

10 BEST PRACTICES FOR DESIGN COLLABORATION

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10 BEST PRACTICES FOR DESIGN COLLABORATION

1. CAD-Aware Cloud Storage Systems
2. Secure Shared Markup
3. Turn Documentation Into Conversation
4. Automated Revision Management
5. Efficient Task Assignment and Management
6. Collaborative Communication Tools
7. Mobile Design Review and Markup
8. Approval Route Management
9. Change Management Coordination
10. Unlimited Scalability

REVOLUTIONIZE DESIGN COLLABORATION

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Effective design collaboration is crucial for the success of any engineering project. With the increasing complexity of product development, streamlined tools and processes are essential to maintain efficiency and innovation. Traditionally, this has meant a significant investment in server hardware, SQL licenses, and IT staff for maintenance, and backups to effectively address many design collaboration challenges. While these methods have been effective for some organizations, the resources required do not make them accessible to all companies. Additionally, in today's remote work environment, VPN connections can be less than ideal for handling large CAD files. Consequently, while PDM remains a valuable tool with long-standing capabilities, other options such as cloud collaboration are available for organizations where PDM may not fit their needs.

To support the needs of even more users, companies must solve common data management issues without the need for extensive infrastructure. Leveraging cloud-based platforms and user-friendly data management tools can provide robust and scalable solutions that enhance collaboration, streamline workflows, and reduce IT overhead. This approach ensures that all users, regardless of their IT capabilities, can manage their CAD data effectively and efficiently. This eBook outlines the top ten best practices for design collaboration, using the Cloud Services tools in SOLIDWORKS® to simplify and enhance design workflows. By democratizing data management, organizations can achieve greater efficiency and accessibility in their design processes.

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1 | CAD-AWARE CLOUD STORAGE SYSTEMS

Cloud storage systems designed for CAD, like the **3DEXPERIENCE®** platform, are tailored to handle the intricacies of CAD data and relationships. These systems offload the burden of data management from designers so they can focus on design work. The **3DEXPERIENCE** platform integrates seamlessly with **SOLIDWORKS**, so designers can easily save and revise their work without worrying about breaking file references or losing data.

Every **SOLIDWORKS** user can benefit from CAD-aware cloud storage. When you store data in a CAD-aware cloud, all interlinked files—part files, assembly files, and drawings—remain updated and intact. This setup eliminates the risk of broken references, a common issue with traditional storage methods. These relationships are automatically managed, ensuring that any update to one file is reflected across all relevant documents. By saving your data to the **3DEXPERIENCE** platform directly from your **SOLIDWORKS** interface, you will never break another file reference again.

WHAT ARE CLOUD SERVICES?

Cloud services in **SOLIDWORKS** integrate advanced, cloud-based tools directly into the **SOLIDWORKS** environment. This integration allows for seamless collaboration, data management, and access to design files from anywhere, at any time. By utilizing cloud platforms, **SOLIDWORKS** enhances productivity, simplifies workflows, and reduces the need for extensive IT infrastructure, ensuring that all users can manage their CAD data effectively and efficiently.

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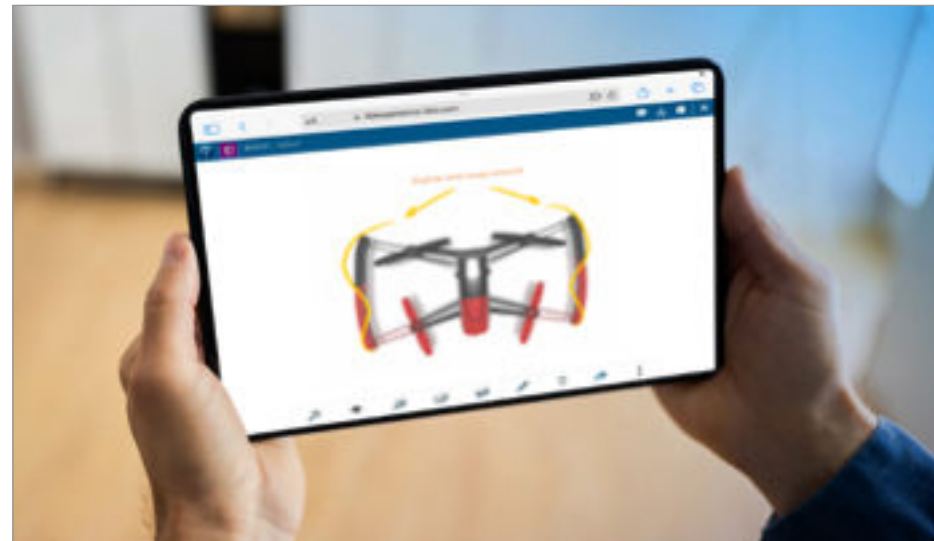
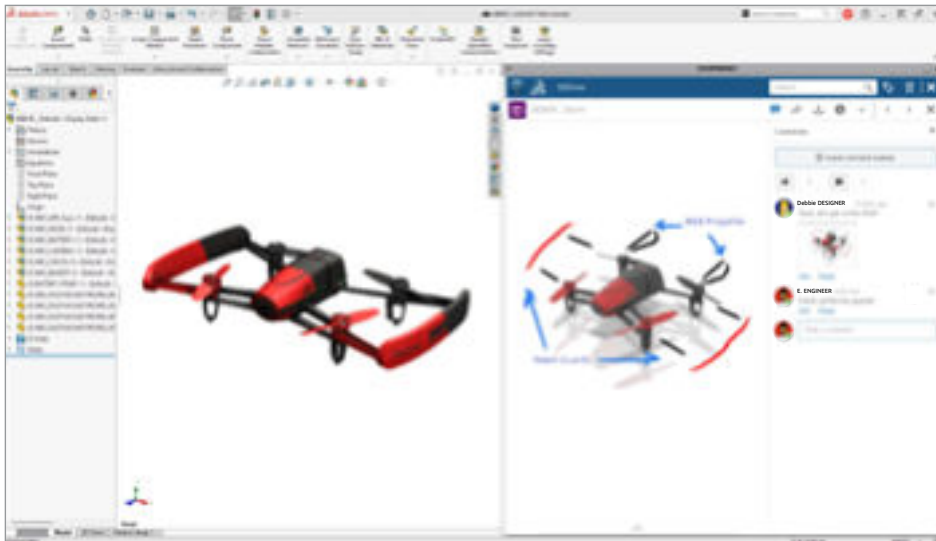
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2 | SECURE SHARED MARKUP

Emailing CAD files back and forth for review can lead to delayed processes, confusing threads, and even lost data. With SOLIDWORKS integrated cloud data management tools, you can collaborate securely with shared markup capabilities. Controlling permissions and visibility right from the platform protects your intellectual property.

This system not only enhances security but also streamlines feedback collection. You can share lightweight versions of your CAD models with external stakeholders without compromising your data's integrity and without additional software installations. The ability to manage digital access means you can specify who sees what, preventing unauthorized access to sensitive information. This controlled sharing environment is ideal for protecting your intellectual property while still enabling collaboration.



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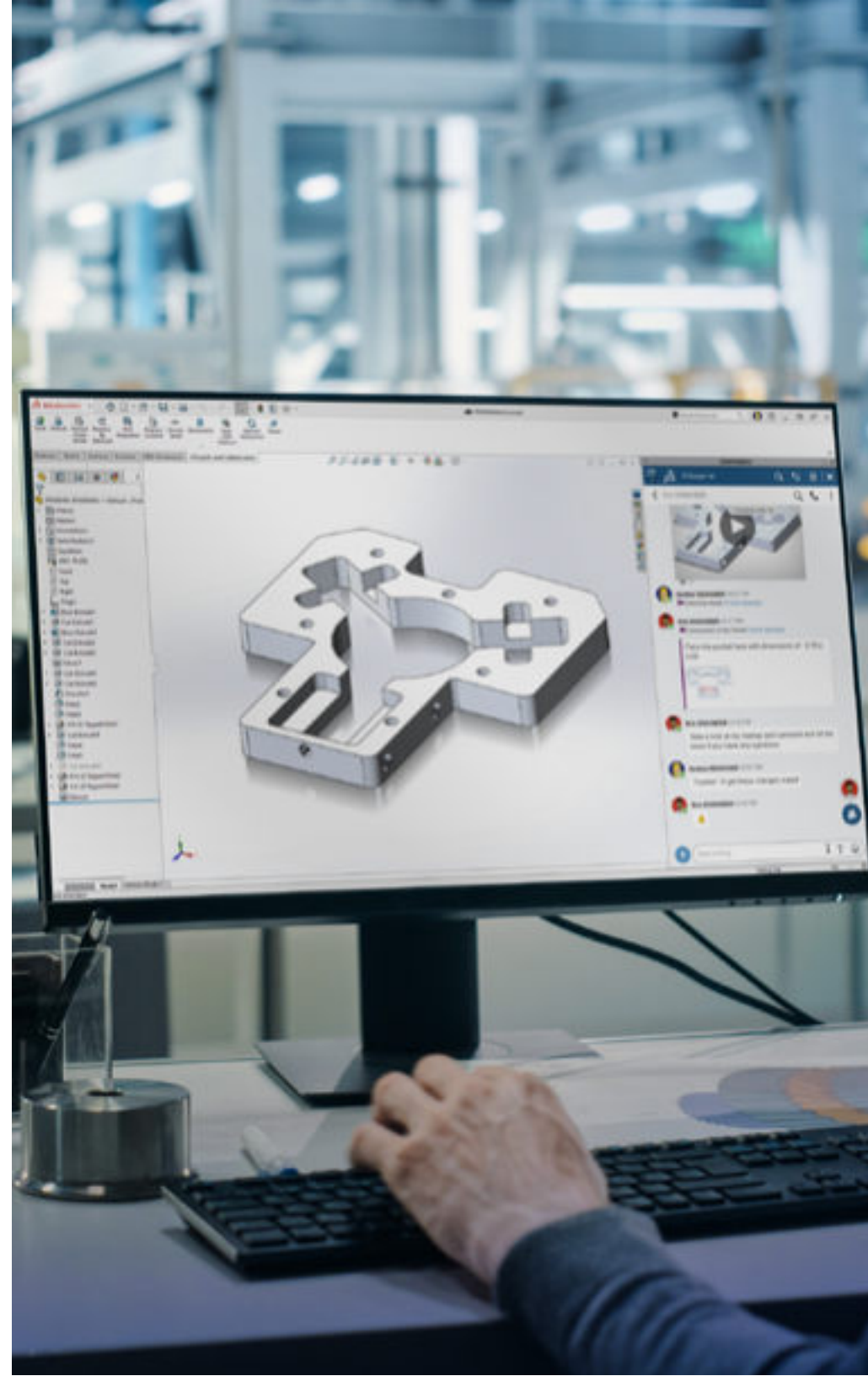
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3 | TURN DOCUMENTATION INTO CONVERSATION

Enhance collaboration with built-in tools for commenting directly on CAD files and documents. This method is more efficient than emails or screenshots, keeping all communication and historical data linked with the file. Use the Lock and Unlock features to prevent overwriting others' work, ensuring smooth concurrent collaboration.

Directly commenting on files keeps all relevant discussions in one place, making it easy to track decisions and changes. The Lock feature prevents multiple users from making conflicting changes. By locking a component, you ensure that only one person can modify a file at a time, preventing accidental overwrites and maintaining the integrity of the design process. With just a couple of clicks, you can easily chat and communicate right inside your SOLIDWORKS interface.



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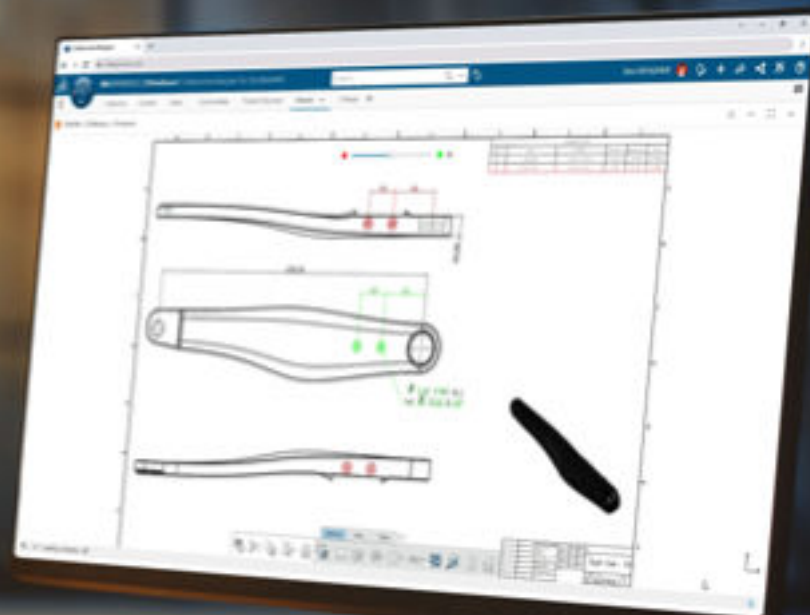
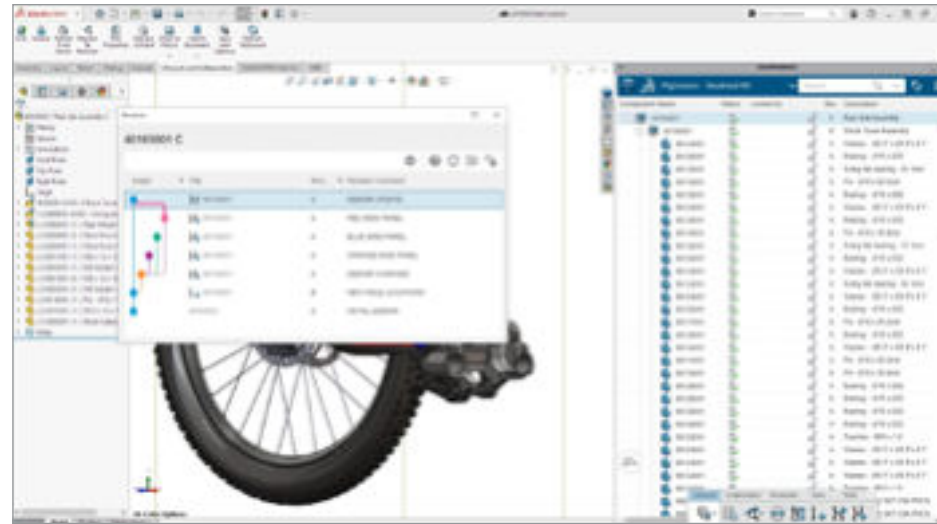
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4 | AUTOMATED REVISION MANAGEMENT

In the past, managing revisions has been a manual process with a significant risk of duplicating and overwriting files. Think about all the design variations, file references, and revised components that need to be managed. SOLIDWORKS includes a robust way to track and compare files with automated tools. Just click on New Revision, and the rest is automated so you can focus on your design work.

Automated revision management is crucial in environments where multiple iterations of a design are common. Instead of manually duplicating and renaming files, you can access the **3DEXPERIENCE** platform's revision management tools to track these changes effortlessly, providing a clear history of modifications. This functionality is particularly beneficial during the concept design phase, where managing several variations can be challenging. Automated revision management reduces manual work, prevents errors, and ensures all team members are working with the latest versions. With SOLIDWORKS CAD connected to the cloud, automated revision management is just a click away.



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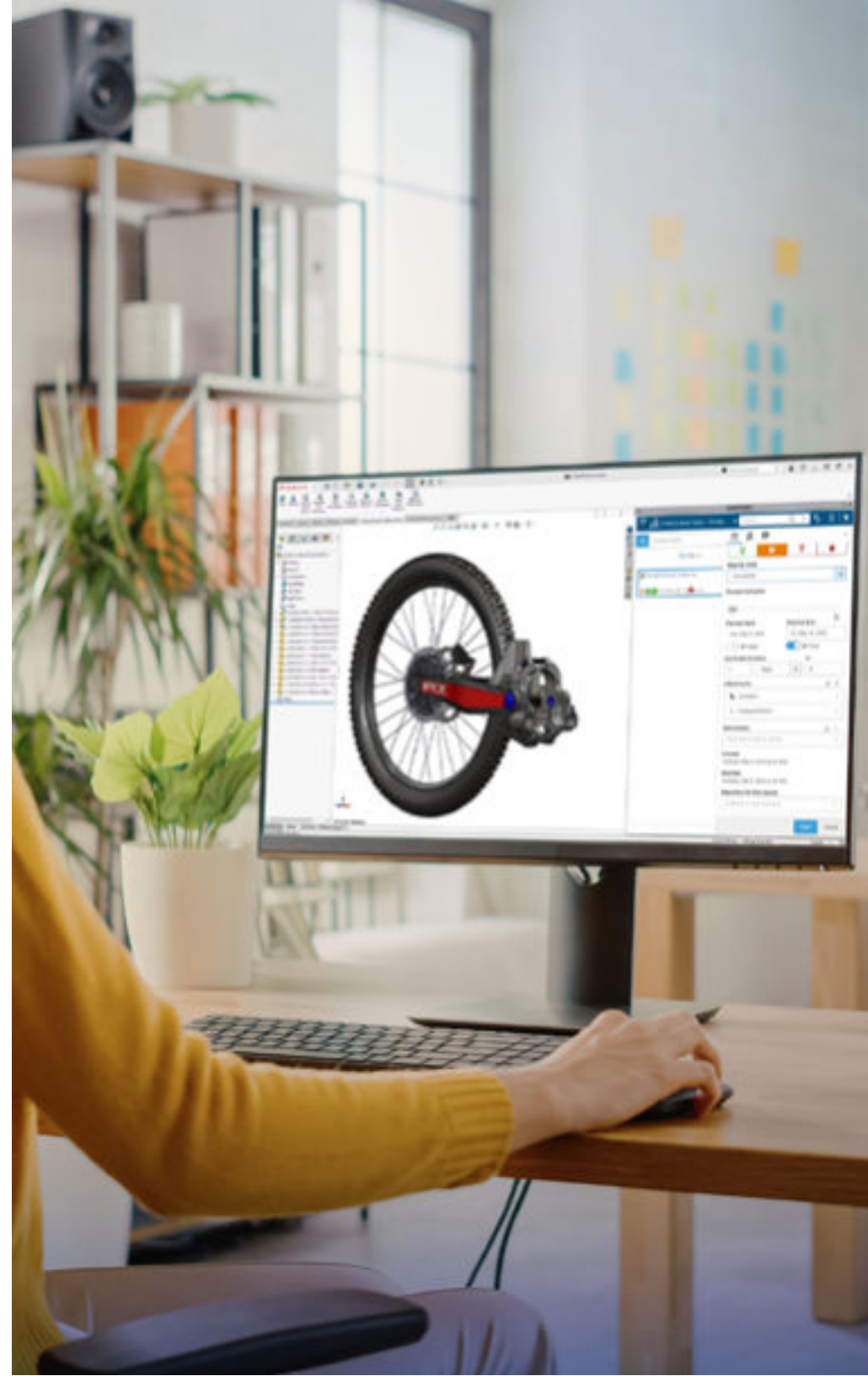
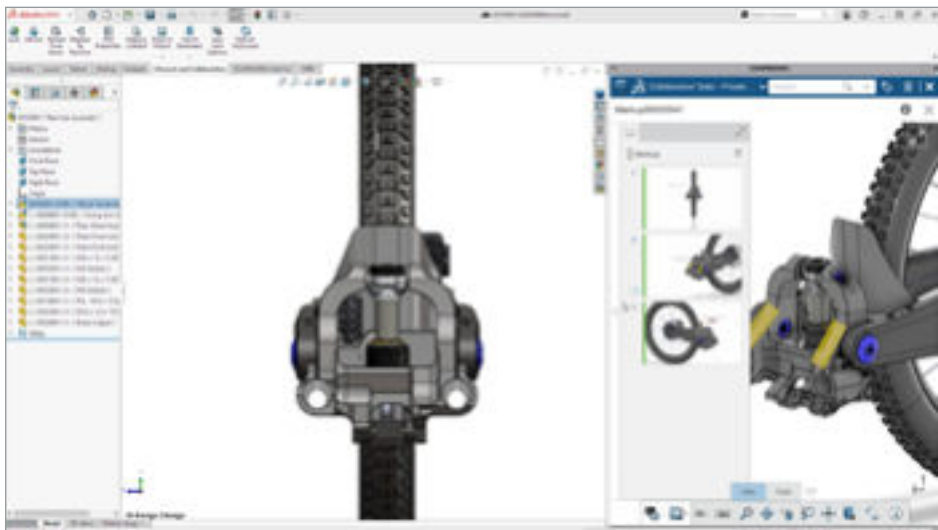
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5 | EFFICIENT TASK ASSIGNMENT AND MANAGEMENT

SOLIDWORKS can help you manage your tasks effectively. You can attach CAD files and documents directly to tasks, view statuses, and add comments. This integrated approach ensures that there is never any duplication, and the latest files are always accessible and connected to tasks, streamlining project management and improving team collaboration.

Task management tools on the **3DEXPERIENCE** platform provide a clear visualization of project progress, helping managers and team leaders move beyond whiteboards and Post-it® notes to prioritize tasks and allocate resources efficiently. Larger teams with more complicated tasks require more sophisticated tools to help them manage how time, money, people, and resources are allocated. CAD-connected task management and assignment minimizes duplication and ensures team members have the most up-to-date information.



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6 | COLLABORATIVE COMMUNICATION TOOLS

In today's fast-paced design environment, enhancing collaboration is a critical part of supporting the innovation process. SOLIDWORKS offers a suite of collaborative communication tools designed to connect people and data, driving sustainable innovation, and improving productivity across the value stream. These tools enable users to share knowledge, insights, and best practices, ensuring that valuable information is accessible and leveraged throughout the company. Real-time communication features facilitate immediate feedback and brainstorming sessions, allowing teams to whiteboard ideas, contribute comments, and provide feedback seamlessly. This enhances collaboration and creativity, helping everyone in the company to become a contributor.



Establishing social communities within the **3DEXPERIENCE** platform connects collaborators, consumers, and customers, enabling effective sharing, experimentation, and innovation. By engaging consumers and customers earlier in the ideation process, teams can validate concepts and ideas more efficiently, accelerating time to market and delivering a better customer experience. These communities keep everyone informed and engaged through ongoing conversations and activity streams, ensuring that critical updates and insights are easily accessible. As an added benefit, capturing feedback through activity streams, chat, video, and user-tagged comments in dedicated communities makes it easy to gather and evaluate valuable input across the value chain. This fosters a culture of continuous improvement, enabling businesses to develop better decisions that incorporate data from across the organization.



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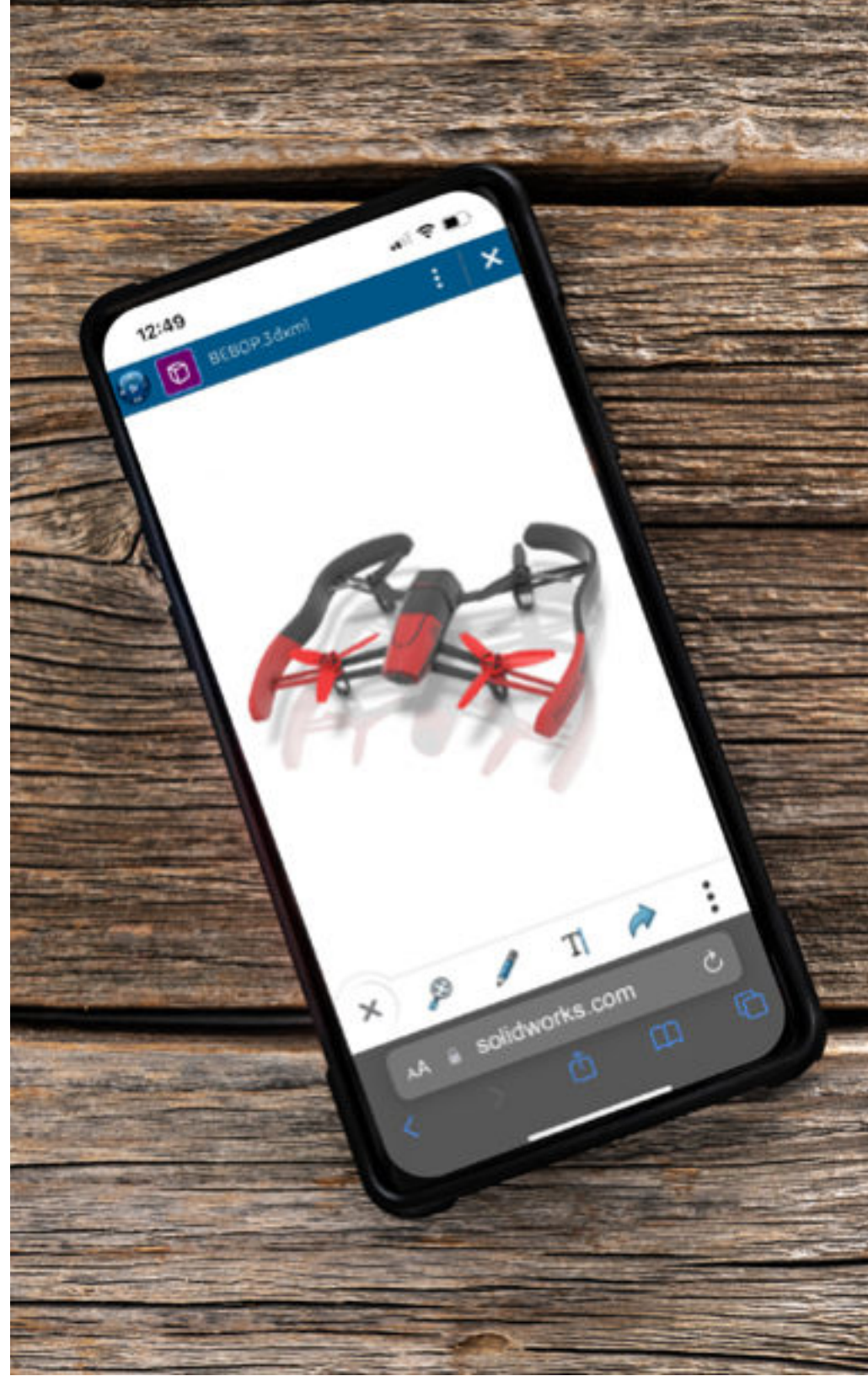
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7 | MOBILE DESIGN REVIEW AND MARKUP

With the mobile design review and markup tools in SOLIDWORKS, you can open even your largest assemblies within a web browser, so all stakeholders can access, review, and dive into CAD projects on any device, anywhere. This capability allows for effective design reviews, providing the power to hide and show components, explode assemblies, and gain additional control over internal reviews and markups. The ability to sort and visualize assemblies based on various criteria—material, release status, in-house or purchased parts, and lead times—offers a comprehensive view of your project. You can estimate when a project will be ready for assembly and gain insights into all related aspects of the design data.

These tools provide deeper optics into the design process, enabling you to review not just the design itself but all its related data. This enhanced visibility supports better decision-making and collaboration within your company. By leveraging mobile design review and markup capabilities, you can enhance your internal review processes, safeguarding intellectual property while accessing powerful tools to drive efficient and effective design reviews.



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8 | APPROVAL ROUTE MANAGEMENT

Efficient approval processes are essential for reducing delays and ensuring designs move swiftly from concept to production. With SOLIDWORKS, you can streamline approval route management, automating notifications and routing tasks to the appropriate individuals in the correct sequence. This automation significantly expedites the approval process, eliminating the need to manually track down approvals or determine the next steps.

The **3DEXPERIENCE** platform allows you to set up formal approval routes to change the maturity state of objects, such as transitioning files from “In Work” to “Released.” This built-in capability provides a structured and efficient way to manage approvals, ensuring that every step is documented and traceable.

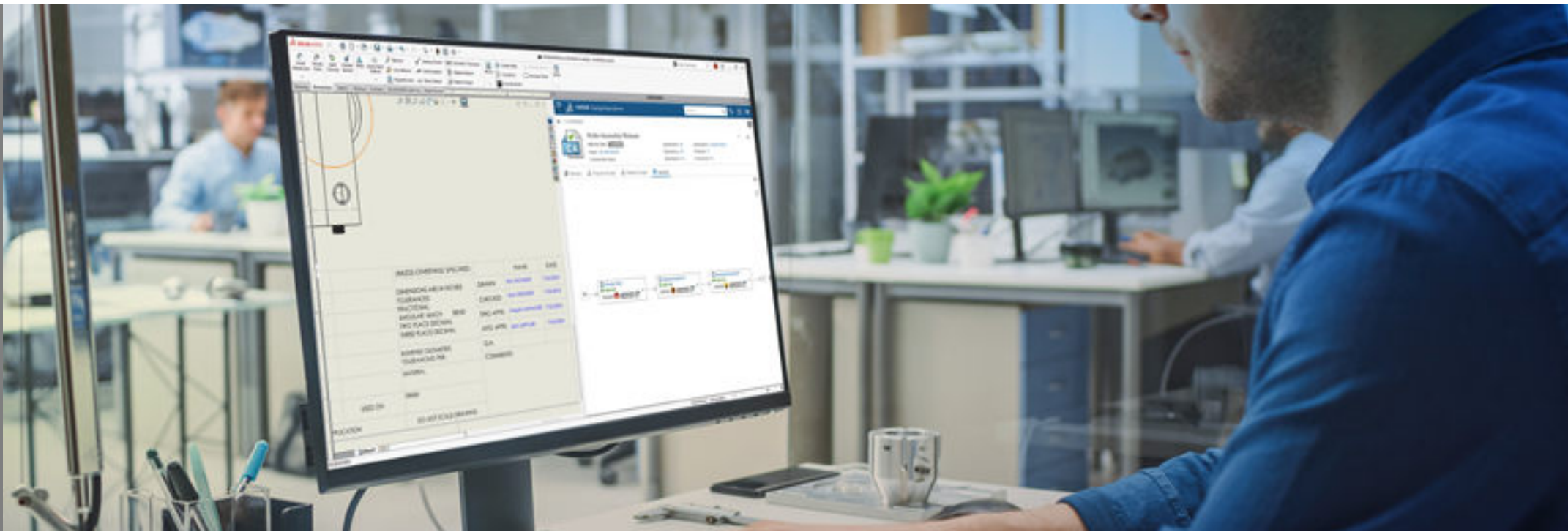
Implementing a formal approval process with the **3DEXPERIENCE** platform not only accelerates design approvals, it also enhances accountability and transparency. By leveraging these tools, you can ensure that your designs are approved faster, with less confusion, and with all necessary information captured accurately. This results in a more efficient workflow, helping your business bring products to market faster and with greater confidence.

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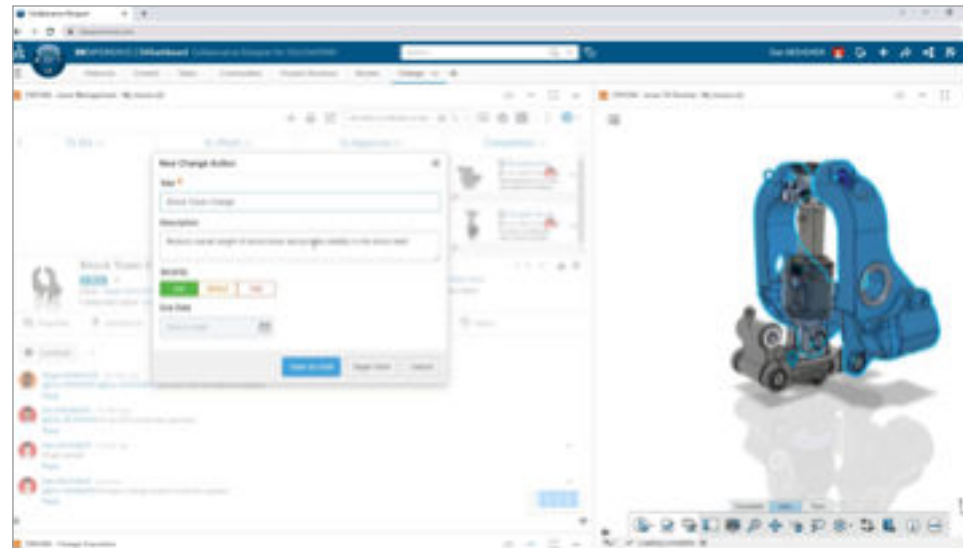
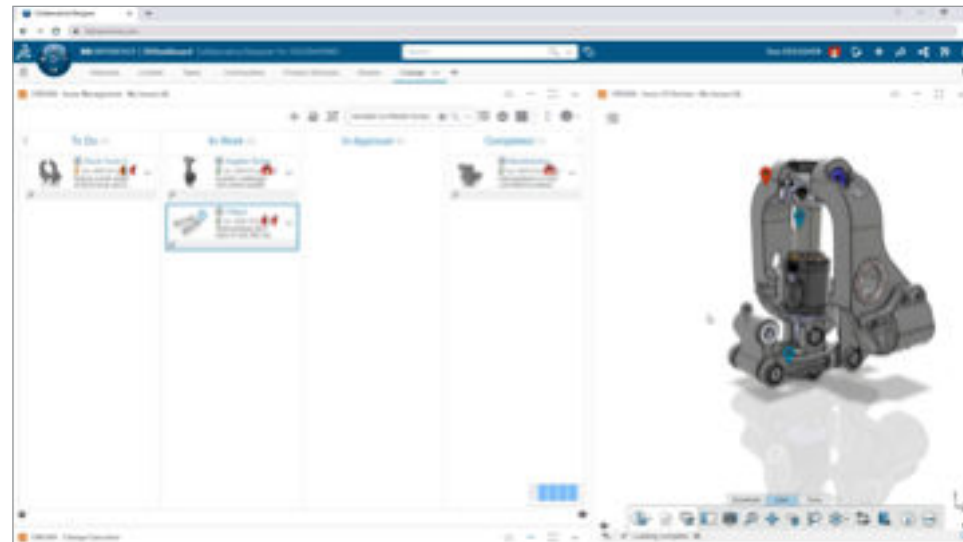
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9 | CHANGE MANAGEMENT COORDINATION

Managing changes in a design project can be a complex task, but with the right tools, it doesn't have to be. SOLIDWORKS includes capabilities to track all changes and approvals, ensuring that every step is documented and communicated effectively. This end-to-end collaborative change process makes sure that change decisions and assignments are communicated to all stakeholders, reducing confusion and streamlining workflows. Connected change management brings all parts of the organization together under a consistent and standardized change process. This means everyone, from designers to engineers to managers, is on the same page, making it easier to coordinate change implementations. By obtaining full change assessments on all proposed changes, you can make informed decisions that minimize disruptions and maximize efficiency.

Whether you're dealing with simple updates or complex product changes, every change is communicated and properly managed. This reduces the cycle time for implementing changes, allowing teams to work in parallel on their assignments and get things done faster. Every modification performed in different authoring applications is captured effectively and seamlessly, providing full traceability with automated change capture. This also includes sign-off traceability from all impacted organizations, including governance stakeholders. Every change is approved and documented, giving you confidence that nothing falls through the cracks. By establishing a seamless change process, your teams can implement changes quickly and efficiently, keeping your projects on track and your designs moving forward.



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10 | UNLIMITED SCALABILITY

This is just the beginning of the core features available on the **3DEXPERIENCE** platform. For **SOLIDWORKS** users, the **3DEXPERIENCE** platform offers unlimited scalability, enabling your CAD environment to grow alongside your business. This means you can start with essential features and gradually add more advanced capabilities without disruption or significant new investments.

Once your data is on the **3DEXPERIENCE** platform, you expand the possibilities. Do you need more formal governance over your data? Are you looking for advanced manufacturing solutions or powerful simulation tools like **SIMULIA®**? The platform evolves with you, offering seamless upgrades as your needs change. This scalability is a huge benefit for growing businesses. As you expand, you can integrate advanced tools and features to meet new challenges and opportunities. The platform supports a dynamic business environment, ensuring you always have the latest technology at your fingertips to stay competitive and innovative.

WHAT IS THE 3DEXPERIENCE PLATFORM?

The **3DEXPERIENCE** platform brings together people, processes, and data in a cloud-based environment to help make collaboration simple for all your teams in one unified environment. It enables teams to collaborate in real time, manage projects, and streamline product development processes. The platform integrates various applications, including **SOLIDWORKS**, to provide a holistic approach to innovation, enhancing productivity and ensuring that all stakeholders have access to the most up-to-date information and tools.

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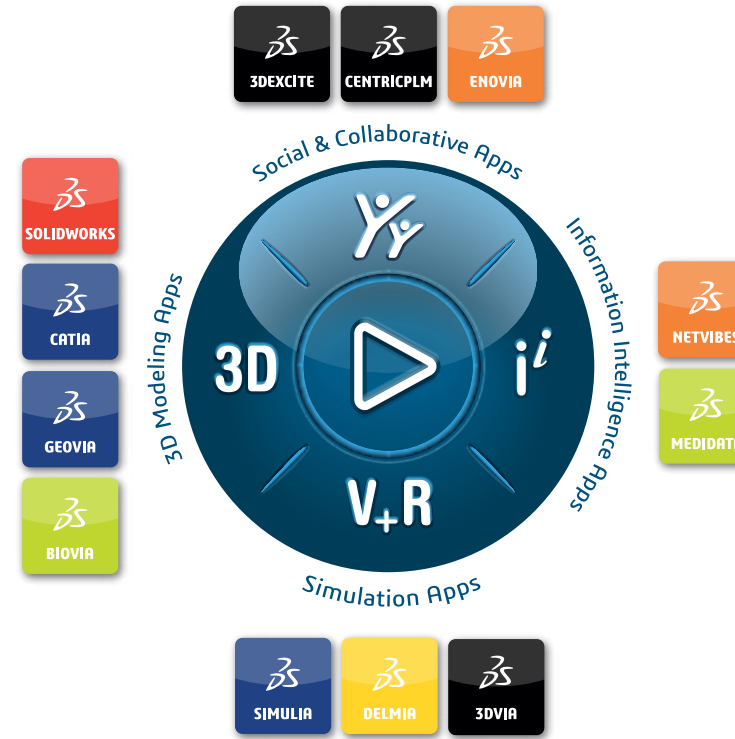
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The **3DEXPERIENCE** platform, fully integrated with SOLIDWORKS, offers a comprehensive solution that addresses common challenges in design collaboration. These tools will help you simplify your processes and focus on what truly matters—creating exceptional designs.

SOLIDWORKS transforms how teams work together, ensuring that every member has access to the most current data and tools. This improves efficiency and fosters a more innovative and agile design environment. By leveraging the power of cloud services, you can break down silos, enhance real-time collaboration, and ensure that your team is always aligned and informed. Adopting these design collaboration practices and leveraging the robust capabilities of SOLIDWORKS and the **3DEXPERIENCE** platform can open up new levels of productivity and creativity. Embrace the future of design collaboration and watch your projects reach new heights of success.



Our **3DEXPERIENCE**® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

Dassault Systèmes is a catalyst for human progress. We provide business and people with collaborative virtual environments to imagine sustainable innovations. By creating virtual twin experiences of the real world with our **3DEXPERIENCE** platform and applications, our customers can redefine the creation, production and life-cycle-management processes of their offer and thus have a meaningful impact to make the world more sustainable. The beauty of the Experience Economy is that it is a human-centered economy for the benefit of all – consumers, patients and citizens.

Dassault Systèmes brings value to more than 300,000 customers of all sizes, in all industries, in more than 150 countries. For more information, visit www.3ds.com.

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