In any major process plant project, 80 percent of the capital expenditure is committed during the conceptual design phase. Bentley® AXSYS®.Process helps users minimize this expenditure and achieve better front-end engineering design (FEED) by allowing increased evaluation of conceptual design cases and managing data and workflow to reduce project time.

Integrated Modeling and Documentation Workflows
The CONNECT Edition provides a common environment for comprehensive project delivery and connects users, projects, and your enterprise. With the CONNECT Edition, you now have a personal portal to access learning, communities, and project information. With the new project portal, your project teams can review project details and status, and gain visibility into project performance.

Optimized Evaluation of Design Concepts
Optimizing front-end engineering design generally entails spending time evaluating alternative designs and then selecting the best case from these alternatives. Bentley AXSYS.Process allows users to perform more designs in less time and evaluate these designs more thoroughly in order to find the most cost-effective case. Bentley AXSYS.Process provides a common database and environment to allow the sharing of process simulation and project evaluation data across the enterprise. This optimizes the engineering workflow and eliminates data re-entry and duplication. A comprehensive change management system tracks all changes made to data during the FEED project and can manage multiple revisions allowing for parallel design cases.

Interfaces with Major Process Simulators and Heat Exchanger Applications
Since Bentley AXSYS.Process manages the process data, it dramatically reduces design effort by linking directly to other engineering programs. Bentley AXSYS.Process interfaces with major process simulators including Aspen Plus, HYSYS, PRO/II, UniSim Design, and VMG Sim. Information from a simulation can be loaded into Bentley AXSYS.Process, including stream properties and detailed unit operation data, along with the associated connectivity.

Once this information has been loaded, it can be manipulated or combined with other simulations to generate a complete plant simulation model. For detailed heat exchanger calculations, Bentley AXSYS.Process supports the major design programs from HTRI and HTFS. These applications can be run in design or rating modes.

Bentley AXSYS.Process enables users to integrate conceptual process design and functional engineering on their process plant projects.

Automatic Drawing Generation
Bentley AXSYS.Process uses a powerful rule base to automatically generate process flow diagrams (PFDs) and piping and instrument diagrams (P&ID). These drawings are easily configured and extended to include project specific graphical symbols and associated data. Drawings can be output to multiple drawing formats.

Customizable Datasheets and Reports
The use of Microsoft Excel and a comprehensive set of customizable datasheet and report formats provide easy access to and manipulation of any information in a familiar environment.

Flexible Workflows
Bentley AXSYS.Process has been designed with maximum flexibility and does not impose fixed or rigid processes. Information can be integrated, analyzed, and edited in both a graphical and a non-graphical environment, or it can be directly accessed via any OLE-compliant application. Users also have control over their work process by utilizing the extensive change management features that are included. The software tracks changes during the project, allowing users to revert to previous designs. Data sheets can be published to Bentley's ProjectWise® for storage, markup, and revisioning.

Extensive Customization Tools
Bentley AXSYS.Process provides an extensive set of tools and utilities to configure the interface as well as write automation procedures through a comprehensive macro language. This comprehensive environment extends beyond the scope of any single discipline and into the enterprise. There is support for VBA, ODBC, XML, and export and exchange capabilities to a number of plant design applications including Bentley OpenPlant and AutoPLANT Modeler®.
**System Requirements**

Processor: 400 MHz Intel or AMD processor (1 GHz or higher recommended)

Memory: 512 MB (2 GB recommended)

Additional memory over the minimum requirements shown above will result in improved performance

Hard Disk: Prerequisites for Bentley Desktop applications 08.11.09 require a minimum of 400 MB of disk space to install all components

Bentley AXSYS i-models engine requires 500 MB of disk space to install all of its components

400 MB hard disk space for installation including sample project databases. The actual space required will vary with each machine

Video: Any industry-standard video card with a minimum of 8 MB memory

Operating System: Microsoft Windows 7 (32- or 64-bit) Windows 8.1 (64 bit)

Software Prerequisites: Prerequisites for Bentley Desktop Applications v08.11.09.03

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**Bentley AXSYS.Process At-A-Glance**

**Simulation Interfaces**
- Use unlimited simulation cases and topologies
- Load multiple simulation topologies into one project
- Support for HYSYS version 2.4.2 and upwards to V8.4
- Support for Aspen Plus versions 12.1 to V7.0, V8.2, V8.4
- Support for UniSim Design version R350.1 and upwards to R430
- Support for PRO/II versions 7.0 through 9.2
- Support for VMG Sim 9.0
- Import data from other simulators through our Generic Excel import mechanism

**Process Flow Diagrams (PFDs)**
- Automatically generate PFDs based on information from the simulation and user rules
- Track what simulation was used
- Overwrite rules manually after PFD has been created
- Full CAD editing functionality
- Export PFDs to DXF or DGN formats

**Piping & Instrumentation Diagrams (P&IDs)**
- Automatically generate P&IDs based on PFD diagram and user rules
- Track which PFD was used to create the P&ID
- Intelligent connectors automatically adjust when objects are moved
- Comprehensive symbol library
- Automatic concept of pipe flow and order of components in a pipeline
- P&IDs can be exported to DXF or DGN formats
- Intelligent P&IDs can be exported to OpenPlant PID

**Microsoft Excel Datasheets and Reports**
- Full read/write capabilities into the AXSYS database
- Data sheet definitions and report definitions are fully customizable
- Formats can become templates in the database
- Offline edits and the AXSYS database are compared and synchronized
- Templates are created or modified using an interactive database mapping tool

**Thermal Flash Support**
- Perform relief or other flash calculations directly in AXSYS
- Modify pressure, temperature, or vapor fraction of your stream and send back to the simulation for flashing

**Heat Exchanger Interfaces**
- Create input file for heat exchanger design program
- Define basic mechanical configuration information
- Track what files have been created for each program by user and date
- Support for design and rating modes in XIST from HTRI
- Support for design, simulation, rating, and thermosyphon modes in TASC from HTFS

**Equipment Sizing**
- Create an unlimited number of process cases
- Create an unlimited number of sizing cases per equipment item
- Size pipes based on PFD or based on P&ID

**Project Control**
- Restrict database access
- Define object level access
- Control access to properties
- Track who makes modifications
- Compare utility for objects and workspace changes

**Revision Management**
- Multiple revisions can be defined and stored within the project
- Revision numbers automatically added when object is modified

**Configuration**
- Virtually all aspects of AXSYS can be configured to suit your corporate and project standards without programming
- Most configurable components are defined within the AXSYS database

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Access information via any OLE-compliant application.

Comprehensive change management system tracks all changes made to data during the FEED project.