

Collaboration for Revit®

When the Revit® Model is your World

Collaboration for Revit® cloud service connects building project teams with centralised access to Building Information Modelling (BIM) project data in the cloud. With no need for costly IT setup, Collaboration for Revit® is a turnkey solution that allows project stakeholders from multiple companies or sites to concurrently author a model using the BIM process. Project teams stay better connected and more informed on project progress in real-time using the Communicator chat tool within models. With Revit® and Autodesk® BIM 360 Team integration, access to information is extended to the entire project team, allowing even non-Revit® users to view, search, and socially interact on models almost anytime, anywhere via web browser or mobile device.

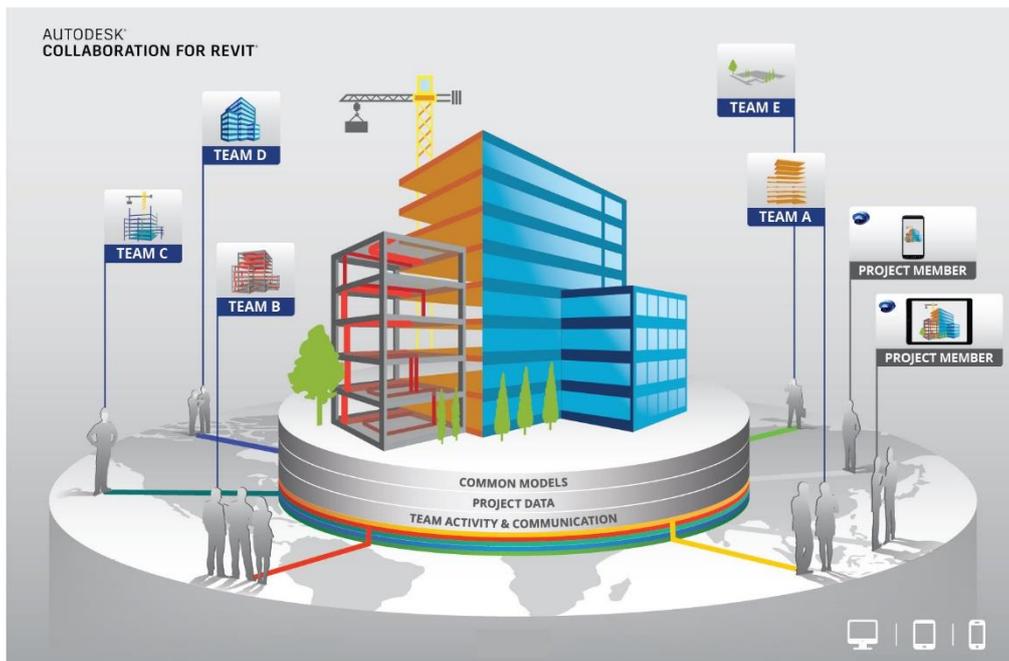


Figure 1: BIM 360 Team Collaboration for Revit®.

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Background information

Before diving into the how and where, we need to understand the why. When should you be considering a BIM solution for Project collaboration if you're using Revit®?

When should you consider Collaboration for Revit®?

The reality is that Building Projects are never simple. Here are some of the challenges that have to be overcome to ensure that a project is successfully completed:

- There are numerous stakeholders across multiple time zones.
- There are different teams, delivering on different schedules.
- There are disconnected communication silos like email and PDF that are happening in places where designers aren't working.
- Multiple teams are working on multiple models, with each model progressing independently of the other within each firm's network.

How does the Industry react to these challenges?

According to the McGraW-Hill SmartMarket report, more companies are investing in improving collaborative processes as "Better Internal and External Collaboration" were the top two business process investments in 2014. A 21% increase in investment can be seen from 2012 to 2014, on developing collaborative BIM procedures with external parties leading the way.

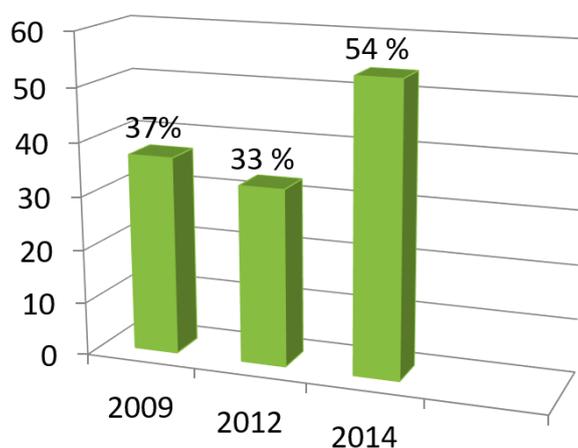


Figure 3: Improving internal & external collaboration processes.

Companies are also seeing the benefits of better project team collaboration and are investing in technologies to share models more efficiently. This number increased by 18% between 2012 and 2014.

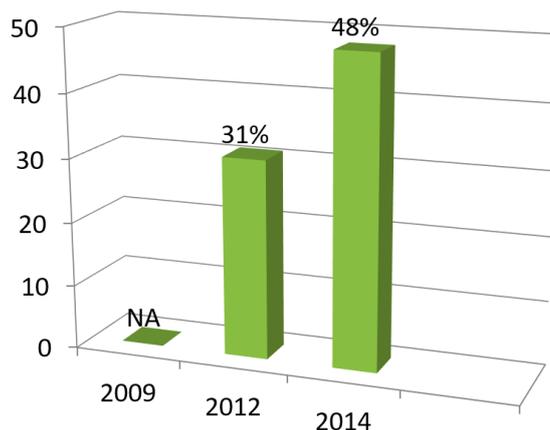


Figure 4: Improving model sharing & communication infrastructure.

More and more companies are encouraging partners and project members to use BIM. This capability is beginning to exert a greater influence on the process of evaluating companies for project teams.

What is the Return on Investment (ROI)?

As a result of these changes, the building industry is reporting some great ROI. McKinsey recently [conducted a study](#)¹ that sought to understand how project collaboration technologies impact how organisations collaborate with customers, partners, and employees. Here are some of the findings:

- 77% are seeing faster access to knowledge;
- 60% are reducing communication costs;
- 52% are seeing faster access to internal experts;
- 44% are cutting travel costs;
- 41% are seeing increased employee satisfaction.

Current Revit® Collaboration

When you have determined that you need to share a project with a team, there are a few options available on how to achieve this. Based on the geographic location of team members, and the complexity of the project, you can opt for file-based, server-based or cloud-based worksharing.

File-based Worksharing

With file-based worksharing, the central model is stored in a file at a network location that all team members can access.

This is ideal for when a project team is working on a Local Area Network (LAN). It provides sufficient performance with no installation of the Revit® Server application. Experience shows that this is also good for team members working on different parts of the model and are not necessarily from different disciplines.

1. McKinsey & Company

Server-based worksharing

With server-based worksharing, central models are stored on one or more Revit® Servers. Team members access the models using local Revit® Server Accelerators that improve performance when communicating across a Wide Area Network (WAN).

Revit® Server enables server-based worksharing where team members can collaborate on the same model across a WAN. As shown below, multiple team members in multiple sites use Revit® Server Accelerators to connect to one or more Revit® Servers across a WAN.

Again, this works best within different branches of the same company that might be located in different provinces or countries.

There are a few user limitations to server based worksharing.

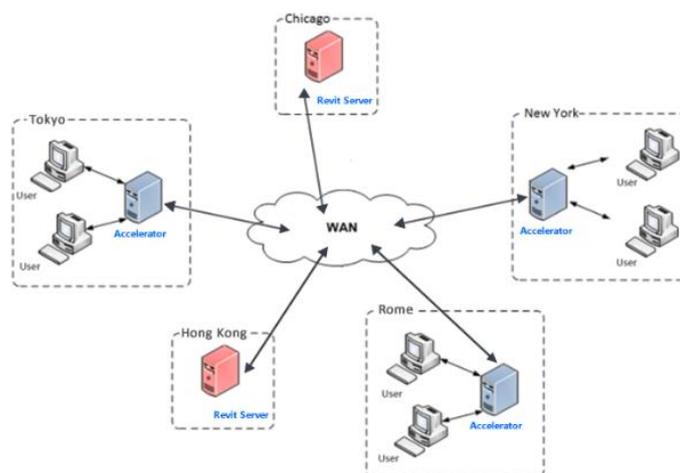


Figure 2: Revit® Server.

End-User Limitations for Server-Based Worksharing

While working with server-based workshared projects, team members cannot perform certain operations from within Revit®. Team members cannot do the following:

- Create, delete, move, overwrite, or rename models and folders on a Revit Server with the Open or Save As dialogs.
- Delete, rename or move the central models on a Revit Server. The Delete and Create New commands are not available when the Revit Server folder is selected in the Open or Save As dialogs.
- Create folders on a Revit Server. The administrator or BIM manager can do this using the Revit® Server Administrator.
- Move or copy models between Revit® Server Hosts using the Revit® Server Administrator.
- Roll back to a previous version of a central model.
- Browse to a different central model path while synchronising with the central model.
- Use Worksharing Monitor. Note that the Revit® Server Administrator displays server, folder, and model submission history and other data.
- Store non-workshared models on a Revit® Server.

- Directly access central files from the application menu's Recent Documents list or in the Recent Files window.
- Set the Maximum History value for log files.

Collaboration for Revit®

Autodesk® Collaboration for Revit® is a cloud-based subscription service that connects building project teams with centralised access to BIM project data. Teams can now work together on the same model from different companies and disciplines in different locations.

Benefits:

- No complex and costly IT setup and maintenance.
- Corporate firewalls and physical location barriers are overcome.
- Replaces costly and inefficient work-arounds for sharing models such as; use of FTP sites, sharing software or email with attached PDFs. It also enables true centralised access to Revit® models by team members in all disciplines around the globe.
- Direct access to project data.
- Enhanced communication.
- Better connections to entire project teams, including those who need access without a Revit® installation.
- All design and project data is stored in the [secure](#) BIM 360™ Team cloud environment.
-

In-context communication

Communicator for Revit® is installed with Collaboration for Revit® as an add-on. With Instant Messaging (IM) communication, team members from all disciplines can communicate directly with each other in real-time. This makes traditional limited communication tools, like phone calls and emails, look like child's play. Communicator for Revit® helps keep track of who is working on which model at any given time and makes a conversation with another team member, just one click away.

More benefits include:

- Chat with project members from other companies
- Send screenshots of areas that need more clarification
- Enhanced communication via Team Chat.
- See what's happening in the model, who is making changes etc.
- See what project members are doing with models associated in your project, even if you are not working on it.
- See when a new version of a model is available.

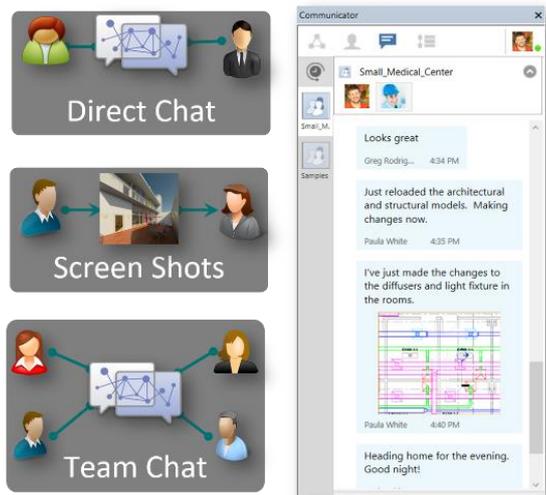


Figure 3: Communicator for Revit®.

Autodesk® BIM 360™ Team

BIM 360™ Team provides a centralised platform for communication, file sharing and design reviews for design teams and their project stakeholders.

- Connect your entire team in one workspace, communicate faster and share feedback in real time.
- View more than 50 (2D and 3D) design file formats. Right in your browser, without any software. Interact directly with 3D models.
- Share 2D and 3D, design and project files with anyone.
- Review designs in real-time with your team, capture feedback and make decisions together.

Collaboration for Revit® is tightly integrated with Autodesk® BIM 360™ Team, providing Revit® design and engineering teams a centralised cloud-based platform in which They can work together more efficiently on projects.

- Data from projects hosted in Collaboration for Revit® surfaces in BIM 360™ Team, making models easily viewable and searchable with no exports, translations, or uploads required.
- External team members and project contributors who do not use or have access to Revit® software can view, search and socially interact on models, discuss challenges and successes, and stay current with project activities.

How does it work?

If you have ever worked with worksharing, either file-based or server-based, the transition to cloud-based Collaboration for Revit® will be a breeze. The fact that the project will be hosted in the cloud, means no more server setups or system requirements.

Upload your central model to the cloud as you would have saved to a network location or on a Revit® server, and have team members take ownership of different worksets.

The central model now allows all disciplines to have their latest version of the model all in one location. However, the best practise is still that every discipline stays owner of their own model. This combines the worksharing and collaborative features of Copy/Monitor all in one location and process.

It might be a good idea to decide on a dedicated coordinator that will link all the models into each other. This means, architects only work on the architectural model, structural engineers only work on the structural model and the same goes for the MEP engineers. With those models then linked into each other, everyone has access to the latest version of the models, at any time. As long as the naming convention of the model stays the same, BIM 360™ Team will keep track of the versions, making sure that all stakeholders always know where in the project timeline they are.

[Click here](#) for a more detailed demonstration on Collaboration for Revit®

Conclusion

Everyone would be amazed by technology and the possibilities it provides. To start out on Revit it is like a glimpse into the future. Having the possibility to no longer overlay drawings to check for clashes etc. using the Copy/Monitor feature was one step closer to the “space age”. Now the ability to work together with different partners across the WORLD on the same project is just beyond imagination, and yet it is here, within reach.

The possibilities are literally endless. Companies tend to be mostly against change because of learning curves and time constraints. The irony of this is that you will save an immense amount of time, energy and money using Collaboration from Revit®. Add Collaboration for Revit® as part of your project planning. Give your client access to easily view the progress of his project.

Better collaboration from the start means less time spent miscommunicating and more time spent on design and deliverables. Read all the information, plan and then, take the leap...

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