



CASE STUDY

Materialise Partners With CTG to Transform Business Processes on Its Journey Toward Business Agility

The Client

Founded in 1990, Materialise enables new uses for 3D printing's extraordinary potential. The company leverages 30 years of experience creating a range of software solutions and 3D printing services, which together form a backbone for the 3D printing industry. Materialise's open and flexible platforms enable companies in industries such as healthcare, automotive, aerospace, art and design, and consumer goods, to build innovative 3D printing applications that make the world a better and healthier place.

Headquartered in Belgium, with branches worldwide, Materialise combines the largest group of software developers in the industry with one of the largest 3D printing facilities in the world.

The Business Challenge

3D printing is a market filled with innovation and disruption, where start-ups focus on only part of the end-to-end (E2E) process or on specific materials and techniques. This makes it challenging for mature companies to remain competitive.

As an established player in the market for three decades, Materialise's software engineering department has built many different software solutions. Each solution plays a role in the various phases of the 3D printing flow: part design and preparation, build preparation, simulation, machine control, build quality inspection, and production management.

In Their Words

"3D printing is an extremely competitive market, and there is greater demand from companies of all industries for innovative products that enhance their customers' experiences. Thanks to their Agile coaching and support, CTG has helped Materialise create more alignment and efficiency in our software engineering process, and strongly positioned us to remain competitive and achieve our goal of creating products that make the world a better and healthier place."

— Mick De Valck, Sr. Director Engineering, Materialise Software

These solutions cover the complete E2E process of additive manufacturing and support various print materials for different printing techniques, which each have unique challenges and requirements. Materialise's rapid growth across the globe provided software development teams with additional synchronization challenges.

To avoid falling behind the competition, Materialise needed to optimize their way of working by providing an integrated software product suite. The company wanted to achieve the following objectives:

- Increase the alignment within the software department and between different products and teams.
- Increase customer focus, resulting in higher quality products.
- Increase predictability of software deliveries and accelerate time to market.
- Increase employee engagement.

The CTG Solution

CTG and Materialise decided to implement a customized way of working based on the Scaled Agile Framework (SAFe) leveraging CTG's Agile Transformation solution. It was clear that adopting an Agile approach would help the company accelerate progress toward its goals.

One of the first steps was creating a guiding coalition, a team comprised of people in different roles and working in different parts of the software engineering division. This team would be responsible for driving the definition and implementation of the roadmap. CTG's Agile coaches supported this team by providing guidance and assistance every step of the way.

The next step was to manage the necessary leadership training and coaching for the people involved. In total, 44 software engineers were trained in the first months as we prepared to start the journey with the complete department of about 120. CTG ran workshops for Agile Coaches and management, as well as a trial run for the first big room planning (Program Increment (PI) planning) event before it was held. During PI planning, the software engineering department and all stakeholders were brought together, and management presented the business goals that Materialise wanted to achieve to create alignment and clear communication between everyone involved.

Together, this group then developed a roadmap for achieving these goals, including identifying roles and potential risks.

Once up and running, CTG's Agile coach actively supported the transformation by assisting the guiding coalition, facilitating big room events, coaching internal staff operating at the program and portfolio level, and performing workshops with different stakeholders based on operational needs.

Results

After a transformational journey of 18 months, the guiding coalition continues to make improvements where necessary and focuses on sustaining the changes made. Some key results include:

- Established a comprehensive process, documented in high level SOPs for the Software Engineering unit, leading to a successful ISO audit in full SAFe transition.
- Achieved a 10%–20% increase in software engineering efficiency.
- Increased alignment across the department and between business and IT stakeholders
- Increased employee motivation and engagement in the new way of working, leading to a change in the company culture.
- Increased awareness that customer centricity is key in developing valuable solutions staying ahead of the competition.
- Enabled more frequent releases by making architectural changes and implementing new testing approaches that accelerate test cycles.
- Ran four PI planning events and three Inspect and Adapt sessions (several virtual due to COVID-19).
- Inspired other departments to begin using the same principles and practices based on the software engineering department's successes.

CTG's goal today, more than ever, is to enable Materialise to continue the journey of becoming a lean and Agile organization that can stay ahead of the competition for decades to come.



About CTG CTG is a leading provider of digital transformation solutions and services that accelerate clients' project momentum and achievement of their desired IT and business outcomes. We have earned a reputation as a reliable, results-driven partner focused on improved data-driven decision making, meaningful business performance improvements, new and enhanced customer experiences, and continuous innovation. CTG has operations in North America, South America, Western Europe, and India. The Company regularly posts news and other important information online at www.ctg.com.



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