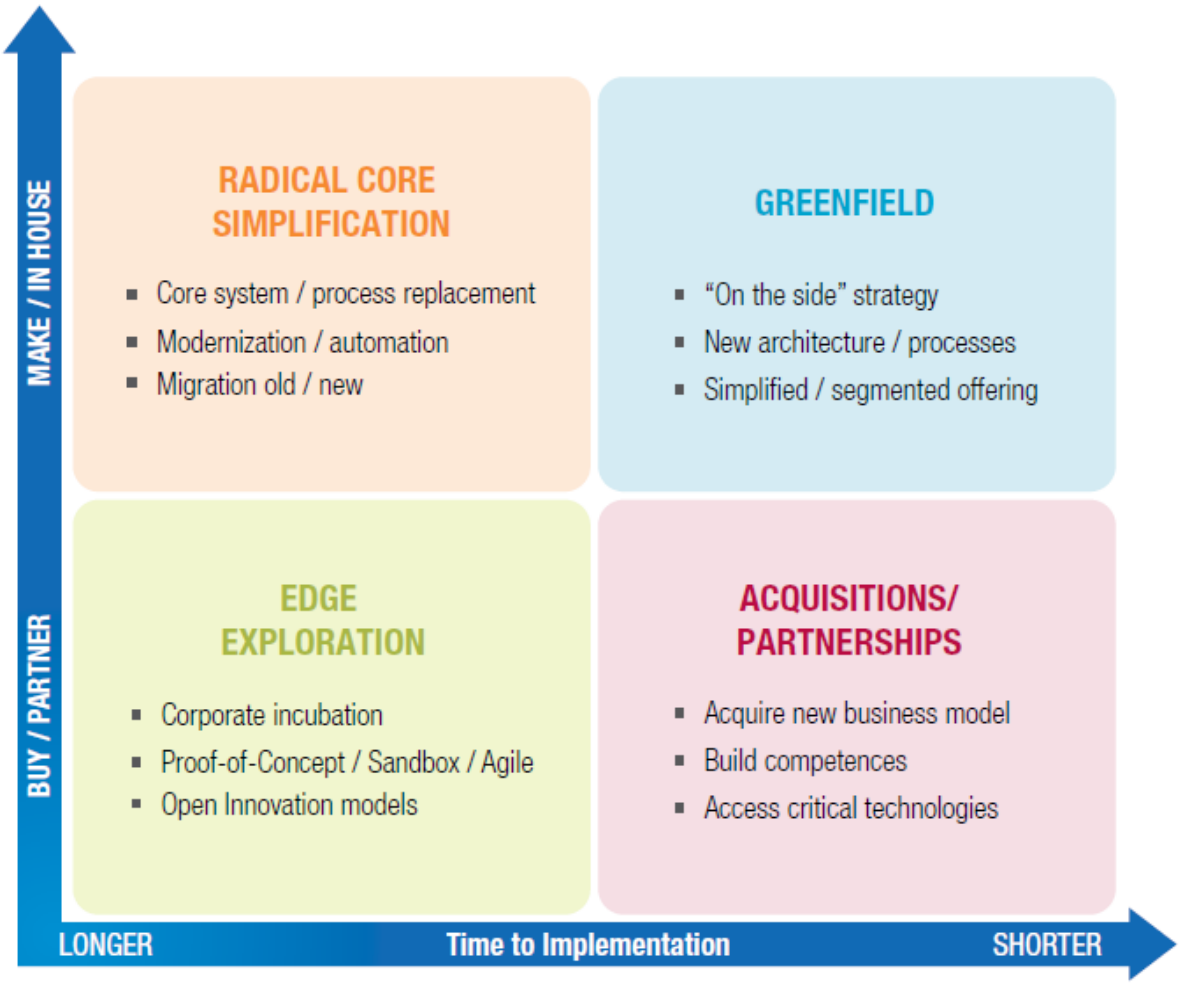
Figure 2: Mapping the Digital Initiatives - The "What" of Your Digital Transformation Portfolio



Source: A Portfolio Strategy to Execute Your Digital Transformation, Cap Gemini Consulting, 2016

Deep-dive: the what of digital transformation.

Figure 3: Mapping the Execution Route – The "How" of Your Digital Transformation Portfolio



Source: A Portfolio Strategy to Execute Your Digital Transformation, Cap Gemini Consulting, 2016

Deep-dive: the how of digital transformation.

Traps, barriers & concerns

Many reports outline the inevitable traps and barriers to digital transformation. Arthur D Little do a nice job in their 2015 study to frame these by industries researched, and Altimeter provide a nice Catalysts and Inhibitors 'Evolution' view.

Yet the one that has most extensively explored the barriers was produced by MIT Sloan Management Review, again working with Capgemini Consulting. They conducted a survey in 2013 that garnered responses from 1,559 executives and managers in a wide range of industries.

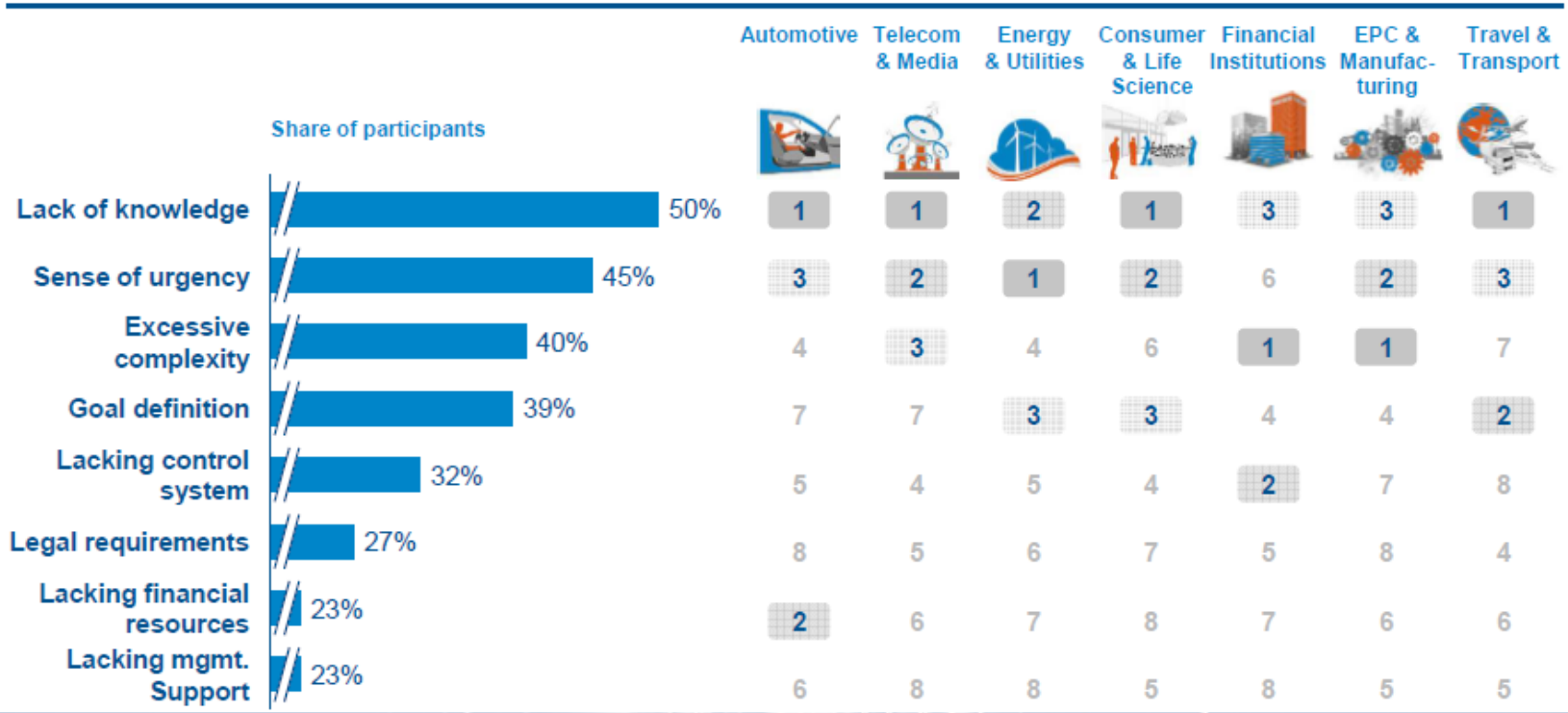
I will highlight only on a few key visuals from this report, but the details are well worth working through as they will all (most probably) apply to you.

Arthur D Little

Deep Dive – Drivers & Challenges

Most critical challenges for Digital Transformation are 1. lack of knowledge, 2. lacking sense of urgency and 3. excessive complexity

Major Challenges for Digital Transformation



Source: Arthur D. Little Digital Transformation Study 2015

Numbers indicate frequency of answers among companies in given industries

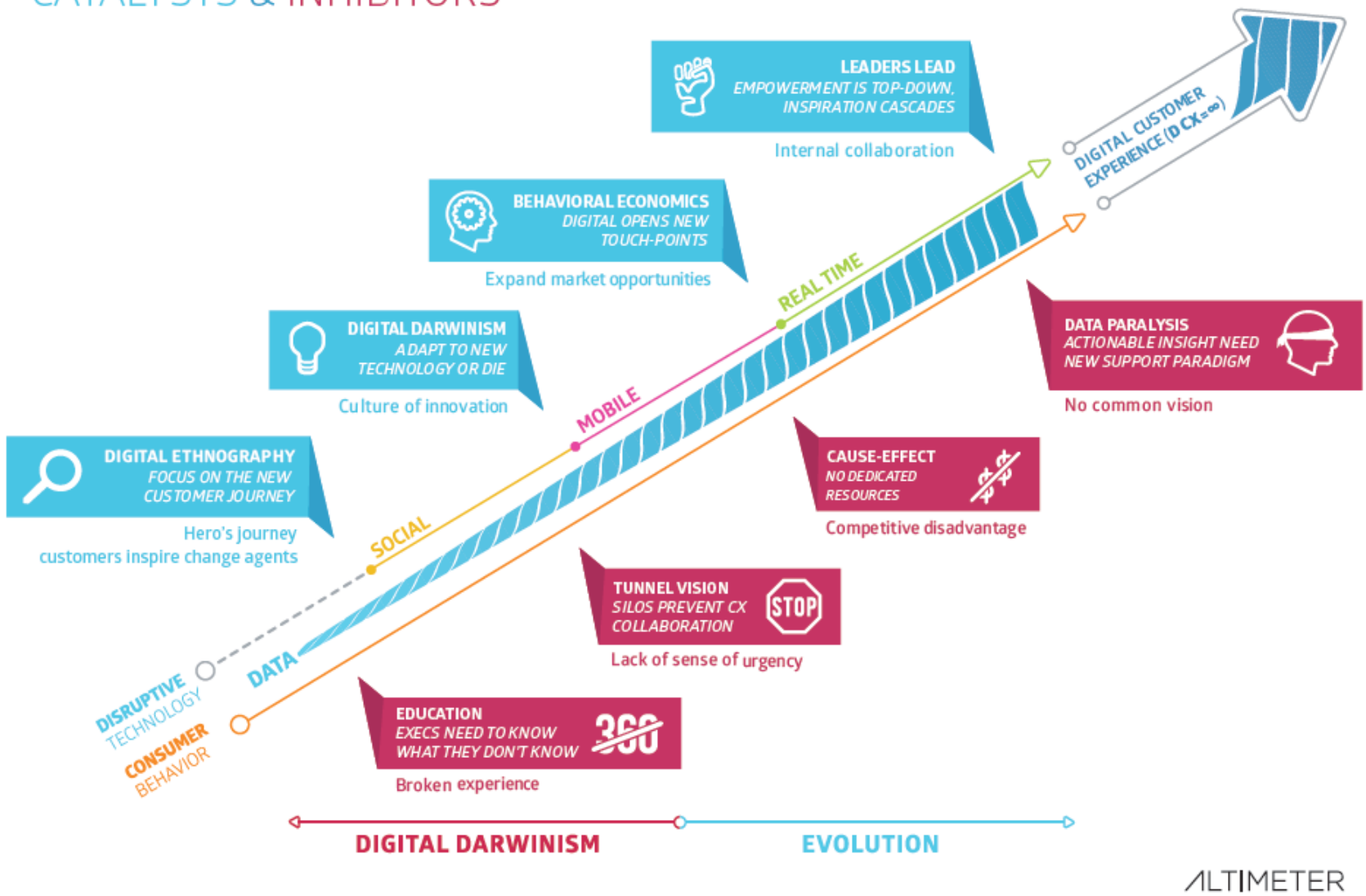
Highest

19

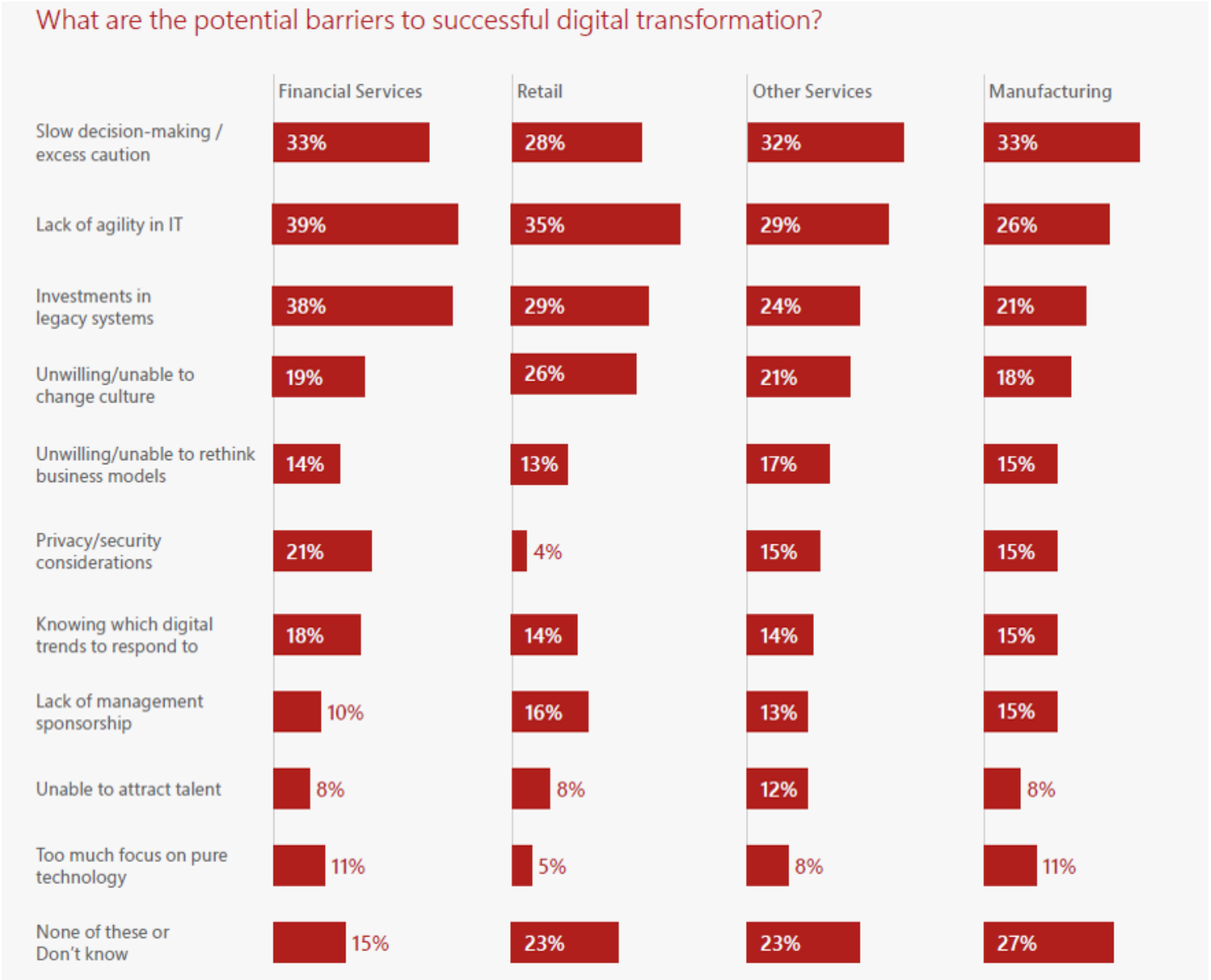
Source: Digital Transformation Study, Arthur D Little, 2015

DIGITAL TRANSFORMATION:

CATALYSTS & INHIBITORS



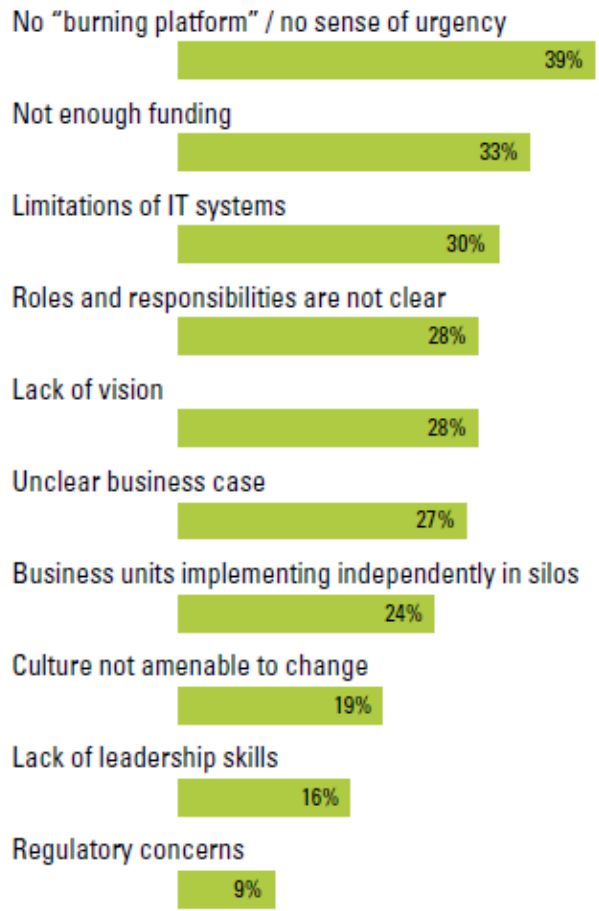
Source: Digital Transformation Study, Arthur D Little, 2015



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

THE BIGGEST TRANSFORMATION TRAPS

Desire, money and tools are the three big reasons organizations fail to use technology to make their business better.



What are the most significant organizational barriers to Digital Transformation in your organization as a whole? Select up to 3.

Percentages refer to respondents who clicked this option versus total number of respondents who answered this question.

Embracing Digital Technology , MIT Sloan Management & Cap Gemini Consulting, 2013

CULTURE CLASH

Entrenched attitudes of fear and ignorance beat down digital transformation within many corporate cultures.

What are the most significant cultural barriers to Digital Transformation in your organization? Select up to 3.

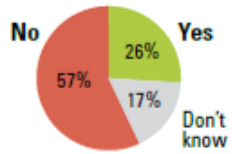
Percentages refer to respondents who clicked this option versus total number of respondents who answered this question.

Embracing Digital Technology , MIT Sloan Management & Cap Gemini Consulting, 2013

METRIC SYSTEMS

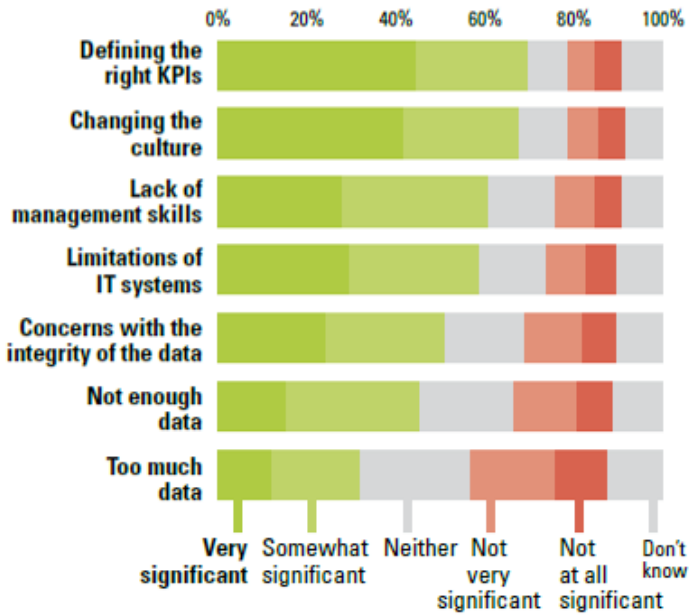
More than half of companies fail to set key performance indicators to gauge digital transformation …

Have Key Performance Indicators (KPIs) been established to track the progress of Digital Transformation?



… even though they know they matter.

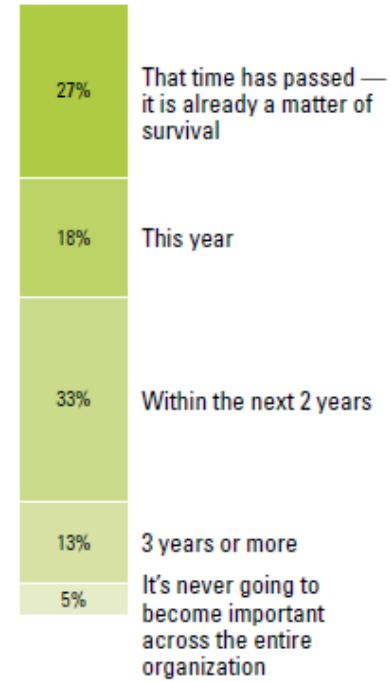
How significant are each of the following in managing Key Performance Indicators (KPIs) around Digital Transformation?



A CURRENT AFFAIR

Almost half of employees think digital transformation is upon us, and a third say it looms.

When will it become critical to implement Digital Transformation across your organization?



Percentages don't add to 100% due to exclusion of those responding "don't know."

Embracing Digital Technology , MIT Sloan Management & Cap Gemini Consulting, 2013

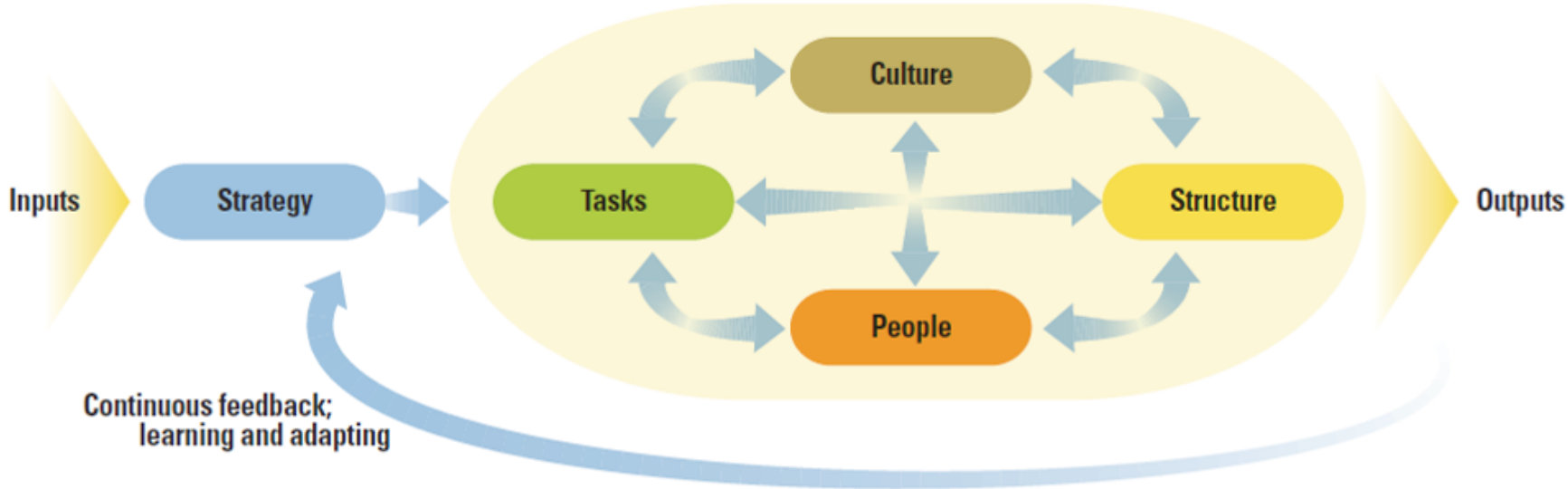
Aligning the company

Reshaping value propositions and building digital capabilities become an integral part of the digital transformation plan. Again, MIT offer some thoughts, this time in collaboration with Deloitte University Press. They outline:

“Preparing for a digital future is no easy task. It means developing digital capabilities in which a company’s activities, people, culture, and structure are in sync and aligned toward a set of organizational goals.
Most companies, however, are constrained by a lack of resources, a lack of talent, and the pull of daily priorities, leaving executives to manage digital initiatives that either take the form of projects or are limited to activities within a given division, function, or channel.”

Finally, IBM and its Institute for Business Value begin to explore the required skill set for digital transformation and suggest phases for reshaping the business.

FIGURE 9: In an increasingly digital world, digital transformation is not just about implementing more and better technologies. It involves digital congruence — aligning your company's culture, people, structure, and tasks.



Strategy
- Adopt "zoom out/ zoom in" planning
- Communicate both vision and risks
- Integrate digital strategy into corporate strategy
- Learn, innovate–repeat

Tasks
- Modularize work where appropriate
- Build stronger relationships with partners
- Organize work around projects, rather than functional silos

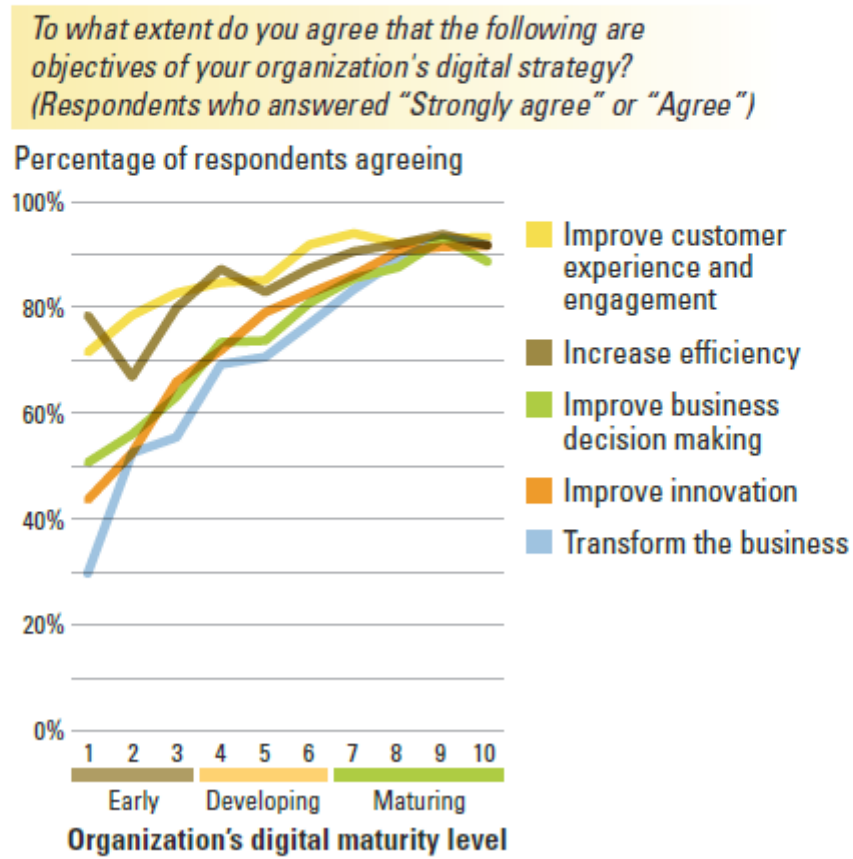
Culture
- Build risk/failure tolerance
- Pilot projects rather than large initiatives
- Drive scalable learning
- Hire for culture fit ahead of tech fit

People
- Adopt a talent replenishment model
- Rethink traditional models of working (e.g., employee / employer models – adopt "tours of duty")
- Balance soft and tech skills at all company levels

Structure
- Build collaborative and distributed leadership
- Define and build out your business ecosystem
- Scale back to scale ahead
- Distribute leadership

Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

FIGURE 4: Organizations across the board are using digital to improve efficiency and the customer experience, but higher-maturity organizations differentiate themselves by using digital to transform their business, allowing them to move ahead of the competition.



Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

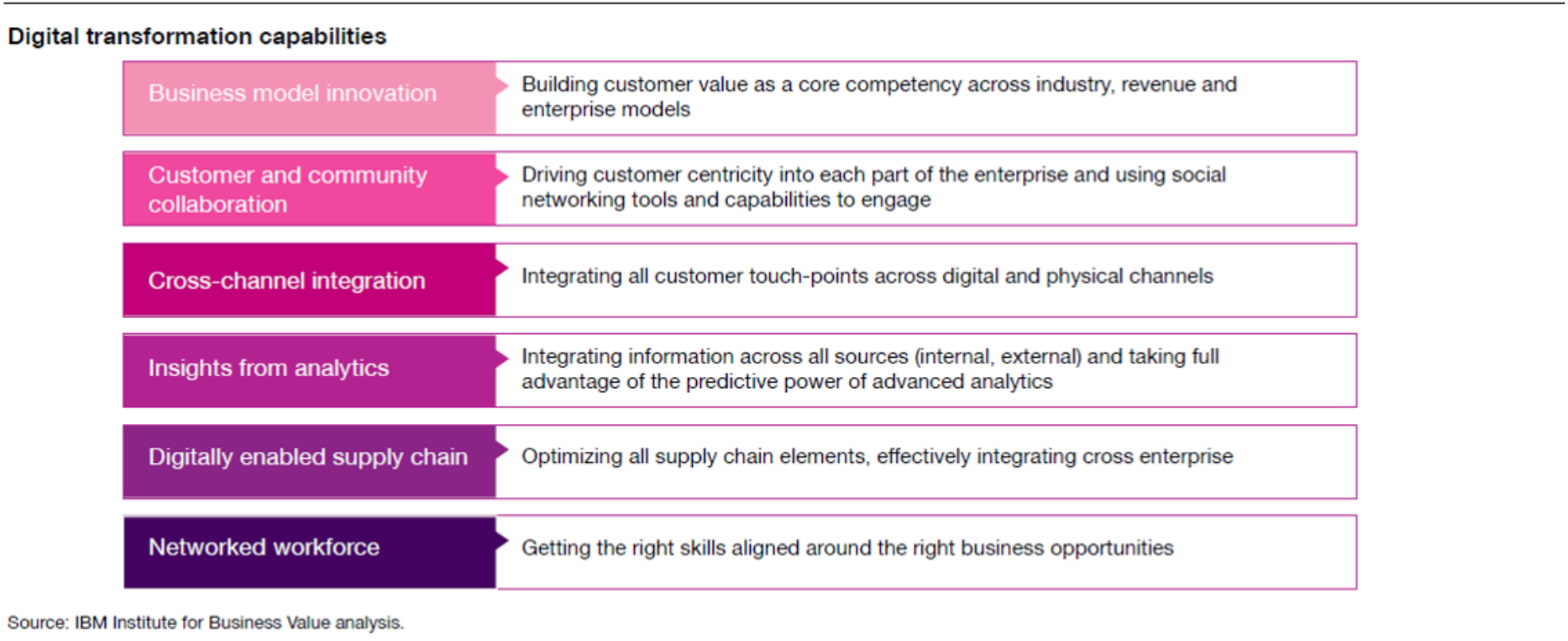


Figure 7: **Reshaping the business and operating model requires a new set of capabilities.**

Source: Digital transformation- Creating new business models where digital meets physical, IBM Institute for Business Value, 2011

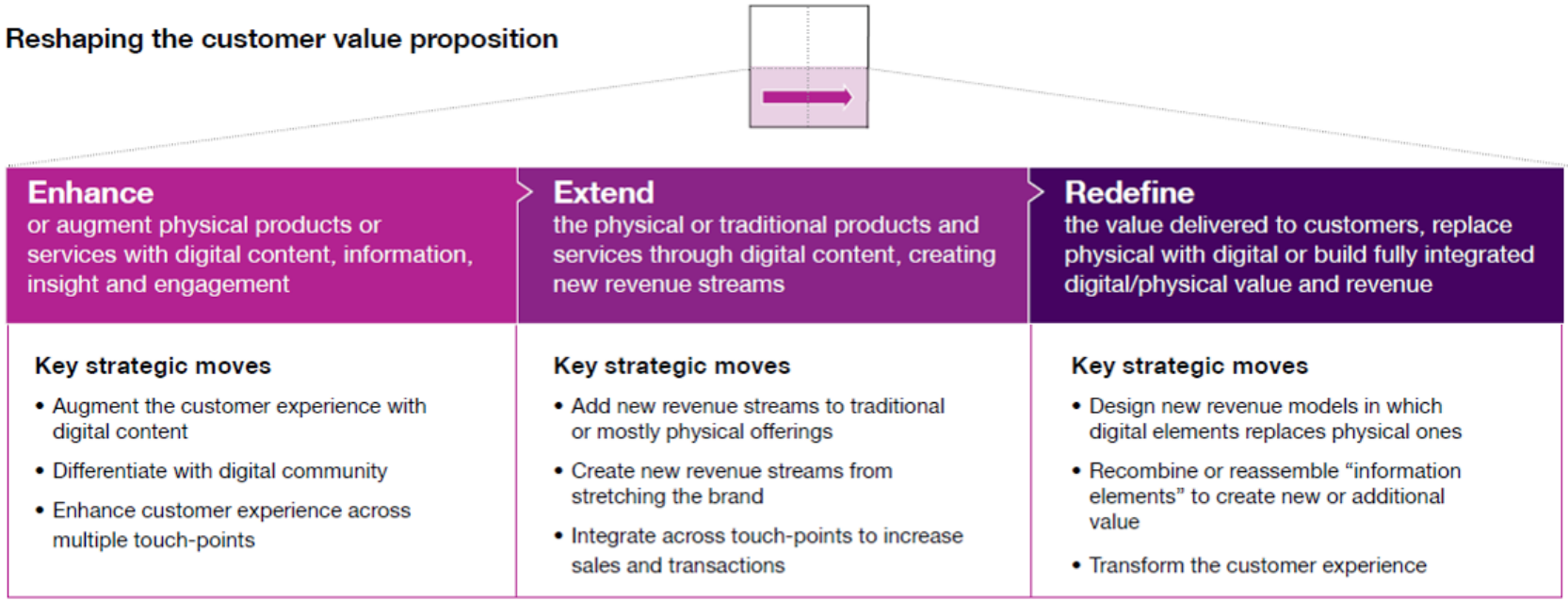


Figure 6: **Three stages in reconfiguring the operating model.**

Source: Digital transformation- Creating new business models where digital meets physical, IBM Institute for Business Value, 2011

Where does digital transformation sit and how is it perceived by the organization?

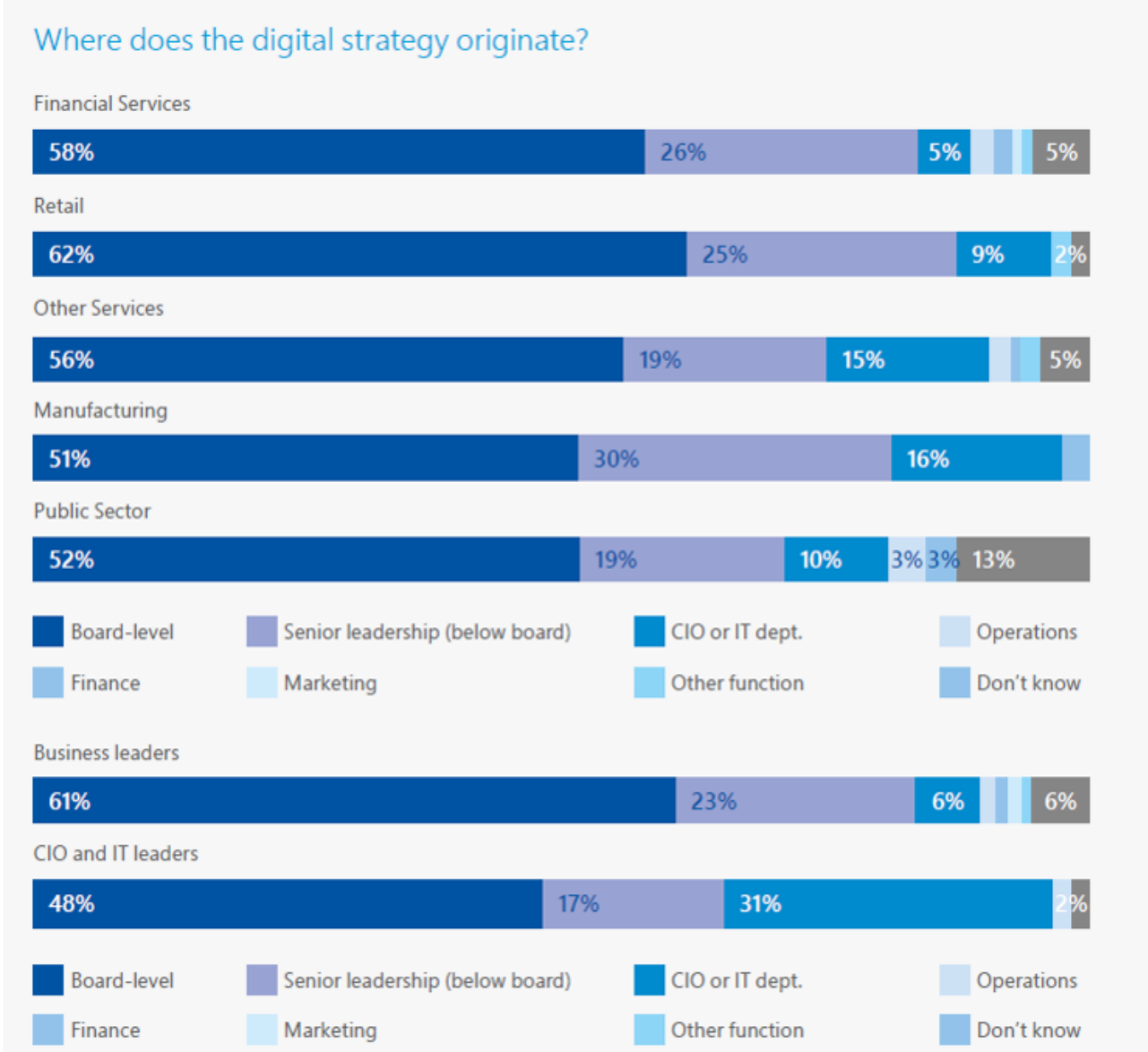
Some critical questions that raise good points of any strategic framing of digital transformation, explored within the Microsoft study in early 2016.

Q: Where does the digital strategy originate?

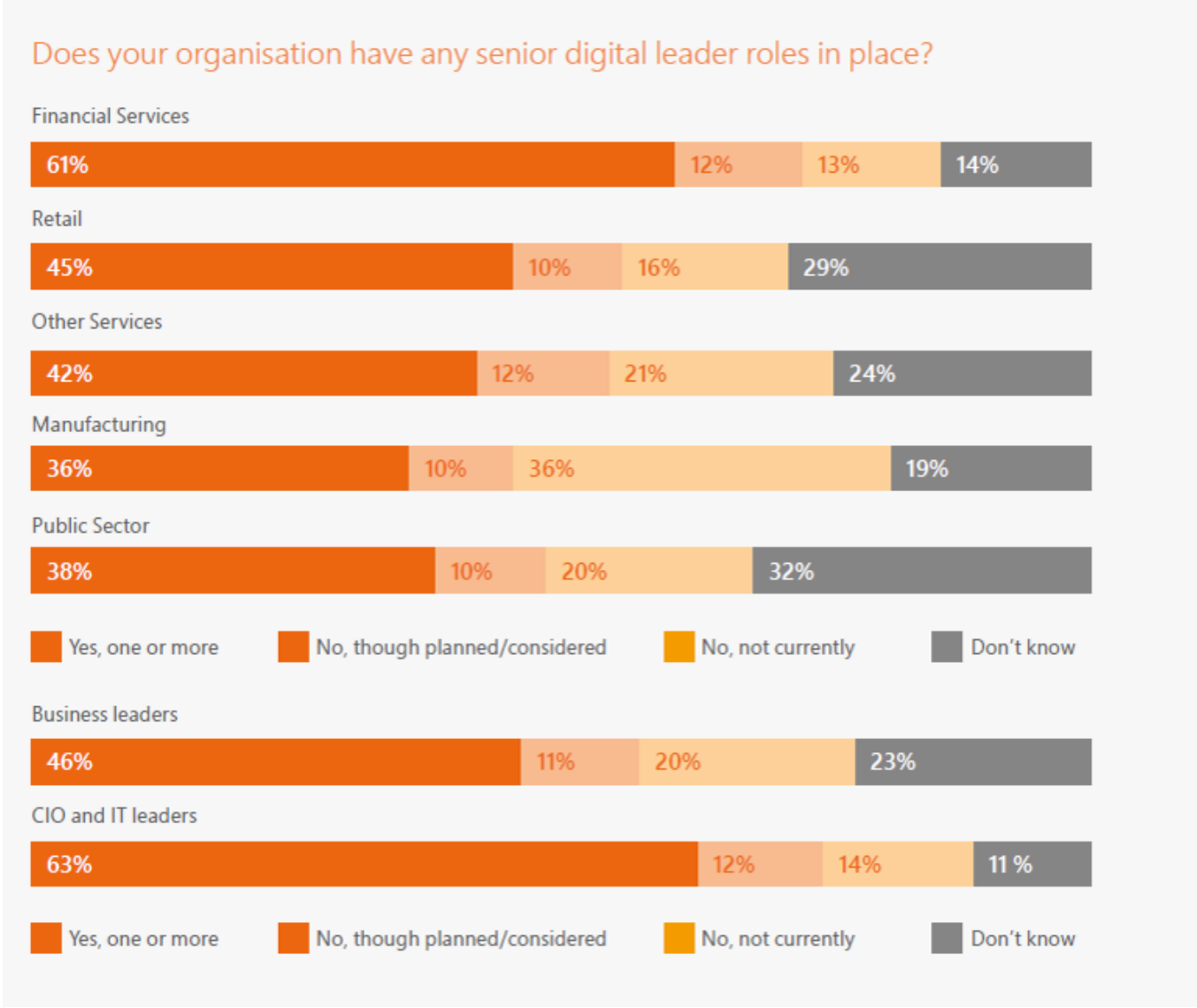
Q: Does your organization have any senior digital leader roles in place?

Q: How the organization thinks about digital transformation

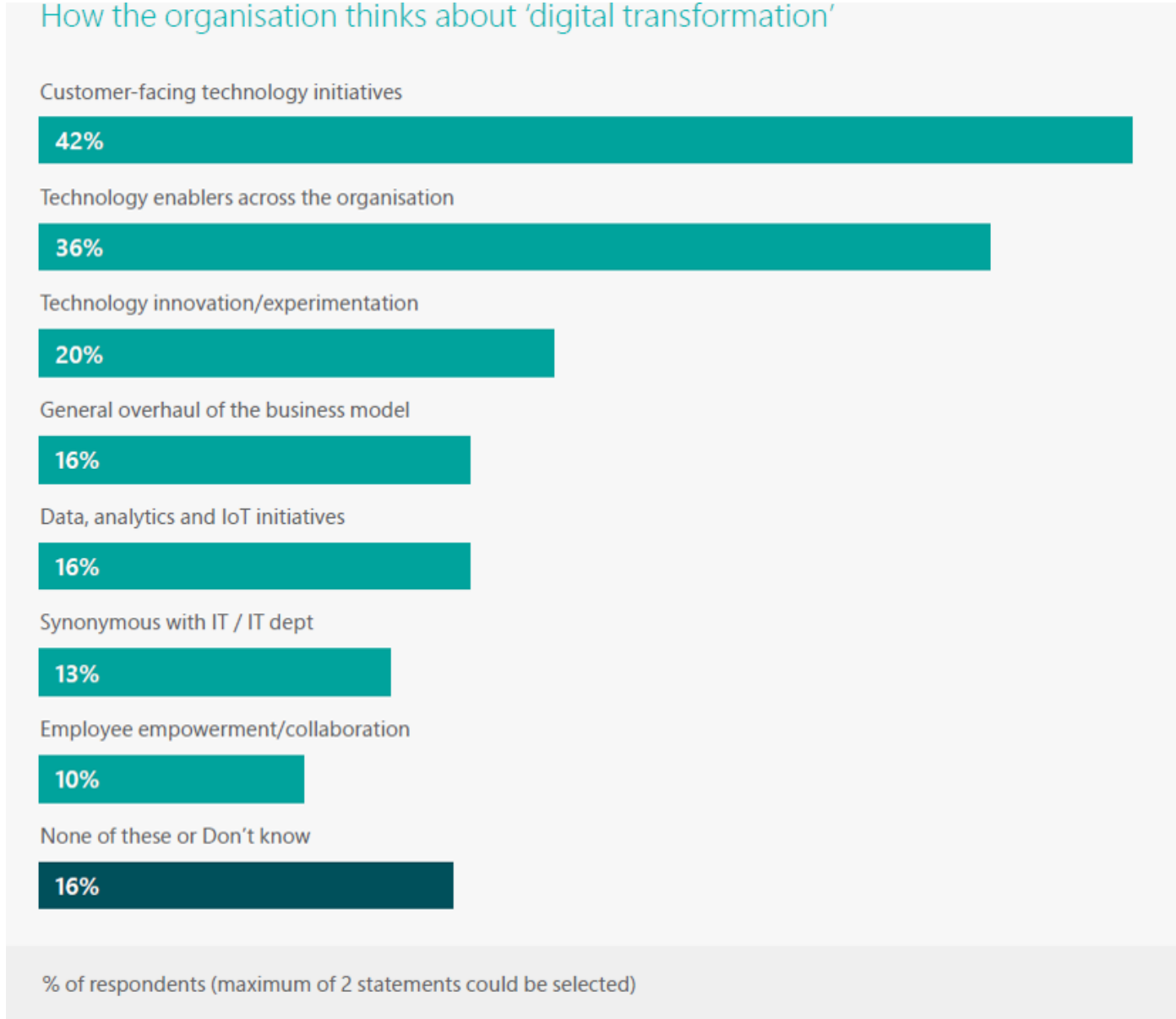
Q: Is your organization taking any action to change the workplace and culture?



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

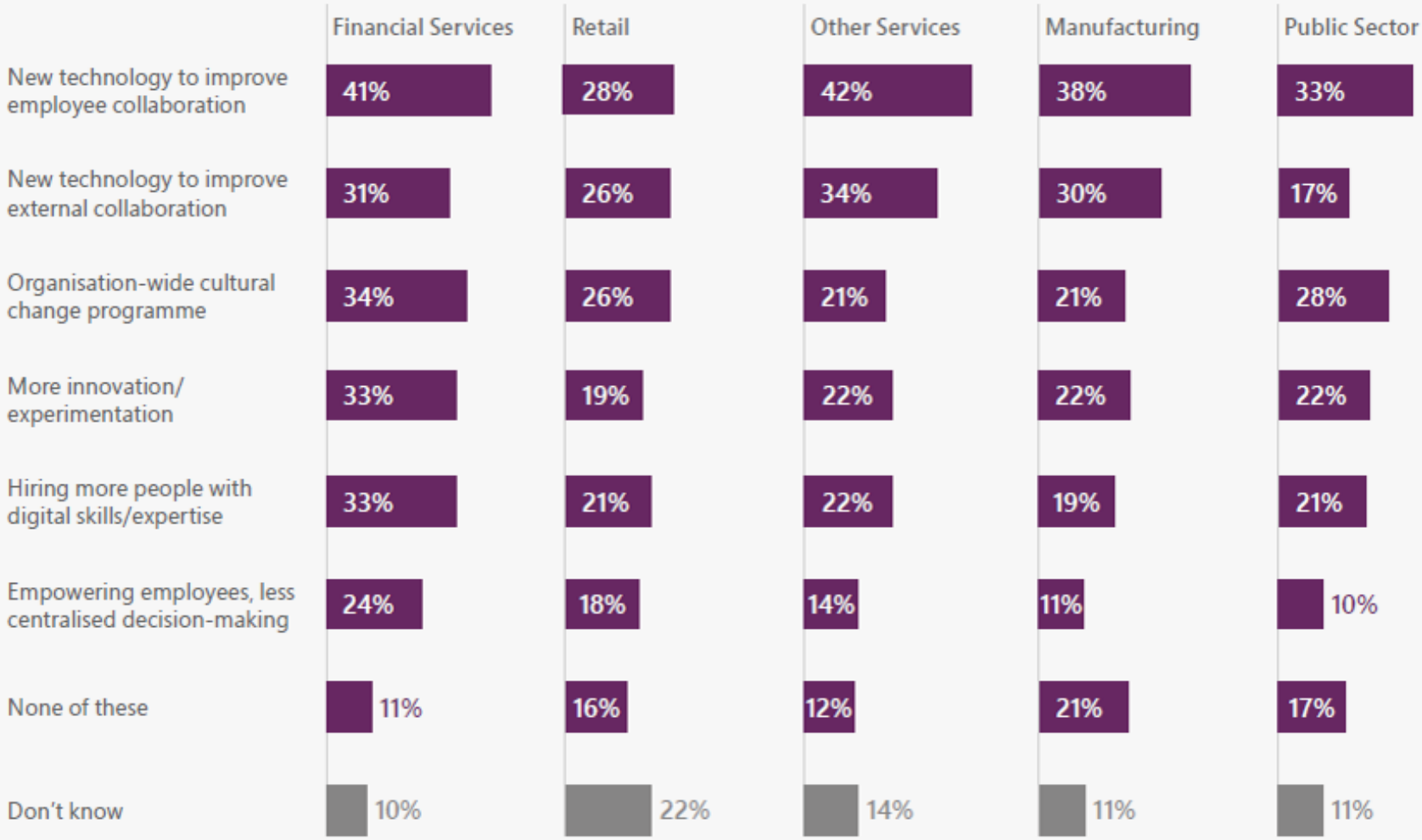


Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

Is your organisation taking any actions to change the workplace and culture?



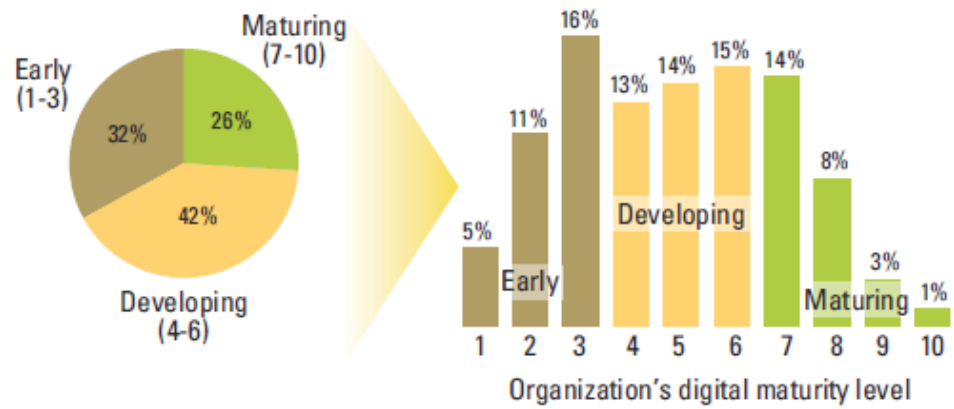
Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

Formulating a digital culture

The main characteristics of digital cultures include, "an expanded appetite for risk, rapid experimentation, heavy investment in talent, and recruiting and developing leaders who excel at 'soft' skills, yet it is suggested leading a digital company does not require technologists at the helm." (MIT Sloan)

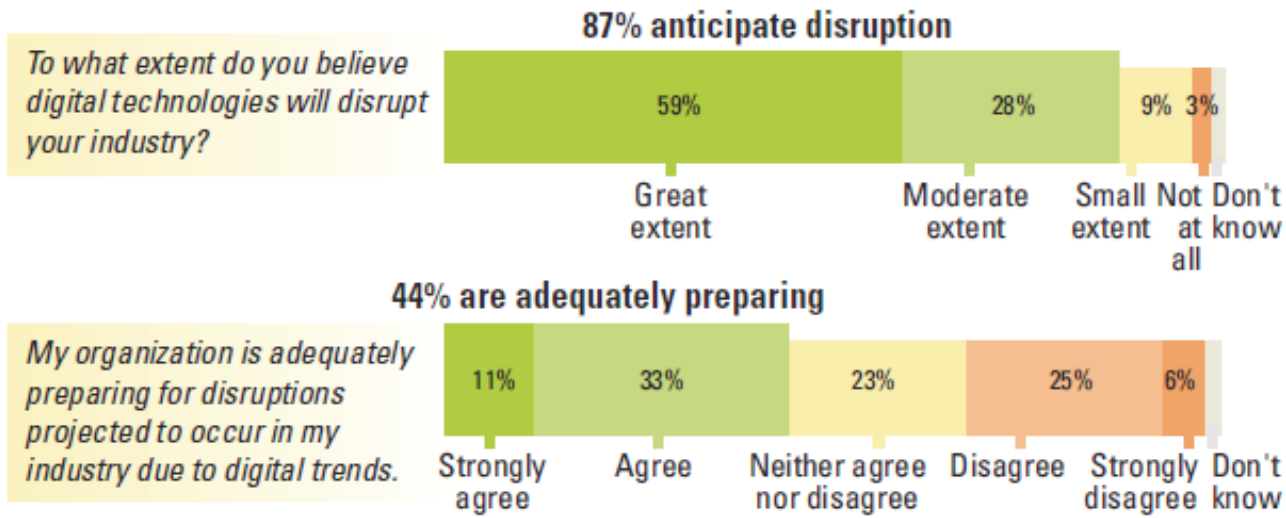
MIT Sloan Management in collaboration with Deliotte raise some interesting questions and results shown in different response charts.

FIGURE 1: We asked respondents to "imagine an ideal organization transformed by digital technologies and capabilities that improve processes, engage talent across the organization, and drive new value-generating business models." We then asked respondents to rate their company against that ideal on a scale of 1 to 10. Three maturity groups were observed: "early" (1-3), "developing" (4-6), and "maturing" (7-10).



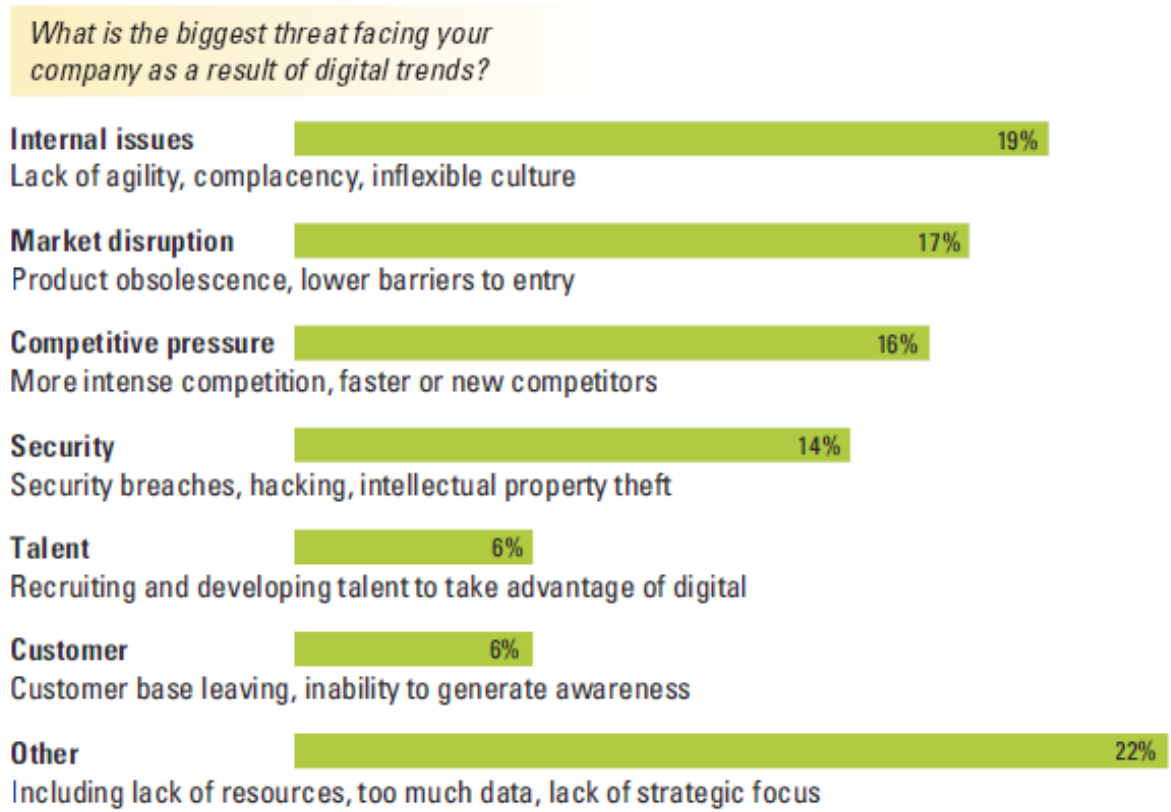
Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

FIGURE 2: Organizations may be waiting too long to prepare for digital disruption. Less than half of respondents agree or strongly agree their organization is preparing for the disruption that most respondents project to occur.



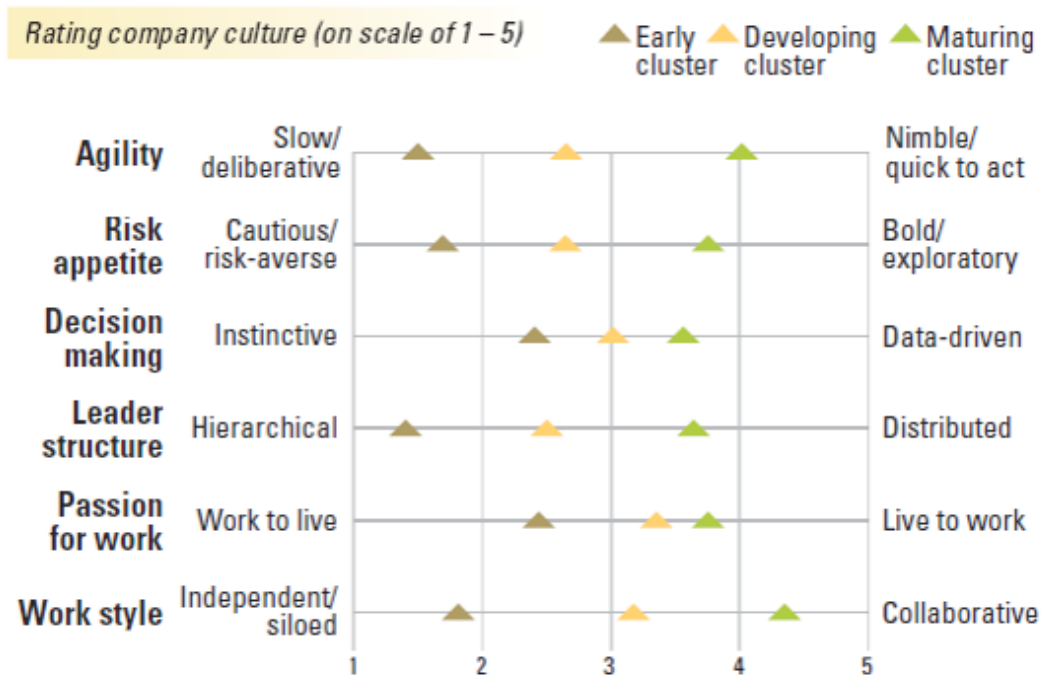
Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

FIGURE 3: Internal issues top the list of threats facing organizations as a result of digital trends, suggesting that organizations could hold themselves back from succeeding in a digital environment.



Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

FIGURE 6: Three distinct cultural mindsets generated by a hierarchical cluster analysis relate closely to the stages of digital maturity.



Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

FIGURE 8: Technology skills are only one of many categories of leadership skills rated as most important by respondents. Managerial skills like understanding the market and/or having a sound strategy are most valued for enabling success in a digital workplace.

Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

Emerging technologies to experiment with

The Cutter IT Journal, as well as Microsoft's research on digital transformation offer a helpful overview of emerging technologies to keep in mind when setting up your experimentation roadmap.

Also refer to PWC's industry 4.0 framework on page 11.

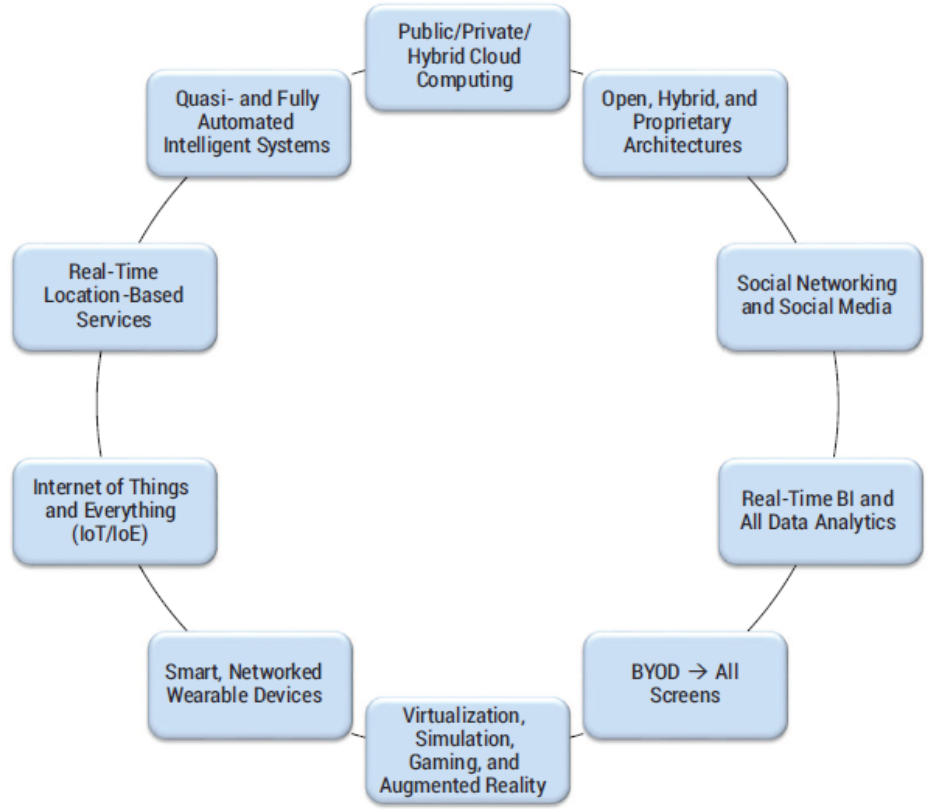
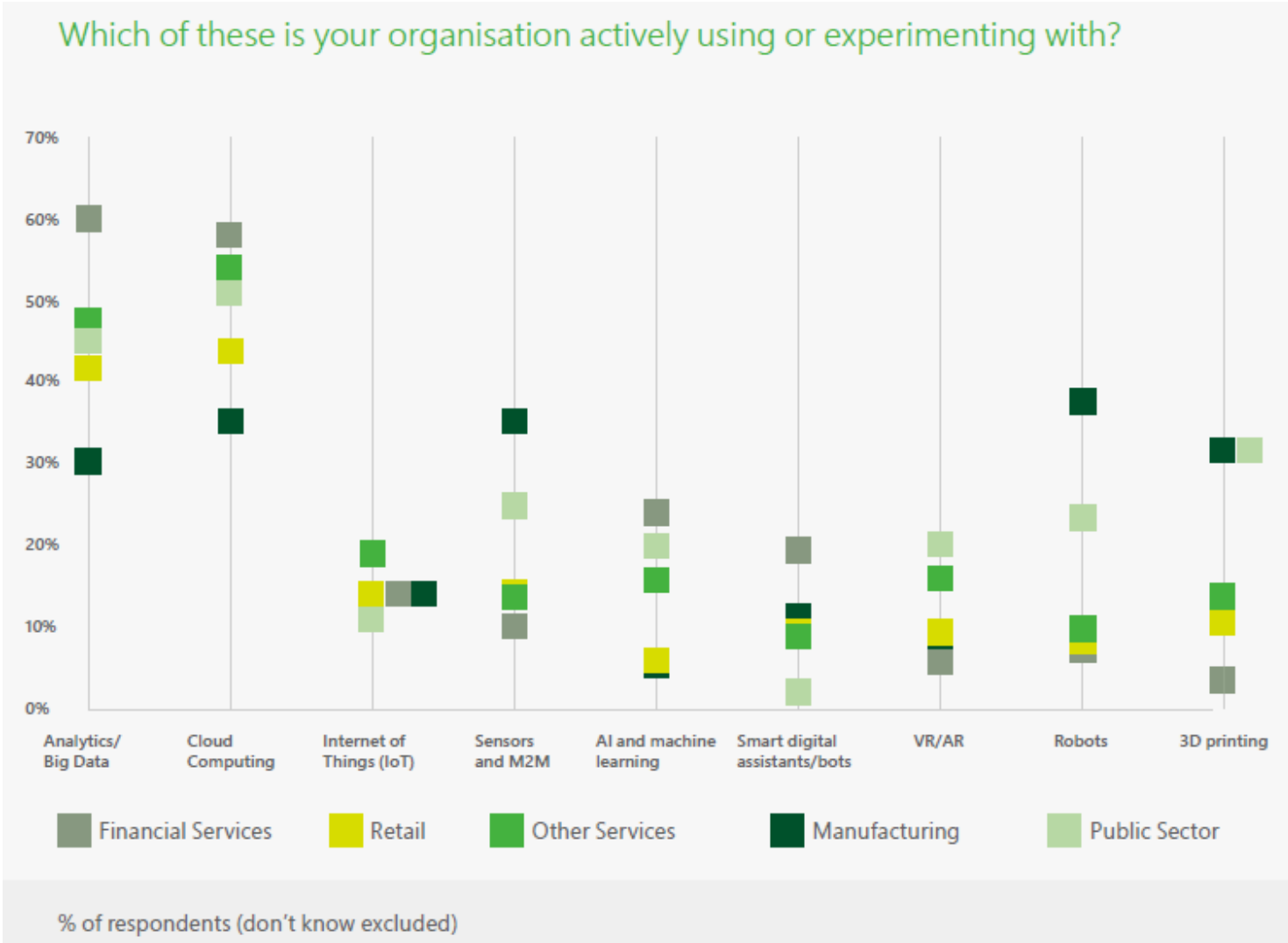


Figure 2 — Emerging technologies for digital transformation.

Source: Five Steps to Digital Transformation, Cutter IT Journal, 2015

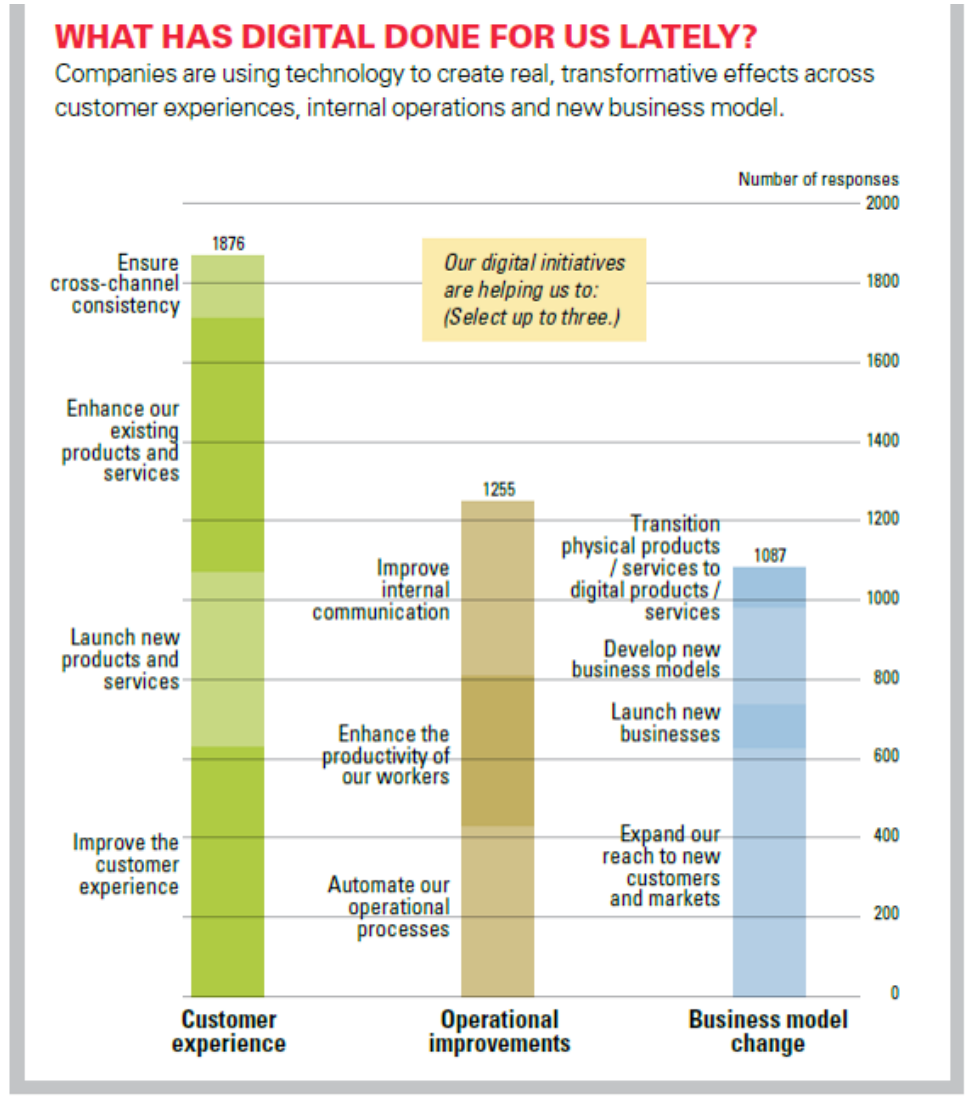
Are you experimenting and exploring these emerging technologies for digital transformation?



Source: Digital Transformation: The Age of Innocence, Inertia or Innovation, Microsoft, 2016

A final visual:

What has digital done for us lately?



Source: Strategy, not Technology Drives Digital Transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015

References

In order of appearance:

Arthur D Little Digital Transformation Study- How to become a Digital Leader, 2015
http://www.adlittle.com/tim-viewpoints.html

Finding your digital sweet spot, McKinsey Expert Interviews, 2013
https://www.hashdoc.com/documents/18882/finding-your-digital-sweet-spot

Digital Transformation, Altimeter, 2014
http://www.altimetergroupdigitaltransformation.com/

Industry 4.0: Building the digital enterprise. A global industry 4.0 survey by PwC, 2016
http://www.pwc.com/gx/en/industries/industrial-manufacturing/publications/building-digital-enterprise.html

Six Stages of Digital Transformation- a Race against Digital Darwinism, Altimeter, 2016
http://www2.prophet.com/sixstagesofdigitaltransformation

Strategy, not Technology drives digital transformation. A Research Report from MIT Sloan Management in collaboration with Deloitte University Press, 2015
http://sloanreview.mit.edu/projects/strategy-drives-digital-transformation/

Digital transformation- Creating new business models where digital meets physical, IBM Institute for Business Value, 2011
https://www-935.ibm.com/services/in/gbs/thoughtleadership/ibv-digital-transformation.html

Embracing Digital Technology , MIT Sloan Management & Cap Gemini Consulting, 2013
http://sloanreview.mit.edu/projects/embracing-digital-technology/

Digital Transformation: The Age of Innocence, Inertia or Innovation- Microsoft Corporation, 2016
https://www.microsoft.com/en-gb/about/ent/digital-transformation-report/default.aspx

Aligning the Organization for its Digital Future - MIT Sloan and Deloitte University Press, 2016.
http://sloanreview.mit.edu/projects/aligning-for-digital-future/

Moving from Best Practice to Next Practice to drive effective Digital Transformation, Cutter Consortium, December 2015
https://www.cutter.com/article/moving-best-practice-next-practice-drive-effective-digital-transformation-489181

A Portfolio Strategy to Execute Your Digital Transformation Cap Gemini Consulting 2016
https://www.capgemini-consulting.com/digital-transformation/portfolio-strategy

Digital Transformation: A Roadmap for Billion Dollar Organizations, MIT Center for Digital Business & Cap Gemini Consulting, 2011
https://www.capgemini.com/resources/digital-transformation-a-roadmap-for-billiondollar-organizations

Source: Five Steps to Digital Transformation, Cutter IT Journal, 2015
https://www.cutter.com/sites/default/files/itjournal/fulltext/2015/11-12/itj151112.pdf

About HYPE Innovation

HYPE Innovation is a global leader in full-lifecycle innovation management software. HYPE's powerful platform allows organizations to engage thousands of employees in idea generation and collaborative problem solving. We help you focus on measurable business outcomes that can be tracked through to execution. Companies work with HYPE for our flexible products, our deep expertise in innovation management, and our long history of success with some of the largest organizations in the world. Our client community includes global companies such as Siemens, BAE Systems, RWE, AkzoNobel, Bombardier, DHL, Roche, Nokia, Daimler, Airbus, Petronas, Saudi Aramco, Boeing, and many more.

Visit our website at **www.hypeinnovation.com** to learn how HYPE enables companies to transform their best assets – employees, customers, partners, and suppliers – into dynamic and engaged innovation communities.

HYPE

US Headquarters
HYPE Innovation, Inc.
485 Massachusetts Avenue
Cambridge, MA 02139-4018
USA

Tel.: 1-855-GET-HYPE
www.hypeinnovation.com

European Headquarters
HYPE Softwaretechnik GmbH
Trierer Straße 70-72
53115 Bonn
Deutschland

Tel.: +49 228-2276 0
www.hype.de