



CASE STUDY

Turner & Townsend's story of automation

in the delivery of a critical data
center using Nodes & Links

nodeslinks.com



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ABOUT TURNER & TOWNSEND

Turner & Townsend is the leading global program and construction management firm behind the operation and delivery of the largest construction projects around the globe. From 112 offices in 46 countries, the firm provides an essential combination of local knowledge, industry expertise and global best practices across the real estate, infrastructure and natural resources sectors. Working closely with the world's leading cloud service providers, Turner & Townsend help deliver hyperscale data centers so vital services run uninterrupted, from daily email exchanges to platforms.

CHALLENGE

The growing demand for cloud services has accelerated the need for planning teams of both clients and contractors to be able to handle multiple projects whilst maintaining a high level of rigor. At the same time, this demand has driven the capital programs of all major cloud providers to grow in both size and complexity.

Working closely with a leading cloud provider, Turner & Townsend identified a major opportunity to improve the workflow of **change tracking** during the lifetime of a project. This currently laborious process is slowing down teams in spotting changes across the schedule. This means that opportunities to proactively manage risk and accelerate project delivery can be missed due to time needed to spot these changes, which leaves little time to act on that information.





68%

industry holds timely completion as their top priority

\$5,600

lost every minute a data center is offline

\$505,500

average loss for a downtime event

Done correctly, the process of tracking changes across multiple schedule versions can mitigate delay risk further down the project's life cycle. However, it's labor intensive nature meant that the team often faced the dilemma of spending time between identifying these changes or acting on the basis of those changes. Currently, this process takes a total of 106.5 person hours per month for every single project.



“One challenge that has resulted in multiple delays on past projects has been to identify schedule compression to maintain the completion date. **Identifying changes to the tasks that have been compressed in every submission is a time consuming process, but vital in mitigating future delay risk.**”

Callum Marsden, Associate Director

Turner & Townsend knew that they had to rethink the way the team assessed the impact of schedule change if they wanted to identify opportunities at a pace that enabled proactive management.

PROBLEM

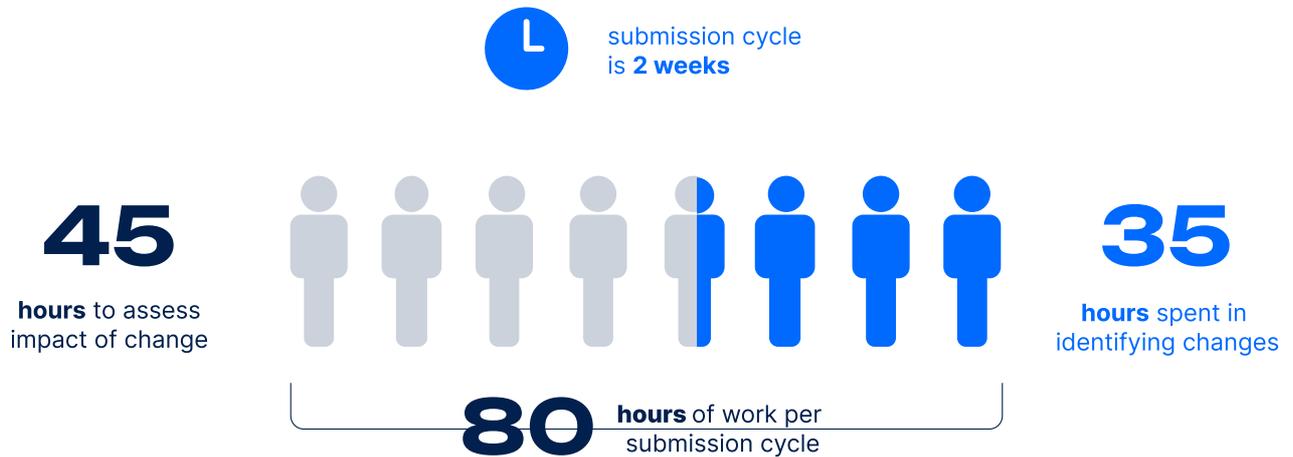
As a project evolves and updated schedules flow in, the client team is in continuous communication with the contractors' team to spot changes across the different versions of the schedule.

The client works hard to adapt to the ever-changing market conditions to ensure the project outcome remains competitive. This means that the project scope remains in flux even when the project has started, to ensure the highest return for the client. At the same time, the contractor continuously makes small tweaks to adjust to the realities of the building process to ensure the project is completed at the agreed time frame.

Being able to identify changes at both ends correctly and at the right pace can uncover shifts in the schedule that can dramatically impact the performance of a project, incl. changes in the critical path. It can also ensure credibility and trust remains high, reducing the risk of disputes to rise and evolve to costly claims.



Given the size of the schedule (~2,500 activities), and a submission cycle of two weeks, Turner & Townsend estimated that the team needed about ~35 hours to complete a broad schedule assessment, including identifying critical schedule changes to focus on. This means that a planner on average spends up to 4 days on analysis, and is left with just 6 days to assess the deeper implications of any impacts or uncertainty identified.



Turner & Townsend understood that the biggest value comes from identifying the impact of changes to critical aspects like the project's critical path and risk profile. The team knew they had to resolve to new solutions to ensure more time is spent in assessing the implication of changes identified instead of spending time trying to identify those changes.



“Being able to **identify these critical changes efficiently** would enable planners to have more time to work with the client and the contractor on **mitigating these challenges and enhance project outcomes.**”

Lindsay MacKay, Associate Director

SOLUTION

Turner & Townsend used the Nodes & Links platform to enable them to quickly identify the impact of changes across different schedule versions, saving time and opening up mitigation and opportunities that the team could not have otherwise identified. The team was able to assess the impact of more than 25 changes across different schedules, **and was able to see their impact in a few seconds.**



From the way new (and deleted) activities led to changes in the critical path, to the impact of changes in float impacting the project's risk profile, the team was able to get answers in seconds. In contrast, merely opening the schedule in traditional tools - let alone analysing it - would take up to 40x more time.

From the first log in, Turner & Townsend was able to intuitively navigate and interpret complex data into impactful insights without any long (and expensive) training. By understanding changes in their schedule, the team was able to evaluate their impact in full context by using the interactive Gantt chart, pinpointing changes all the way from the WBS to the activity level.

Turner & Townsend was able to use the speed of the analysis to enable planners to brainstorm mitigation strategies and new methods to accelerate their schedule. Combined with the advanced analytics, changes made in those scenarios can then be immediately assessed and acted on without having to wait weeks for the analysis results.

Sharing the information was then straightforward - the team was able to invite other members to the Nodes & Links platform immediately (and securely) or get a .pdf report with a single click.



“The future is very much a partnership between a Planner and Nodes & Links, driving faster on better project performance and therefore, better outcomes.”

Callum Marsden, Associate Director

BY THE NUMBERS

232

hours saved monthly

6x

efficiency

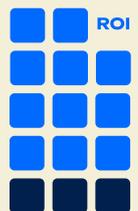
40x

faster

327%

+

100%



CONTACT NODES & LINKS

The best project teams understand and proactively manage their plan

Nodes & Links is built for every member of your team to track, analyse and prioritise work to make great decisions.

Find out more by contacting greg@nodeslinks.com or stephen.rennick@nodeslinks.com