



# The CIO journey to agility

**Organizations that want to thrive in a digital world need to organize in a completely different manner by embracing agility as a key principle**



This article provides a brief description of the overall development of the IT function over time and focuses on the present challenge that many organizations are facing: going from demand/supply-based models to agility.

Organizations are faced with an explosively digitizing and turbulent environments. Most organizations are not ready to react with the speed and flexibility required to keep up with quickly changing technological capabilities and client wishes. While the IT function needs to be agile to support the digital agenda, this required agility is hampered by traditional demand/supply-based models that rely on functional specialization and silos to provide maximum control over changes and that aim for stability. This article highlights the journey of the CIO and the IT organization over time from a supporting function to a demand/supply model and now faces the challenge of integrating into multi-disciplinary teams with the business to provide agility.

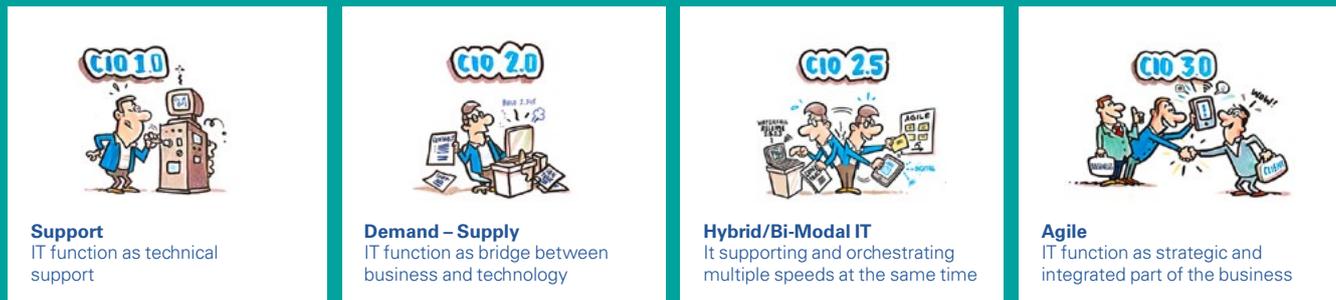
# Introduction

Digitalization is a key development that will affect organizations fundamentally. Digital is not a thing, but is simply a word that describes our world today. Advances in technology have blurred the lines between physical and virtual, creating an emergence of digital disruptors that provide new pathways for organizations to create value. Speed and flexibility have become value drivers for organizations and as such, have a fundamental impact on the (IT) operating model of organizations.

We believe digital is broad in its impact, but also industry-specific. Far more than just the front office is involved to facilitate a truly enterprise-wide business transformation, allowing organizations to build a sustainable competitive advantage. There are also smaller forces from within the organization that drive the change. IT and technology are no longer the exclusive domain of the IT organization. Today, end users and clients have a greater understanding of the possibilities and impossibilities of technology than the IT organization itself. Managers no longer accept development projects that take years to complete. They want quick results and influence. Furthermore, technology is becoming increasingly more intuitive and easier to use, giving users greater autonomy. The operating model itself must change to support speed and flexibility as core principles. This in addition to the frequently mentioned drivers for change in IT, such as greater transparency and a better grip on IT and IT costs. The challenge is to remain competitive amid constant turbulence and disruption [Kott12].

This article describes the change that organizations will have to make. The way IT functions have been developing indicates that there is a need for a holistic perspective; it also gives a hint of the challenges organizations are facing and how to address these. This article provides a brief overview of how IT functions have developed over time and then focuses on the present challenge that many organizations are facing: going from demand/supply-based models to agility.

# The Journey of the CIO and IT function over time



Developments of the role of IT (inspired by [Zwig16])

To understand the overall journey that the IT organization is facing, we first take a quick look at its development over the last decades. We have depicted the route of the IT function and CIO from a purely supporting to a more professionalized one in demand/supply, then a hybrid model into agility.

## **CIO 1.0 – IT function as technical support**

In this phase of IT within the business the focus of the IT function is strongly IT oriented. IT is a specialized function, requiring much technical knowledge and specific competences. The department's aim is to improve and automate processes by gradually introducing new IT capabilities to the business. In this phase, IT is instrumental by nature and as a result, there is only a moderate relation to tactical and strategic levels. Business and IT are not approached from a common perspective but are two different worlds. Most organizations have vastly outgrown this state of IT, and have aligning business demand with IT supply.

## **CIO 2.0 – IT function as bridge between business and IT**

As a result of the increasing importance of IT organizations start focusing on business- IT alignment. In this phase, organizations invest heavily in defining an IT strategy to support the business strategy and implement operating models to channel business demand more effectively. This is done through information managers and demand managers who have formalized relations with supply managers. Gradually IT is becoming an essential part of business processes, making IT processes and IT governance highly formalized and standardized to ensure reliability and continuity.

## **CIO 2.5 – IT supporting and orchestrating multiple speeds at the same time**

By now, digitalization is everywhere, which also means that IT has become of increasing strategic importance for organizations. Speed and flexibility have become drivers that frequently conflict with the cumbersome and highly standardized and formalized relation between IT, suppliers and the business. Agility is starting to gain momentum in an increasing part of the organization. New initiatives rely on the traditional IT backbone based on demand/supply, but leverage agile values and principles in how they are organized.

## **CIO 3.0 – IT function as a strategic and integrated part of the business**

Agility has become the key design principle for organizations that want to thrive in a digital world. Organizations such as Spotify embrace the principles of modern operating models and agile scaling frameworks such as SAFe and LeSS. As a result, the organization integrates business and IT to drive speed and flexibility.



# 'One-Company' strategies and demand/supply models to facilitate integration and standardization

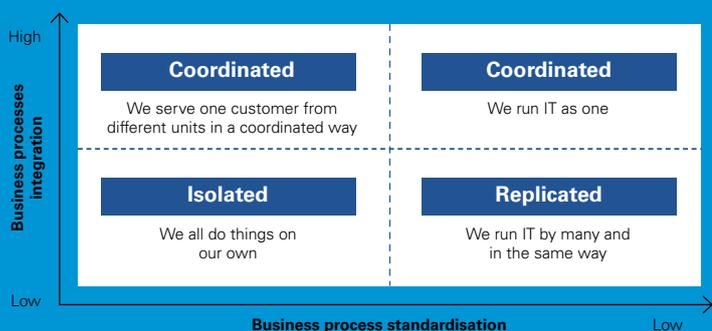
After introducing IT to the business and making it assume a purely supportive role, in the last decade, organizations have strived for stability, predictability and efficiency of costs. This resulted in systematic planning, standardization and integration, the so-called one-company strategy [Koot14].

In order to create economies of scale, synergies and improve performance, this strategy requires concessions in local autonomy in favor of standards and centralization. In the authoritative book, Enterprise Architecture As Strategy: Creating a Foundation for Business Execution ([Ross06]), this type of model is called the 'shared operating model' (see figure 2).

This model (shown on a high level in figure 3) is still dominant at many organizations, and will continue to remain relevant for organizations aiming to optimize their traditional models. In the last decade, KPMG has designed and implemented many IT organizations centered around this model.

In addition to striving for integration and standardization, this model is very suited for an environment focusing on stability and predictability. IT organizations leveraging this model are frequently designed around standardized and specialized activities. Until recently, governance and process models using demand/supply constructs were the dominant vehicle to achieve the desired optimization of functional domains. Supply management is frequently part of IT while demand management organized closer to the business but a separate department.

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Interpretation of Ross and Weill: Enterprise Architecture as Strategy ([Ross06]).

**The one-company strategy provides a strong foundation by reducing complexity and increasing standardization**

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Core functional blocks of the KPMG demand/supply model

The demand/supply model has served organizations well, allowing them to standardize and optimize, both of which are important prerequisites for a successful agile and digital transformation described below.



# The hybrid IT environment: multiple speeds as a steppingstone into agility

Most organizations run into the difficulty of having to move from a demand/supply model into the domain of agility. While maintaining focus on reliability and continuity in selected parts of the IT environment, new technologies and initiatives are based on agile principles. This inevitably results in a Bi-Modal or hybrid environment where the classical and digital world co-exist until potentially the entire organization has embraced an agile mode, as described in the section entitled CIO 3.0.

Although a hybrid situation is something that has been around for years, recognizing shadow IT, and multiple speeds of delivery, with the vast uptake of agility, its existence becomes more apparent.

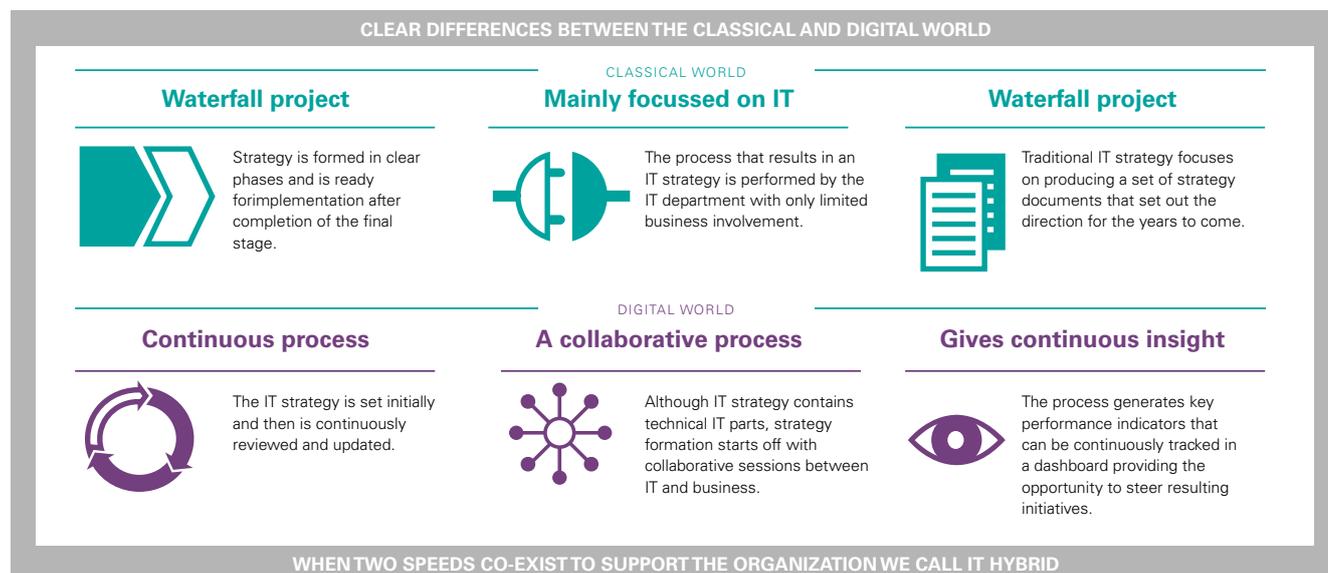
Many organizations have willingly invested in designing models that support both speeds, and “Bi-Modal” or “Multi-

Speed” (Kett16) has its clear disadvantages. According to Forrester [McCar16], bimodal may contribute to:

- making it difficult to retain talent, especially those with capabilities for legacy applications and infrastructure, as it implies branding the new versus the old
- making a distinction between the roles and competences required to successfully manage each mode
- encouraging (IT) management to shift their transformation efforts away from the slow, mode 1 IT, thus isolating but not solving the issues
- creating a split within the IT function, resulting in inefficiencies and ineffectiveness

**Hybrid or bi-modal IT is a temporary stepping-stone to move from demand/supply to agility**

Our view is that bi-modal or multispeed IT is a temporary situation that needs to be dealt with in hybrid models as a stepping-stone towards enterprise agility where the different team cadences are managed in one governance model that is sufficiently flexible to support these from a portfolio perspective.



High level overview of the confrontation of classical and digital worlds



# Business and IT integration as the ultimate alignment to achieve agility

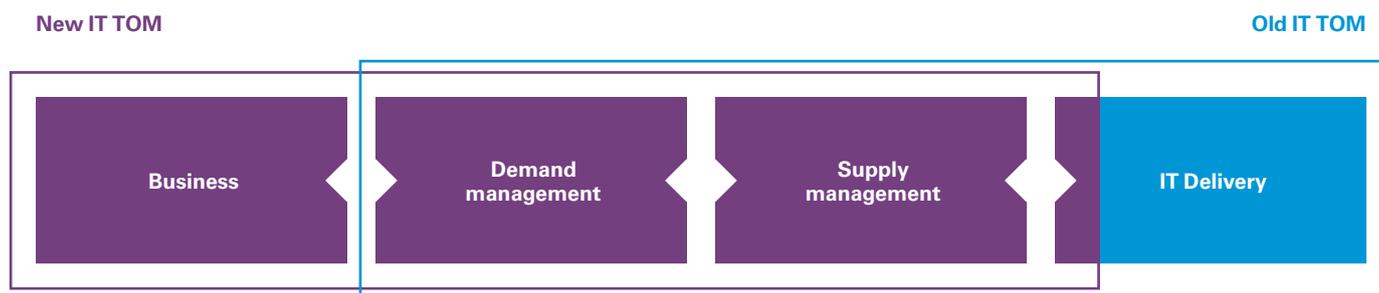
Principles, such as speed and flexibility, require a new type of model that goes far deeper than merely setting up agile methodologies like Scrum for IT development. It demands a fundamental change of the existing operating model where agile is not only scaled, but also applied on an enterprise level. Inspiring examples, such as Spotify, demonstrate how flexibility and speed influence existing business models and what the potential implications are for their own IT operating models.

The big question is how do you deal with this as an existing organization, struggling with cumbersome (legacy) IT landscapes, processes, many suppliers and an overload of regulations and existing client commitments? What changes have to be made to the organization to be able to respond to this effectively?

Business users seek direct involvement. They want to participate and actually have a say in IT instead of waiting for clumsy processes across silos in demand/supply-based models. Having business and IT collaborate and integrate in multi-disciplinary teams seem inevitable. As Koot, Mutsaers and Veen ([Koot15]) already concluded, the traditional IT operating model based on demand/supply cannot fulfill this goal.

***The demand / supply model of the last decade is not suited for agile organizations in a digital world***

The introduction of agility makes change a core function and concessions are made in the efficiency of clustering activities in departments or positions focused on tasks. To respond quickly, agile teams are introduced that consist of all disciplines to bring change from idea to production in IT. The business assumes responsibility for these teams. As a result, the introduction of self-steering multi-disciplinary teams brings IT closer into the business. This is illustrated in the figure below.



The business assumes responsibility for domains that used to be primarily IT driven



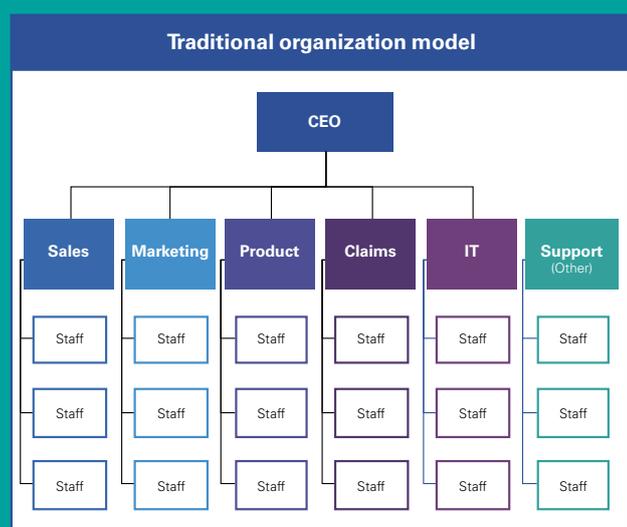
# Agility requires the integration of business and IT into a coherent and flexible model

The limitations of hybrid models often have to do with the classical separation between front-end / back-end. The ability to make changes is limited by the system that is most difficult to change safely, usually a system of records. A digital focus on just the front office will not provide a company with a sustainable competitive advantage. Instead, organizations must focus on restructuring operations beyond customer-facing functions to enable digital transformation. By driving speed across all systems, from back to front, will provide sustainable competitive advantage. Business and IT should operate as one team to rapidly respond to changes.

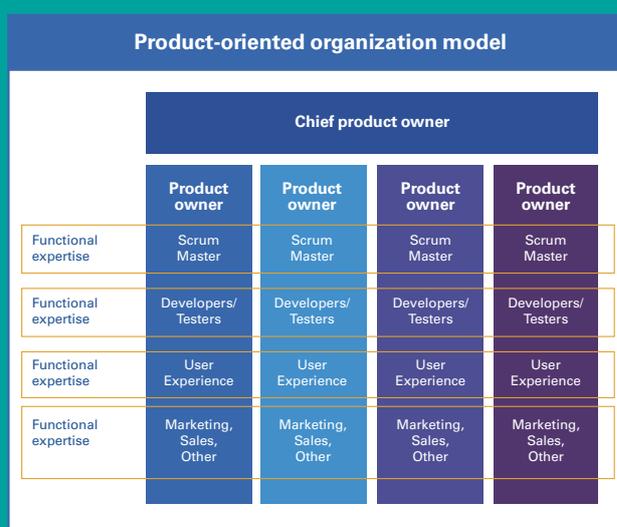
One of the chief impediments to achieving this one-team goal at an enterprise scale is the traditional silo'ed organizational structure where, for example, clear lines of separation exist between the business and IT resources. IT teams in a demand/supply model are typically organized by applications and projects, creating the type of fragmented delivery whereby multiple teams are involved in a project conducting piece-meal tasks of a larger business request.

This means organizing products and services into perspective value streams, i.e. from end-to-end. This view is depicted below. As recognized in the lean startup approach [Ries11], these end-to-end value streams should start at the customer, applying techniques such as design thinking, leverage business-IT integration to provide flexibility and quick responses to customer needs, and apply DevOps to embrace quick delivery into the IT environment.

***Customer-focused and digital frontrunners organize themselves through product-related value streams***



The business assumes responsibility of domains that used to be primarily IT driven





# Agility challenges existing constructs and beliefs

Dealing with flexibility and agility while coming from a world aimed at stability and predictability, requires fundamental organisational design choices, resulting in a redesign of the traditional IT operating model with respect to all the structural elements. In the figure below, we briefly touch upon some key effects on the operating mode we frequently see at organizations adopting agility at their core.

**Agility is a game changer for the entire organization not just an efficiency opportunity for IT**

These rather drastic changes to the operating model cannot be delivered overnight and will require the organization to adopt a learning-by-doing approach. This means starting experiments and pilots to fuel learning, defining your own vision and engaging the organization in the change. This journey is described in the next section.

## Performance Management

- Performance evaluation is team-based or organization-wide instead of individual
- The measurement framework and metrics enable continuous feedback and value initiative, transparency, and honest and direct feedback
- Funding of change is based on capacity (of teams) that is pre-set

## Organisation & Governance

- The demand/supply model is replaced by integrated business IT value streams
- The (temporary) rise of hybrid/bi-modal IT as a result of differing needs of business functions
- Scaling of agile teams to project, program, portfolio or enterprise level using new types of organizational models or scaling frameworks such as SAFe and LeSS (Huge)
- Empowerment of a limited number of mandated POs

## Culture, People & Skills

- Multi-disciplinary teams requiring intrinsic motivation and initiative with the ability to work across the boundaries of traditional departments
- Introduction of profiles that value both specialization and looking across disciplines (i.e. "T-shaped")
- A culture of cooperation that stimulates experimentation and learning by doing, and leadership that facilitates and values empowerment
- Continuous agile coaching on multiple levels (board to management to operations)

## Capabilities & Processes

- Customer orientation through customer journey and value mapping drive product definitions and client validation
- Lean at the core of Agile; start with optimization and look integrally into chains
- Processes have less rigid handovers across domains and functions and are characterized by flow and cadence
- Agile tools and working methods drive processes (e.g. visualization, kanban, stand-ups, definition of done, backlogs on various levels and scaling practices)

## Sourcing

- Rise of multi-sourcing models with increasingly fluid relations and which allow for flexibility in adding and removing suppliers from the ecosystem
- Establishing effective metrics to drive performance and collaboration in renewed contracts
- Assessment of supplier relations and capabilities on agility: how can they help, stimulate, or where are constraints that can be dealt with

## Technology

- Simplification and rationalization of the application landscape as a sound basis for agility
- A modular architecture that (where needed) supports micro-services
- Automation and tooling to provide continuous delivery (e.g. build, test, integrated, deployment)
- Cloud and on-demand self-provisioning of environments as enablers for high flexibility and scalability

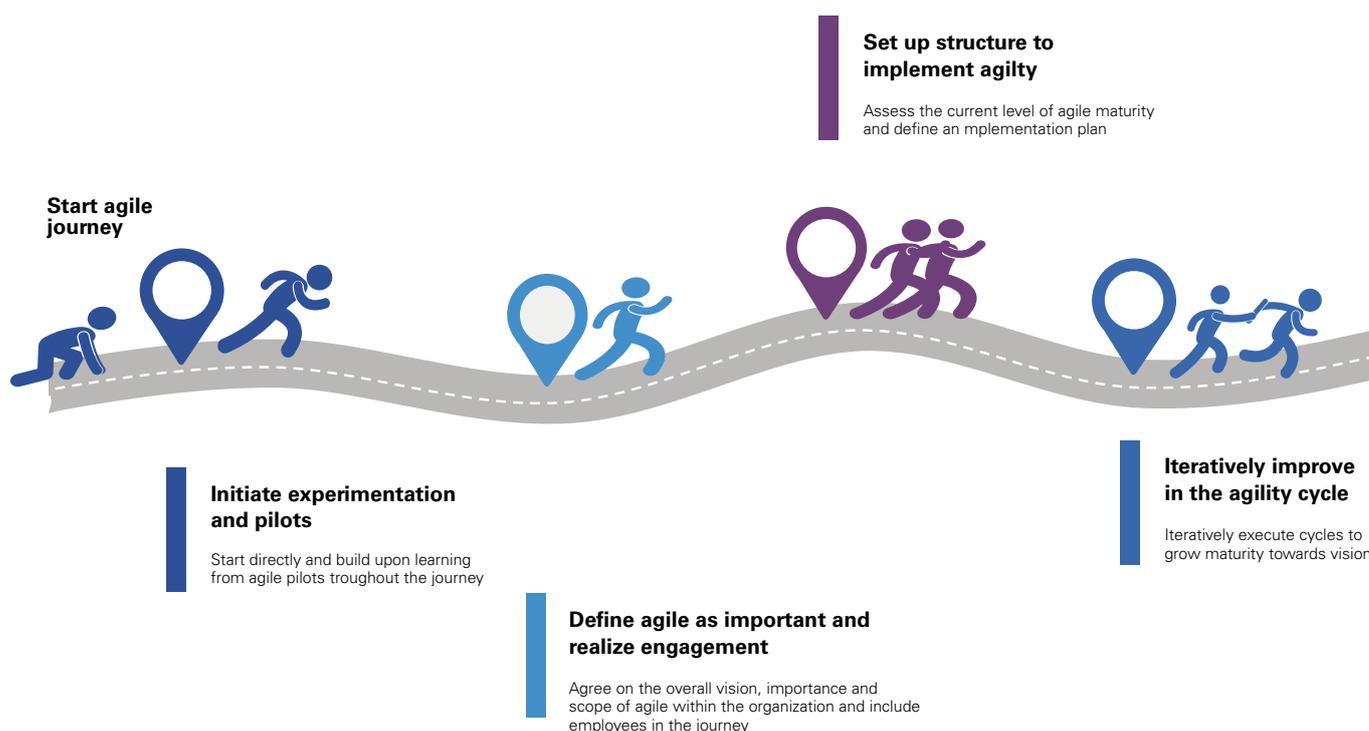


High-level impact on the overall operating model of the organization



# The journey to agility starts with experimentation and failing fast to drive learning for the overall organization

The question remains of course how an organization can move from a demand/supply model that limits flexibility and stimulate functional silos and individual expertise to agility? How should an organization move from a culture of individual appraisal to a flexible, empowered team structure? To this end KPMG has identified the four elements of the journey to agility that we typically see at our clients.



The agile journey based on observations of agile transformations across European organizations

## I

### The journey starts with leveraging or initiating agile pilots and experiments

- Learning-by-doing is at the core of agile philosophy
- Identify where in the organization is already applying agility
- Define where you want to start additional pilots and expand
- Continuous feedback from the pilot team(s) is essential: which constraints do they experience in their agility and how can these be removed?

## II

### A clear and aligned view of the direction and the purpose of the transformation

- Agree on common definitions and starting points on what agility actually is for you
- Define a first scope and ambition on agility
- Define your purpose and what the key drivers you want to achieve for the change
- Engage stakeholders from the business and IT, identify champions and other enthusiastic employees to initiate the journey together on all levels

## III

### Obtain a clear picture of the current agility and set up the structure to enable improvements

- Look holistically throughout the operating model and levels of agility (enterprise, portfolio, project, team) to assess agility maturity throughout the organization
- Define an implementation plan consisting of a high level roadmap, governance and value streams, and transformation approaches: (e.g. big bang vs incremental, bottom-up vs top-down, greenfield vs change, value driven vs one-size fits all, functional vs value streams)
- Create a first business case that identifies the value you are aiming for

## IV

### Kick-start the cycle of continuous improvement

- Based on the clear vision and view of the current agility level, iteratively increase agility in selected functions and domains
- Create short cycles and engage stakeholders from the start
- Ensure epics and features are scoped correctly to enable quick iterations through the cycles. However, accept the fact that some changes will require a waterfall type of approach, such as redefining the function house

This journey shows the high level steps in the overall journey, which is frequently heavily supported by experienced coaches and a strong group of empowered internal enthusiasts. For learning across this journey, we refer to our recent article on agile transformation of the (IT) Operating model - Crossindustry observations and lessons learned [Cool18].

# Conclusion

Irrespective of which model a particular organization currently identifies with, be it a traditional demand and supply model, hybrid / bi-modal, the end outcome should be clearly defined and enable increased business demands of speed and flexibility in this digital era. This is something the traditional organization models could not deliver.

Organizations that do not embrace this change and adapt to cross-functional ways of working will find themselves in a situation where they are actively excluded by the business from IT-related initiatives. One of the outcomes of this is currently seen in the market: increasing costs through the potential buildup of shadow IT and loss of control as traditional delivery processes are bypassed and become a network of interactions as transformations lasting several years become less acceptable to the business.

It is clear that in order to prevent IT becoming a low-value overhead function it must adapt and become a true partner, offering responsive high-value innovation and constant improvement in the quality of experience the business is able to offer its customers. This can only be achieved with an integrated approach and by moving away from IT as an "order taker".

In our opinion, in order for organizations to become truly digital, there will have to be a paradigm shift with an explicit focus on agility, flexibility and speed.

This article has highlighted the overall journey the CIO has taken, going from a supporting role, through a demand/supply model and now hitting upon the challenges of a hybrid IT environment with multiple speeds, and eventually winding up on the journey to enterprise agility.

We highlighted the need for an integral and holistic perspective on the operating model during this journey, and have shown the common journey that most organizations are currently facing based on our industry observations across Europe.

# About the authors



**Tim de Koning** (KPMG the Netherlands)

T.C.M. de Koning works as a Senior Manager at KPMG Digital Advisory. For over 10 years, he has been focusing on strategic change and effective use of IT, particularly for the review and design of (IT) Operating Models and the management and execution of the related (agile) transformation efforts.

dekoning.tim@kpmg.nl; +31 6 21393579



**Thomas Woolcombe-Adams** (KPMG Switzerland)

T. Woolcombe-Adams is a Senior Manager at KPMG Digital Transformation in Switzerland. For over 9 years, he has been focusing on the design and transformation of strategic change covering IT Operating Model and Service Management, including the management and execution of related enterprise agile transformation programs.

twoolcombe@kpmg.com; +41 79 573 27 32

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## Contact

### **KPMG AG**

Badenerstrasse 172

PO Box

CH-8036 Zurich

**kpmg.ch**

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