

FOUR WAYS TO **EXPAND THE USE** OF YOUR 4D MODELS

SYNCHRO™ | get time on your side

Bentley®

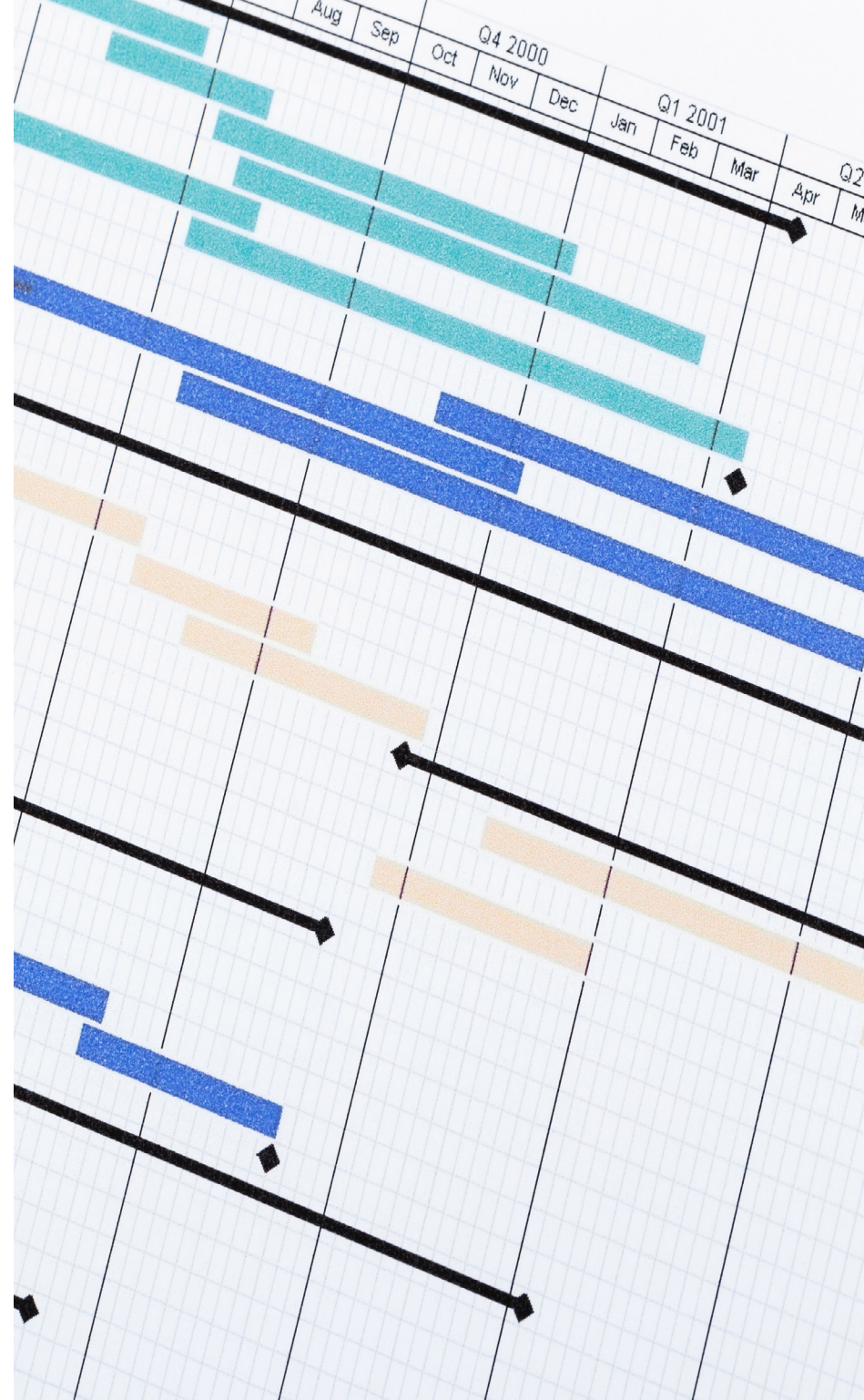
Are you using 4D models to their fullest capabilities?

Many construction firms leverage **4D models** to develop project plans and schedules, but then revert to using Gantt charts. This process causes them to miss out on significant value during project design and execution.

Typically, only a few project planners have access to the 4D model, spending endless time creating video simulations for various stakeholders. Because these snapshots don't capture 360-degree views or trade-based nuances, **it's difficult for team members to gain a complete view of the project.** They often miss errors that could have been avoided, leading to costly rework, or worse yet, present commercial claims or project delays.

These issues expand to the field too, including inefficient communication, delays, and unnecessary added costs.

Read on to discover 4 ways you can solve these issues by expanding the use of your 4D models.





Expand the power of your 4D models – throughout the entire project lifecycle

From pre-bid to design and through all phases of construction, everyone can benefit from a 4D model.

Enabling a wider audience of non-planners to utilize and leverage your 4D models results in more-accurate bids, reduced risk, better schedules, enhanced collaboration, and increased profits.

But the value doesn't stop there. Model-based workflows create a connected data environment for teams to communicate more efficiently and effectively between the office and the field—no longer relying on emails and paper documents for time-sensitive project information.

Here's how...

1. Leverage Model-based QTO

to Generate More Accurate Bids, Win More Work, and Increase Profits

Problem...

The traditional QTO process is manual, repetitive, time-consuming, and often error prone. One small mistake can have cascading effects and can mean the difference between winning and losing a bid and profit margins.

Solution...

With model-based quantity take-offs (QTO), you can split a model into manageable constructible components and automatically estimate what you need in terms of labor and material to construct your project, creating a more accurate representation of the construction process, as well as associated costs. It informs logistics and materials planning, so you don't end up with endless stockpiles.

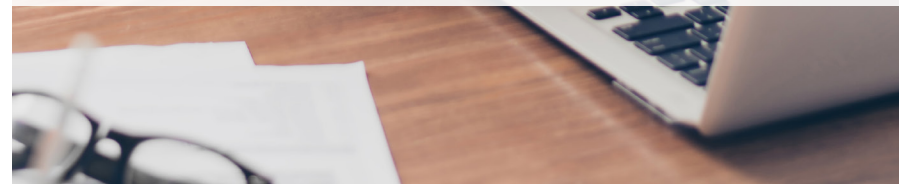
Benefit...

A faster QTO process means less time needed to estimate projects, hyper-accurate bids, more won work, and increased profits.



*" By implementing SYNCHRO 4D
into our business, we have
increased our client base by 100%
in the past year. "*

Conor Tansey,
Chief Executive Officer
and Co-founder, Tantek 4D





" SYNCHRO 4D enabled our planners to visually create a construction program from design information and validate any missing information. [...] By using the SYNCHRO 4D model, those delivering the project understand the construction sequence before they stepped foot on site. "

Tom Denby
BIM Manager, SKANSKA UK



2. See Your Project Visually First to Reduce Risk and Limit Exposure to Workspace and Logistic Clashes

Problem...

Without a way to visually see and plan your project before construction begins, you increase the chance of risk, rework, workspace and logistic clashes, and commercial claims and extensions of time from subs.

Solution...

Leverage your 4D models to validate and optimize your project plan with stakeholders before you start on site. Perform "what-if" scenarios to reduce risks and delays by reviewing time-lapsed construction sequences. Say goodbye to the days of endlessly reviewing Gantt charts.

Benefit...

With a 4D representation of your project, you can see issues before they occur, minimizing mistakes during construction, reducing risk, and limiting exposure to workspace and logistic clashes.

3. Slice Elements into Constructible Components

to Develop More Accurate Schedules and Better Track Progress

Problem...

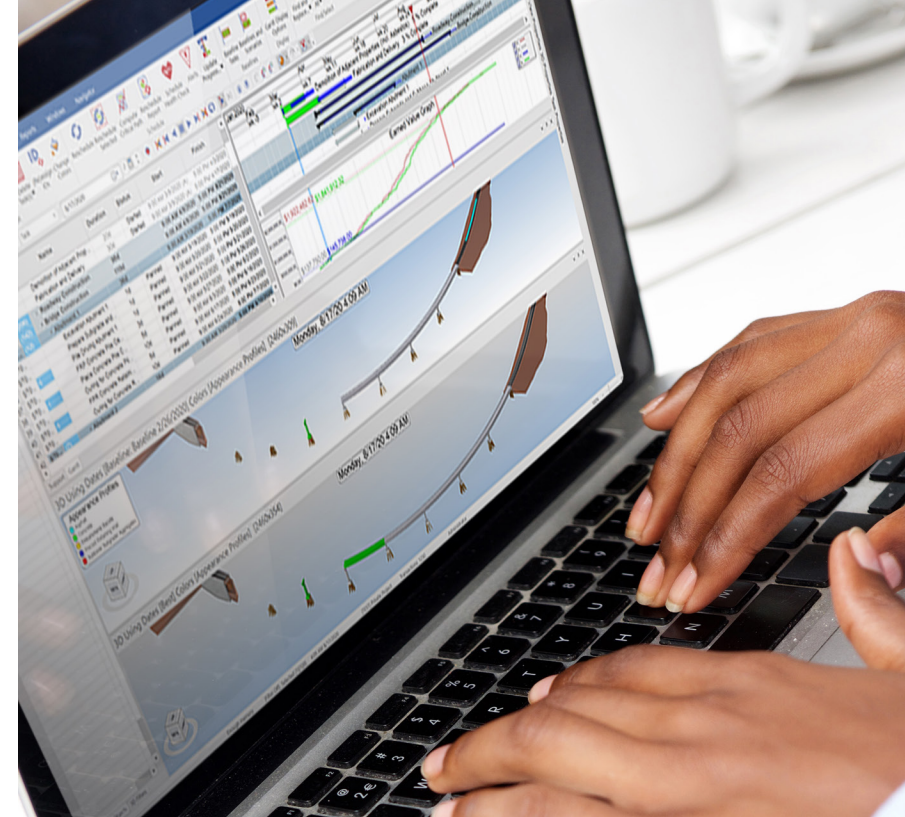
In a traditional BIM model, components of construction are broken down into objects for use in work packages. Unfortunately, it is not the same for horizontal projects like a freeway project. Work packages are not broken down by components, making it challenging to create an accurate plan for quantities and schedule.

Solution...

4D workflows allow you to break horizontal projects into constructible components with auto-calculated quantities and use them to build a construction schedule against, for example, how many people are needed and when they're needed.

Benefit...

By breaking down your model into constructible components, you gain hyper accurate quantities and provide the ability to optimize your sequencing. The result is improved efficiency and maximized project profitability.



"Bentley's SYNCHRO 4D helped us nail costly mistakes in BIM design, avoid errors in schedule preparation and site area utilization, and eliminate time clashes and illogical activities."

Mikhail Mushurov,
BIM/VDC Coordinator,
Renaissance Heavy Industries



" We utilized SYNCHRO as our single-source-of-truth, where multiple project teams could integrate their plans for stakeholders to view, edit and extract information from—all from a single, user-friendly platform "

Jeffrey Kam,
Value Mine Technology Limited



4. Share Your 4D Sequence with All Project Stakeholders

for Increased Collaboration and Better Risk Mitigation

Problem...

Project updates and communications are often reliant on emails back and forth between the field and the office, leading to inaccurate data, poor decisions, and costly project delays.

Solution...

Share your web-based 4D sequence with stakeholders, including field crew, enabling them to playback automations to better understand construction sequences. They can also gather data right on the site and send instant, geo-located feedback back to the office. Imagine if each of your team could run their own weekly lookahead on Monday before even getting to site.

Benefit...

Everyone on the project can share and access project data and information, increasing collaboration between the office and the field to better mitigate risk and make more timely and informed data-driven decisions. Improved situational awareness improves every aspect of project delivery.



SYNCHRO™ | get time on your side

To successfully leverage 4D models to bid, plan, optimize, execute, and track construction projects, teams need to be empowered with the right digital solutions.

SYNCHRO is a complete construction management platform—from the office to the field that enables teams to:

- **Plan, manage, construct, track, and review construction projects in 4D, providing the entire project team with real-time progress updates and 360 degrees situational awareness**
- **Understand what they are building before they build it as well as validate and optimize the plan, to avoid all the potential risks involved**
- **Review, validate, and communicate in one complete digital and interactive visual environment that includes documents, forms, and models from the entire enterprise**

With SYNCHRO, you can seamlessly connect your workflows and plan, optimize and track projects in a single visual.

Turn design models into 4D construction models with cutting-edge model-based QTO, scheduling, and construction simulations.

Visit www.bentley.com/SYNCHRO to learn more about SYNCHRO.

