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»Many organizations and companies discover agility as a promising option for developing innovations or getting closer to their customers' needs.«
Agility is a concept that has been trending in management for some years. Seemingly every organization wants to be agile, as this means being able to respond flexibly, quickly and proactively to all manner of changes. Agile working methods offer young startups, traditional companies and international groups alike the opportunity to collaborate in small teams in order to analyze customer needs, improve products or develop innovations. Three agile methods, in particular, are prominent here: **scrum, lean startup and design thinking**. In the following chapters you will learn how the individual methods work, what they aim to achieve and the challenges that result from them.

**What is agility?**

For a long time, the normal practice was to develop products entirely sequentially, meaning in a succession of separate steps. For example, one department would produce a market analysis and the next a requirements analysis, after which product designers, engineers and other employees were brought in one after another to design the production line, the quality management process and the business model. However, these sequential processes often led to problems, because the departments did not coordinate well with each other and written communications were imprecise or inaccurate. In addition, all these handovers and discussions took up time. The greatest disadvantage, though, was that products were immediately manufactured and put onto the market even if there was maybe no demand at all for them. The company would receive market feedback only years later, and an »update« would become possible only after another few years.

In Japan, this realization led to **changed ways of working back in the early 1980s**. In companies there, tasks were no longer processed one after another, but production phases began increasingly to overlap. At the optimum level, there was complete overlap among all the stages of development. As a result, individual departments were now compelled to engage much more in communicating with each other, coordinating and defining common goals. This changed way of working meant very many more innovative products could be developed with a substantially reduced time to market (from idea to cash).

In the past, when markets and products were less complex, this way of working was feasible – but now, technological innovations are being developed faster and faster, and these are resulting in a constant flow of new needs and possibilities. The risks involved in developing new products in the old-fashioned way are simply too great.
WORKING METHOD IN JAPAN

In traditional product development, each step was completed before a new one began (type A). Then teams experimented with having some overlap between the tasks of individual departments or individuals, which resulted in an increasing amount of simultaneous work (type B). The greater the overlap between the steps, the faster the teams became in developing the product, but this meant they had to interact far more with each other (type C)

Source: Takeuchi and Nonaka, 1986
The Japanese researchers Hirotaka Takeuchi and Ikujirō Nonaka investigated the influence that these changes in collaboration among development teams had on innovation in Japan in the early 1980s. In 1986, they published the article, »The New New Product Development Game,« where they first used the metaphor of a collaborative game to describe the shared work of Japanese development teams on a product or project.

Nonaka and Takeuchi examined just the development of hardware. One famous example that they cited was the development of the Canon AE-1, a single-lens reflex camera. This product was Canon’s last attempt to catch up with its rival, Nikon, which at the time was streets ahead. The camera proved to be revolutionary in terms of price, size and technology and it soon gained huge market shares.
The idea of cross-functional teams

According to agile principles, products are created across departments and with very close coordination among everybody involved in the development process.

But how are the individual departments now supposed to know how to proceed? For example, if the task is to develop a small, low-cost SLR camera with a super-fast autofocus that any enthusiastic amateur photographer can afford, how can that problem be approached?

Every task requires new competencies, which means that in agile companies, teams are constantly being put together from scratch. The idea of agile work is that teams are cross-functional – meaning that the development team should, as far as possible, have within it employees with a variety of skills and types of knowledge, to enable them to solve complex tasks quickly and independently. In their article, Takeuchi and Nonaka wrote about autonomous, cross-functional teams working together on one concrete task. They are independent and autonomous in the sense that they themselves decide how to solve a problem, although they do not define the problem itself.

Principles, rules and values of agile work

The changed nature of their collaboration enabled teams to go to market in faster iterations. This resulted in earlier feedback, which meant products could be improved or adapted to market requirements more quickly. Teams also started working deliberately with ignorance and putting products onto the market on a good enough for now basis, to see what would happen. For example, the need for an app store for Apple became apparent only after the first iPhone came onto the market.

Therefore, a key by-product of agile ways of working is accelerated learning on a real product: the more often a team tests a product on real customers or users, the better it can adapt it to market requirements.

However, agility does not mean that one employee should suddenly take on the work of ten colleagues and complete it in the shortest possible time. In other words, the point of agile working is not to achieve more throughput. Instead, it has a focus on effectiveness. The aim is to »build the right thing« – not the same product that is merely »cheaper and faster.«

The principles described by the two scientists Takeuchi and Nonaka were initially adapted outside Japan in software development, probably because experiments and tests can be performed faster and more easily in software development than in hardware production. However, this new form of collaboration was not given a name until 2001, when a group of software developers in the United States came together and formulated the »Agile Manifesto.« This declaration formulated the principles, rules and values of agile teamwork for the first time.
TO THE POINT

The core element of agility is cross-functional teams, who work autonomously to find a solution to a pre-defined problem.

A lot of their work revolves around tests on customers, and the development process involves trying out, adapting and trying again. As a result, teams learn more quickly and are able to adapt their ideas to customers’ or market requirements.

Agile working does not mean companies producing more, faster with the same employees. Rather, it is about »producing the right thing« - a product that is tailored to the market and customers.
1. **What is a cross-functional team?**

   - **A** A team composed of managers from different areas who decide together how the agile method is to be implemented.
   - **B** A team composed of equal numbers of women and men and covering as many age groups as possible.
   - **C** A team in which employees from as many different areas as possible and with the widest variety of skills work.

2. **Agile working focuses on efficiency, not effectiveness.**

   - **A** True
   - **B** False

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1. Answer C is correct, because the team is supposed to be in a position to solve the problem without outside help and to make decisions autonomously and quickly.

2. Answer B is correct: the focus is on effectiveness, which means building the right thing – not the same thing faster and more cheaply.
Dr. Holger Rhinow

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Markus Andrezak

is a veteran of the German internet. He was researching semantic networks before the term had been invented. He was designing and building large internet products back in the late 1990s. Today, Markus Andrezak advises numerous companies in the fields of strategy and agility. Many publications and talks have also made him well known on the international agility and kanban scene. He is a fellow of the Lean Systems Society and was nominated for the Brickell Key Award in 2012. He is also a certified innovation games facilitator.
Jan Schmiedgen

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**SOURCES**

**LESSON 1**  

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**PHOTO CREDITS**

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