Fast lane IT for the agile enterprise

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**Summary** 10
Today, more than ever, long-term success is dependent on an agile enterprise and an IT department that is optimized to serve modern business and value creation processes. Companies must successfully leverage the fundamental changes created by technical and digital transformation.¹

New and advanced technologies represent a crucial element for success in this regard. Mobility, cloud services, wearables, sensors and big data, for example, not only modify the traditional supply and value creation chains, but also allow for completely new business models. The only way for companies to benefit from this development is by continuously optimizing their processes and supporting them with targeted deployment of innovative technologies.

Ever-shorter product and innovation cycles mean that IT departments are facing the challenge of increasing the companies’ agility. Yet even in many well-established companies, rigid line structures inhibit the expansion of agile IT development skills. An ‘agile enterprise’ concept therefore not only requires a highly innovative IT department, but also a holistic view that takes into consideration the changed mindset of staff members and a reorganization of processes throughout the entire company.

Market leaders from all industries have already recognized the new potential for success and have realized that transforming their company into an ‘agile enterprise’ that can act flexibly and profit from change is integral to their success.²

¹ Gartner, 2014: Six Key Steps to Build a Successful Digital Business
² Gartner, 2014: What SMBs Need to Know About Enterprise Agile
There are four major challenges for the internal IT operating model, driven by the requirements that companies must meet in today's digital world. These challenges relate to the interface between the business units and the IT department, agility in value creation, multi-speed IT practice and the digital evolution of the corporate culture.

The interface between the individual business units and the IT department – insofar as it is still necessary – must be designed in such a way as to allow both sides to collaborate closely. This is because new business models can only be developed and successfully implemented by combining the skills and experience of both groups.

Agile value creation is proving to be particularly important for well-established companies, who must keep up with the often shorter product cycles of challengers such as startups.

However, this is only possible with a radically accelerated IT department and powerful development capabilities.

A multi-speed IT practice enables companies to continue operating the legacy systems necessary for traditional business logic and processes, while at the same time integrating and providing new digital services. This must be achieved regardless of whether it relates to internal or external services.

The digital evolution of corporate culture understands that the success of technology-driven business models and the organizational changes are dependent upon the cooperation of the workforce. A clearly-defined target culture for the digital age helps staff members to advocate agile enterprises with dedication and purpose, and to successfully implement the strategy.

Throughout Accenture’s consulting work on numerous projects, the central challenges that define a successful digital IT operating model have become clear. On the basis of this extensive experience, Accenture has identified nine characteristics which the IT operating model of an agile enterprise should possess in order to meet the requirements of the digital future (see Figure 1). In this model the agile approach pervades not only the entire IT organization but in fact, the characteristics explained in the following text are the basis for the path to an agile enterprise. It was possible to validate and refine the characteristics based on Accenture's experience with large corporations once the first successes on the path to agile enterprises became apparent.

Companies that develop their agile abilities at an early stage will have a significant competitive advantage. This is why there is an urgent need to take action for all companies that have so far failed to implement digital IT transformation or who haven’t even begun to design a strategy for it.

Figure 1: Nine characteristics of an agile enterprise

Technology-driven product & innovation management
Ecosystem security strategy & governance
Agile corporate culture & workforce
Centralized responsibility for customer interaction
Flexible investment & portfolio management
Agile development & DevOps concept
Transformational architecture & release management
Service brokerage
Centralized data & analytics

Source: Accenture Research
Nine characteristics of an agile enterprise’s IT operating model

1. Technology-driven product and innovation management

Comprehensive digitization leads to new dynamics and changes the balance of power between the business unit as a consumer and the IT unit as a service provider.

These changes are because it is only possible for new products, services and business models to emerge and contribute to the entrepreneurial value creation if business and IT truly grow together (technology-enabled business).

For the IT department this means facing the challenge of integrating technology-driven innovations into the company while creating value. The IT department thus becomes an ‘innovation incubator’. However, it will also have to establish itself as a partner for the go-to-market strategy and ensure a close connection with the business units.³

An active involvement of the IT department in the business-driven processes of product development and product management makes it possible to realize this cross-departmental approach. For this to happen it is also essential to develop and implement new cooperation models and to bring the IT department, business processes and interfaces closer together, for example through joint innovation projects.

Setting up a technology lab might help develop demand management further in the direction of product management. In the technology lab, experts identify new business-relevant technologies, test their applicability and try out new business models in a safe environment (sandbox procedure). In so doing, the cross-departmental innovation team creates the basis for an agile enterprise.

Figure 2: Technology labs and shorter decision-making cycles favor the creation of successful products

2. Flexible investment and portfolio management

In order to create an agile enterprise that profits from faster product and innovation cycles it is also necessary to rethink investment management. However, even according to the standards applied to traditional IT, the investment processes and decisions most companies use at present are inadequate. An annual IT budget and investment decision-making aimed at maximum security inevitably leads to deficits in flexibility and innovative power.

Companies must therefore adjust their investment management to take advantage of readily available technology trends and agile value creation. In order to satisfy today’s requirements it is essential to advance investment decisions based on the venture capital principle, because only those who show the courage to accept the associated challenges will benefit from new opportunities that arise.

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³ Gartner, 2014: Six Key Steps to Build a Successful Digital Business; Gartner 2013: CEOs and CIOs Must Co-Design the C-Suite for Digital Leadership

Source: Accenture Research
This applies not only to the initial investment, but also to the ongoing management.

In practice, decision-makers are therefore well advised to make investment processes and project releases in the framework of IT budgeting more flexible and more dynamic and, in doing so, to contribute to shorter cycles of coordination between business and IT. This constitutes the way to overcome failures and bad investments quickly on the path to achieving success. When companies shift their investment decisions further towards innovation analyses and prototypes, they lay the foundations necessary for agile value creation.

3. Agile development and DevOps concept

A holistic deployment of agile methods in the IT department is essential on the path to an agile enterprise, i.e. from the requirements of the business unit through the application development (agile development) to the operations (DevOps). The initial aim is to remove barriers between the units involved, in order to allow smooth cooperation. Furthermore, companies that deploy agile methods prove to be more capable of action and are more efficient than those that only use entirely traditional methods, such as the waterfall principle.

Evidence for this is provided by the experience gained in projects of different sizes and degrees of complexity. Agile development methods to improve cooperation between specialist departments and development departments are already successfully deployed in many cases. In order to benefit from the concept of agile development, companies must create a suitable project environment. This environment should allow an agile development process, irrespective of the project size, location or complexity.

For this purpose, centrally defined criteria support the decision as to whether a project will benefit from agile methods or whether traditional development models are the better choice.

The DevOps concept improves the cooperation between development and operations, but has (to date) rarely been used in large organizations. The benefits of agile development, e.g. shorter time-to-market, are thus not fully achieved.

It is therefore advisable to apply agile principles, such as early feedback and continuous improvement to software operations and system maintenance. In doing so, companies are well advised to involve staff members from the operations unit in agile, cross-functional teams in order to promote a holistic exchange of experience. Ultimately, successfully establishing DevOps requires simplifying procedures and processes, such as providing infrastructure, by reaping the benefits of automation and self-service portals.

When designing an agile environment, the decisive factor is the use of both agile development methods and the DevOps concept. It is essential to explicitly define roles and responsibilities.

4. Transformational architecture and release management

Apart from establishing agile development and the DevOps concept, effective architecture management is also essential for an agile enterprise. Synchronizing traditional and agile development work is of crucial importance, because the majority of IT landscapes have grown organically and use legacy systems and processes to a significant extent.

In this regard, the focus is on the continuous cooperation from technical requirements to IT operations in order to optimize the development of services according to demand.

This involves an additional design factor: promoting staff members’ interaction possibilities by using agile tools and techniques. One example of this is the use of applications based on agile development methods, e.g. incremental development. In addition, the use of suitable tools serves to motivate the teams to achieve continuous improvements.

Figure 3: Agilization of legacy back end – prerequisite for agile development

- Implementing new applications requires access to the legacy back-end
- Access is made possible through back-end services
- Development of services is on-demand and predictive

Source: Accenture Research

5 Study of „Dev“ from Development and „Ops“ from Operations
6 Study Status Quo Agile 2014, BPM-Labor HS Koblenz, Prof. Dr. Komus
7 Gartner, 2014: CSPs Digital Business Requires a Bimodal IT Transformation Strategy

Outlook: Set-up for a native, agile back-end
As a result, a flexible, service-oriented architecture (SOA) represents an important basis for integrating new software into existing or external services, regardless of whether it was developed using the agile or traditional model.

To achieve this, companies should define a suitable professional and technical target architecture of various granularity levels and implement it gradually. The target architecture should make it possible to decouple the release cycles of agile and traditional IT components, thus reducing the time-to-market. To ensure consistency and reusability as well as minimize the code refactoring effort, architecture management with more foresight is essential. This applies particularly in the context of agile software development with a focus on short development cycles.

Companies that take this into account are also in a position to adapt existing systems, or interfaces with external systems, to new requirements and synchronize them with agile development planning at an early stage. At the same time, they must ensure that release management is integrated, and that the production uses are coordinated in terms of the various architecture components.\(^8\) This also requires standardized governance structures that have, for example, been calibrated to internal security and compliance standards. By improving the transparency of the end-to-end development process, the overall organization also prepares itself for the increasing interface complexity.

5. Service brokerage

Services provided by third parties can also be smoothly integrated into existing systems – as long as companies have laid the necessary foundations. The advantage of using externally provided services is that companies can often benefit from new digitization trends faster and more efficiently than if they first have to develop the required services internally. It is advisable to centralize the procurement of external services and give a professional purchasing department the task of procuring external IT services. It should have appropriate knowledge in optimized bundling of services and products to determine and serve customer needs accurately.

In addition to this, centralizing and professionalizing the purchasing department creates benefits by scaling contractual agreements and by optimizing service costs.

Furthermore, the following aspects are crucial success factors for optimized purchasing management of external IT services: Cooperation with the architecture should be well tested and established. Those involved in and responsible for the purchasing process should have in-depth knowledge of the market and the technologies of external services. Additionally, extensive expertise and experience in integrating external services is necessary. These factors allow companies to design and optimize choice, procurement, integration and compliance of external services efficiently and holistically.

6. Centralized data and shared analytics

Successful launches of new products and services that take trends into account require distinctive analytics capabilities.

Targeted analysis and interpretation of large volumes of data has become a crucial basis for business success in many industries.

Market-driven offers can be identified with the help of ‘big data’ technologies and further developed to suit customer and market needs, and seamlessly deploy analytical results for automated decision-making.

Essential milestones on the path to an effective use of analytics are the central collection and storage of all available data and information (e.g. in raw format in ‘data lakes’), the establishment of dedicated roles, and centrally provided supporting technologies and reporting processes within the company.

The responsibility for preparing data for further use in analytics initiatives lies with ‘data scientists’ who have excellent skills in data analysis. Other roles in the course of the processing are domain-specific and cross-domain analytics experts, who work together with the business units as closely as possible to achieve relevant results. End-to-end governance and reporting processes as well as supporting technologies, e.g. technologies for statistical analysis, are additional components for establishing an analytics service.

A centralized shared-services unit is suitable for effectively maximizing the performance of analytics with the right skills, methods and technologies. Centralization allows all business units to profit from the new abilities. In this context, an important success factor is the close cooperation with the specialist departments, which is reflected in the organizational structure or even by placing domain experts, e.g. statistical model experts, in the business unit. When introducing analytics services, staff members should be trained in the relevant skills, while also ensuring scalability. It is advisable to check the options for external sourcing, in which case both competencies and the necessary tools can be utilized.

\(^8\) Gartner, 2013: How IT Operations Can Set Up an Effective, Centralized Release Management Process
7. Centralized responsibility for customer interaction

Customer behavior in terms of information and consumption has changed radically with modern communication practices and digital media channels. The establishment of social networks and mobile interaction has meant that both communication intensity and the demand for a cross-channel brand dialog have increased on the customer side. For a homogenous perception of their product and service offers companies must therefore act consistently across all relevant communication channels. This uniformity is an important precondition for gaining the target group’s trust in the company, which in turn is a major factor for purchasing decisions.

The consistent cross-channel creation of customer experience and interactions in particular leads to increasing complexity. Apart from higher data traffic, companies now have to manage a multitude of communication channels and media, ranging from needs-based development through error-free synchronization of the operation to value-adding analysis. A good basis for a consistent creation of customer experience is presented by creating central responsibility for customer interaction. At the same time, it is essential to coordinate the content management of campaigns in order to avoid competing offers on different channels.

For an effective management of centrally controlled customer interaction it is advisable to implement the following measures:

- Development of an architecture that allows the flow of information as a basis for a consistent shopping experience
- More efficient bundling of support teams for digital end customer services offered by different business units, brands or product lines
- Integration and establishment of digital interaction channels to achieve greater customer satisfaction and reduce support costs
- Creation of a consistent customer experience (including mobile platforms) by centralizing the development of apps in a mobile center of excellence
- Definition of suitable interfaces between business management and relevant functions of the IT department

Implementation is a challenge for many companies because significant changes are necessary in terms of governance on the business side, e.g. during the interaction between product and marketing management. Early involvement of the responsible persons is an essential component of this success.

Figure 4: Organizational and technical measures guarantee security in the digital context

Source: Accenture Research

\[ Gartner, 2014: Digital Maturity is a Key Factor in Profitability for Insurers; Gartner, 2014: Building out Digital Business „Dream Teams“ \]
8. Agile corporate culture and workforce

The structural changes of the IT operating model necessary for the creation of an agile enterprise have a particular effect on the staff. As new roles are created, tasks have to be distributed in a new manner and areas of responsibility are shifted. However, the most important factor for a successful transformation is that staff members adapt to the new requirements flexibly and fulfill them quickly. This entails following the IT trends caused by digital change and always keeping an eye on the overarching context.

In this regard, it is also important to understand how the components of the digital IT operating model interact and to recognize how they can help to achieve the business objectives.

Consequently, decision-makers not only have to initiate and promote cultural change within the company, they must also ensure that staff members have, or acquire the necessary skills. It is therefore advisable to start by defining the changed roles and responsibilities that meet the requirements of an IT department in the digital age. To do so, companies must continuously analyze demand and establish the required skills and capabilities.

Apart from empowering existing staff, cultural change is also a prerequisite for recruitment. Generation Y junior employees entering the job market take digitization for granted, reject rigid hierarchies and want to work in an agile and interdisciplinary manner. This change is a long-term process, so an agile enterprise needs to start this change now in order to be an attractive employer for Generation Y.

It will not be possible to realize cultural change with the help of traditional workforce transformation instruments (e.g. work shadowing, coaching, workshops, knowledge management tools) alone. Digital change therefore requires new impulses, which must be sourced from external corporate structures and cultures not currently present within the company itself.

9. Ecosystem security strategy & governance

With increasing digitization the attack surface is growing significantly, therefore any potential damage in the event of security issues is becoming greater. At the same time, guarding customer confidence and one’s own reputation is becoming one of the core tasks for companies. The physical world is merging with digital artefacts and processes, and the establishment of networks with customers, suppliers and partners – the ecosystem – is blurring corporate boundaries. Furthermore, a growing use of digital technologies is increasingly facilitating professional cyberattacks.

An essential factor for security strategy and security governance in the digital world is the close interlocking of information security with the business and IT strategy. The increased connectivity of the company with its ecosystem requires strict safety directives and flexible security processes. The focus should be on establishing consistent end-to-end services and separating responsibilities between the parties involved in the ecosystem.

As the behavior of internal and external users changes in the digital context, there is a growing need for training and information campaigns. The training offers should be built on a standardized basis of safety principles developed in accordance with business and staff requirements.

The demand for technical security solutions for mobile end devices and connected physical components (Internet of Things) is continuing to increase. Custom-made, device-independent data protection solutions are indispensable in our digital world. Technologies for the early detection of possible security threats to companies, tool-based management of known weak points, and sophisticated access control are also relevant.

To summarize, competence in the field of IT security should not be purely based on the use of technologies; companies should instead strive towards a holistic alignment of business targets and business risks. Establishing responsibility in a specially created top-level management role, supported by sufficient resources in the field of security strategy and architecture reflects the growing importance of safety requirements.
Companies can master the challenges of the digital world by implementing a strategy for an agile enterprise and a future-compliant IT operating model. Adapting existing processes, changing organizational structure, developing new abilities and teams, transforming the corporate culture and integrating external services are critical factors for business success in the course of digital business transformation.

The nine characteristics identified by Accenture help companies to meet these challenges and to quickly align their organization.

Leading companies from almost every industry have already recognized the need for action and are currently beginning relevant projects. However, their approaches are necessarily very individual. Accenture supports its clients in finding transformation and optimization solutions suitable for their organization – tailored to the client’s individual starting point and objectives.

For many Accenture clients setting up a digital competence center turns out to be a practical milestone on the path to a future in which agility and digitization are taken for granted and offer the company holistic support.

In the long run, concepts will be developed which will only partially distinguish between business and IT units. The IT department will therefore increasingly diffuse into other business areas, with the effect that the IT department of the future will focus on the overall strategic alignment and on achieving economies of scale. In this scenario, in-house IT providers (captive IT providers) create the IT infrastructure efficiently and implement safety directives reliably. The group IT department assumes a governance function and is responsible for the overarching IT strategy – possibly based on the group business strategy.

Figure 5: Multi-Speed IT becomes a stable model on the IT department’s path into the business units

Today

- Separate responsibility for development and operations
- Simple architecture management for administration of standards
- External services not centrally managed

Tomorrow

- From demand management to integrated product management
- Architecture management transforms legacy IT
- Central external service management

stable state

Outlook

- IT strategy defined on the same level as business strategy
- Service assembly in business units
- Corporate IT: integral part of the ecosystem

Source: Accenture Research
About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 336,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world’s most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.

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