SYNCHRO™

Get Time on Your Side

A complete portfolio of integrated software and services for digital construction management

Bentley®
Advancing Infrastructure

SYNCHRO™

Get Time on Your Side

A complete portfolio of integrated software and services for digital construction management

Win More Projects. Construct Better. Get Paid.

With Synchro, you can plan and manage your people, materials and equipment more easily and affordably.

	Field	Control	4D
Name	**Field**	**Control**	**4D**
Price/Qtr/User	**$90.00**	**$300.00**	**$1,000.00**
Includes	**Field Management**	**Field And Control Management**	**Field, Control, Cost And Computer Management**
Benefits	**For Superintendents, Foremen, Inspectors**	**For Project Managers**	**For Project Planners, Engineers, Estimators**
Capabilities	Docs to the Field 4D Models in the Field Field Data Capture Resource Management	Includes Field Document Management Task Management Project Insights	Includes Field + Control 4D Scheduling and Sim. Model Based QTO Construction Modeling

Prices shown in USD

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Virtual Design and Construction Engineer or Planner

The Challenges

- The average construction project runs 20% over schedule.[1]
- It can be difficult to convey the plan to the execution team, resulting in costly errors.

1. The construction productivity imperative, McKinsey & Company, 2015.

1

The Solution

SYNCHRO enables virtual design and construction engineers and planners to deliver better plans that ensure optimized resources and improved project outcomes by delivering:
- An easy environment to manage aggregate construction models
- 4D models to validate how the project will be built
- 4D project simulations to better communicate to project teams

Estimator

The Challenges

- The average construction project sees an 80% budget overspend.[1]
- 40% of pre-bid resource days are spent on QTO.[2]
- Using Excel sheets and take-off from 2D plans is time intensive and error prone, making it easy to either lose a bid or win projects that will not make money.
- 3D models are complicated to use for QTO and estimation, and design models do not represent how the project will be constructed.

1,2. The construction productivity imperative, McKinsey & Company, 2015.

2

The Solution

SYNCHRO enables estimators to more quickly and accurately complete QTOs, ensuring that you win more projects at higher margins by delivering:
- 3D models that can be split up into constructible pieces that represent how the project will be built
- Cost codes and quantity calculations into model objects so that estimators can rapidly create error-free quantity reports

Project Manager

The Challenges

- The average project has over two million documents and six million tasks to manage.[1]
- Data is often not structured and in disparate systems – as a result, teams only use about 4% of available data and spend half of a day looking for that information.
- When a project manager determines that the project is not in control (either budget or schedule), it is often too late to react and adequately mitigate the issues.
- It is difficult to ensure that everyone is on the same page at all times, resulting in errors, rework, and extra costs.

1. The construction productivity imperative, McKinsey & Company, 2015.

3

The Solution

SYNCHRO enables project managers and project executives to have one place to access, capture, manage, analyze, and collaborate on data and workflows, ensuring that projects stay in control, on budget, and on schedule by delivering:
- Managed and organized data and documents in project context
- Managed tasks, including issues, RFIs, and submittals
- Controlled data access and creation based on the role and organization
- Business analysis with reports and dashboards based on real-time project data

Field Engineer

The Challenges

- Data is captured in an inconsistent manner through disconnected systems, leading to time-consuming reviews and inaccurate reports.
- Outdated design data is near-impossible to track down, increasing the risk of construction errors.

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The Solution

SYNCHRO empowers field engineers with consistent and automated processes to capture, store, and track information by delivering:
- Consistent data capture through configurable construction forms
- Automated workflows with timely reminders
- Offline capabilities for data capture and document access, including 3D and 4D models
- Up-to-the-minute reports with accurate tracking

Superintendent

The Challenges

- When an issue occurs on site, delays arise before the issue is resolved or escalated.
- It can be challenging to make sure everyone is working safely.
- Field directions are not communicated efficiently, resulting in delays.
- Training is delayed and does not happen at the correct time.

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The Solution

SYNCHRO enables superintendents to better coordinate and plan activities that improve project outcomes by:
- Communicating job tasks efficiently and immediately to complete tasks on time or ahead of schedule
- Ensuring issues are resolved before they affect project schedule
- Having complete, real-time insight to what is transpiring in the field
- Instantly reviewing and managing safety concerns

Foreman

The Challenges

- Project progress updates to leadership are slow and unstructured, leading to inaccurate reports that are outdated by the time that they reach the office.
- Issue reporting and tracking from the field are inconsistent while status updates are sporadic, which could lead to costly emergencies or work stoppages.
- Crew coordination is disorganized and erratic, causing potential safety and right-of-way issues.

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The Solution

SYNCHRO enables foremen to communicate, track, and resolve issues from the field in a timely manner for improved project outcomes by delivering:
- Consistent data capture through configurable construction forms with photo capture and a mapping tool for added context
- Offline capabilities for data capture and document access, including 3D and 4D models
- Automated ball-in-court tracking to ensure that no issue is ever dropped

SYNCHRO™ Field

Access, capture, and communicate up-to-the-minute information from the jobsite — even when offline

SYNCHRO Field connects your entire project team and improves data quality through an integrated mobile application. It is armed with geolocated forms and automated weather data, which allows project data and location accuracy across even the largest civil projects. With one user interface and project context views, users can identify issues early, coordinate with other crews, communicate new processes or current field directives, and update project owners on daily progress in real-time.

This application is used by construction personnel to perform daily tasks, including filing RFIs; documenting issues, observations, and site conditions; updating the status of assigned tasks; documenting inspection and test plan results; and providing automated weather recording. Each action is geolocated so that every field action can be visualized by the project team using a map or 3D model.

Access Your Information

Provide one user interface that connects to SYNCHRO Control for real-time updates from the office. Access project data from SYNCHRO Control or ProjectWise. Identify issues early to mitigate and manage risk in real-time.

Capture All Necessary Data

Eliminate double data entry by locally uploading photos and syncing when back online. Move quickly through daily tasks with standard construction forms created with project context templates for logs, issues and observations, RFIs, submittals, and inspections. Use the talk-to-text feature to minimize the amount of typing information when on site. Implement georeferencing for all data within the model for trusted accuracy. The exact location within the project coordinate system makes it easy on a large construction site– especially horizontal civil infrastructure projects.

Create an issue from the jobsite and upload the photo with automated weather data and geolocation coordinates.

Communicate Effectively with Your Team

Capture accurate information with offline capabilities, as well as online, which can then be immediately communicated and updated when the phone or tablet is back online. Report updates and red-line issues with PDF markup capabilities. Assign tasks to other team members to alert changes. Coordinate through real-time communication across the team, allowing for updates and issues to be raised to advance transformation.

SYNCHRO™ Control
One place to access, manage, collaborate, and analyze construction data

SYNCHRO Control is a project management web service that provides construction context. Now, you can connect resources, workflows, and the entire project team in one location. Project insights are available to make fast, real-time decisions to drive efficiencies and execute while remaining in control of time and budget.
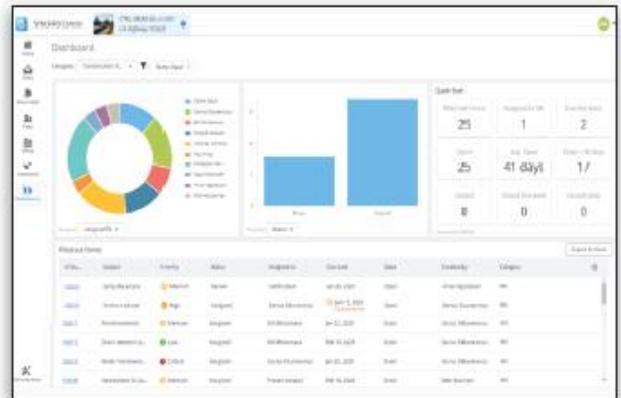
This web-based construction management hub is an easy-to-use solution for delivering information needed at quick glance via grid, 2D, map, and 4D model-based views. Form-based workflows connected by business logic provide a simple and organized process for inputting project data. You can use multiple views to quickly monitor and report project performance, implement map and model services, provide templated processes and end-to-end workflows, and connect to external data sources for better access.

Provide quick, multi-view, and accurate reporting of project KPIs.

Analyze Your Data

View project by task, report, 2D plan, map, and model styles for quick reference and full context decision-making. Provide quick, multi-view, and accurate reporting of project KPIs. Project stats are presented in map, chart, and summary views in one dashboard.

Manage All Project Information

Implement georeferencing for all data within the model for trusted accuracy. The exact location within the project coordinate system makes it easy on a large construction site– especially horizontal civil infrastructure projects. Coordinate through real-time communication across the team, allowing for updates and issues to be raised to advance transformation.

Collaborate Effectively with Your Team

Follow easy-to-use templates from the time that a project is created, as well as configured workflows with simple stepped processes, to help all users manage the project. Use project context templates designed to allow users to quickly move through daily tasks, such as logs, issues and observations, RFIs, submittals, and inspections. View, manage, and share all SYNCHRO Field-captured data (via mobile applications) in the same project management web service. Use configurable forms to raise issues and RFIs across your team within the mark-up phase, which connects into the same registry and interface.

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SYNCHRO™ 4D

A Proven, Industry-leading 4D Digital Construction Management Solution

SYNCHRO 4D is designed for construction modeling, planning and scheduling, visualization, simulation, and project controls. All construction team members can build digital projects on the screen and extend the value of 3D models by adding time, the fourth dimension. Serving as the real-time source of truth, SYNCHRO 4D can help solve the time-cost conundrum, increase safety, and reduce both employee and project risks.

Extend the Model's Value

SYNCHRO 4D provides a wholistic and purpose-built construction solution, enabling projects to construct, plan, and track projects based on a construction model. Users can easily communicate and present the construction plan and schedule, allowing for trade partner collaboration and commitment with confidence, on-time execution and delivery, and quicker approval for payment. The web and mobile applications extend the value of the 4D construction model by exchanging and managing 2D, 3D, and 4D models with geolocated, rich data in the project context. Teams can efficiently access and author data to make more informed decisions.
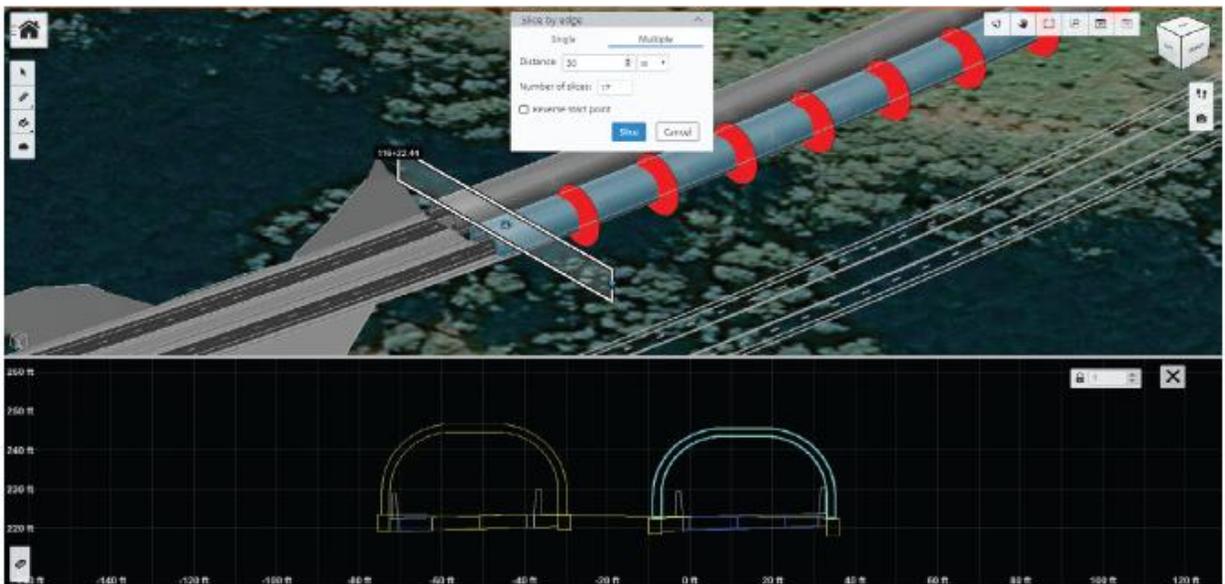
Plan, Construct, and Track from Models

Slice and dice your design into a construction model with auto-populated quantities while keeping original design intent. Display both 3D models and the schedule in one environment to perform model-based scheduling. Add construction equipment and paths to schedule activities to visualize conflicts and resolve them before construction. Perform "what-if" analysis to reduce risks and delays by reviewing time-lapsed construction sequences. Identify areas that are ahead or behind schedule through a planned-versus-actual visualization.

Connect between Office and Field

Extend the value of the 4D model into field workflows for status checks, work planning, review, and inspections within the SYNCHRO portfolio. With connected applications and workflows, a project team can review, validate, and communicate in one complete digital and interactive visual environment that includes documents, forms, and models.
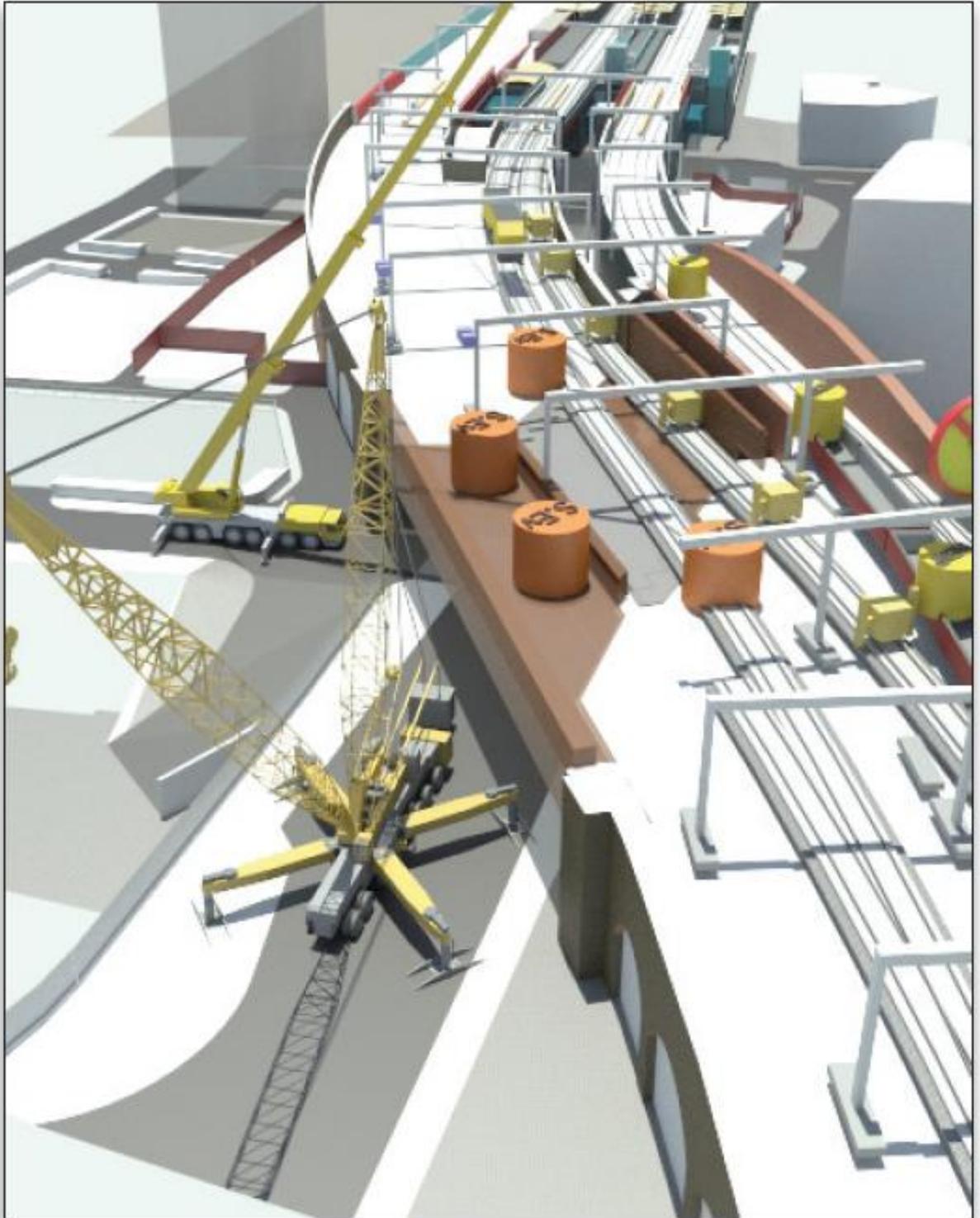
Enable Digital Twins

SYNCHRO 4D, powered by Bentley's iTwin® technology, enables 4D construction models to be accessible by stakeholders as a single source of truth. It empowers users to navigate and author construction models from gathered design models. The application also features best-in-class interoperability with a variety of third-party modeling and scheduling capabilities.

SYNCHRO™ CAPABILITIES CHART

◆ 4D Capabilities	4D	Control	Field
4D Simulations, Sequencing, and Coordination	●		
Model Splitting into Constructible Components	●		
Model-based Quantity Take-off	●		
Third-party Application Links	●		
Model-based Project Insights	●		
Model CDE and Cloud Collaboration	●		
Construction Digital Twin Services	●		
Industry-leading Model Interoperability	●		
Aggregation of Engineering Models	●		
Adding Construction Attributions (Schedules, WBS, Cost)	●		
Model-based Work Planning	●		
LumenRT Photorealistic Rendering	●		
Clash Detection	●		
Reality Modeling Viewing	●		
◆ Control Capabilities			
Document Management and Sharing	●	●	
Issue and RFI Management	●	●	
Work Package/Planning	●	●	
Map and Location Services	●	●	
2D, 3D, and 4D Model Viewing and Collaboration	●	●	
Inspections, Checklist, and Punch-list Management	●	●	
Project Insights, Dashboards, and Reporting	●	●	
Version Control Models and PDFs	●	●	
User Roles and Permissions	●	●	
Task Notification	●	●	
PDF Export	●	●	
Audit Trails	●	●	
Reality Modeling Viewing	●	●	
◆ Field Capabilities			
Document Viewing and Markup	●	●	●
4D Model to the Field	●	●	●
Daily Logs, Safety, and Observations	●	●	●
Field Issues, RFIs, Photos, and Daily Logs	●	●	●
Model-based Progress Tracking	●	●	●
Quality/Quantity Inspections	●	●	●
Work Plans to the Field	●	●	●
Punch-list and Checklists	●	●	●
Pin Issues to Map, 2D, 3D, or 4D models	●	●	●
Status Project Components (Modeled/Non-modeled)	●	●	●
Full Offline Use	●	●	●

A SYNCHRO 4D ANNUAL SUBSCRIPTION INCLUDES ANNUAL SUBSCRIPTIONS TO SYNCHRO CONTROL AND SYNCHRO FIELD

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SYNCHRO 4D augments construction projects with 4D digital information throughout the project's construction.

SYNCHRO™

Get Time on Your Side

A complete portfolio of integrated software and services for digital construction management

FIELD
Mobile Field Management

Speed field data access and capture, improve data quality, and enable real-time reporting:

- Easy to use, and in context
- Documents to the field
- Issues and inspections
- Completions and check-lists
- Progress tracking
- Daily logs

CONTROL
Web-based Project Management and Document Controls

View, access, capture, manage, analyze and collaborate in one place:

- Location based and in context
- Construction document management
- Task management
- Issue management and RFIs
- Data reporting and dashboards

4D
Cloud and Desktop Planning and Virtual Construction

Use real-time digital construction environments for model-based planning and controls:

- Constructible model objects
- 4D/5D construction models
- Visualize, analyze, and track
- Logistics and temporary works
- All team members involved in a transparent process

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

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