



Agile in Pharma

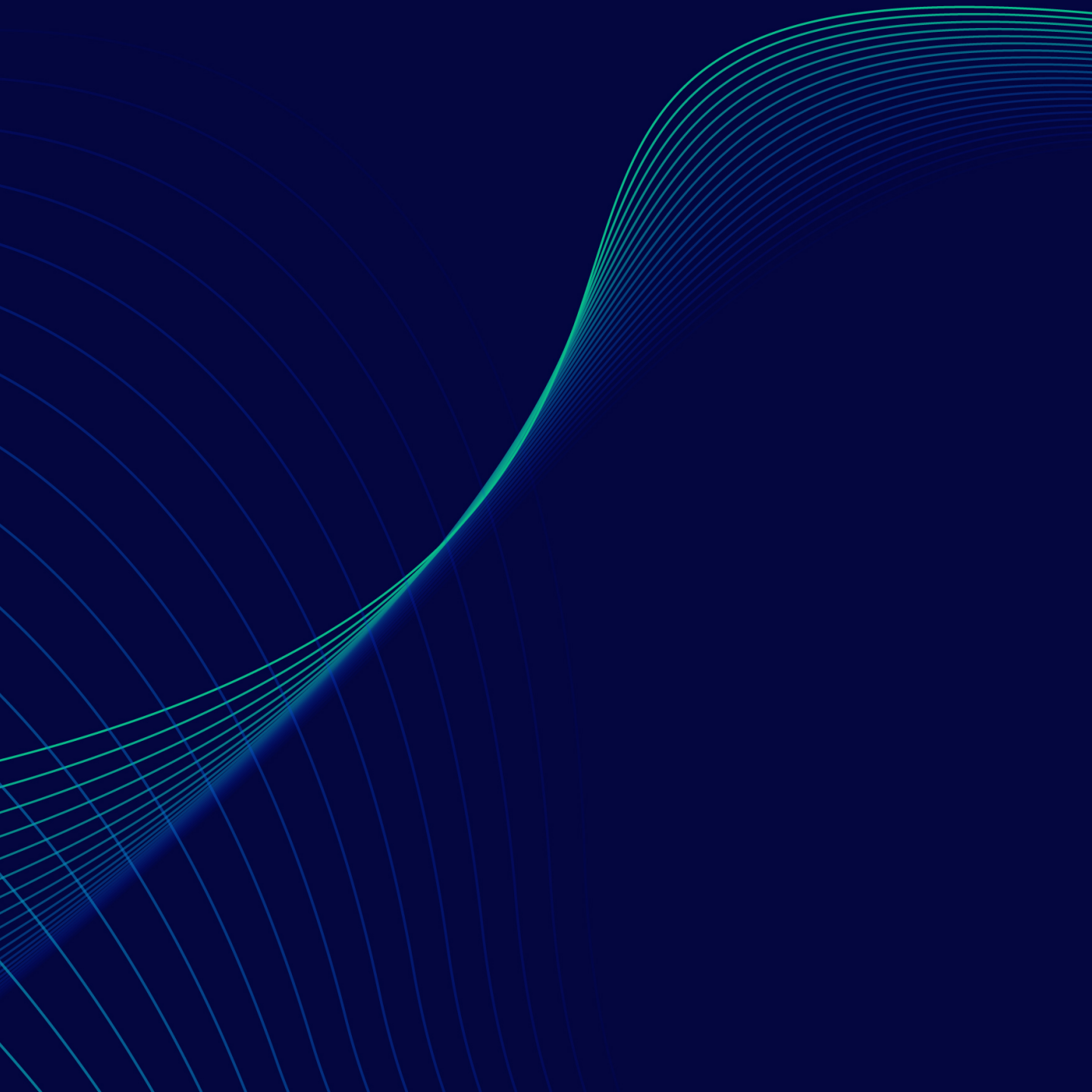




Table of contents

Agile in Pharma

- 3 When hope is not a strategy
- 4 What is Agile?
- 6 Effects of Agile
- 8 Agile in the pharma industry
- 9 The future is Agile
- 10 If you want to know more

When hope is not a strategy

Imagine that you are lost in the woods. 20 miles east is a gas station, and your only method of navigation is a compass. You locate east and start walking. Do you continue to walk in one direction and hope for the best, or do you take frequent breaks to consult your compass and scout for possible obstacles to continuously make sure that you are on the right track? Probably the latter.

Traditional approaches to working in larger IT projects have been linear and inflexible, determinedly following a plan towards a clearly defined result. Hoping for the best like the lost man in the woods walking for hours in what he believes to be the right direction, only to realize that he is further away than ever.

While hoping might be appropriate when cheering on your favorite sports team, it is not a reliable strategy when it comes to business. Teamwork, flexibility, and being adaptable to changes are, on the other hand, all ingredients in a recipe for success, and are also the key characteristics of a modern way of working called Agile. By 2020, 7/10 companies have adopted Agile approaches in some manner¹.

Agility not only increases success rates in software development, but also quality, speed, and work culture. Companies working Agile

experience higher customer satisfaction, faster time-to-market delivery, reduction in development costs, and more than 90% employee engagement². Along comes almost a doubling of requests for people with Agile skills from 2019 to 2020.

In times where digitalization and IT development are on top of many businesses' agendas, Agile is proving to be of value and a great tool to facilitate change. But what exactly does Agile working entail? And is it even possible to work Agile in an industry, like pharma, with standards and regulations? This brief will provide the whats and whys, the benefits and barriers, and ultimately investigate if and how Agile processes can improve the pharma industry.

¹ Djurovic, Ana, "20+ Astonishing Agile Adoption Statistics for 2020". 2020. <https://goremotely.net/blog/agile-adoption/>

² BCG.com, "Agile at Scale", 2021. <https://www.bcg.com/capabilities/digital-technology-data/agile/agile-at-scale>

What is Agile?

The word “agility” is defined as the ability to move quickly and easily, and in the world of business, this meaning has been transferred to a team’s ability to quickly adapt to changes as a response to external demands. Compared to traditional approaches, where you plan the project, carry out the project, and the final product turns out exactly as planned, Agile approaches are all about continuous adaptation throughout. You can compare it to the scientific method, where you create a hypothesis, test that hypothesis and then apply what you learned to the next experiment. The final product might not turn out exactly as planned but will to a greater extent respond to the end users’ needs.

Solving the right problem

Agile teams typically consist of a product owner with extensive knowledge of the specific domain and an Agile coach, or scrum master, that facilitates the project and manages the team. Which technical competencies are needed is dependent on the specific project. A project is birthed out of a specific problem, but oftentimes, the problem that a project is aiming at solving is not compatible with the end users’ actual problem. Imagine if a manufacturer introduced the invention of bikes and they did not sell. The team might speculate that it is because biking is too strenuous, so they decide to build in a motor,

but in reality, people are not biking because it rains a lot. Different problems require different solutions. Before commencing an Agile project, the team will thoroughly investigate this problem through dialogue with end users, often with the help of a user experience designer, and all this information is then gathered in a backlog that will work as a point of direction for the project.

From phases to sprints

Whereas traditional Waterfall approaches are structured as one linear project with phases, Agile approaches break the project into sprints. Depending on the size of the team, quite a few user stories can be active in a sprint and worked on in parallel, but the sprint should usually be able to be finalized in two or three days. The team members plan the tasks that must be finalized before the next sprint, and after finalizing each sprint, the team conducts a sprint review to test out the outcome of the sprint. The team presents the results of the sprint and receives feedback – they then use this feedback to reflect, adjust and plan the next sprint.

So, why does it make sense to change from linear phases to iterative sprints? How does this new way of working differ from traditional approaches and what is the payoff of switching?

This is best explained by a simple analogy: A painter painting a house would undoubtedly prefer to learn that he is using the wrong color after painting one wall rather than the entire house. The same logic applies to Agile approaches, where, if your project is failing to live up to standards, client demands, or end user needs, you would rather know sooner than later.

Aligning expectations

In traditional Waterfall approaches, the project is divided into phases typically consisting of requirements specification, approval, delivery, and validation. The two initial phases can sometimes take several years, so by the time the product lands in the hands of the end user, the world suddenly looks completely different, and the product might be outdated or irrelevant.

Agile approaches, on the other hand, are structured around continuous alignment of client expectations. It is vital that the client is not only included in the process, but also, that the client is equipped to work Agile and understand the team dynamics, processes, and consequences of

different decisions. Failing or changing directions is, contra to popular belief, not a bad or costly process – it is a process of learning and innovation that ultimately leads to better products. Similarly, it leads to products that the client actually wants and feels a relation to because they played a key part throughout the entire process.

Does Agile come with a manual?

One of the founding principles behind working Agile is flexibility, and there is nothing inherently flexible about a manual or going by the book. According to our consultants, who have extensive experience with working Agile, it is significantly more beneficial to tailor the principles of Agile to the specific situation – the scale of the project, size of the team, the specific organization, etc. Agile approaches are designed to support the specific task rather than manage it, and by adding unnecessary rules and restrictions, you counteract the entire purpose of adding value to the process.

Effects of Agile

Agile and digitalization

Agility is an important player in the game of driving digitalization and technological advancement. If your business is focused on gaining a competitive advantage through digital transformation, then agility might be your missing key. As is often the case with any type of change, digitalization can sometimes be a tough process. Agile approaches offer flexibility to the process that often requires adaptation and changing priorities along the way. Through steady iterative steps, the Agile way of working allows businesses to move forward with their digital transformation in an environment where failing is not dreaded but considered an inevitable and constructive part of the process.

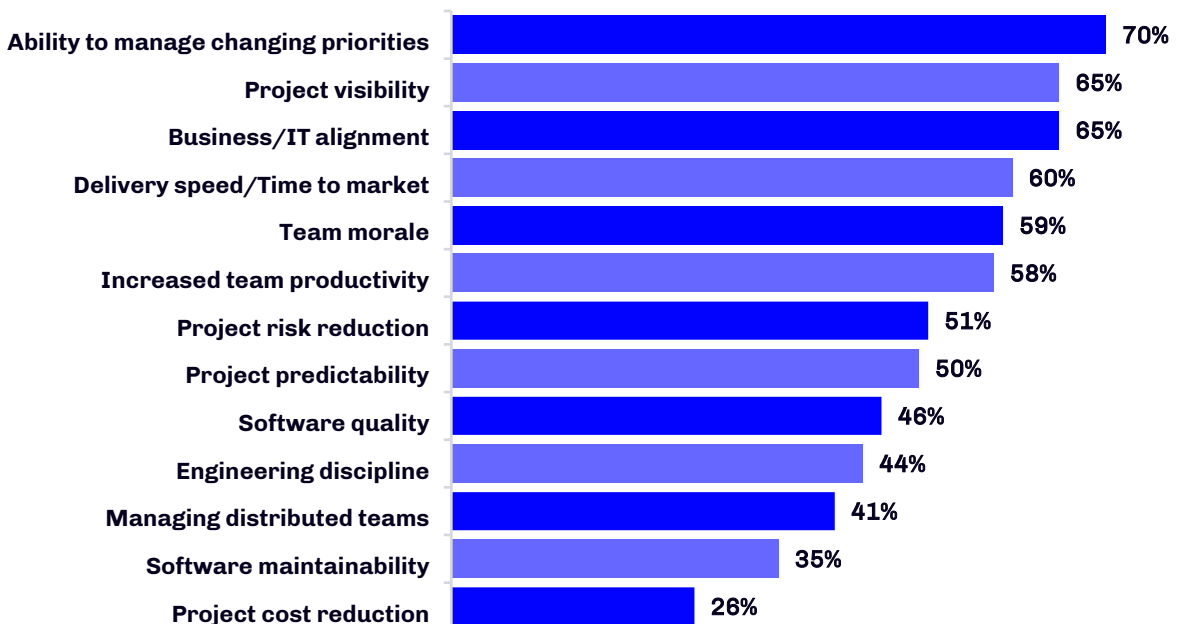
Higher success rates

One of the most convincing arguments for adopting Agile processes is the positive effect it

has on success rates. There are different prerequisites for reaching success in a project, and amongst those are having an Agile process and a highly skilled Agile team. Research shows that projects led by an Agile process have a 45% success rate compared to 26% for non-Agile projects, and a report states that small Agile teams of six people often outperform large departments of software developers³.

Working Agile not only increases success rates, but companies working Agile also experience 10-20% higher customer satisfaction, up to four times faster time-to-market delivery, 15-25% reduction in development costs, and more than 90% employee engagement⁴. Studies show that there are numerous additional benefits realized by companies adopting Agile⁵. 70% of respondents have improved their ability to manage changing priorities, 60% have seen an increase in delivery speed, and 51% have lowered project risk.

BENEFITS OF AGILE



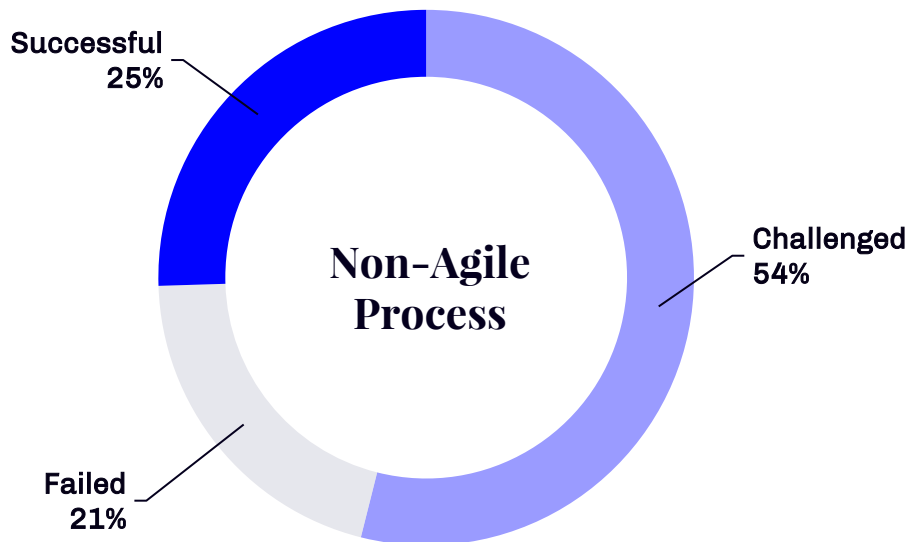
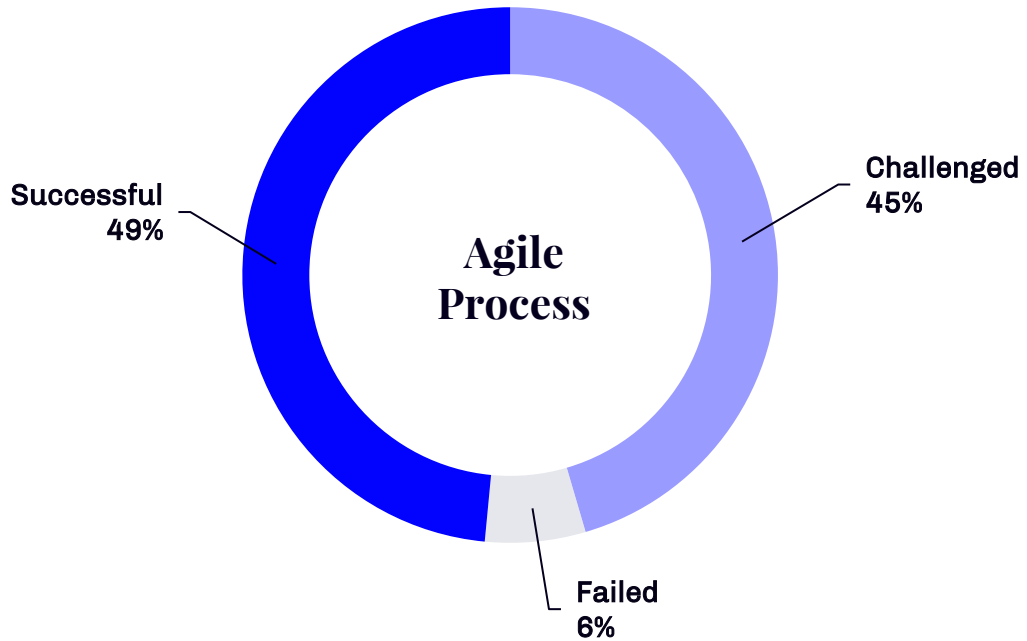
⁶ Respondents were able to make multiple selections

³ Johnson, James, "Decision Latency Theory: It's All About the Interval", The Standish Group International, Inc., 2018.

⁴ BCG.com, "Agile at Scale", 2021. <https://www.bcg.com/capabilities/digital-technology-data/agile/agile-at-scale>.

⁵ ⁶ Digital.ai, "14th Annual State of Agile Report", 2020. <https://stateofagile.com/#ufh-i-615706098-14th-annual-state-of-agile-report/7027494>

EFFECT OF THE AGILE PROCESS WITH SKILLED TEAMS



Agile in the pharma industry

An industry that, surprisingly, is benefitting from Agile approaches is pharma. Even though it is an industry that is heavily regulated and is known to rely on traditional ways of working, an increased focus on communication and customer feedback is driving the industry towards Agile processes. According to our 7N consultants that are currently working Agile in the pharma industry, the close contact between team members and continuous feedback makes Agile a great tool for optimizing traditional processes, while increasing product quality and patient safety.

Pharma case

A recent project at a pharma client, in which one of our 7N consultants operated as technical lead, confirmed the effectiveness of Agile approaches. The client was struggling with ineffective packaging lines for finished products, and they speculated that AI might be the answer to the problem and had come up with a complex solution. They set up an Agile team, and the user experience designer investigated the problem further by talking directly to the operators of the packaging lines. Consequently, they learned that the operators' daily operation involved a wide array of different systems that were slowing them down. The close collaboration with the end users of the final product, that Agile approaches require, enabled the team to target the actual problem and thereby offer the right solution. The initial complex AI solution was put on hold, as it not only would have been extremely costly but also would not solve the most concrete daily challenges of the end users.

The Agile team decided to design and implement an end-to-end manufacturing intelligence solution in Azure Cloud. The final product was presented on big dashboard screens that the operators could easily orient themselves on and collect relevant information related to the ongoing and upcoming orders. The solution was capable of presenting key information from existing production line systems to front-end applications for the various user types such as operators, technicians, and managers. Throughout the entire project, the Agile team kept in close contact with the operators, continuously receiving their feedback to ensure that they would end up with the right solution for their specific needs. The solution has since resulted in the client saving a total of 15 production days for each of the lines where the solution is currently implemented.

Overcoming barriers

The biggest barrier to working Agile in pharma is changing the culture and mindset of an industry in which rigid processes and regulations rule. A helpful way to ease into a transformation from traditional to Agile is by bringing in an external Agile coach to lead the project. Their experience with working Agile will be indispensable, and the presence of a newcomer can give a fresh impetus to inspire and change old ways.

The future is Agile

The Agile way is here to stay as businesses everywhere are realizing its effect on success rates, work culture, and end user satisfaction.

The world of IT and business is changing, and so should our approaches and methods. Agile is proving to be an effective tool to facilitate digitalization and technological advancement, and industries, like pharma, are benefitting from the close end user collaboration to provide safer and improved solutions.

It starts with the right team

For the Agile process to deliver results, it is paramount that the skills of the team match the project. One of the main reasons for the success of the aforementioned pharma case was namely that our 7N agents were able to find the right consultants, including a technical lead and Agile coach whose professional and personal skills were perfectly matched with the Agile project. The extensive knowledge of the client's business that the consultants possess combined with a professionalized skillset meant that the 7N team was able to create a unique solution in close collaboration with the end users that would not only solve the client's problem but in a long-term, sustainable, and cost-effective way.

The road to success is paved with agility

Besides having the right team, the Agile process was also an important player in the success of the pharma case. Working Agile allowed the team to remain in close contact with the end users of the final solution, which ultimately resulted in the right solution for the client.

Because pharma is an industry that is subject to formal approval requirements and procedures as well as fixed deadlines under control, it is a common misconception that traditional Waterfall approaches are the only option. Like the case illustrates, working Agile in the pharma industry is entirely possible. Most often, it just means that you will have to add additional layers to your Agile approach, such as multiple levels of automated testing and full traceability on all elements of the process from features to code, infrastructure, deployment, and test. Furthermore, the close contact between the team and the end users is an enormous advantage when products are being made for patients, as it allows them to have a voice throughout the process.

If you want to know more

We are always more than happy to meet for a virtual cup of coffee. Do not hesitate to get in touch if you are interested in learning more about our business model or our highly skilled 7N consultants within several different areas of expertise, such as Agile.



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If you want to know more about working Agile or have general questions regarding your business' digitalization strategy, feel free to reach out to Management Consultant, Freek Hoekstra. Freek's specialities include IT due diligence and project risk assessment, business and IT transformation, as well as Agile and SAFe.



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We have dedicated ourselves to finding the right match between our consultants and the companies we serve – we believe that is how the best results are created. At 7N, we have built a professional community of extraordinary people. A community dedicated to achieving professional and personal development. A place where the best gets to play with the best.

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