

**Bentley**<sup>®</sup>  
Advancing Infrastructure

 CONNECT Edition



## SYNCHRO Pro CONNECT Edition

Visual Construction Planning and Operations

SYNCHRO Pro CONNECT Edition is a 4D digital construction environment that provides highly interoperable digital technology to drive the construction industry's evolution from traditional 2D planning and siloed workflows to a highly cooperative and efficient 4D visual planning and VDC project management process. SYNCHRO Pro provides a single technology solution to create and accurately visualize, analyze, edit, and track your entire project, including logistics and temporary works. With SYNCHRO Pro, construction projects are augmented with 4D digital information throughout the entire lifecycle of the project, allowing full participation from the supply chain—all in real-time. The result is sustained improvement, the elimination of waste, and increased value.

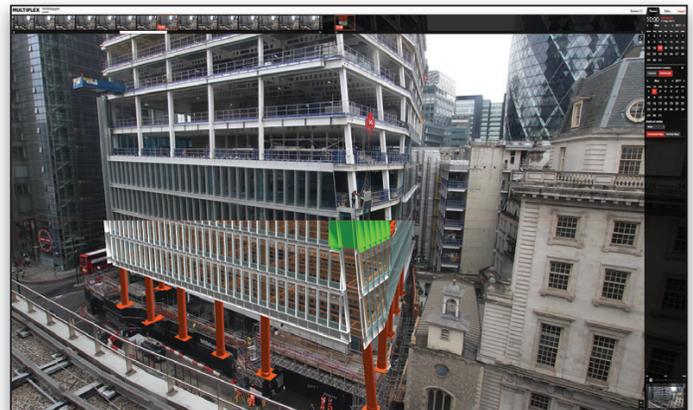
### The CONNECT Edition

The SELECT<sup>®</sup> CONNECT Edition includes SELECT CONNECT services, new Azure-based services that provide comprehensive **learning, mobility,** and **collaboration** benefits to every Bentley application subscriber. *Adaptive Learning Services* helps users master use of Bentley applications through CONNECT Advisor, a new in-application service that provides contextual and personalized learning. *Personal Mobility Services* provides unlimited access to Bentley apps, ensuring users have access to the right project information when and where they need it. *ProjectWise<sup>®</sup> Connection Services* allow users to securely share application and project information, to manage and resolve issues, and to create, send, and receive transmittals, submittals, and RFIs.

### The 4D Digital Construction Environment

Construction projects involve the coordination of people, materials, and equipment in a dynamic and ever-changing workspace. Using paper, spreadsheets, and Gantt charts is no longer enough. A digital construction environment enables digitally enhanced construction planning and operations.

SYNCHRO Pro is the only environment that interoperates with all major 3D modeling technology and scheduling applications in the market. Deploying this environment, combined into a real-time transactional database and open application program interface (API) that runs on Azure Cloud, opens the door for total participation from the construction supply chain.



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

### Large-scale Model Performance

The construction industry needs to create large-scale models that are interoperable with all major BIM and scheduling formats. With SYNCHRO Pro, users can work on the models on multiple jobsites for digital monitoring in the field. Manual data entry processes are now replaced and users can produce weekly digital output from data collected in the field.

### Real-time Project Teamwork

To deliver projects well, teams need to work together in real time. Supply chains can participate with data exchange and collaborative workflows that are based on project roles and permissions. SYNCHRO Pro can help users reduce time needed to complete a field inspection by days, showing results to the entire team without delay.

### Project to Portfolio Analytics

Analytics are also important for construction. SYNCHRO Pro provides metrics for visibility into progress and problem areas. Automated reporting is integrated with Power BI dashboards. Also, with Microsoft HoloLens, users can create augmented models on site.

## System Requirements

### Processor

2.13GHz Dual Core minimum; 3.33GHz Dual Core recommended; 4.0GHz Quad Core enterprise specification; only 64-bit (x64) processors are supported

### Operating System

Microsoft Windows 7, Microsoft Windows 8/8.1, Microsoft Windows 10, Microsoft Windows Server 2012 (all editions); only 64-bit (x64) operating systems are supported

### Memory

8 GB minimum; 16 GB recommended; 32 GB (or 64 GB for large datasets) enterprise specification

### Disk Space

1.2 GB for installation files, 1.0 GB for each project file (typical); 50 MB for small office models (optional), 95 MB for logistics models (optional)

### Graphics Card

512 MB minimum; 2 GB recommended; 4 GB (NVIDIA with CUDA support) enterprise specification

### Screen Resolution

1280x1024 minimum; 1920x1080 recommended; 2560x1600 or 2560x1440 enterprise specification

### Input Device

Mouse

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## SYNCHRO Pro CONNECT Edition At-A-Glance

### Manage Models

- Import multiple models from different sources
- Synchronize from updated versions of the model
- Import and reference model attributes
  - » Dimensions
  - » Part numbers
  - » User defined fields
- Create simple geometry (box, cylinder, sphere, or extrusion) to represent objects not contained in the imported model, such as lay-down areas or workspaces
- Subdivide model objects to match construction tasks (e.g. multiple pours for a concrete slab)
- Filter model by any attribute

### Manage Schedules

- Import multiple schedules from different sources, such as subcontractor schedules
- Create schedules from scratch with a full-featured CPM engine
- Insert tasks to imported schedules to add more detail to better show intended construction sequence
- Synchronize from updated schedules
- Export or synchronize updates made in SYNCHRO to external scheduling tools
- Organize schedule by work breakdown structure or activity codes
- Import or create and assign activity codes for better schedule visualization (e.g. filter or sort by trade, level, or work zone)
- Filter or sort the schedule by any attribute
- Calculate and display the critical path (longest path or least float)

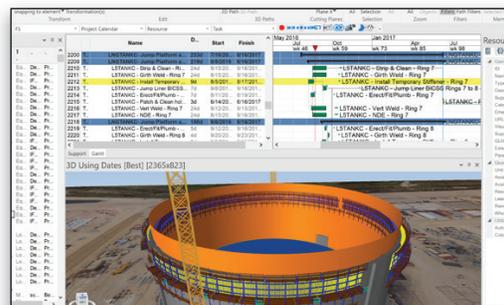
- Analyze the schedule using a built-in health check to find potential errors missing logic, and schedule weaknesses
- Baseline the schedule for comparison against later updates or what-if scenarios
- Edit task duration and logic ties to create what-if scenarios
- Update schedule progress

### Manage Resources and 4D Models

- Drag and drop to assign model objects to tasks
- Auto-match resources to tasks based on model and task attributes or user-defined fields
- Assign human, material, equipment, and space resources to tasks
- Create new tasks in the schedule from model objects
- Use growth simulation to show intended installation direction
- Use 3D paths to show equipment and material movement across the site
- Track resource status and actual resource usage
- Visualize 4D sequence using multiple color schemes
- Play 4D sequence directly in SYNCHRO for live review, share with stakeholders for viewing in the free open viewer software, or export a video to share

### Track Costs and Earned Value

- Assign or import resource costs and task expenses
- Track actual costs
- View the earned value graph
- Roll up costs by work breakdown structure
- View and export cost totals report



*SYNCHRO Pro enables digitally enhanced construction planning and operations.*



*SYNCHRO Pro is part of the SYNCHRO's digital construction environment, which also includes mixed reality and mobile applications, and a portal for managing multiple projects with cloud services.*