

## Case Study

# How DPR Rodgers Successfully Navigated Target Value Design for Atrium Health

## Introduction

Target Value Design (TVD), the process of designing towards a budget without sacrificing quality or extending schedules, is increasingly popular with owners. TVD works when everyone involved in a project is part of the process. It requires true collaboration, transparency, rapid estimating, and rapid decision-making.

Atrium Health, a non-profit health organization based in Charlotte, North Carolina, employed TVD to build a new rehabilitation hospital and acute care bed tower at the Atrium Carolinas Medical Center (CMC) campus. Atrium awarded the \$650M

project to DPR Rodgers (a joint venture between DPR Construction and Rodgers Builders), NBBJ, and WSP. To manage the projects, Stantec was selected to augment Atrium's in-house staff.

Preconstruction planning for the two projects was handled separately. The team tackled the \$100M rehab hospital first. From March to December 2020, approximately 30 people from multiple cluster groups collaborated towards the goal. They used their existing tools to track their project costs, budget, and timelines as they had done with other projects in the past.

**Building Name:** Atrium Carolinas Medical Center Rehabilitation Center & Bed Tower  
**Building Location:** Charlotte, NC  
**Project Type:** New Construction/Additions  
**Delivery Method:** Target Value Design  
**Owner:** Atrium Health  
**Project Manager:** Stantec  
**Design Team:** NBBJ  
**Contractor:** DPR Rodgers



"Tracking decisions for the rehabilitation hospital quickly became chaotic," said Melanie Moreschi, Preconstruction Manager for DPR Rodgers. "Due to having so many users in the same tracking log, it was too easy for files to be overwritten, causing new items to be lost or even to have two copies of the same file running simultaneously. Furthermore, it was challenging to track items affecting multiple building systems such as structure, skin, mechanical and electrical into separate project clusters."

DPR Rodgers had to ensure that the TVD process was smoother for the CMC bed tower project. They had to find an alternative — and fast.

## Criteria for Choosing a Decision Tracking Solution

Multiple versions of the tracking log weren't the only problem. The team wanted a solution that would meet these criteria:

**1. Intuitive.** With so many users with varying technical skills, it had to be intuitive. Since construction and owner costs were being tracked for this project, many stakeholders were entering and reviewing data — owners, design team, trade partners, contractor, etc. The alternative had to be simpler and couldn't take more than 30 minutes to learn.

**2. Automated tracking and documentation of every decision.** The ideal scenario was an automated way to track who entered which item and when. Pulling decision analysis and item history was also critical. There had been many mysteries with their tools: missing entry dates, items without descriptions, making it unclear what the item was referring to, and who made the initial item entry or subsequent changes.

**3. Sortable.** The ability to filter data was important. Among the things they wanted to be able to do was to sort by date of creation and/or due date — to see which items were pending decisions.

**4. Decision impact.** Transparency is key to the collaborative TVD process. It was important to track

and document who created items, who entered pricing, and who or what was impacted by each decision. It was also important to see who needed to take the next action for item resolution.

**5. Visibility into a single source of "truth."** Getting visibility for all the cluster groups was challenging. With analyses of open items usually happening in cluster meetings while viewing specific cluster tabs, it was easy to become unaware of what items were pending in the other clusters and more difficult to understand other risks or opportunities other cluster groups were facing. To improve cross-cluster communication, DPR Rodgers wanted all changes and actions created in one or more cluster groups to be communicated and visible to all the other cluster groups who were likely affected.

**6. Fast Implementation.** With the team gearing up for the TVD process to kick off during the first quarter of 2021, DPR Rodgers had to find a solution that could be up and running in days versus months.

## Join Checks All the Boxes for TVD

The TVD team considered smartsheet options and quickly ruled them out. They weren't intuitive, and worse, and they seemed difficult to implement for a large team. When they learned about Join, they put it through a rigorous testing. For the first two months of 2021, the team loaded estimates and cost items into Join and put them through multiple scenarios. "Due to the complexity and scale of the Bed Tower project, accurate cost tracking was critical. We couldn't risk losing data or having miscalculations, so whatever software the team selected had to be correct. I tried to break Join, trying every possible way to mess it up," Melanie said.

By April 2021, the TVD team was confident to roll out Join to the project's entire TVD team; it was a 30–45-minute training session. "Most of the people were excited to try it once they realized how user-friendly it was and that they didn't need to be an Excel or smartsheet wizard to use it," Melanie said.

## TVD with Join: The Real Estimate Right Here, Right Now

As with the rehab project, the Atrium Bed Tower TVD team consisted of 30+ people working in cluster groups, including a few from the owner's group responsible for equipment, furniture, interior design, MEP systems, and facilities and maintenance. Three members of Stantec and Atrium project managers functioned in the role of owner. The design team consisted of multiple people – from architecture and interiors to civil, structural, mechanical, and electrical engineering. Then there were the DPR Rodgers team members in the contractor's corner; they included design-assist trade partners engaged to inform the TVD process for the more complex building systems.

The estimators who weren't as familiar with the TVD process had the common concerns about switching to a new platform, but they soon adapted. They liked the ability to restrict access to cost and quantity changes where needed. They also had the flexibility to note rough order of magnitude costs when a specific design wasn't known; they could include allowances where appropriate for unknown items pending design confirmation.

The project team has now simplified what used to be a multi-step process, says Melanie. "Any time we're working with an owner, particularly in TVD jobs, there's

always the, 'Hey, can I get a printout of the current job value?' It's a fair question, but there are so many moving parts and pieces at all times: ideas being accepted, rejected, or under consideration. Most contractors will want to be detailed and specific to provide the most up-to-date information, but that can take a few days if the information is being compiled in multiple files and tabs."

With Join, DPR Rodgers and other groups can see the full impact of every decision, even indirect costs such as insurance and construction management. "Join allows us to provide that information in real-time, to give the owner the real estimate today – right now, not a minute from now," added Melanie.

## Join Fosters Trust with Owner & Design Team

According to Melanie, Join improved trust among the teams – between project owner and contractor, contractor and design team. The design team would create new items, upload CAD or PDF files of each option, and enter details, to which the contractor could add estimates. The owner could then see the options and their impact.

Best of all, it made it easier to talk through those decisions. The architects were effectively involved in



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– Jamey Basinger, Atrium



What we've used in the past were traditional spreadsheet files, which were kind of scary at times. What I like about Join is it's web-based. Anyone can go into it. It's live. There's no, 'Hey, this is an old version' or the formula isn't working. The fact that Join is automated leaves very little opportunity for human error. It puts up guardrails to prevent someone like me from breaking formula links and miscalculating totals.

– Tyler Campbell, Stantec

the pricing effort. "We weren't just taking an email or sketch and running off for two weeks to work on it, and then coming back and saying, here's the total. They could see the process," said Melanie.

Having used traditional spreadsheets for the TVD process for the Rehabilitation Hospital and Join for the Bed Tower, the Join advantage was easy to see, especially since it was the same owner and mostly the same team of designers, trade partners, etc. "With the Rehabilitation project, I felt the current working estimate value was not always up to date for the owner's use," said Melanie. Join provided context to every decision – who, what, when, and why – information each cluster group found valuable.

"This is the first TVD project that I've worked on," said Jamey Basinger of Atrium. "In the past, we did more of a traditional design-build process which is more rigid and not quite as interactive. However, I have worked with several projects and have seen different methods for tracking decision-making during construction. Compared to those, I would say that Join is very intuitive. I like how it breaks down into individual items that can be reviewed and how it sends out messages to different teammates to say, 'hey, we put something in Join. Come check it out.'"

## Web-based Join: One Document, One "Truth"

The Atrium project wasn't Stantec's Tyler Campbell's first TVD project. He's worked on several, noting that some were more in-depth than others. "What we've used in the past were traditional spreadsheet files, which were kind of scary at times. What I like about Join is it's web-based. Anyone can go into it. It's live. There's no, 'Hey, this is an old version' or the formula isn't working correctly.. The fact that Join is automated leaves very little opportunity for human error. It puts up guardrails to prevent someone like me from breaking formula links and miscalculating totals."

Tyler also liked how Join tracks decisions and creates a history. "Being able to look at the items that were rejected, incorporated, or that aren't applicable – and why that direction was chosen is very helpful," he said.

While every decision in construction has an impact, the decisions made for a health care project such as the Bed Tower can have a domino effect. "In health care, there are so many things that are overlapping clusters, especially when you're looking at really



big-ticket items such as the skin and mechanical systems – things that are architecturally-driven that affect the system's outcome," said Nolan Rome of WSP Design.

Join allows the different cluster groups to see the decisions and assess their impact on their cluster. It also provides for scenario planning. Tyler liked how easy it was to study a scenario that had a cost impact and communicate the findings to the rest of the team. "The team would get a reported magnitude, which we take to a higher-up to get a decision. Then we log in to Join, accept or reject that item," he said. The history of how that decision came about is stored in Join.

## Preconstruction Communications Streamlined

Join facilitates efficient communications among the cluster groups using a simple tag such as – @architect. Everyone working on an item gets a message when an action is taken.

"Improved communications allowed us to make our pricing more accurate. We set up Join to allow the owner to see not just projected direct construction costs but also full indirect cost impacts," said Melanie. *(Editor's Note: Join is permission-based, and the account owner or project lead determines what stakeholders see.)*

The ability to create custom sorts and tag items in Join focused the team leaders' weekly meetings. "I could tag the top 10 items that needed attention, so even if I wasn't in the meeting, I could send it to our project director to share with the leadership group. He could then say, 'we have to make a decision with this structural design to avoid schedule impacts,'" said Melanie.

With Join, DPR Rodgers could see the origin of an item, who requested it and when, its impact on the project, and any analysis related to the item. Is it waiting on owner direction? Design information? Contractor pricing? Which items were slowing the process? DPR Rodgers tracked all this in Join.





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– Melanie Moreschi, DPR Rodgers

Join also made it easy to see which cluster group was making progress – who was accepting and rejecting, who was finding new ideas. Join allowed Melanie to see which team was struggling and why. Knowing who and why made it easier to bring DPR Rodgers and owner leadership together to make the necessary decisions to move the project along.

## More Accurate Pricing Moves the Project Right Along

"If you're working on an IPD or TVD project, Join is super helpful," said Karl Schantz of NBBJ. "I liked the ability to tie the drawings to the items so you can see exactly what was priced. Having everyone in the same, easy-to-find location works really well. In most cases, the ability to leave comments and have the history is better than having the A3s or A4s because it's right there with the number and the data."

Before Join, three to four people would have been working on a file that was shared periodically. By the time the "latest file" was sent, the info was likely outdated. With Join, all members with the proper permissions could see the current data – what was accepted and rejected – important information for project stakeholders.

Melanie tracked the progress by getting a snapshot estimate every two weeks. "It allowed me to see

where we were flatlining, if we were headed in the right direction. At one point," she said, "there was a long, flat period where our estimate was not trending up or down, and that was an indicator that we had a decision problem. In August, we ended up with over 100 items that needed decisions, so we scheduled a full Join meeting day with the entire team. We reviewed every open Join item and identified next steps (action item, responsible person, and date required) to keep moving forward."

From Melanie's perspective, Join was critical for decision-making for all parties involved in the Atrium project. Without Join, Melanie said they might not have realized how many items depended on various decisions, which would have slowed the design process even more. "Without Join, we would've spent more time getting to where we are now. I think it saved time, and it's definitely saved money. My only regret is that we didn't use it earlier in the process."

Karl Schantz of NBBJ agrees: "Compared to the spreadsheets and other cost tracking tools we have seen, Join makes it much easier to navigate target value design. It's nice to see the industry come to this maturity point, the point where we're asking ourselves hard questions and making decisions in a smart and thoughtful way."





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