



## The CIO journey to agility

Organizations that want to thrive in a digital world need to organize themselves in a completely different manner by embracing agility

**Organizations are faced with an increasingly digital and turbulent environment. Most organizations are not ready to react with the speed and flexibility required to keep up with quickly changing technological capabilities and client wishes. 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 on changes and aims for stability. This article highlights the journey of the CIO and IT organization over time, from a supporting function to a demand-supply model, which now faces the challenge of integrating with the business, in multi-disciplinary teams, to provide agility.**



## INTRODUCTION

Digitization 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, resulting in the emergence of digital disruptors that provide new ways for organizations to create value. Speed and flexibility become drivers of value 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. It goes far beyond the front office to facilitate true enterprise-wide business transformation, so that organizations can 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. And besides, 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 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. From the viewpoint of the overall developments of the IT function, it stresses the need for a holistic perspective and highlights the challenges that organizations will face and how to address them. This article briefly describes the overall development of the IT function over time and subsequently focuses on the present challenge for many organizations; the step from the demand-supply based models into agility.



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## THE JOURNEY OF THE CIO AND IT FUNCTION OVER TIME

To understand the overall journey that the IT organization is facing, we first take a brief look at the developments during the last decades. We have depicted the route of the IT function and CIO from supporting to professionalization in demand-supply, via a hybrid model into agility.

### CIO 1.0 – IT function as technical support

In this phase the focus of the IT function is very technically oriented. IT is a specialized function, requiring highly technical and specific knowledge and competences. The department aims to improve and automate processes by gradually introducing new IT capabilities to the business. 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 aligned 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. 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. As IT is becoming an essential part of business processes, IT processes and IT governance is highly

formalized and standardized to ensure reliability and continuity.

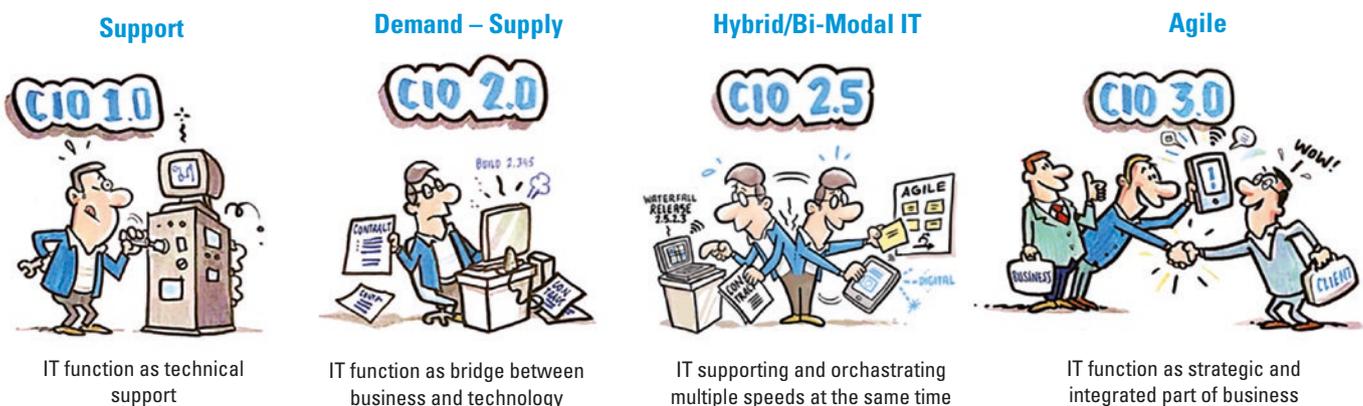
### CIO 2.5 – IT is supporting and orchestrating multiple speeds at the same time

As a result of digitalization, IT becomes of increasing strategic importance for organizations. Speed and flexibility 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 throughout more 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 becomes the key design principle for the organization that wants to thrive in a digital world. The organization embraces the principles of modern operating models, such as Spotify and agile scaling frameworks, such as SAFe and LeSS. As a result of this the organization integrates business and IT to drive speed and flexibility.

**Figure 1.** Developments in the role of IT (inspired by [Zwig16]).





## 'ONE COMPANY' STRATEGIES AND DEMAND-SUPPLY MODELS TO FACILITATE INTEGRATION AND STANDARDIZATION

After earlier introducing IT to the business and assuming a purely support 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]).

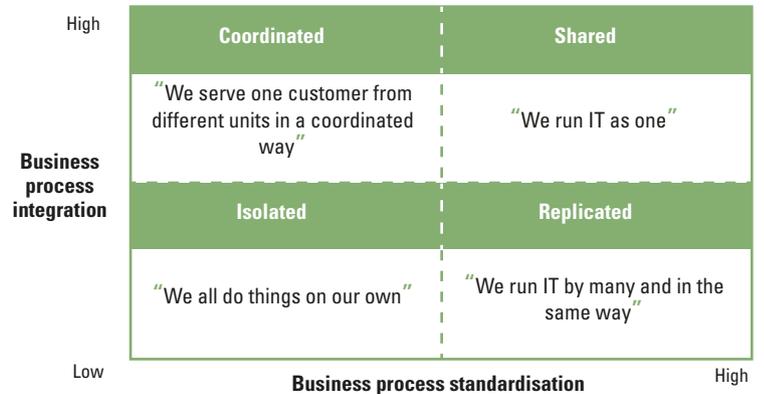
To create economies of scale, synergy and improved performance, this strategy implies concessions in the field of local autonomy in favor of standards and centralization. In the authoritative book *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution* [Rosso6], this type of model is called the 'shared operating model' (see Figure 2).

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. 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, and demand management is organized closer to the business, but as a separate department.

This model, shown at 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.

The demand-supply model has served organizations well in standardization and optimization, which are important prerequisites for a successful agile and digital transformation described in the remainder of this article.

**Figure 2.** Interpretation of Ross and Weill: Enterprise Architecture as Strategy ([Ross06]).



**Figure 3.** Core functional blocks of the KPMG demand-supply model.



The one-company strategy provides a strong foundation through complexity reduction and standardization



## THE HYBRID IT ENVIRONMENT SUPPORTS MULTIPLE SPEEDS AS A STEPPINGSTONE INTO AGILITY

Most organizations are facing the challenge of having to move from a demand-supply based 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 Bimodal or hybrid environment where the classical and digital world co-exist, until potentially the entire organization has embraced an agile mode as we describe later at 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.

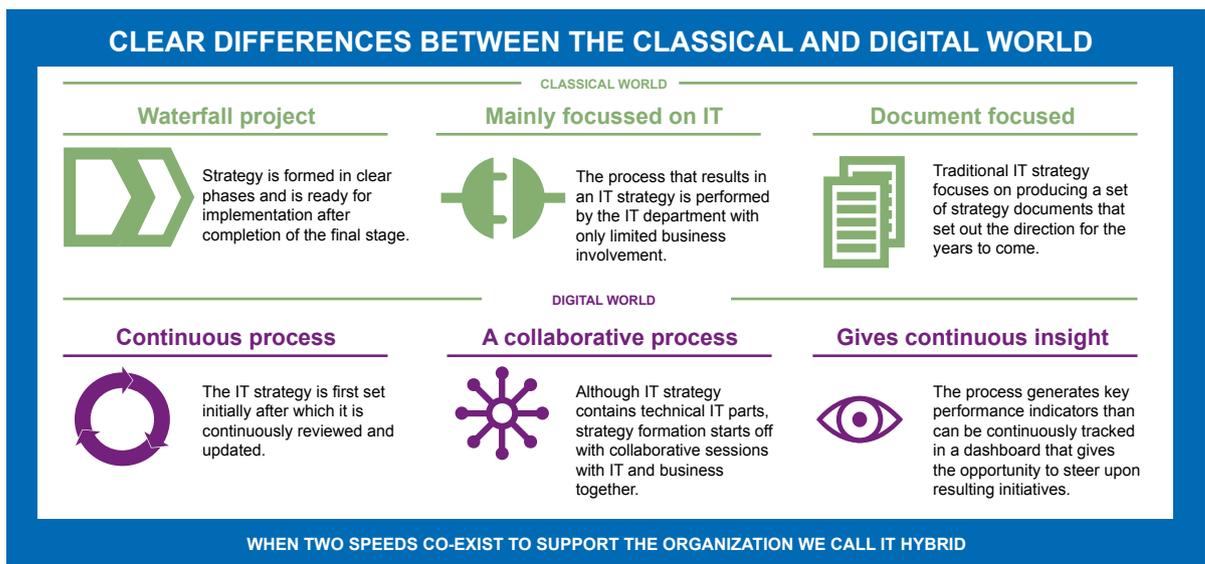
Many organizations have willingly invested in designing and implementing models that support both speeds, through concepts such as 'Bimodal' or 'multi-speed' ([Kett16]). However, these models have some clear disadvantages. For example, Forrester [McCar16] clearly describes some disadvantages in their article *The false promise of Bimodal*. In the end Bimodal leads to:

- it is becoming difficult to retain talent, especially the capabilities on legacy application and infrastructure, as it implies branding the new versus the old;
- a requirement for a distinction in the HR function house between the roles and competences required to successfully manage each mode;
- using two modes of IT, which encourages (IT) management to shift their transformation efforts away from the slow, mode 1 IT, that isolates but does not solve the issues;
- a split within the IT function leading to inefficiencies and ineffectiveness.

Our view is that Bimodal or multi-speed 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.

## Hybrid or Bimodal IT is a temporary steppingstone to move from demand-supply into agility

**Figure 4.** High level overview of the confrontation of classical and digital worlds.





## BUSINESS AND IT INTEGRATION AS THE ULTIMATE ALIGNMENT TO ACHIEVE AGILITY

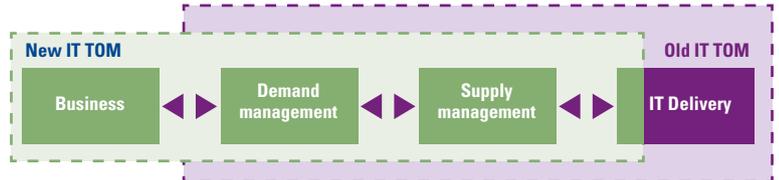
Principles such as speed and flexibility require a new type of model. It goes far deeper than merely setting up agile methodologies like Scrum for IT development; it demands a fundamental change of the existing operating model where agile is not only scaled, but also applied on an enterprise level. Inspiring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

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 in the organization to be able to effectively respond to this?

Users in the business require direct involvement, they want to participate and actually have a say in IT, instead of waiting for cumbersome processes across silo's in demand-supply based models. Collaboration and integration of business and IT 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 introduction of agility makes change a core function, and concessions are made on 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 is drawing IT towards the business. This is illustrated in Figure 5.

**Figure 5.** The business assumes responsibility of domains that used to be primarily IT driven.



## AGILITY REQUIRES THE ORGANIZATION TO INTEGRATE BUSINESS AND IT INTO A COHERENT AND FLEXIBLE MODEL

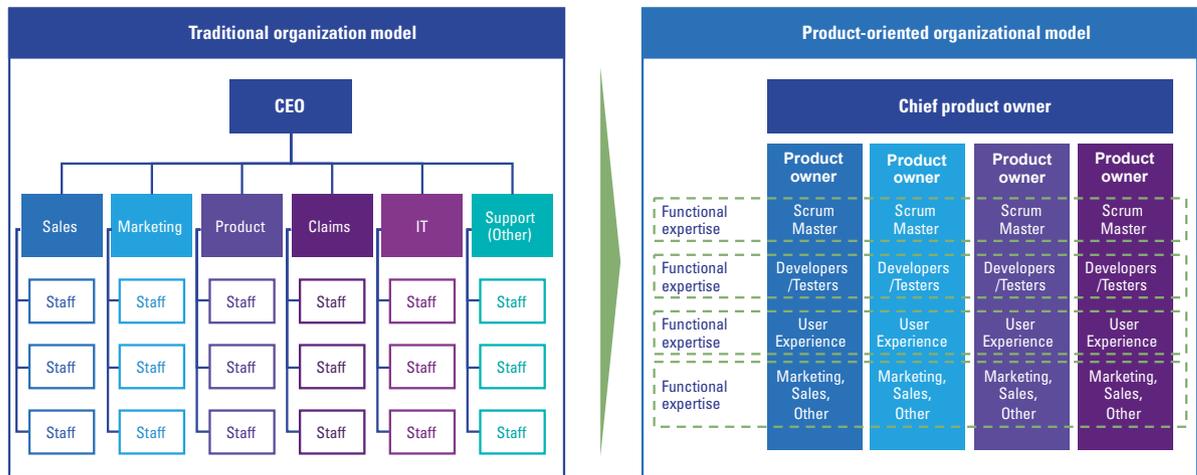
The limit of hybrid models is often related to a classical separation of front-end/back-end. The ability to make changes is limited by the system that is most difficult to safely change, usually a system of records: a digital focus on just the front office will not provide sustainable competitive advantage.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

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

One of the chief impediments to achieving this one team goal at an enterprise scale is the traditional siloed 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 different teams are involved in a project conducting piece-meal tasks of a larger business request.

This means organizing products and services from an end-to-end perspective into value streams. This view is depicted in Figure 6. As recognized by 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.

**Figure 6.** The business assumes responsibility of domains that used to be primarily IT driven.



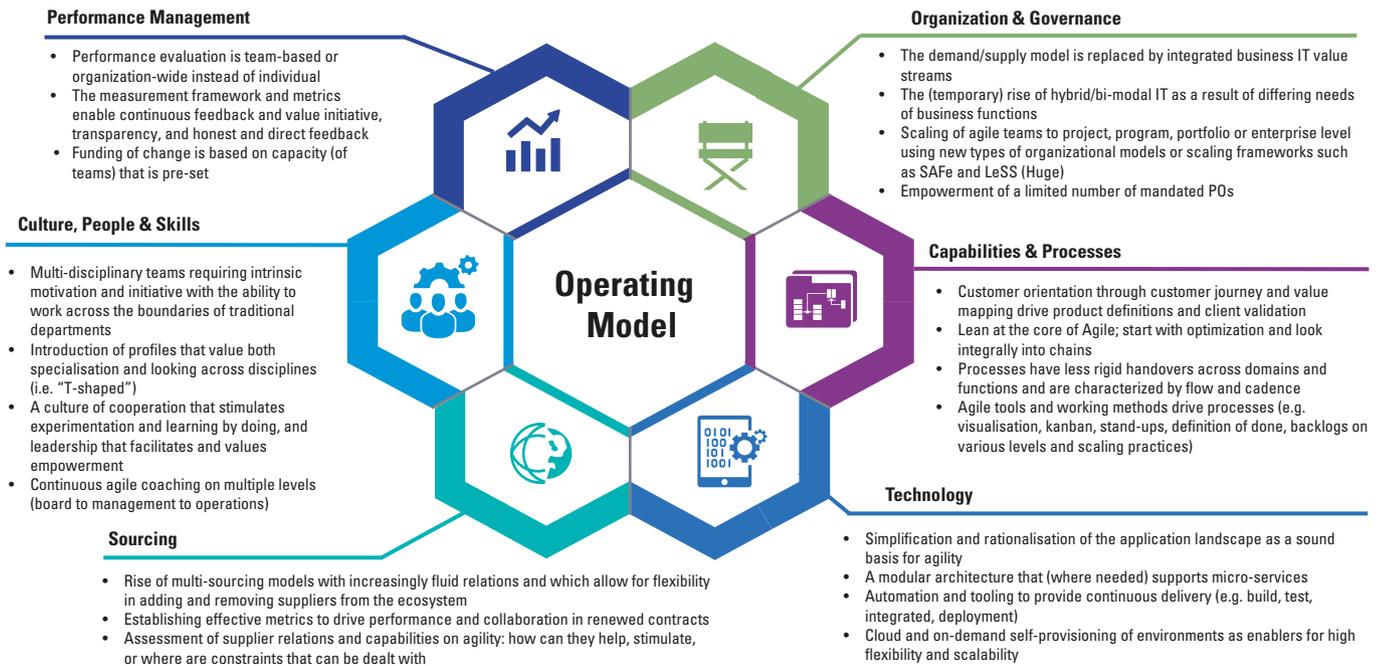
**AGILITY IMPACTS ALL STRUCTURAL ELEMENTS OF THE OPERATING MODEL CHALLENGING EXISTING CONSTRUCTS AND BELIEFS**

**Agility is an operating model challenge for the whole organization, and not just an efficiency opportunity for IT**

Dealing with flexibility and agility, while coming from a world aimed at stability and predictability, requires fundamental organizational design choices, resulting in a redesign of the traditional IT operating model, with respect to all the structural elements. In Figure 7 we briefly touch upon some key effects on the operating model that we frequently see at organizations adopting agility at their core.

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 to realize the change together. This journey is described in the next section.

**Figure 7.** High level indication of the impact on the overall operating model of the organization.

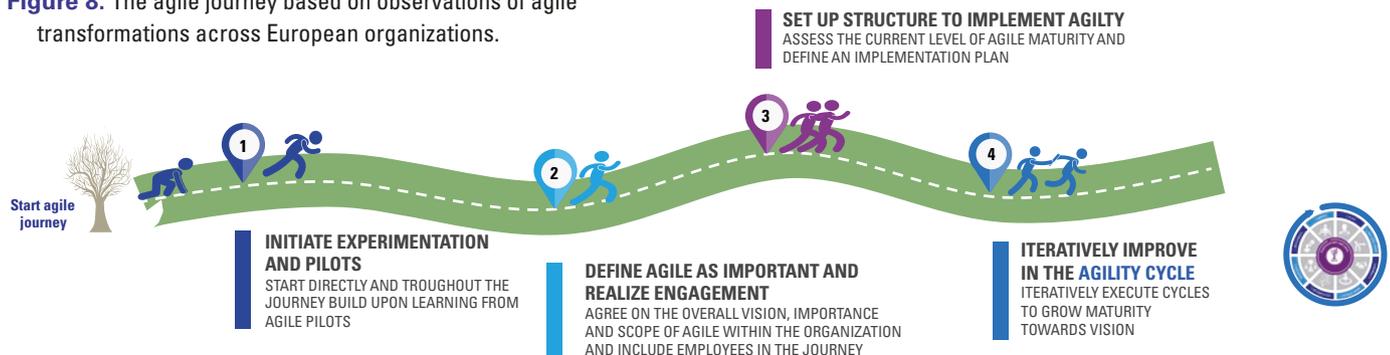


**THE JOURNEY TO AGILITY STARTS WITH EXPERIMENTATION AND FAILING FAST TO DRIVE LEARNING FOR THE OVERALL ORGANIZATION**

The question remains of course: how do I move to agility from a model relying on demand-supply constructs that limit flexibility and stimulate functional silos and single expertise focus? How do I 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.

**Figure 8.** 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 the agile philosophy. Identify where in the organization agile is already applied;
- 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 on the direction and the purpose of the transformation*

- Agree on common definitions and starting points about what agile actually is for you;
- Define a first scope and ambition on agility;
- Define your purpose and what the key drivers are for the change you want to achieve;
- 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 setup the structure to improve it*

- Look holistically throughout the operating model and levels of agility (enterprise, portfolio, project, team) to assess agile 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 on 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, but 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 often heavily supported by experienced coaches and a strong group of empowered internal enthusiasts. For learning across this journey, we refer to our recent article [Cool18].

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## CONCLUSION

Irrespective of which model a particular organization currently identifies with, be it a traditional demand and supply model, hybrid/bimodal, the target model should enable increased speed and flexibility in this digital era, which is something traditional models have before long not been able to achieve.

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, which is currently seen in the market, is increased cost through the potential buildup of shadow IT, and loss of control as traditional delivery processes are bypassed, and become a network of interactions with multi-year transformations becoming less acceptable to the business.

It is clear that 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 moving away from IT being an 'order taker' to the business.

In our opinion, to enable organizations to make the step towards digital, there will have to be a paradigm shift that leads to an explicit focus on agility, flexibility and speed.

This article has highlighted the overall journey the CIO has taken from a supporting role, through a demand-supply model, and is now facing the challenges of a hybrid IT environment with multiple speeds, and eventually 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.

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