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Agile transformation of digital product development using the example of the One Medicine Analytics data solution

Annemarie Kulas and Hauke Meyer, subject matter experts at Eraneos, share how Boehringer Ingelheim transitioned from a project-based approach to a product-centric model for digital solution development. The result: a modern architecture that enables seamless process data exchange across clinical development programs.

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Agile processes break down silo thinking

Developing new drugs typically takes between seven and ten years. One of the key priorities for pharmaceutical companies is to responsibly shorten this timeline – especially in therapeutic areas where no effective treatments currently exist. Transforming into a product-driven, agile organization can play a crucial role in achieving this goal. Despite this, project-based approaches remain prevalent in the pharmaceutical industry. Boehringer Ingelheim has taken a bold step toward agile product development: together with the consulting firm Eraneos Group, the company is advancing the agile development of its digital solution, One Medicine Analytics.

One Medicine Analytics is a digital ecosystem for medicine, designed to implement advanced data analytics and enable decision-making based on those insights. Volker Rothenbacher, Product Manager in the Clinical Development and Operations department and part of the transformation process, recalls: "The biggest challenge for us in the beginning was changing the mindset within the involved departments, as we often still encountered siloed thinking. We wanted an agile, high-performance solution for the highly complex medical data landscape – one that would allow us to quickly answer operational questions and thereby accelerate and improve decision-making in clinical development. We quickly realized that the solution wasn't simply to purchase a large IT platform. In One Medicine Analytics, we saw an opportunity to consolidate the many small reporting silos."
The goal was to establish a suitable infrastructure for the medical domain that spanned all departments. This wasn't just a technical transformation – it was a business transformation affecting the entire organization. "Management supported the change. But we lacked practical concepts and personnel capacity at scale. The experience, resources, and expertise of the Eraneos consultants were extremely valuable in helping us get off the ground."

Companies face an innovation dilemma

Industry players are facing an innovation dilemma: the development of new therapeutics is becoming increasingly complex, expensive, and challenging, while true innovation remains insufficient. One potential approach to alleviating this situation is to reduce the time it takes to develop new drugs.
The core idea: the development process could be measurably shortened if certain aspects were predicted through data-driven algorithms. Boehringer Ingelheim reinvests approximately 20 percent of its profits into research and development. Ultimately, this benefits patients as medications become available sooner, and rare diseases can be explored more effectively. A fundamentally shorter development cycle frees up capacity to pursue new therapeutic breakthroughs.

One Medicine Analytics shortens development time

Previously scattered and siloed across various data sources and business intelligence solutions within the medical departments, the data was migrated by the team onto a new technical, operational, and cultural foundation thus breaking down departmental barriers. One Medicine Analytics leverages this new infrastructure for data exchange and offers an intuitive, transparent view into the longitudinal process data of clinical trials. This foundation enables cross-functional collaboration and supports data-driven decision-making across the organization's digital ecosystem.

Challenges of the transformation process

When digital initiatives are structured in an agile way as part of a broader product transformation, the product lifecycle becomes the central focus. Unlike traditional projects, there is no fixed beginning or end. The core implementation question becomes how to deliver new features as quickly as possible. As a management consultancy with deep expertise in digital product and innovation management, Eraneos supports digital transformation efforts in complex business and technology environments. Boehringer Ingelheim brought the experts on board to guide this shift.

Pharmaceutical companies face significant challenges during this transformation, many of which are also evident at Boehringer Ingelheim:

→ Strict regulatory frameworks: Operating in a highly regulated environment, pharmaceutical companies must ensure compliance with extensive documentation and regulatory standards. In practice, this can conflict with agile principles focused on flexibility and responsiveness.

→ Quality assurance and validation: Ensuring the quality and proper validation of digital products is essential. Agile practices often need to be adapted to meet rigorous validation standards without sacrificing speed or adaptability.

→ Long development cycles: Drug development involves extended research, testing, and approval phases. Agile methods are designed for shorter, iterative cycles, thus requiring thoughtful adjustments to ensure they align with regulatory and quality expectations.

→ Cross-functional collaboration: Drug development typically involves multiple departments with different working styles, ranging from waterfall to agile. This diversity can hinder collaboration. However, close cross-functional alignment is crucial to success and may require a fundamental cultural shift.

Success factors of the transformation process

Key factors for a successful transformation include:

→ Strong leadership and commitment from management to actively guide the change process and ensure employee engagement.

→ A shared understanding across the organization, supported by ongoing training and clear communication regarding new frameworks, roles, and responsibilities.

→ Active involvement of all stakeholders, from both business and IT, as true transformation can only succeed through cross-functional collaboration.

Employees must also understand the importance of agility and should not feel overwhelmed by the process. Clear communication and alignment are essential, and the overarching vision should be embedded into the transformation roadmap. It is crucial to involve all areas of the organization, identify synergies, and ensure organizational fit. A holistic approach, combined with transparent communication around the technical components, helps drive change. Another key success factor is interdisciplinary collaboration, particularly between business units and IT. Without this, siloed working models can hinder agile progress.

Volker Rothenbacher adds: “Especially for the scaled software product One Medicine Analytics, involving up to six teams, Eraneos’ experience supported us in key areas. Their recommendation to begin the start-up phase with a minimal planning cycle was also helpful. It was the only way we could get this complex process up and running in a company of our size.”

Agile development of digital products at Boehringer Ingelheim

Drawing on best practices and hands-on experience from previous projects, the Eraneos experts fostered understanding and interest in the differences between project-based and product-oriented approaches. For employee acceptance, it was essential that the consultants struck a balance between familiar structures and agile flexibility. Although the transformation took place in an international setting, regular in-person workshops were held. It was crucial to the success of the change process that, whenever possible, the full team was present for these sessions.

In an initial workshop, a shared understanding of the product was established among the relevant stakeholders. The consultants supported the development of a framework to serve as the methodological foundation for product development. Another key outcome was the alignment on the team concept and the decision on who – on both the Boehringer Ingelheim and Eraneos sides – would be part of the interdisciplinary development team.

This initial phase brought a significant shift in how work was understood, as old processes were replaced and new ones introduced. A follow-up planning workshop defined concrete next steps for the following three months. From there, the agile teams began development, with the transformation experts supporting both business and IT leads in rapidly designing a streamlined, effective operating model for product-oriented development. The joint focus was on creating a clear structure and way of working for the interdisciplinary team.

Boehringer Ingelheim’s corporate headquarters in Ingelheim (Photo: Boehringer Ingelheim).

Finally, the team created the pilot product based on this preparatory work: a minimum viable product (MVP). This marks the first expansion stage of a product that can be made available to users. The idea behind it is that digital solutions are developed iteratively, step by step. However, regulatory requirements already came into play at this early stage. Each development phase must comply with defined regulatory standards.
In the case of One Medicine Analytics, the minimum solution turned out to be significantly larger than what is typically expected from an MVP. The reason lies in the regulatory environment: The product team must plan and build in much larger increments to meet compliance expectations.

Volker Rothenbacher draws the following conclusion:

Conclusion

"In my view, it is crucial for the start of the transformation process that the key roles are filled by qualified experts: the agile coach, the product manager and the solution architect. My recommendation is also to simply start with a minimal planning cycle. It is also crucial to have the theoretical knowledge, practical experience and, last but not least, the additional capacities of external experts in the team.

This is because the transformation is happening in so many places at the same time that our own agile human resources are no longer sufficient. And especially for the scaled software development product One Medicine Analytics with up to six teams, Eraneos' experience has complemented us in key areas. In future, the solution will make a central contribution to the collection and analysis of all data during the execution of studies for drug development."

These insights form the foundation for all operational findings and are therefore highly valuable for the development of new products. Through this transformation process, Boehringer Ingelheim has positioned itself as a pioneer in the industry.

About Eraneos

Eraneos is an international strategy, transformation and technology consulting group, dedicated to empowering organizations to thrive in an ever-changing digital age.

By bringing together top-tier experts from business and tech, we help clients to continuously raise the bar in successful transformations, from strategy to execution. Whether we're designing future-ready organizations, unlocking the potential of data and AI, or securing businesses with cutting-edge cybersecurity, we deliver results pragmatically. Our team of around 1,200 dedicated professionals is based in offices across Switzerland, Germany, the Netherlands, Spain, Denmark, Sweden, Austria, the UK, Singapore, and the USA, and seamlessly blends global perspectives with strong local roots. In 2024, Eraneos realized a turnover of EUR 263 million.