‣ Agile in a Complex World

How organizations become
both flexible and stable

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Agile in a Complex World
How organizations become both flexible and stable

Apple and Amazon have a combined market value of nearly US$2 trillion.[1] Fundamental market changes are no longer a matter of decades but years or months. Disruption is the term commonly used in this context. Technologies are developing at exponential rates, as are the products and services based on them. Customers once placed a premium on robust qualities and long service lives but are now interested primarily in adaptability and the rapid availability of new functions. The complexity of the solution space increases with the degree of uncertainty about customer requirements and the necessary solutions.
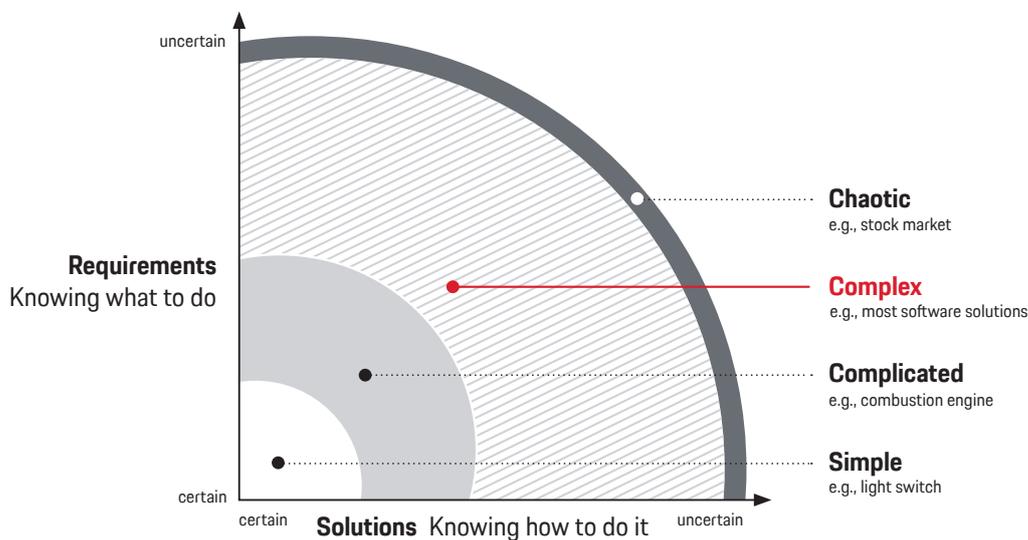
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Fig. 1 Agility as a key to solving complex problems[2]

> » **It's not the largest companies that will survive but the most adaptable ones.**
> Joe Kaeser on announcing Siemens' new 2020+ agile corporate strategy, 2018[3]

As a consequence, organizations are coming under increasing pressure to adapt their structures and processes to their ecosystem's rate of change. Whereas traditional organizations are designed for and measured by stability in their structures, responsibility profiles, and goal systems, agile organizations take a different path: stability is combined with adaptability to maximize the speed of anticipating external changes that

will affect the organization. Stability is the foundation for the requisite flexibility, decisional speed, and adaptability needed to master the challenges of an increasingly chaotic world.

Agile organizations take a customer-centered approach to spot changes in the market and to quickly and efficiently anticipate them in their products and services. They rely on frequent, incremental improvements to their products to meet customer expectations. The philosophy behind the agile approach—focus on essentials and seek continuous improvement—also helps in becoming more productive. Ultimately, agile organizations strive for perfection and are not satisfied with the status quo.

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[1] Capital IQ, May 2019
[2] Based on Stacey, 1999 "Agreement and Certainty Matrix"
   [Stacey, Ralph D. (1999). Strategic Management & Organisational Dynamics: The Challenge of Complexity. Third Edition. New York: Financial Times Prentice Hall.]
[3] https://www.siemens.com/press/pool/de/pressemitteilungen/2018/corporate/2018-q3/PR2018080262CODE.pdf

Attributes of agility:
What sets an agile organization apart?

Agility is not a clearly defined term but rather a synonym for an organization's capacity to constantly reinvent itself and adapt to its environment. An organization is agile if it succeeds in anchoring and coordinating certain features and approaches at a deep level of its culture, processes, and structure. Such organizations display the following six attributes:

100 percent customer-centric.
Goals are aligned with customer requirements. They are the basis on which the organization is designed. Structures, processes, methods, and tools are adapted or eliminated if they no longer serve the aims of customers. Competitors are monitored, but the customer is the only barometer for adjusting the organization's activities.

// Jeff Bezos, CEO and founder of Amazon said in an interview that many people consider Amazon to be "the earth's most customer-centric company" in this respect: "I would define Amazon by our big ideas, which are customer centricity, putting the customer at the center of everything we do."[4]

....

Entrepreneurial.
An entrepreneurial approach to opportunities and risks is solidly anchored on all levels of the organization. Assuming responsibility for actions and decisions is a deeply rooted part of the culture. This leads to both risk management and prompt decisions on how to make use of market opportunities. Mistaken decisions are analyzed in transparent fashion, and the necessary conclusions are resolutely drawn and anchored in the organization.

// At Haier, a Chinese manufacturer of household and other appliances, the aim of CEO Zhang Ruimin is to transform every employee into a micro-entrepreneur who leads their own microenterprise within the Haier Group. That includes full responsibility for the budget and P&L. These "micro-companies" within the company also have their own business units and independently shape the business related to their product.[5]

Stable and adaptable.
Agile organizations are characterized by a backbone that gives them stability. Teams in this part of the organization focus on efficiency and productivity, driven by standardized procedures and processes. At a production company this could be the manufacture of core products. At the same time, this backbone provides the freedom to respond quickly to new market opportunities and deploy resources flexibly where needed. These teams also work with standardized processes, but with a focus on speed and innovation. Agile organizations have mastered the art of balancing stability and flexibility.

// EnBW, a German energy provider, introduced a dual structure in which classic business divisions—such as the regulated grid and conventional power generation—are hierarchically organized and optimized for process security and efficiency. Areas that focus on digitalization projects, smart grids, and renewable energies, however, benefit from the constant give-and-take of an agile networked organization. The interplay within this parallel structure is fruitful, as resources become available to pursue visions.[6]

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Objective decision-making.
Decisions are always based on objective data. Hypotheses are developed from data and then tested early on in contact with customers. When a hypothesis proves to be correct, it is systematically allocated more resources. At the same time, unsuccessful approaches are promptly and resolutely discontinued. This objective quality also extends to internal decisions, such as choosing new employees.

[4] https://www.myfeelback.com/en/blog/customer-centric-lessons-amazon   [5] http://knowledge.ckgsb.edu.cn/2015/10/05/china-business-strategy/haier-is-disrupting-itself-before-someone-else-does/
[6] https://www.fuhrmann-leadership.de/wp-content/uploads/2017/10/personalmagazin_mit-dem-zweiten-geht-es-besser_16.10.2017.pdf

// At Otto.de[7], a leading German based e-commerce player, every team has constant access to the key performance indicators influenced by its specific activity. Anyone can monitor the changes that occur when previously established hypotheses are implemented. This ensures that decisions on pursuing specific ideas are transparent and objective for everyone.

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Sharing knowledge.

Agile organizations have realized that innovative solutions can only be developed by sharing knowledge and working across departmental lines. On one hand, employees from different teams are grouped into specialized domains, thereby ensuring the exchange of specific expertise. On the other, agile organizations utilize communities of practice, in which employees team up to tackle certain topics or problems on an interdisciplinary basis. These communities of practice often produce results (e.g., test automation tools) that help the entire organization work in more efficient ways. In addition, teams present their progress, latest results and ideas, and mistakes to the entire organization at regular meetings.

// At Spotify, team members are organized into so-called chapters that facilitate the exchange of knowledge within certain specialized domains, such as testing. These are equivalent to classic specialist divisions.[8]

Modern management.

Managers at agile organizations focus on setting the right coordinates. In essence, this consists of making entrepreneurial decisions about prioritizing goals, utilizing resources, and providing suitable boundary conditions for their teams. Managers at agile organizations no longer offer concrete guidelines for activities or solutions. They are nevertheless sought as experts and sources of know-how in their respective domains.

// Laszlo Bock, head of Google's People Operations, has a clear take on the role of managers—they need to focus on sharing leadership, clearing roadblocks, and inspiring teams to succeed. This view was echoed by Eric Schmidt, former CEO of Google, when he said, "Managers serve the team."[9]

[7] https://dev.otto.de/tag/agile/   [8] https://labs.spotify.com/2014/03/27/spotify-engineering-culture-part-1/
[9] https://www.inc.com/marcel-schwantes/googles-insane-approach-to-management-could-transform-your-company.html

Agile transformation:
Three-dimensional change

Agile transformation requires changes in three dimensions. On an overarching level, culture and values need to be examined and adjusted to reflect the goals and attributes of an agile organization. The introduction of agile methods and tools allows the teams to take an iterative approach marked by continuous learning. For this to work throughout the organization, suitable framework conditions (e.g., IT equipment and New Work environments) must be provided and processes (e.g., material procurement and team budgeting) adapted where appropriate. The three dimensions are as follows:

1

▶ **Culture and Values**

At agile organizations, culture and values are not vague terms but rather serve as guidelines for all decisions. It is no coincidence that one often hears about Google or Amazon culture. The culture of an agile organization is essentially a mirror of its attributes. Modern management, which has shifted from "command and control" to employee empowerment, is just one example. Agile organizations generally place a higher value on individual employees and their interaction than on structures and processes. This mindset—often expressed in company values like "think big"[10]—and support for a culture based on such values have the greatest effect on agile transformations. Yet changes to this dimension require more effort and time than with any other. This part of the transformation is often connected with difficult decisions on retaining personnel and is therefore handled personally by CEOs. Without their full commitment to agile culture and values, a transformation cannot succeed.

2

▶ **Methods and Tools**

An agile transformation becomes immediately evident when agile methods and tools are introduced. They enable teams to take responsibility for achieving goals in an iterative process and thereby manage themselves. This frequently takes the well-known *scrum* approach, by which teams make decisions based on prioritized lists of requirements (goals). A *scrum* approach specifies standardized roles, activities (meetings), and artifacts. Digital tools to enhance communication and transparency in the team and the organization are levers that can be quickly implemented but on their own have limited impact.

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[10] https://www.amazon.jobs/principles

3 ▶ Framework conditions and Processes.

When putting agile methods and tools into practice, teams at traditional organizations quickly encounter obstacles in their environments. Even established structures like specialized departments can contradict the fundamental principle of interdisciplinary teams directing themselves in their day-to-day work. Suitable framework conditions and processes therefore need to be created and adapted to meet the requirements of the agile methods and tools. Instead of focusing on predetermined activities, budgets are allocated to goals and the requisite resources. Teams have the liberty and responsibility to determine the concrete details of their budgets as they work to achieve their goals. Whereas goals were once set for specific areas and with reference to individual employees, they now cascade top-down to all the teams and are formulated as team goals.

Agile organizations consistently follow agile values and have corresponding cultures. In addition, framework conditions and processes are always designed to achieve goals and enable the desired attributes. However, the application of agile methods and views needs to be more differentiated, especially during the transformation from a traditional to an agile organization. In such cases there will continue to be tasks, and therefore teams, that do not experience any added value from iterative, self-directed, interdisciplinary, and agile modes of work. These include teams that perform very standardized and transactional tasks such as bookkeeping. Likewise, the production of technical hardware does not benefit from a self-directed team approach that designs its own solution space and receives new goals within short cycles. For these areas, the maxim of greatest possible efficiency continues to apply, even at agile organizations.

Areas which do not need approaches generally considered agile (e.g., *scrums*) can and should use agile elements and ideas to streamline their processes while simultaneously making them more customer centered. This can include introducing general and transparent task-prioritization processes or team guidance with the help of KANBAN boards to limit "work in progress." It is also beneficial to enable such teams to regularly review their working modes and processes in order to continuously find ways to improve.

How agile is your organization?
Take this self-assessment to find out!

For the three dimensions of an agile transformation, assign a number from 1 to 7 for how each of the statements describes your organization

1: never | 2: seldom | 3: sometimes | 4: neutral | 5: often | 6: usually | 7: always

▶ Culture & Values

_____ Information is transparent and provided to everyone.

_____ Decisions are made on the basis of facts and data.

_____ All the company's employees pursue a shared aim.

_____ All employees are familiar with the vision and purpose of the organization.

_____ Decisions are primarily customer-centric, not hierarchically driven.

1

| Total |

▶ Framework conditions & Processes

_____ Processes are designed end to end throughout the company.

_____ Budgets can be (re)allocated within the same year to meet priorities.

_____ Teams can utilize their assigned budgets freely and without additional clearance.

_____ Employees have set periods of time in which to pursue their own projects.

_____ Employees set their own personal goals.

2

| Total |

▶ Methods & Tools

_____ Employees work in small, self-directed teams.

_____ Products and services are developed and brought onto the market in short iterative cycles.

_____ Teams themselves determine which methods and tools to use.

_____ Employees voluntarily organize subject-specific teams to exchange expertise.

_____ Modern project spaces and new communication tools (Skype, Slack, etc.) are established.

3

| Total |

Calculate the average value for each of the three dimensions.

Then compare your overall total with the scale below to estimate how agile your organization already is.

| Total Score |

1–7 points
▶ Agile beginner

First start with individual teams and test the application of agile methods & tools

8–14 points
▶ Agile transformer

Place increased focus on the dimension "culture and values" and adapt existing "framework conditions and processes" consistently for agile methods & tools

15–21 points
▶ Agile pacemaker

Now, take the step to design your organization fundamentally according to self-contained value chains and transfer this into self-organized small teams
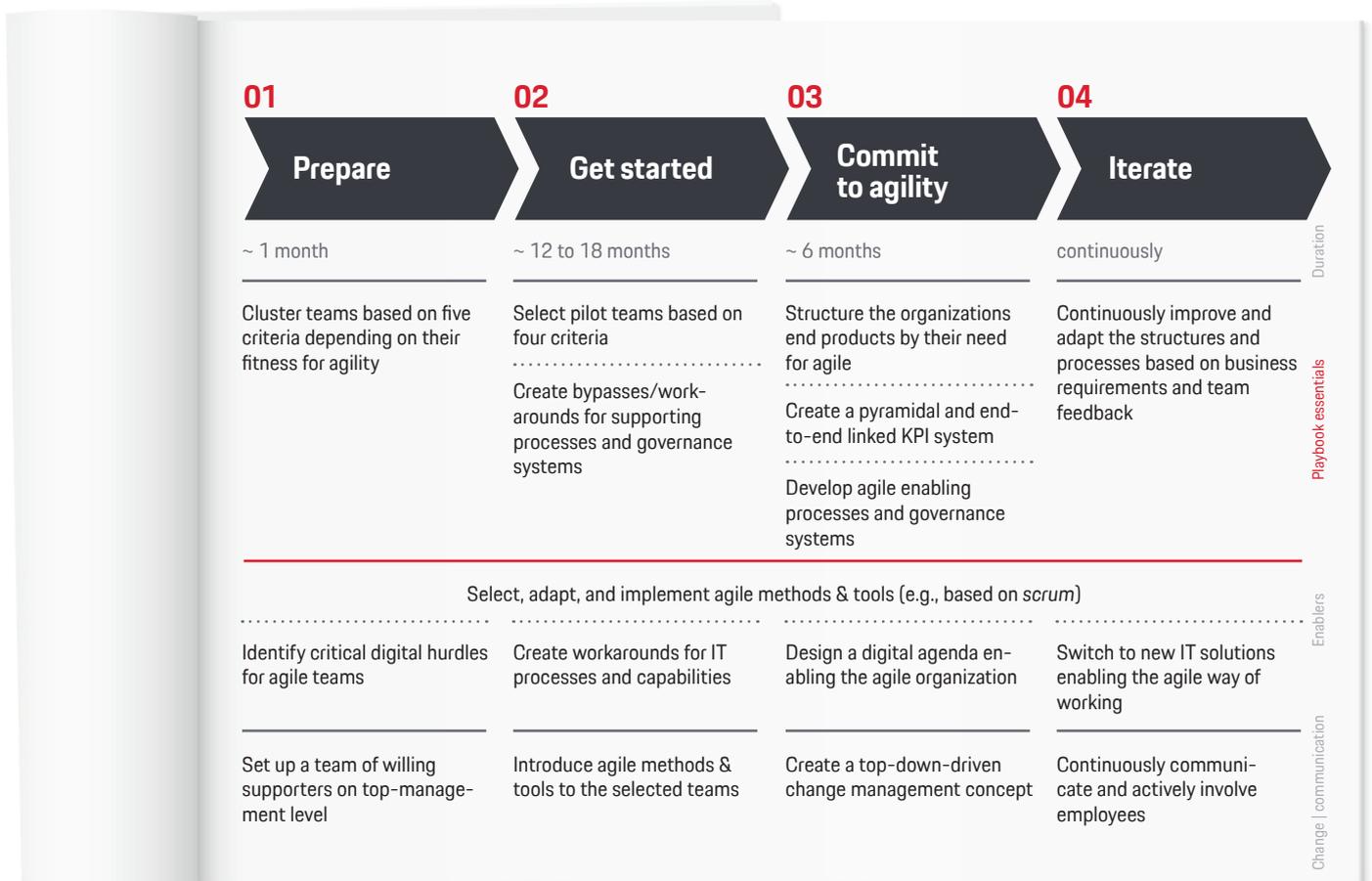
Playbook for CEOs:
Four steps to an agile organization

Transformation to the values and culture that foster agility should be pursued from the top down. That includes not tolerating behavior that impedes an agile transformation. At the same time, it is of paramount importance for top managers to embrace the desired values and thus serve as examples. In addition to the CEO, it is advisable to form a team of willing supporters at the top level of the organization. This team is ready to leave familiar ground and embark on new paths, with a firm conviction that the transformation is needed. The task of this top management team is essentially to persuade employees and partners, foster enthusiasm for the new course, and remove any obstacles. Eliminating reserved parking places in front of the building entrance can symbolize change but is is no way crucial for the transformation's success. It is more important to refraining from decisions based on personal opinions and to respect the agile processes established for decision-making.

// Spotify introduced a new feature in 2015 called Discovery Weekly, which generates customized playlists for users. Daniel Ek, CEO and founder of Spotify[11], admitted in an interview published in 2018 that he personally would not have developed it. He had frequently expressed reservations about it at strategy and prioritization meetings. Nevertheless, it was ultimately developed and has become one of Spotify's most successful features.

The four steps to an agile organization start with selecting suitable teams and then launching a pilot phase that focuses on testing and learning. The third step is designing an organization that is agile throughout, and the fourth is putting it into practice with an iterative approach.

	01 Prepare	02 Get started	03 Commit to agility	04 Iterate	Duration
Duration	~ 1 month	~ 12 to 18 months	~ 6 months	continuously	
Playbook essentials	Cluster teams based on five criteria depending on their fitness for agility	Select pilot teams based on four criteria	Structure the organizations end products by their need for agile	Continuously improve and adapt the structures and processes based on business requirements and team feedback	
		Create bypasses/work-arounds for supporting processes and governance systems	Create a pyramidal and end-to-end linked KPI system		
			Develop agile enabling processes and governance systems		
	Select, adapt, and implement agile methods & tools (e.g., based on *scrum*)				Enablers
Enablers	Identify critical digital hurdles for agile teams	Create workarounds for IT processes and capabilities	Design a digital agenda enabling the agile organization	Switch to new IT solutions enabling the agile way of working	
Change communication	Set up a team of willing supporters on top-management level	Introduce agile methods & tools to the selected teams	Create a top-down-driven change management concept	Continuously communicate and actively involve employees	

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Fig. 2 Agile transformation—the playbook

[11] https://www.spotify.com/de/discoverweekly/

01 | Prepare:
Evaluate team fitness for agility

Relevant teams generally have about seven employees, do not necessarily have the same disciplinary head, and follow a shared, clearly delineated goal. The following five criteria are used to identify teams that are suitable for introducing agile methods and tools to a traditional organization:

▶ The demands placed on the team change quickly and frequently.

▶ The team has direct customer contact via its product.

▶ The solution space for achieving the goal has as few limitations as possible.

▶ An interdisciplinary approach is required to achieve its goal.

▶ The team's goal is highly relevant to the organization.

These criteria can be used to divide teams into the following five archetypes:

End-to-end solution teams

experience the most added value from the introduction of agile methods and tools. They bear full responsibility to customers for a (sub-)product and command all the necessary skills and resources. Their dependence on other teams in the organization is very limited or technically easily feasible (e.g., via defined APIs). These are often digital product teams responsible for both the content and technology of a complete sub-product, such as an app, and their resources include a range of different skills.

Demand-driven delivery teams

are present in various areas of the organization. They generally have a certain mix of specialists and handle tasks that are only partially routine. They also work largely independently of other teams. They often work on an event-driven basis and need to prioritize simultaneous demands. One example would be maintenance teams in production departments who perform routine jobs yet also need to intervene in an unplanned, event-driven manner.

Cross-functional solution teams

are interdisciplinary product teams with significant technical or process-related dependencies on other teams. One example would be simultaneous engineering teams in vehicle development. They generally fulfill the criteria for working with agile methods and tools, although the impact on results can be limited. Structural and procedural impediments at traditional organizations are too large to enable coordination among these teams.
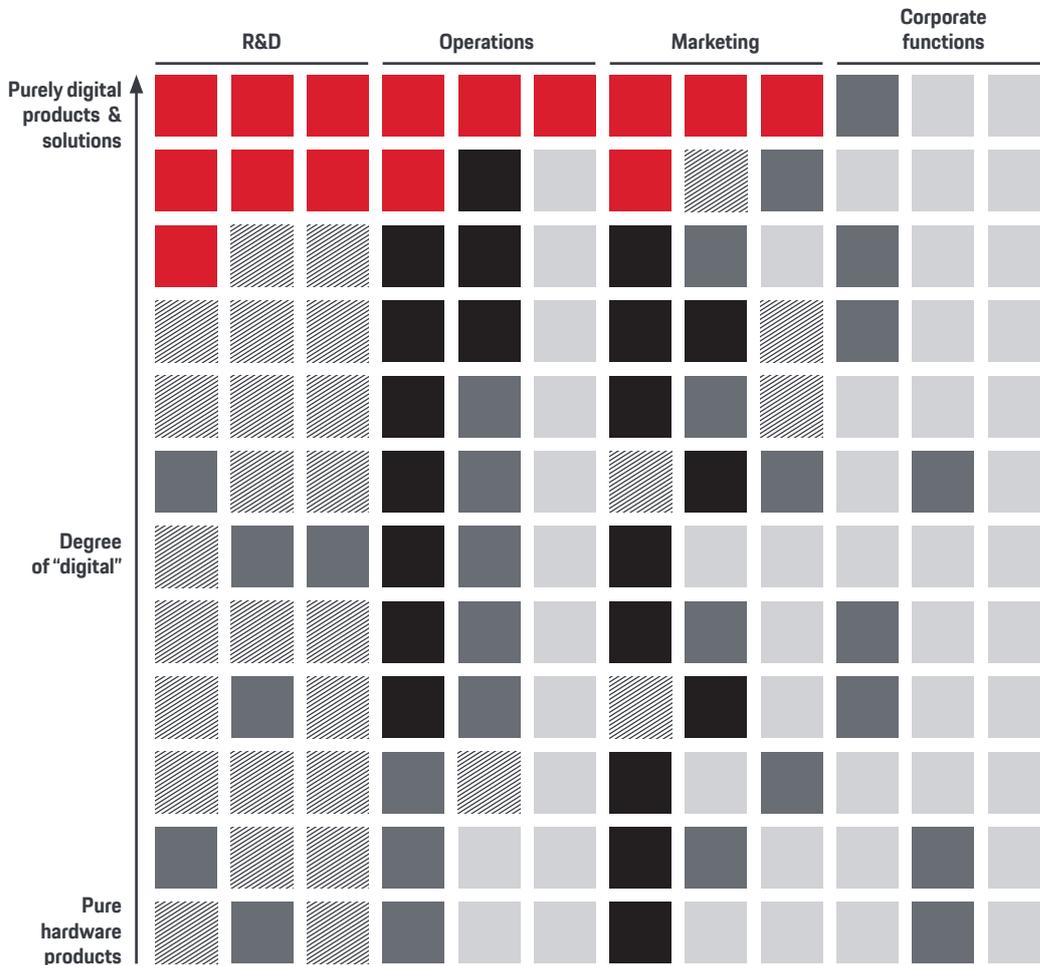
Specially skilled design teams

also have conceptional and creative tasks. But their solution space is both limited and dependent on the milestones and deadlines of other teams (that are not always agile). Working with agile methods and tools makes general sense here but may offer only modest added value within the context of a traditional organization. Frequent relevant examples include concept and process planning teams in logistics or production.
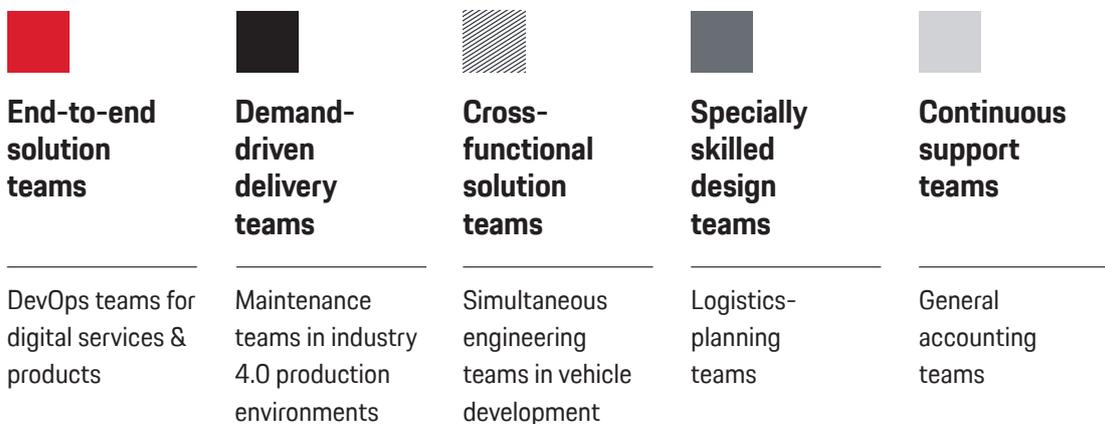
Continuous support teams

handle recurrent transactional activities. Agile methods and tools only provide these team with added value to the extent that they help streamline processes, encourage employees to assume responsibility, and foster continuous improvement. Classic bookkeeping teams work in this context.

This classification results in an informational map that indicates the most beneficial areas for agile methods and tools.

Exemplary Agile Teams Map (to be specified for each organization)

Archetypes incl. examples

End-to-end solution teams	Demand-driven delivery teams	Cross-functional solution teams	Specially skilled design teams	Continuous support teams
DevOps teams for digital services & products	Maintenance teams in industry 4.0 production environments	Simultaneous engineering teams in vehicle development	Logistics-planning teams	General accounting teams

Fig. 3 Archetype-based evaluation of team fitness for agility

02 | Get started: Select pilot teams and start

Ideally, an agile transformation is performed along the value chains of an organization's end products. In reality, this is often not possible in traditional organizations because, for example, the value chains are distributed across different areas, resulting in too much structural interconnectivity. A pilot phase is recommended to enable teams in various divisions of the organization to work in agile ways. The experience gained will lay the foundation for the overall agile transformation.

As with any major change, an agile transformation will face criticism within the organization. Both top managers and employees will promptly view failures as evidence that an agile approach is ineffective. Successful results are therefore very important and must be taken into account when selecting the pilot teams. The courage to give these teams the right framework conditions, even beyond standards and processes, will play a role in the success or failure of an agile transformation from the outset. In addition to examining the general fitness for agility, the following four criteria should be used when selecting the pilot teams:

▶ **Team constellation:**
members are high-potential individuals in the organization

....

▶ **Interdependencies:**
as little dependency as possible on other teams

....

▶ **Implementational strength:**
direct contact to the CEO driving the transformation

....

▶ **Impact:**
goals viewed positively within the organization

Starting with the first pilot team and the experience gained, additional teams are selected from the map and empowered with agile methods and tools. This should take place horizontally throughout the entire organization to gain as much experience as possible during this phase. It is helpful if individual members of agile pilot teams can transfer to subsequent teams and thereby maintain momentum.

The reality in traditional organizations reveals that the framework conditions and processes needed to allow the pilot teams to work with agile methods and tools are often only achievable as bypass or special solutions. Examples include upgrading IT equipment to meet the requisite standards and

then settling the expense via travel costs, or planning extra budget funding to ensure sufficient leeway if work needs to be extended beyond a given year. With more and more agile teams embedded in a traditional organization, there comes a point during a transformation when the "keep it up" directive no longer works. This often occurs after 12 or 18 months and marks the end of the pilot phase. The restricting factors of a traditional organization that impede the success of agile teams are too great, directly impacting results and team motivation over time. The agile teams and framework conditions tailored to them have created a parallel organization, which can no longer be synchronized with the rest of the organization. At the same time, decisions and transactions resulting from nonofficial processes and guidelines can generate unpredictable risks for the organization.

During a transformation, agile teams not only run up against process-related or structural limits but are also hindered by IT systems that are obsolete or not adapted to the requirements. For this reason, a digital transformation is an integral part of an agile transformation. The expectations associated with agile organizations can only be met with a digital infrastructure that meets the relevant requirements. Availability and free use of cloud capacities, for example, is rudimentary. This is the only way to rapidly scale-up new (digital) products and services in global markets. The same applies to digital and direct paths of communication. Xerox's Sentinel system solicits rapid and unfiltered customer feedback. The company uses direct email communication to send customer feedback to front-line account managers. Customers can give their feedback in the form of emoji, with negative ones triggering a detailed follow-up via an interactive algorithm.[12]

At the end of the pilot phase, the top management needs to decide whether to continue scaling up the agile organization. If it decides not to, the experience gained by the pilot teams should be evaluated individually. If necessary, allow individual teams to continue working with agile approaches and methods and successively decouple them from the organization. These new areas can be supported by appropriate framework conditions and processes. If top management decides to pursue the agile transformation on a comprehensive basis, it is time to embark on the third step and design a holistic agile organization.

[12] https://www.xerox.com/corporate-citizenship/2011/customer-experience/customer-satisfaction.html

03 | Commit to agility:
Conclude the pilot phase and prepare for transformation

Agile work in isolated teams and involving employees who retain their line position hinder an organization's thorough integration of agility. Fundamental changes to the organization's structure are needed. Existing structures—such as consolidated functional responsibilities of the sales department—are freed from their current silo structure and redesigned.

To begin with, the organization's end products (products, services, and other such results as year-end reports) are classified by their need for an agile approach. This classification is based on two key issues:

▶ Frequency, speed, and extent of modification due to demands on the end product
▶ Complexity of the end product, determined by the degree of uncertainty about customer requirements and necessary solutions (e.g. technology)

The greater the uncertainty as to the correct solution (end product), the means to achieve it (technologies), and the complexity caused by other factors (e.g., dependencies on other teams), the more important an approach using agile methods becomes. The value chains of the individual end products are set up end to end in closed form wherever possible. Teams within the value chains ideally have seven members (plus/minus two). This number can vary depending on the team constellation and environment. A top-down, cascading, successively building system of goals is developed to direct and synchronize the teams. The requirements are consistently and clearly prioritized and evaluated with regard to dependencies among the teams. Every agile organization is subject to a continuous learning process that subsequently disseminates proven results and replaces everything else with new ideas.

// Spotify has been working on finding ideal solutions to the team prioritization process[13] for nearly 10 years. In 2009 it began using OKR[14] to ensure synchronization of its many autonomously operating teams. In 2014 it switched to a development of its goal system known internally as Priorities & Achievements. Since 2016 it has been prioritizing what it calls "bets"—basically hypotheses as to which ideas with which resources in which team can achieve the greatest added value for the customer and therefore also for Spotify. These bets take the form of a rolling process on multiple levels of the organization and are used to synchronize team goals. Spotify's top priority continues to consist of defining only the team goals, not the paths to achieve them.

Even agile organizations will maintain teams that work in traditional hierarchies with standardized processes. Decisions about a team's methods and tools and the potential use of classic hierarchies with team leaders and managers do not affect the need to transform the culture and values. This, too, forms the basis of a thoroughly agile organization.

During this second, six-month phase the framework conditions and processes of the entire organization are adapted to the vertical value chains and the requirements for working with agile methods. For example, the logic of budgeting should be adjusted so that funds are no longer assigned to concrete project plans with predefined work packets, but rather to goals and the resources they require. Moreover, teams in agile organizations are free to use their available budget within set frameworks to achieve their goals. Value limits for decisions should be tailored to employees' responsibilities and appropriate compliance and controlling instruments installed. New ideas for evaluation and goal-achievement systems should be designed in exactly the same way as recruiting processes. In many agile organizations teams assume the role of manager as a counterpart to the HR department when making hiring decisions.

[13] https://www.fastcompany.com/90213545/exclusive-spotify-ceo-daniel-ek-on-apple-facebook-netflix-and-the-future-of-music
[14] OKR – Objectives and Key Results

04 | Iterate and improve:
Iterative rollouts and continuous improvement at agile organizations

After the basic design of the agile organization has been generated, the fourth step—implementation—begins. It takes the form of an agile project itself, in which the structures and processes of selected areas are adapted. The buzzword "agility" must be demystified throughout the entire organization. It is essential for everyone to understand that agile organizations are not about uncoordinated teams descending into chaos as they work on their own individual goals. Agile organizations are subject to intense pressure to perform, because every activity is evaluated for what it offers the customer. Employees are compelled to manage themselves on a daily basis and take the necessary steps to achieve set goals. Responsibility for decisions can no longer be "bumped up" but instead is borne by every individual according to their sphere of influence. An agile transition team supervises this process by identifying, prioritizing, and finding or effecting solutions for all obstacles encountered. However, certain elements cannot be successively changed but must be implemented like classic reorganizational projects. This includes the organizational and team structure of areas that will eventually be entirely organized as agile teams and assume responsibility for certain products and services. Continuous optimization of these structures then follows an iterative process.

Case study

Agile transformation often starts in an organization's IT divisions. Agile methods and tools enable the teams responsible for applications to plan and proceed in an iterative manner. At first, it seems like the new modes of work will generate the desired added value. Employees are more motivated; the amount of effort put into planning and documentation decreases; and the integration of different skills yields new ideas for products and services. But if customers are to have a functioning product, not only is the application itself needed but also the underlying infrastructure. This is typically assigned to a different department or division, and is highly standardized and optimized at successful, traditional organizations. Some companies do not alter the infrastructure so that stability and security is not at risk. Others entrust it to their IT people, who also work in small, customer-oriented teams (an internal customer in this case) that take a more flexible approach using agile methods and tools. As a consequence, neither approach succeeds in making

IT divisions fully agile. The application teams want to create new functions as swiftly and frequently possible to meet customer demands and exploit market opportunities. The agile infrastructure teams are evaluated by their ability to ensure stable, app-related operations at all times, and they focus their activities on achieving this goal, just like before the agile transformation. The same conflict arises as with a traditional IT organization, resulting in dissatisfied teams and customers still lacking daily or even hourly improvements to their applications.

The solution is known as DevOps—development and operations—
which means that one team is responsible for the application's development and operations as well as its requisite infrastructure. This is now a de facto standard feature of all digital-native companies, whereas only a few large, traditional companies have succeeded in transforming their IT into DevOps IT. The main reason for failure is that a transformation to DevOps cannot be

done "a little" or "bit by bit." It needs to be "either-or," with radical changes to the technology and the associated organizational structure.

// Otto.de[15] is a traditional company that has succeeded in transforming itself entirely. Over a period of nearly two years, it developed a completely new shop and set up the necessary organizational structure in parallel to operating its previous online shop. The result is impressive. Otto.de is the second-largest German e-commerce company (Amazon.de is the first), with sales of nearly €3 billion. The online shop is updated nearly 700 times a week, and Otto.de is increasingly becoming a marketplace for other dealers. The basic premise of its development was clear: ensuring that Otto.de can respond to any demand at any time, because seven years ago its board could not predict today's world of e-commerce, nor can it now for the future.

The next step:
From an agile organization to an agile company

Agile organizations display impressive decisional speed on all levels. An agile organization lays the foundation for more comprehensive agility within a company's overall context. A company can only secure relevant competitive advantages over decades if it makes fundamental structural changes and combines its organizational agility with the ability to continually and rapidly adapt its corporate strategy as a management tool. Three roles for an agile strategy development.

1 The "insight generator" from total anticipation to fast recognition

In classic strategy work, analyses of markets, customers, and environments are carried out at regular intervals. But frequent spurts of exponential growth with very high market penetration levels in short periods of time threaten to render some strategies obsolete before they can even be launched.

Instead of implementing strategy projects in regular cycles, one must continuously monitor the environment for tipping points based on defined threshold values. Trend radar continuously scans company environments for STEEP factors, whose relevance is regularly discussed with top management. When predetermined threshold values are exceeded, alerts are triggered that prompt event-driven strategy evaluation and adjustment.

One example of a tipping point with relevance beyond the automotive industry is the dependence of electric vehicles sales on battery prices. When battery cell and module costs sink below a certain level, electric vehicles can be sold profitably at prices that enable end-consumer TCO (total cost of ownership) to fall below that for combustion engines. When this point is reached—along with sufficient range and charging possibilities—an abrupt rise in demand for electric vehicles can be expected.

If battery-cost forecasts fall below a defined level, the radar system relays the need for the strategy's adjustment and subsequent implementation. Initial applications have shown that utilizing artificial intelligence can enhance the speed and accuracy of work with a trend radar.

2 The "scenario strategist" from a single direction to thinking in alternative futures

Scenario management, an aspect of strategic planning, can help implement rapid strategic changes. Strategic planning that envisions only one possible future development is a dangerous wager that fosters rigid instead of agile strategy work. Companies like Shell develop scenarios for different types of drive systems on the automotive market to derive measures (plan B) for their own company. By consistently examining new impulses from tipping points in various scenarios, they create

the conditions for rapid and successful implementation. An agile decision-making process during strategic planning ensures that scenarios derived from identified tipping points are discussed promptly with top management and the concrete measures required are conveyed and decided on. Consistent thinking in different scenarios also ensures that managers can prepare for changing environments and develop more robust strategies.

» **Plans are nothing, planning is everything.**
(Dwight D. Eisenhower)[16]

[16] https://www.brainyquote.com/quotes/dwight_d_eisenhower_149111

3 The "portfolio re-allocator" from project budgeting to resource allocation

The crucial point of every strategy is successful implementation. Classic approaches to defining, budgeting, and tracking initiatives for internal implementation are often no longer enough to achieve the right corporate adjustments in a timely manner. The relevant initiatives need to be given suitable and sufficient resources—whether in terms of capital or personnel. Available capital and employee expertise must be allocated in targeted ways that reflect the strategy. Depending on the situation, this can mean allocating capital to a company's existing business fields as well as new, future-oriented fields. In many cases the right business fields cannot be established internally within a suitable period of time, so shared approaches (M&A and venture investment) or partnerships are used. In the current environment of shortened product lifecycles and intensified competition, the ability to systematically and strategically allocate capital and resources is a key competitive advantage. An example of successful resource allocation is Siemens, which continuously invests in promising future fields of business and funds them through resolute divestment.[17]

Empowering by dividing:
Making companies structurally agile

A company's structural agility extends beyond the aforementioned differentiation between agile and traditional teams and divisions. Depending on the size of the organization and the diversity of its end products (and/or services and the like), overarching structural measures may be needed. One could be the carefully considered but then rigorously implemented spin off of certain areas into smaller and thus more swiftly acting organizational units. Another would consolidate separate value chains that face similar demands. Ever more disparate demands, depending on individual products and markets served, can seriously undermine the viability of large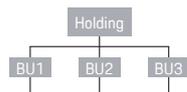 and diverse organizations. Siemens' 2020+ strategy and Continental's divisional split are just two examples of this trend. Google took this step back in 2015 by founding Alphabet Inc. as a holding. The "old" business of its search engine and associated marketing activities are consolidated under Google, while independent companies are advancing new products. For instance, Waymo is developing self-driving vehicles and is financially independent. Alphabet's subsidiary X (formerly Google X) develops completely new products of a radically different type. It works on so-called moonshots until they become products of sufficient developmental maturity to warrant their own organizational units.[18]

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[17] Siemens made five acquisitions and nine divestments from 2014 to 2018
[18] https://www.handelsblatt.com/unternehmen/management/neue-konglomerate-immer-mehr-konzerne-spalten-sich-auf-das-steckt-hinter-dem-trend/22817512.html

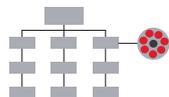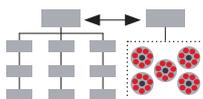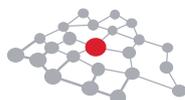|	Characteristics	Benefits
▶ **Strategic holding**	BU = Business Unit	• Independent strategic business units (BU) with full P&L responsibility • Structure according to business purpose, e.g., new energy vs. conventional energy	• More strategic options, e.g., for specific partnerships or IPOs • Increased decision independence • Precise and adjusted business steering
▶ **Speed boats**		• Create specific teams or topics within the organization • Set up of new ways of working and reporting	• Little structural effort • Fast implementation • Utilization as test bed for agility
▶ **Individual entities**		• Spin-off companies with definable business purposes • Usually nonhierarchical structures, focused on high-speed delivery of software products and services	• Faster decisions and reduced dependency on legacy structures • Easier realization of agile structures • Increased appeal for digital talent
▶ **Cross-industry alliances**		• Based on core competency decisions, development of strategic alliances with adjacent corporations, e.g., hardware producers with software companies like Microsoft	• Enhanced scalability options • Sharing risks when pushing toward new technologies and trends • Access to know-how and talent

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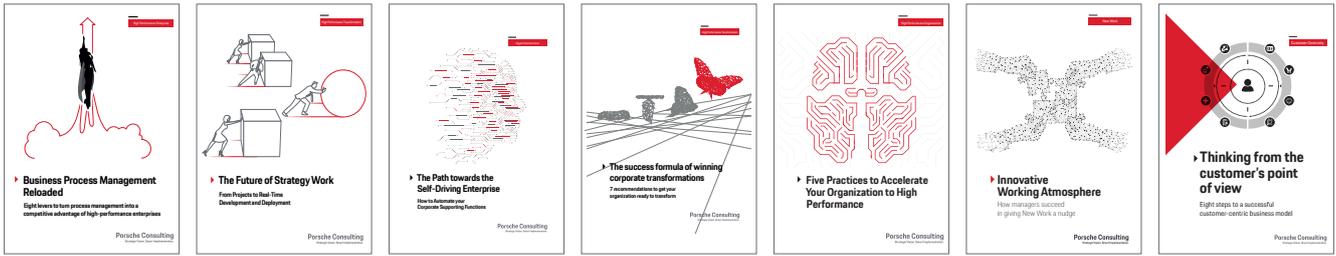**Fig. 4** Structural agility with adaptable corporate structures

One thing is clear:
the challenges companies face today, and all the more in the future, can only be mastered by an agile organization, ongoing strategy work, and the capacity for structural change.

Bear in mind:
those that start later learn later. The resulting advantage for competitors is often no longer obtainable and can jeopardize a company's existence.
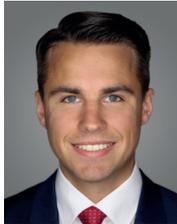
Further readings

Business Process Management Reloaded	**The Future of Strategy Work**	**The Path towards the Self-Driving Enterprise**	**The success formula of winning corporate transformations**	**Five Practices to Accelerate Your Organization to High Performance**	**Innovative Working Atmosphere**	**Thinking from the customer's point of view**
Eight levers to turn process management into a competitive advantage of high-performance enterprises	From Projects to Real-Time Development and Deployment	How to Automate your Corporate Supporting Functions	7 recommendations to get your organization ready to transform		How managers succeed in giving New Work a nudge	Eight steps to a successful customer-centric business model

Authors

Dr. Roman Hipp
Senior Partner
roman.hipp@porsche.de

▼
Contact
T: +49 170 911 0491

Julius Hollmann
Manager
julius.hollmann@porsche.de

Alexander Gerdes
Consultant
alexander.gerdes@porsche.de

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