



MÁRKUS ENGINEERING SOLVES REMOTE WORKING COLLABORATION CHALLENGES WITH REVU AND ARCHICAD

CHALLENGE

Budapest-based civil engineering firm Márkus Engineering is seizing the opportunity to be at the forefront of the burgeoning AEC industry in Hungary. The family-run SME, which specialises in high-end building projects, is upping its game with Revu.

In 2020, with face-to-face work restricted by the coronavirus pandemic, Márkus Engineering needed a reliable online project collaboration platform to maintain information flow between project teams both on- and off-site. When lockdown procedures were introduced, the firm was in the midst of managing a major renovation project in the heart of Budapest – the creation of a new Radisson Collection Hotel in St Stephen's Square. With delivery of the high-stakes project under threat, the Márkus team needed a solution that would help them stay on schedule and on budget. Crucially, the solution had to work with Archicad, Graphisoft's BIM software, which was used by the project's designers and architects. The answer? Bluebeam Revu.

SOLUTION

Project teams were able to switch seamlessly to remote work thanks to Archicad's Bluebeam Connection, which integrates Graphisoft's BIM authoring tool with the design review workflows in Revu. Better yet, switching to digital collaboration with Revu significantly streamlined working processes, leading to time and cost savings across the project. Design reviews, quantity takeoffs and estimations were all much quicker.

Márkus has now made its switch to Revu permanent. It's the firm's strong belief that BIM-based solutions are needed to provide the best possible quality of service and communication tool to clients. And in Márkus' experience, Graphisoft's and Bluebeam's solutions are among the most competitive and simple to use.

BENEFITS

- 50% time savings on design reviews
- Five times faster quantity takeoffs and estimations thanks to the measurements suite and quantity calculation functions in Revu
- Thousands of euros saved in paper printing costs for design comparisons and revisions
- More efficient document management and quicker workflows when creating digital dashboards in Revu
- Weekly project meetings maintained during lockdown thanks to Studio Sessions

A new landmark hotel for Budapest

Márkus Engineering is a family-run multi-disciplinary engineering and management firm based in Budapest, Hungary, specialising in high-end construction projects. The firm has managed over 60 projects worth over €40 million and oversees everything from design through to operation.

Their most ambitious project to date is the build of a new Radisson Collection Hotel in Budapest's central plaza, St Stephen's Square. The objective? Create a spectacular hotel to attract tourists to the centre of Budapest. Márkus was appointed to manage and provide technical supervision to ensure project delivery on time and on budget.

Construction on the 71-room hotel began in mid-2019 and is set to complete in 2021. The renovation involves the retention of the landmark building's original character features. Once complete, it will feature a rooftop bar with views of St Stephen's Basilica.

Digital transformation accelerated by a pandemic

At the beginning of 2020, Managing Director Tamás Márkus Sr set his intention for the firm to become more digital and BIM-focused, because in his words, 'either you keep up or you fall behind'. His goal is to position Márkus Engineering as a progressive firm at the forefront of Hungary's rapidly growing AEC market.

The switch to digital became an urgent priority when the COVID-19 pandemic hit Europe: Márkus had to adapt to maintain communication and progress on the hotel project during lockdown.

Tamás Márkus Jr, engineer, suggested trying Revu, as he'd experienced how easy it was to use while working at another firm. With Revu in place, Márkus Engineering was able to keep the hotel project on schedule, despite lockdown restrictions.

'In Hungary, 89% of architects work in Archicad. Revu was the right solution for us because it integrates seamlessly with the Archicad software. It's versatile and cost-effective, which is important to us as a small business. We saved 50% of our time on design reviews and completed quantities and estimations five times faster.'

– Tamás Márkus Sr, Managing Director, Márkus Engineering

Archicad-Revu integration: How it works

The Budapest Radisson project was designed using Graphisoft's Archicad BIM platform.

Bluebeam and Graphisoft are sister companies under the Nemetschek brand, a leading global software provider for the AEC industry that covers the entire lifecycle of building and infrastructure projects.

'If it wasn't for Graphisoft and Bluebeam, the COVID-19 lockdown would have derailed this project. The seamless integration and digital collaboration tools helped us work faster and more efficiently. I have no doubt we'll continue to use Revu in the future.'

– Tamás Márkus Jr, Engineer, Márkus Engineering

Graphisoft's Bluebeam Connection provides a bi-directional link between Archicad and Revu. All markups created in Revu are imported as native Archicad entries, appearing in the correct location on design layouts, without any manual work. The seamless compatibility saves time in design reviews.



Studio in Revu allows you to easily invite team members from anywhere in the world to collaborate, giving external stakeholders the ability to mark up and review documents in real time. Four teams on the Budapest Radisson renovation project used Revu and Studio: the architects and design teams, Márkus Engineering, the general contractor and the property owners' facility management team. Graphisoft Hungary provided training to quickly bring the Radisson project teams up to speed with Studio's functionality.

The Archicad-Revu design review workflow looked like this:

- Views or layouts were saved as PDFs in Archicad
- These PDFs were sent to project stakeholders for markup in Studio
- The PDF markups were imported to Archicad using Bluebeam Connection. The markups appear in the right places, on the original source views in Archicad
- Architects could manage the markups using the Markup Tools palette

50% time savings on design reviews

Switching to Archicad-Revu led to a 50% time savings on design reviews for Márkus Engineering. For a small business working on a project as complex and ambitious as the Radisson renovation, gaining this time back was a blessing.



Márkus found several key features in Revu sped up design reviews:

- **Markups and Tool Chest**
Creating customised Tool Chests made marking up and measuring much faster. Each discipline has its own designated toolset, making it easy for each team to know which tools to use. Customised Tool Chests also proved useful for creating fault logs, which are automatically tracked in the Markups List.

Márkus uses its own properties for taking measurements, but there are pre-made specialty Tool Sets available to download from Bluebeam.
- **Digital Document Comparison**
Physical document comparison can take at least half a day. With Revu, Márkus could compare two documents in minutes, saving time and reducing human error.
- **Overlay Pages**

Spotting differences between plans and dealing with any resulting cost changes is faster and more accurate in Revu. Changes can be marked in different colours using the Overlay Pages function, and work can then be accounted for and acted on.

- **Submittal Review**
Submittal Reviews are simpler with Studio. Because remote and on-site workers can add markups or queries in real time, issues are resolved quickly and it's easy to track actions. Submittals reviews run smoother, saving time and increasing productivity.

A simple document management solution

To meet their complex document management challenge, Márkus set up a system to leverage Studio Projects to host a Digital Dashboard, using it on a daily basis to access up-to-date project information, from construction drawings to RFIs.

Digital Dashboard is a customisable navigation interface that links to a folder structure granting quick access to important project files. Because of the well-arranged interface, the team didn't have to spend time searching for the information they needed among the 1,250 plans and 15,000 links stored on the Digital Dashboard.



Keeping communication flowing

Márkus kept up its weekly project meetings during lockdown with Studio Sessions. Because Revu is accessible online all of the time, there was no need to wait for face-to-face meetings for approvals.

Thanks to Archicad's Bluebeam Connection, project stakeholders had direct access to the most commonly used review process features. It created a uniform working environment, where, as Tamás Márkus Sr put it, everyone was able to 'speak the same language'.

Five times faster quantity takeoffs and estimations

Quantity takeoffs and estimations are critical for every construction project. Thanks to the measurements and quantity calculation functions in Revu, Márkus was able to complete quantity takeoffs and estimations five times faster than before. 'It speeds up a lot in checking quantities and controlling material costs', a Márkus employee said.

The team found the Dynamic Fill function and measurement tools in Revu particularly helpful for ensuring the accuracy of their outcomes. The fact that Revu can handle drawings of any scale was also beneficial.

Another everyday benefit of using Revu was the electronic signature tool for RFI approvals. Márkus used this feature to approve each product change and to officially register all RFIs.

Change for the better, for good

Since the majority of architects in Hungary use Archicad, the easy integration with Revu helped Márkus collaborate with designers. While Márkus' partners hadn't worked with Bluebeam before, they adapted to it easily, and now have plans to adopt it for other projects.

'Our ethos is: you either keep up, or you fall behind. With the help of Bluebeam, we're taking the first steps on the technology ladder. It's helped us put our small business on an equal footing with bigger players to gain a competitive edge in the local market.'

– Tamás Márkus Sr, Managing Director, Márkus Engineering

Márkus saved thousands of euros in paper printing costs with Revu. What's more, it helped eliminate human error. Previously, the team had to manually red-line delivered prints and digital PDF files, risking mistakes. The [Archicad-Bluebeam Connection](#) meant that all project stakeholders – even those not necessarily linked to any BIM platform – could mark up directly onto digital deliverables.

The transition to Archicad-Revu has helped the firm level up their digital workflows, reducing overall work hours on the Radisson project. Time is money in construction, and any time saved adds profit to the bottom-line.

The team has a new digital strategy in place, which includes Graphisoft and Bluebeam on all future projects to keep pace with the industry, staying agile and competitive.



About Bluebeam

Bluebeam develops innovative technology solutions that set the standard in project efficiency and collaboration for architecture, engineering and construction professionals worldwide. Our award-winning PDF-based software, Bluebeam Revu, continues to serve as an industry-leading markup and collaboration solution that connects all projects and teams, increasing productivity while saving both time and money. Founded in Pasadena, California, Bluebeam has grown to include additional offices in the United States, Canada, United Kingdom, Denmark and Sweden.

Bluebeam is part of the Nemetschek Group.

Download a trial

Visit bluebeam.com/trials to download your trial of Revu.