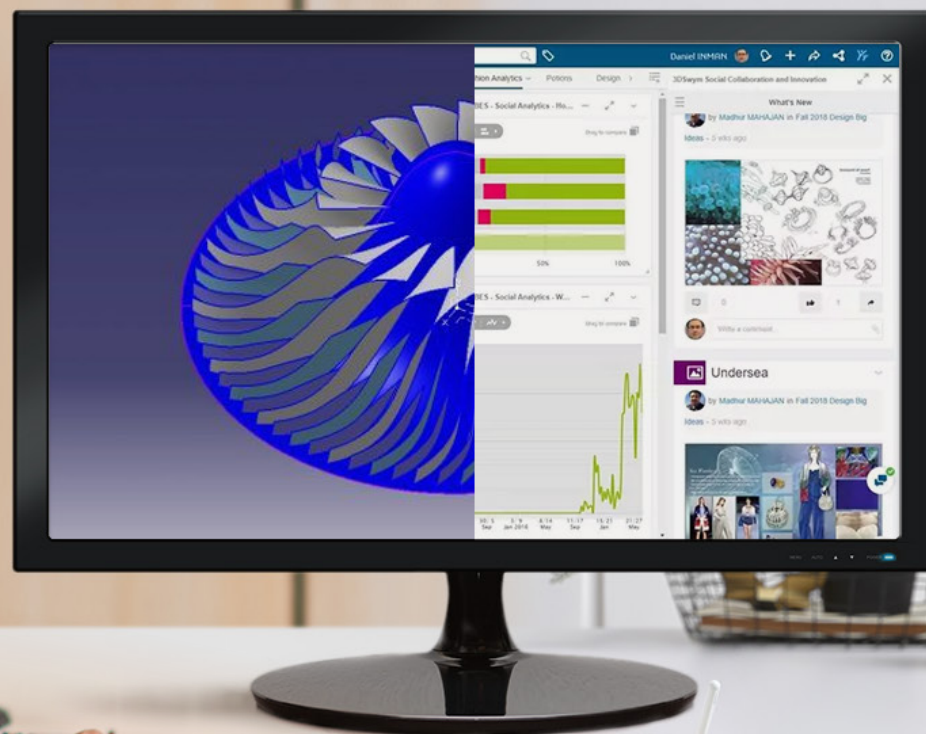


3S ENOVIA



3 WAYS TO ENGAGE EVERY STAKEHOLDER

in the Product Development Process

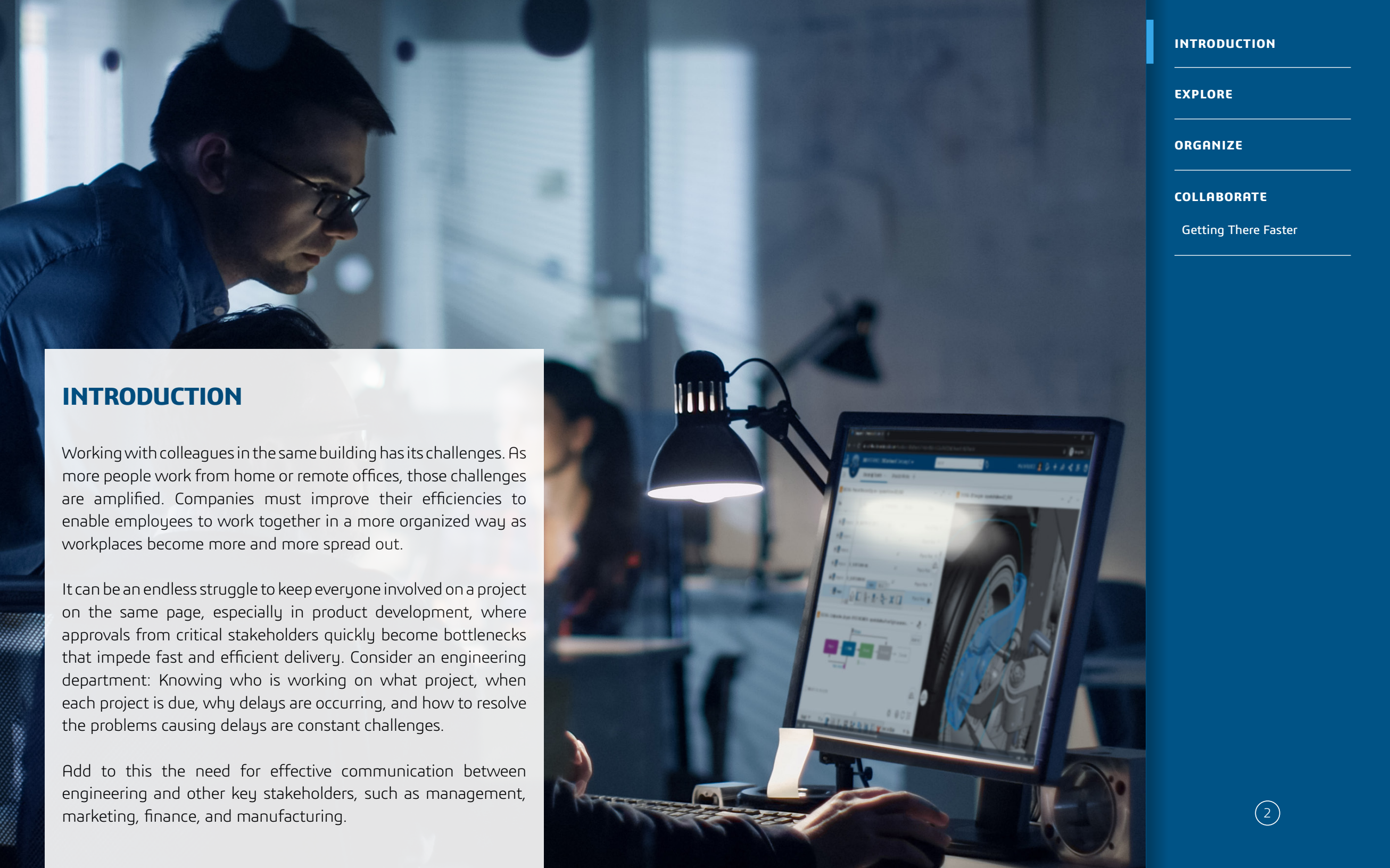
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Working with colleagues in the same building has its challenges. As more people work from home or remote offices, those challenges are amplified. Companies must improve their efficiencies to enable employees to work together in a more organized way as workplaces become more and more spread out.

It can be an endless struggle to keep everyone involved on a project on the same page, especially in product development, where approvals from critical stakeholders quickly become bottlenecks that impede fast and efficient delivery. Consider an engineering department: Knowing who is working on what project, when each project is due, why delays are occurring, and how to resolve the problems causing delays are constant challenges.

Add to this the need for effective communication between engineering and other key stakeholders, such as management, marketing, finance, and manufacturing.

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Those outside of engineering often do not have access to CAD or PLM systems. Even if they do, it doesn't facilitate collaboration because of the complex nature of engineering tools. Therefore, in-person meetings, data extractions, screen captures, emails, phone calls, Excel spreadsheets, and more rule the day.

Keeping an audit trail of all this data is overwhelming and practically impossible.

At specific junctures in the product development process each stakeholder, both technical and nontechnical, needs to explore the product design, organize the product development data to suit their needs, provide feedback and collaborate with colleagues. Effectively addressing these three needs with purpose-built apps results in fewer delays, messy miscommunications, less rework and botched delivery dates. Let's take a look at each need in detail: explore, organize, and collaborate.

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Comprehend the Product

Feedback plays an important role in the design process. It's difficult to effectively present concepts or design milestones, especially with nontechnical stakeholders who need concrete evidence for decision-making yet may not fully comprehend the **engineering reasons behind design decisions**. This can be frustrating for engineering since they typically agonize over getting every single detail of a design exactly right. This communication gap slows the decision-making process and increases the chance for misunderstandings. Tensions between departmental groups easily flare in this environment, causing potential communication breakdowns.

Non-engineering decision makers need easily accessible tools that provide them with a **"window" into the design** and enables them to participate in real-time reviews and provide their insight without any requisite CAD knowledge. Team members, regardless of their department, should be able to interrogate models on their own time and in 3D, as a picture is worth a thousand words. Enabling all non-CAD stakeholders to participate early in the design review process skyrockets collaboration on the front end. Long meetings become a thing of the past. Better decisions are made faster. It is easier to communicate concerns, identify issues, and propose resolutions. Promoting product ideas becomes a snap because all team members, from engineers to managers to executives, can participate in the design review process with full 3D digital mock-ups. Potential issues are uncovered earlier in the process when they are less costly to resolve.

Compare Content

The world continues to change at a breakneck pace. Products come and go, employees come and go. What remains is the data. And leveraging data, especially in your engineering department, can **save you time and money**. Engineers building new products often benefit from reviewing past designs, which becomes especially challenging when the engineer who built a previous product is no longer with the company. Manufacturing also benefits when engineering is able to show them what has changed in a product from version to version. However, comparing design versions with the unaided eye is difficult, to say the least, and wrought with uncertainty.

An app that enables engineers to digitally compare modifications to products is invaluable. Whether component geometry, structures, or properties, digital visualizations of overlaid color-coded models make it easy to **see differences and similarities in 3D**. Or, you can virtually compare differences side by side in a list or tree view. A simplified process of finding differences or duplicated content is more efficient. Another critical element when comparing structures, finding duplicates, locating specific components, or detecting differences in large structures is effortlessness: If it is not easy, no one will do it. The ability to understand changes is critical to success.

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Track Versions

In today's business environment, companies must continuously be innovating regardless of where its employees and suppliers are located geographically. Work is conducted in multiple locations—home, office, and on the road. Managing the influx of files and storing them in a single location is only the beginning of the challenges: the same files are saved too many times in the same database, released files get reworked without permission, changes are made in one location but not updated in all locations. And, file naming conventions are often obscure and confusing to everyone in the organization. Technology to capture and share maturity states and control file access, permissions, and privileges are no longer optional.

Tools that help you work methodically and **manage product lifecycles efficiently**—from creation to obsolescence—greatly simplifies the process of defining and conducting project tasks. Capturing and managing the states of the creation, review, release, and obsolescence of content is essential. With all the data in the same place, everyone is up to date with access to a **single source of truth**. And, because you are accessing “real-time” data, there is no risk of being out of sync on model revisions or assembly configurations. Version management capabilities should include automatic detection of out-of-date assembly components, enabling accurate and fast updates.



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Securely Access and Share Content

Security is a top issue for companies today. When product development work hits a frantic pace the ability to stay organized so you can keep projects and people on track is more vital than ever. Stakeholders need help to keep important data secure yet easily accessible so all team members can get to it when needed most. The right files in the wrong hands can wreak havoc. Good security must include the ability to define who gets access to what, with clearly defined file privileges. And, files need to be **securely and reliably accessed from any location**.

Cloud-based solutions that enable a **secure collaborative space** where stakeholders can access and share critical information are vital. Controlling who has access to content by assigning privileges such as Contributor, Author, or Owner ensures your entire team works in synch as a single unit. By creating and managing spaces dedicated to content storage and collaboration with all your files in a single, secure location on the cloud, you make working together a breeze. Design or other content review happens seamlessly when 3D models are easily shared with others in your company or even with external resources. In a secure cloud environment, working from the office, at home, or on the road is just one click away.

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Organize the Data

Some say that innovation is superior to mundane tasks like maintaining an organized work environment, but the reality is that searching for documents in a database can be very time-consuming, potentially slowing down product development projects. To participate in a team effort, everyone needs to promote order and routine to get projects done efficiently and deliver on time. **Critical data needs to be organized and easily accessible** so you can find it at on a moment's notice. Let's face it: It is simply easier to be creative in a well-run company that has a framework for getting things done. Disorganized data can steal valuable time and reduce your ability to be innovative.

If you think of your product development effort as a book, then technology tools that make it easy to mark individual "pages" become shortcuts to access what you need quickly. As you develop an organized structure, it makes it easier for you to work as a team and retrieve items of interest without searching. Building a framework of "bookmarks" that flag frequently accessed files as favorites expedite you and your team's access to critical pieces of information. Building and delivering new products requires directed action. Having tools that make it easy to stay organized is one of the keys to project success.

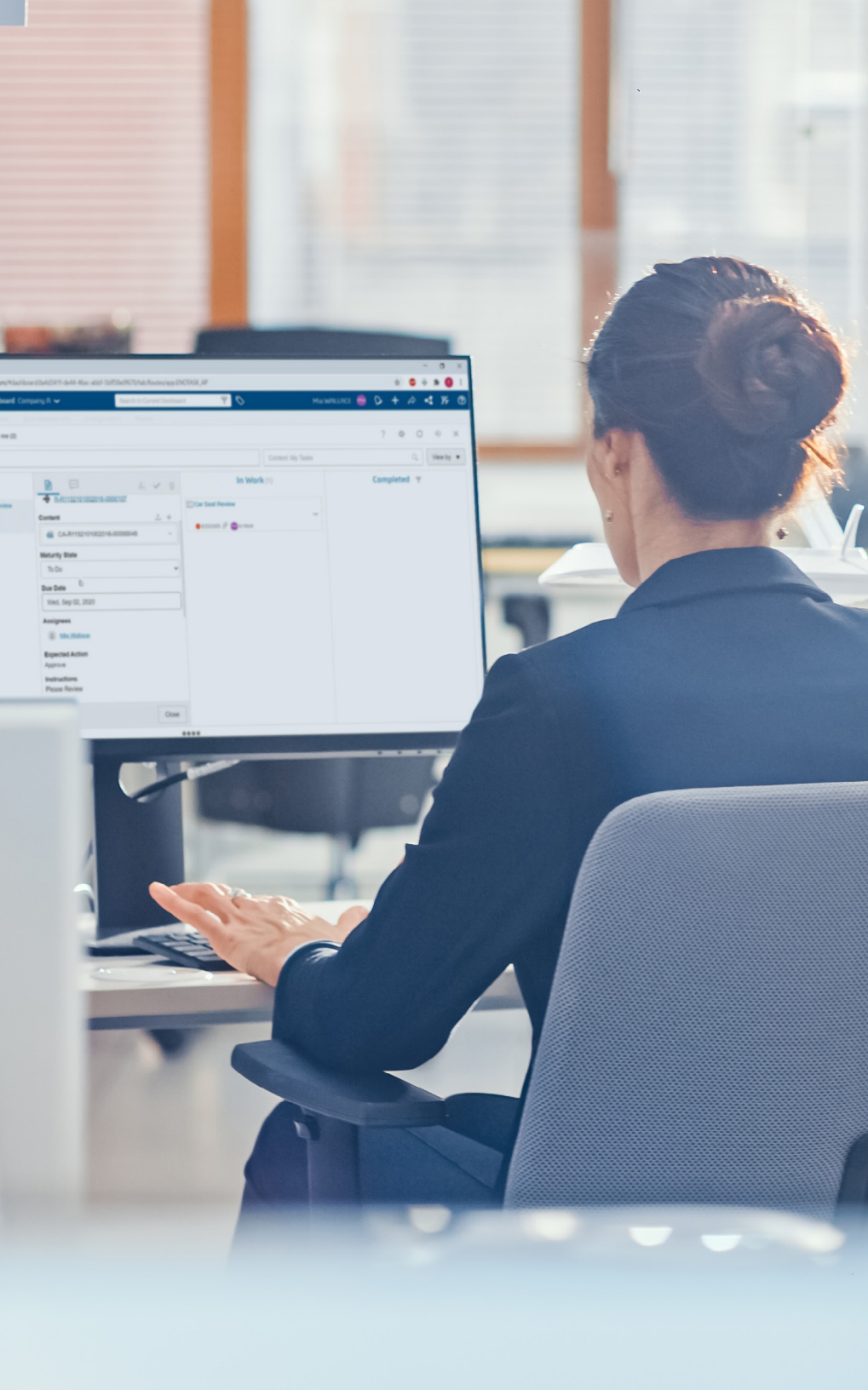
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Share and Track Tasks

Managing product development tasks is unwieldy, especially when there are stakeholders from almost every department in the company outside of engineering that constantly seek status updates. Simultaneously managing changes, issues, and workflows, even within engineering, is hard enough. It can seem impossible to keep everyone involved on the same page without an endless stream of meetings, emails, and web conferences. Trying to keep all those balls in the air is a tedious and dangerous game.

Lighter and more flexible technology is needed to **manage the complexities of keeping all tasks organized and completed on time**. Agility matters. Kanban boards, 6W (Who, When, What, Where, Why, and How) tags, project lists, and more must be instantly available to all stakeholders. Assigning tasks needs to be easy, and notifying users automated. Nontechnical stakeholders outside of engineering need a window into task status since their work timeline often reacts to when engineering hits specific milestones. One location showing synced tasks enables key decision-makers to clearly see the big picture.

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Understand Issues

It is impossible to anticipate and effectively deal with every type of problem that could potentially occur in the product development process. All manner of glitches can arise at any time. If you do not respond rapidly, situations get out of hand and, before you know it, become major issues. The problem isn't the problem: it is how quickly you spot the issues and manage the process to consistently resolve them. Making the wrong decisions or overlooking issues can have a huge impact not only on product quality but also on the efficiency of your business.

Technology solutions for **managing issues** need to avail all stakeholders of the information they need ASAP. Logging, tracking, notifying, and working on resolving issues must be simple. The system needs to be equipped to respond to issues that can be raised against a variety of items, not just CAD parts and files, and it must include the flexibility to raise multiple issues against the same problem. Stakeholders also need to be able to **easily view all issues in their various stages, with the priorities attached to each one**. This level of efficiency practically eliminates last-minute meetings and panicked emails. And, product quality is both preserved and improved in the process.

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Working Together on Changes

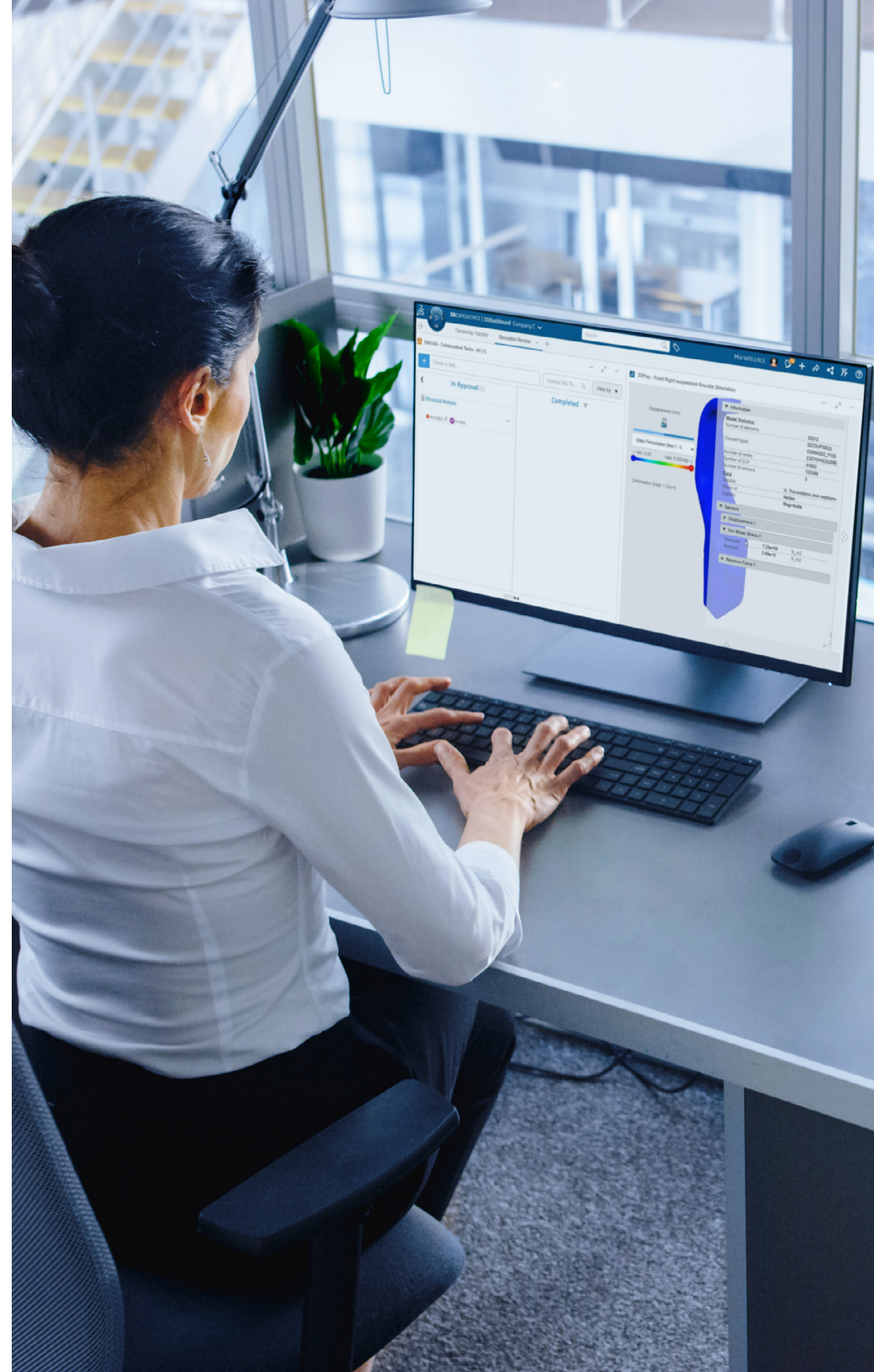
Every person in development knows that product changes will happen and are necessary, whether they like it or not. The process of innovation is often about managing changes from the earliest stages of design to delivery. At the beginning, before any work is done, all stakeholders need to sign off. That same process applies to making changes that happen during the heat of design and development. Products may change on a day-to-day basis. The changes must not only be captured but recorded and stored for easy access and traceability in the future. Proposed changes also need to be reviewed by all key stakeholders to assess the value and benefits to the organization.

Technology tools that make it easier to **track, manage and automatically capture product changes** are essential. Tools should provide a controlled, clearly defined process to manage products and production during the development process. **Creating, assigning, and managing change actions** for all project stakeholders should be simple, including for employees working remotely, vendors, and suppliers. Attaining peer validation and approval, updating changes of scope, and tracking proposed or completed work should all be contained within a framework where everyone on the team has visibility into the change status and the actions assigned to them.

Adhere to a Business Process

A well-structured project is broken down into stages that involve several different people. However, many organizations rarely measure the success or failure of their business processes. Rework, delays, workarounds, and missed steps quickly turn into a chaotic pile of obstacles. It is often tricky to spot where process hurdles are happening. Even when companies have strong development processes, rigidity in the process makes it almost impossible to get tasks done in an efficient manner. When frustration begins to reign among the ranks of engineers and designers, project progress is in danger of screeching to a halt.

Technology that shows who is assigned to do what and keeps everyone up to date with each completed stage is critical. Plus, being able to create visual workflows in a shareable dashboard makes it easier to communicate and manage your entire team. Because workflows are often similar from project to project, **the ability to automatically create workflows based on a previously used template** is a huge time saver. The reality of most projects is that some members have tasks for reviewing and commenting while others have tasks for approving the spec. Therefore, **defining precise roles and tasks** needs to be built-in. Automated email reminders inform assignees to start their tasks to ensure communication is clear and expectations are met.



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Imagine an environment where it is easy to communicate concerns, identify issues, and propose resolutions. Communicating product ideas becomes a snap because all team members, from engineers to managers to executives, can participate in the design review process with full 3D digital mock-ups. Potential issues are discovered earlier in the process, so they are less costly to resolve. Designers have instant access to updates made by other contributors. This enables real-time concurrent design, enhanced decision-making, and faster design maturity.

Built on the cloud-based **3DEXPERIENCE**® platform, the Collaborative Industry Innovator role offers all stakeholders everything they need to effectively and efficiently explore, organize, and collaborate on product designs, thereby improving productivity, ensuring traceability, and ultimately driving innovation and faster time to market.

Built on the cloud-based **3DEXPERIENCE**® platform, Collaborative Industry Innovator makes it easier to track and manage the product development process from project start to finish. The platform provides the technology infrastructure to manage the people, data, and documents among your entire team, including partners, customers, suppliers, and manufacturers.

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Dassault Systèmes' 20,000 employees are bringing value to more than 270,000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com.

