

Powering Cloud Infrastructure & Engineering ASG

Reset

A different way to set up organizations and their IT systems in the light of continuous change

Accenture Technology

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Initial thoughts

This is not yet another Point of View urging to “do things differently”, to reorganize teams or to rebuild IT systems for the sake of “innovation” or “disruption”. As the past two years marked by COVID have shown, reconsidering how we conceptualize IT systems, IT organizations and business organizations, is crucial to ensure long-term, sustainable competitive advantage.

In the past, the expectation towards leaders was that the execution of strategic reorientation of a business to ensure its survival on the market was accomplished through strategic thinking, problem-solving and rushing and pressing for action in a simultaneous and well-coordinated, aligned endeavor. Reorganizing structural elements was (and still is) often perceived as the means to project “evolutionary fitness”¹ to staff and shareholders. Therefore, one of the most crucial and challenging leadership decisions in the first place has been about whether, when or how to reorganize – and how radically to approach such a reorganization.

Today, the urge to act quickly is less about launching a specific change initiative, or about accelerating a transformation – but about **a mindset shift of continuous change**. With new technologies ever evolving, rethinking how we consistently rejuvenate IT systems, create, and re-create IT and business organizations in a disciplined and consistent manner, and embed learnings and plan for renewal, will ensure that a business remains relevant and future-proof from the core of its IT and organizational fabric.

Getting there requires fundamentally engaging on a journey of continuously renewing legacy system landscapes, breaking through sticky routines and organizational fiefdoms – taking strategic action to a new “continuum” level and envisaging a new way to set up organizations and their IT systems.

Past conversations were about choosing between evolution and revolution – our view is that this choice is obsolete. In our thinking, it is not about doing one or the other but setting up organizations in a revolutionary new way that allows an organization to evolve continuously.

It's the continuous nimbleness of a whole system, reinventing and rejuvenating itself, which will differentiate and make any business successful in the future.

Everything is about continuous change

Organizational change has received a different meaning over the past decade. Academic scholars and leaders in business have now embraced the idea that change in an organization is to be considered a continuum. The accelerated speed of innovation and the disruption-of-life-as-we-knew-it before COVID are impacting how interwoven we perceive life, technology, and community – and this in turn determines that change is no longer seen as a sequencing of individual phases.



In organizations, four aspects need to be considered:

1 Technological disruption enables new business models: Technology has developed from the role of “supporter” to the business functions to a “definer and driver” of new business models. With technological innovation, new spaces for value creation are emerging. Ten years ago, the largest organizations in terms of market capitalization were what we might think of as ‘traditional’ companies: Walmart, Exxon, BP, Toyota, ING and General Motors. Today’s enterprise landscape is tech driven. Five out of 10 largest companies (based on market capitalization) are technology platform companies: Amazon, Microsoft, Apple, Alphabet, Meta (Facebook)². **Many of the companies on today’s Fortune Global list did not exist a decade ago.** This is supported by significant investment power: For example, the MAGs (Microsoft, Amazon, Google) invest more than 40bn every year into their Cloud setup and deliver new services and features every day³.

2 Generation Z, the first digitally native generation, lives with and shapes their lives through the digital space: The first digital native Generation Z is growing up, and is used to constant feature updates, to quick and straightforward digital solutions indicating everything from their heart rates to distance to friends, to a continued flow of messages to their phones, watches, and other devices. Social media spaces that are used for documentation, storytelling, interaction, and creating visibility for a new invention or business idea. **If organizations want to remain relevant, their focus needs to shift to software** as the key element to produce and operate digital products that consumers will enjoy using⁴.

3 The role of the technology (IT) function in organizations has evolved: In 2003, Harvard Business Review published an article by Nicholas Carr, “IT doesn’t matter”⁵. Carr presented the notion that IT is not a differentiating capability but should be sourced from the best location, with price being a key determinant. At that time, the technology function was considered a simple productivity factor. In other words, business transformations were seen to be driven by “management” people and technology had to “just deliver”, with delivery measured against cost advantages through shoring, standardization and industrialization. Of course, this was reflected in how careers in

IT evolved. Careers in onshore locations were driven by establishing themselves in team leadership and coordination roles. In 2011, Marc Andreessen published his view that “Software is eating the world”⁶. Accenture, in 2014 stated that every business is “a digital business”⁷. A fundamental paradigm shift: **With this IT and technology no longer follow the sole mantra of industrialization – but instead we see a rise of craftsmanship, or more specifically, of platform-based craftsmanship, building upon technologies such as Cloud, utilizing services and frameworks, driving the value creation of any business.**

4 Tech talent and true expertise are rare to find and hard to keep: Businesses in the future will only thrive if sustained by deep technological expertise. This requires e.g., native software engineering, security and infrastructure experts, that can work with and incorporate the newest technologies, the many available frameworks and understand how to apply those in a concrete business context. To develop such expertise, businesses are well advised to not only look at how a workplace might be designed, but at how they can enable continuous learning and education. **It is key to give IT talent expanded responsibilities and visibility across the business value chain, and actively consider how to create working models that bring IT experts together with industry-specialists to drive business outcomes.** Furthermore, organizations must allow their talent to work with the latest technologies, thinking of the immense innovation speed that comes with the Cloud, ever-advancing frameworks, agile, AI and their business-related application.

Consequently, organizations need to change the way they operate: In disrupted and high-speed markets, it is not enough to create an innovative product as a one-off “change initiative” but to re-think the operating model to open up space for new and continued business evolution. Organizations must be able to constantly integrate the latest technology innovations and utilize them as value levers for their customers’ needs.



The reality today

In contrast to this ambition, today's reality looks relatively blank. The Knowing-Doing gap⁸ in large corporations, that are stuck in hierarchical organizational models, is still significant.

“Why is it every time I ask for a pair of hands, they come with a brain attached?”

This quote, attributed to Henry Ford is perceived as harsh nowadays. Yet, we observe that many organizations are stuck – having been built based upon principles of the Industrialization age, when ordinary workers focused on execution based on top-down orders and when career development depended on leading large numbers of people and being the spearhead of big departments.

This is also reflected in the way how IT systems themselves have been designed and built. Conway’s Law from 1968 says that “organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations.”⁹

Based on this Law, in today’s large organizations we find IT systems that are static, horizontal, and reflect the business’s hierarchical organizational architecture. Such IT systems were built to stay, taking the form of large monolithic systems supposed to run for 20 years and beyond.

IT is no longer just a support function

Despite many change initiatives being launched, the IT function in many corporations nowadays is still considered a pure support function. In such organizations, business owns the investment budget and IT is regarded as a supplier, delivering functionality within specific time, budget, and quality constraints.

Today, more and more companies find themselves in a dead-end, technology-wise. This is due to the technical debts created over the years, with inflexible IT systems that grew incrementally and became increasingly complex. As a response, companies usually start significant multi-year transformations to renew their platforms. If successful, this leads them to be “just right” for the next few years until the next extensive change must be started.

Considering the continuous nature of change, the problem of such an approach towards developing systems and the organization supporting such systems is obvious: If market changes occur continuously, if new technologies arise every day, if customers demand frequent adoptions, companies are significantly constrained if they continue to stick to architectures and practices that allow for go-lives only a few times per year and that require large retest efforts.

Today’s businesses can no longer thrive if a transformation effort needs to be executed linearly due to systemic constraints.

Hence, we believe that a new and different approach of organizing, designing, building and managing both the IT systems as well as the organizations and teams that take care of, develop, and maintain those systems, is needed.



A solution approach from the IT side

Setting up systems for continuous change and innovation is pushed heavily through concepts such as Cloud, DevOps, Automation, Microservices and the business agility movement.

Increasing the adaptability and readiness of IT systems for change is, for example, supported by microservices, data mesh or event-driven architectures. In essence, the understanding is that decentralization and segmentation of the overall IT systems in smaller pieces increases flexibility. Moving away from giant monoliths is encouraged to react quickly to changing demands, as IT components are more independent from each other and can be developed in separate cycles, eventually based on different technology stacks. This goes hand in hand with transitioning from just a few very risky deployments per year to frequent deployments of smaller chunks.

Automation, CI/CD and DevOps play a critical role to enable such a transition. The Cloud as a core technology supports this idea by providing infrastructure, platform, and application services “as-a-service”, allowing an organization to fully concentrate on the business application only. At the same time, the rest is delivered “out of the box”, is scalable and can be fully integrated into the overall automation chain. Hence, the Cloud plays an important role as an enabler and accelerator for agility and adaptability¹⁰.

Producing innovation in shorter time cycles

This supports the current developments, which we call the “third wave of agility”¹¹. In the first wave, that started a decade ago, companies used agile mainly as software development methodology (using e.g. SCRUM on team level) to deliver the “right” software in shorter turnaround cycles. Whereas this was the “de-facto standard of development” for startups, large corporations adopted this way of working rather in dedicated departments or business areas, usually treating this as an “IT only” thing. The second wave kicked in about 5-6 years ago, when the agile idea was lifted on program level (using methodologies such as SAFe¹²) to deliver complex programs that cross various departments in an agile way. However, both waves did not necessarily support the overall aim to produce innovation in shorter turnaround cycles effectively. The reason is that too much focus was given to the IT side only, neglecting the business side and not aligning with its core principles.

But how to achieve decentralized decision making when your governance is still set up hierarchically? What is the value of an IT sprinting in two-weeks cycles if business departments are not set up to support this? How to keep speed and agility if, e.g., your budgeting process runs for months? No wonder that many foggily implemented agile engagements have returned less satisfactory results¹³. Insights and reflection led to a third wave, that we currently see organizations embarking: The wave of business agility. **The key element is to understand that “the ability to compete and thrive (...) requires that everyone integral to delivering solutions—business and technology leaders, development, IT operations, legal, marketing, finance, support, compliance, security, and others” are involved and collaborate to continuously recreate and innovate products and services.**^{12, 11}

Build systems for constant adaption

This means that all elements of changing the organization, its operating model, its approach towards attracting and developing talent, its leadership mindset, and its IT systems, architecture and infrastructure need to be aligned and enabled coherently. Only then can the agile idea lead to improvements¹³. In our

view, all this calls for a fundamentally different idea of looking at how IT systems are treated: **We argue for a shift from “building for endurance” (based on frameworks that are built to stay but outdated a few months later) to “building for replacement and continued innovation” whenever there is a changing need or a new technology that better supports the business.** To achieve this, we need systems that are built for constant adaption, where it is planned by design that every 1, 2 or 3 years, those systems (where it makes sense!) are entirely refactored or even rebuilt – more as a continuous process than a significant one-time effort –, eventually replaced with new technologies and new frameworks. This implies the call for systems that are more independent from each other and can be tested and deployed without major integration and retest efforts. Additionally, this leads to significantly lower deployment risks.

The fundamental advantage of such an approach is that this avoids technical debt being piled up in the first instance, and the existing debt is further pushed to be “offloaded”. It also avoids that frameworks and technologies that are significantly outdated are continued to be utilized, reducing maintenance and security risks. Furthermore, this allows talent to work with the latest and most remarkable technologies, providing a more motivating work environment instead of handling legacy technology.

As in today’s rapidly evolving times, every system becomes legacy fast, many digital companies already apply such principles– and still, many large organizations have not yet incorporated this into their “core principles” and are not yet fundamentally rethinking and resetting their systems and organizations. In fact, what we see in today’s large organizations is that the described concepts of agility, Cloud, DevOps, automation or microservices are not yet applied widely and consistently.

Either these concepts are implemented in single areas only, or they are not supported by systemic changes on the business-side – such as adaptations in e.g. the funding governance processes. It seems that the core systems that organizations are built upon are very often still designed and built “to stay”, which holds back organizations from becoming more flexible – a most likely unintended implication of Conway’s Law.



A solution approach from the organizational side

Similar to major IT transformations launched to overhaul technical debt, in many organizations, every new strategy cycle – i.e., every three to five years – a significant reorganization is still meant to kick-off the strategic reorientation of the business.

This is pursued from top leadership with the clear intent to disentangle the organizational debt in the form of e.g., outdated business processes, structures, and policies – and to build a new setup to support the new business strategy.

In linear thinking, to adjust to the increasing acceleration of technological innovation, substantial changes for the existing organizational structure must be introduced to produce a significant strategic shift.

In our view, in uncertain times, radical, top-down driven organizational restructuring is seldom the correct method to achieve the desired business benefits. Two main reasons support our idea:

1. The more radical a technological innovation is, the more significant is its impact on the revenue architecture of a business¹. **This means that more radical re-adjustments will be required in shorter periods of time to cope with the accelerated speed of innovation.**

2. Research shows that “even the most successful restructurings take three to four years to bear fruit”¹⁴. **This means that it takes too long to capture value from having shaken up the organization in the first place.**

So how to set up organizations for continuous evolution, able to adopt quickly to changing needs?

In the context of innovation at enterprise level, scholars have suggested dual operating models, using various terms, such as “both/and system”¹⁵, “transformation A, transformation B”¹⁶ or “dual transformation”¹⁷. They propose parallel structures to reinvent an organization’s existing operations whilst creating a new future. In this thinking, the mandate of each element in the dual structure differs. Kotter¹⁸ sees the first pillar as operating the core business, whilst the second pillar acts as a transformational force to the old, designing and implementing strategy.

Anthony et al¹⁷ emphasize – in contrast – that “transformation A” itself has an innovation purpose aside from operating its core, to reposition the core business, whilst “transformation B” should create a separate, disruptive business for new growth.

How to enable dual transformations

To enable dual transformation, integrating mechanisms such as “capabilities exchanges”¹⁶ – e.g., in the form of cross-teams for resource exchange – are suggested in organizational leadership research. From a structural perspective, the “powerful guiding coalition” introduced by Kotter is enhanced by a network structure that involves change agents based on their voluntariness¹⁸ – amplifying the signaling of focus and urgency.

Such models were seen in practice already around the year 2000, for example, in the newspaper industry, when online newspapers first emerged, and publishing houses created separate organizations in the form of online editorial teams to act as disruptors and build up new revenue streams. Yet, as of today, these “dual” models still present a substantial leadership challenge: They require effective mechanisms and efforts of reintegration into the incumbent operational structure¹⁷. Additionally, separating transformational roles from operational roles with incremental mandates can create perceptions of inequality in an organization.

In today’s non-linear, high-paced and ambiguous contexts, we picture an organization like an organism that continuously evolves –, and we see organizational change as an effort of continuous renewal. This means that we encourage the notion that the various design elements of an organization need to continuously evolve, re-adjusting to capture new value opportunities.

The expertise and experience of everyone involved in knowledge and value creation is crucial, opening up new spaces for innovation¹⁹. Based on a mindset of collaboration and solidarity, successes and failures are shared. With this, no detached “management” layer unilaterally acts as driver for change, but those involved in creating value continuously drive change themselves.

This implies that teams are given autonomy to choose how to best organize their work, with which other economic actors to cooperate to produce the best results most effectively, and how to define their own success metrics. In practice, mechanisms such as clear meeting and voting rules support transparent collaboration and decision making becomes independent from position or influencing power. Leaders are those who balance visioning with hands-on, on-the-ground actions, enabling their teams and calling upon veto rights to direct the work productively.

The key element here is the understanding that this redistribution of accountability to the team level comes with increased responsibility for individuals and teams to think for their imminent context and how their work integrates with the broader context.

At the enterprise level, we envisage a modularized organizational architecture as manifestation of many organic teams that constantly adapt. Such adaptation needs to be tightly linked to the principles of taking responsibility for continued value creation, integrating distributed information into collective understanding and focused execution. This avoids going too far in flattening an organization, giving decision autonomy to individuals without expecting accountability or teams operating in isolation.

Our thinking is based on the mindset of continued evolution: Dissolving a team, merging teams, creating new teams, or re-orienting individual talents is considered beneficial to the efforts of improving value creation and does not indicate failure an initiative or low performance of an individual.

In summary, we sustain that with such an approach, reorganizing efforts no longer need to be considered as intervening actions nor as a means of demonstrating leadership power. Based on a mindset and framework of principles for continued re-configuration, leaders act as architects by setting high ambitions, establishing guardrails, and holding the space for constructive debates.



Bringing it all together

The key intent with our thinking is not to replicate what others have stated, since many models, frameworks, and playbooks are established to convey aspects of an agile organization or the corresponding technological architecture.

We also know from practice that reorganizing and adaptation processes are complex, multifaceted, and always contextual endeavors, and our intent is not to propose simple rules to follow for guaranteed outcomes.

Going back to Conway's Law, in our view, neither the organizational structure of a business alone nor the technology-driven developments alone should guide how we might best re-orient towards new value creation.

We want to encourage IT and business organizations as one unit, working in unison as small, nimble teams for continued renewal and value re-creation.

This means that, in an initial effort, refactoring applications as part of an IT legacy modernization endeavor needs to be approached in conjunction with re-adjusting the setup of IT and business teams to develop and operate the applications and products effectively.

Or, vice versa, the effort of reorganizing business functions to focus teams on building new products and revenue streams needs to be accompanied by aligning IT functions and renewing and rebuilding the underlying technological architecture and legacy estate.

Once a certain degree of deconstruction in both the technological and organizational architectures have been achieved, of course, new reorientations driven by the market, consumer behavior or new technology will become less complex and faster to execute since the teams in charge are already small, nimble, and disentangled from traditionally more static hierarchical structures.

Combine organizational and technological capabilities

The combined efforts of the organizational capability and its technological capabilities under the same architectural principles leads to a setup made for continued adaptation, with no need to direct energy to big reorganization efforts any longer. If small units that operate in a lean, highly expert-driven setup, are focused on value and – actively by themselves – re-adjust their setup as needed, this frees up space to focus on producing innovation in shorter turnaround cycles.

Highly contextual, such a deconstructed setup needs to be integrated by the glue of principles that guide the work and practices at the activity level, reflecting “how we do things in our world”.

Ambition and priority setting should govern investment- and decision-making processes and ensure that choices made are grounded in economic reality.



The value of continuous resetting

We see significant value in disentangling organizational and technological architectures in conjunction and in establishing a setup that emphasizes the evolution of small and highly autonomous teams. It's those teams that create new business value for the future, developing and operating new services and software-first products.

Not only will the resulting structural setup be more resilient under changing conditions, but it will also enable capturing new market positions in a focused manner and with less internal frictions associated with any traditional reorganization. It will also allow an organization to use the latest technologies as those “smaller system pieces” are frequently redeveloped. Compiling large buckets of technical debts is thus avoided. This has also a positive impact on talent attraction and retention, as it is way more motivating to work with cutting-edge technology and continuously be engaged in improving than to maintain and patch legacy tech²⁰.

Of course, such a journey of disentanglement and rejuvenation requires fundamental efforts and investments, and it is obvious that coming from the “As-Is” to the “To-Be” as outlined here is a substantial paradigm shift which is far from being simple and straightforward. But to start thinking about how a target state could look like, what to achieve and why - which we tried to lay out here – must be the first step of such a transformation journey.

Yet, the “creative destruction” of existing competences through “entrepreneurial” actions – as mentioned by Schumpeter already in 1934²¹ – will ultimately outweigh the investments.

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