

MOVING TO SIEMENS XCELERATOR AS A SERVICE

REMOVE FRICTION & SPEED INNOVATION

THE ENGINEERING MANAGER'S VIEW

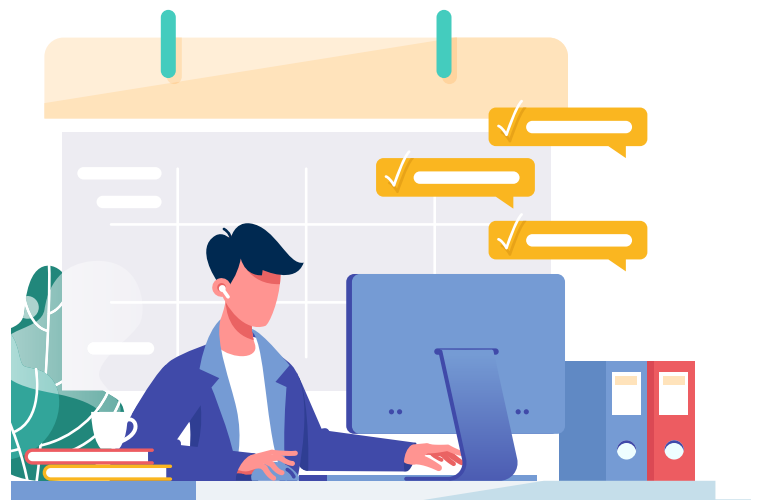
Engineering teams can be stuck in the past, using capable—but old-fashioned—software to do their jobs. These tools often require expensive desktop machines, create data that's stuck in silos because of formatting and access issues, and limit the team's ability to innovate. And too often, these tools are based on older technologies that are difficult to move into a modern, personalized, connected environment. Engineers demand better.

Siemens' Xcelerator as a Service is an open digital platform with Siemens' engineering, design, simulation, and manufacturing apps, connected using domain-specific interfaces. The platform handles the connections, and the business model offers the flexibility to scale up and down as needed and automatically delivers the latest software and security updates. Connecting from anywhere, anytime and from any device means faster innovation in a more productive and collaborative environment.

THE STAKES ARE HIGH

Meet Finley, an engineering team manager at Modern Robotics, a hypothetical manufacturer of industrial robots. The company's latest project is an exciting new retail robot, the MRone, that could create many new opportunities for MR.

Finley leads the MRone design team and was tasked with building a technology environment that could bring a prototype MRone to early adopters in 12 months—a tight timeline. He quickly identified experts across MR in electric motors, sensors, software, and communication systems. They joined designers, analysts, and manufacturing specialists who will scope out, detail, and prototype the MRone over the next few months. But first, they needed to define the technology environment in which they'll work: a lot to do and not much time.



TACKLING THE BIGGEST PROBLEM: CONNECTION

Finley knew that designers and engineers often work alone or with peers in their disciplines and only rarely come together for cross-discipline design reviews. Finley needed to build a more collaborative culture within his team to meet the aggressive MRone schedule.

A culture change takes hold when it's made easy. MR had too many siloed mechanical and electrical CAD tools and too much Excel. It was often easier to email a PDF and ask, "what do you think?" than to sit together over a live design. What if there were a better way to create data for downstream uses like collaboration? How could that tie into simulation, manufacturing, and other functions? How could Finley make these connections as easy as possible?

FOCUSING ON BEST-OF-BREED AND THE CLOUD

The first step was identifying how the team would create data to share. They did an in-depth technical evaluation of mechanical, electrical, and conceptual CAD apps, simulation, CAM, and other tools. They worked with their in-house IT partner, Sofia, to ensure that their selections were open, modern, and connected — future-proofing at every step.

Sofia told them that selecting a technology platform was one way to jumpstart these processes. Platforms have built-in connectivity, quickly transferring data from one node or application to another, including collaboration, data management, and workflow tools.

Once the Engineering team started looking at platforms, they realized they also wanted the ability to work in the cloud, on cloud-native solutions. Cloud apps mean work-from-anywhere, anytime, on any device. The Engineering team sees many advantages to this flexibility, but Finley sees an added benefit: a modern infrastructure will make it easier to hire new employees because he can give them the tools and work environment they expect.

CREATING ROOM TO GROW

This project wasn't just about improving the current work environment. Finley also needed to look to the future when MR moves into areas where it currently lacks expertise. One prime example is expanding its use of simulation. MR uses simulation mainly as a final verification to ensure a design meets all objectives. If a problem is discovered, it's expensive to fix so close to the start of production. Finley knows that's old-style thinking and wants to use simulation earlier in a project. But that's not his only idea. Configure-to-order design and assembly and other advanced techniques are also on Finley's radar — but in the future. Any technology choices he makes now must be open and adaptable for whatever MR decides to try.

TYING IT ALL TOGETHER

Finley's immediate goal was to build a technology infrastructure that would enable Engineering to bring the MRone to market on schedule and on budget. By giving the team more modern tools, improving collaboration, and changing legacy workflows, he's confident they'll get the job done.

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Working with Sofia from IT, Finley came up with a plan to connect data, processes, and tools, from concept design to product launch and after-sales service, and across disciplines:

1. Select cloud-native CAD and CAE tools for each discipline that best meet functional criteria
2. Ensure that a platform underpins these apps so that they can take advantage of built-in connectivity, workflow, and data management capabilities, as well as APIs (application programming interfaces) to connect to applications outside the platform
3. Replace Excel and other legacy tools with apps that are connected to the platform, and
4. Use the vendor's managed services to offload IT tasks from the IT team so that they can build extensions and personalizations to gain the most value from the platform.

SO, HOW DID IT GO?

The Engineering team settled on the Siemens Xcelerator platform, with everyone migrating to Xcelerator's mechanical and electronic systems modeling apps and the platform's software and simulation capabilities. Because they wanted a flexible work-from-anywhere, at any time, on any device capability, they also opted for the Xcelerator as a Service offering.

The tool and platform selection process took several months. Engineering and IT then spent several more months on the initial implementation and training. Fine-tuning took place during the initial phases of the MRone design sprint. Sofia was an integral part of making this all work, using low-code tools to connect third-party apps to the platform and to customize apps where needed. Even with these changes, Finley and the team are meeting their deadlines.

WHAT'S NEXT?

The MRone project is on schedule, so Finley can now shift his attention to how Xcelerator as a Service can be used outside Engineering. His priority is MRone's external suppliers, but he's also considering Test and Purchasing. Finley is confident that each team can connect to the platform, selecting the apps that enable them to work from the same data as Engineering. Sofia can work in the Mendix low-code environment to customize as needed. And he knows Xcelerator as a Service uses state-of-the-art protection from data theft and attacks so that all interactions will be safe and secure. He's excited to get going.

A DAY IN THE LIFE ... NOW

With the Xcelerator as a Service implementation, Finley's days are calmer. His designers and engineers work together, finding and fixing cross-disciplinary problems earlier than before. Siemens Xcelerator as a Service is open, integrated, and flexible, able to handle future needs. Room to grow — and the MRone is on plan and on budget. Life is good.

Cloud, Connected, SaaS. Changing how engineers work to be faster, smarter, better.

Schnitger Corporation created this brief at the request of Siemens Digital Industries Software, Inc. For more information or to comment, please visit www.schnitgercorp.com