

Dynamic Review

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Information Challenges



Incomplete Information

- Graphics and business data are stored in separate places
- Rich information is not accessible outside native application
- Information source and change history is often unknown

Unreliable Information

- Insecure information is vulnerable to misuse
- Lack of information status compromises trust
- Inaccurate transformation eliminates precision



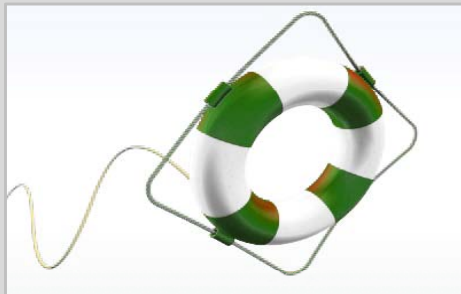
Irrelevant Information

- Multi-discipline information is constrained at source
- Graphics and business data are not optimized for reuse
- Review and comment workflows are disconnected

Dynamic Collaboration Priorities

Reuse Multi-discipline Information

- Exchange rich multi-discipline information
- Rely upon secure and accurate content
- Improve the quality of decisions made



Manage Change Reliably

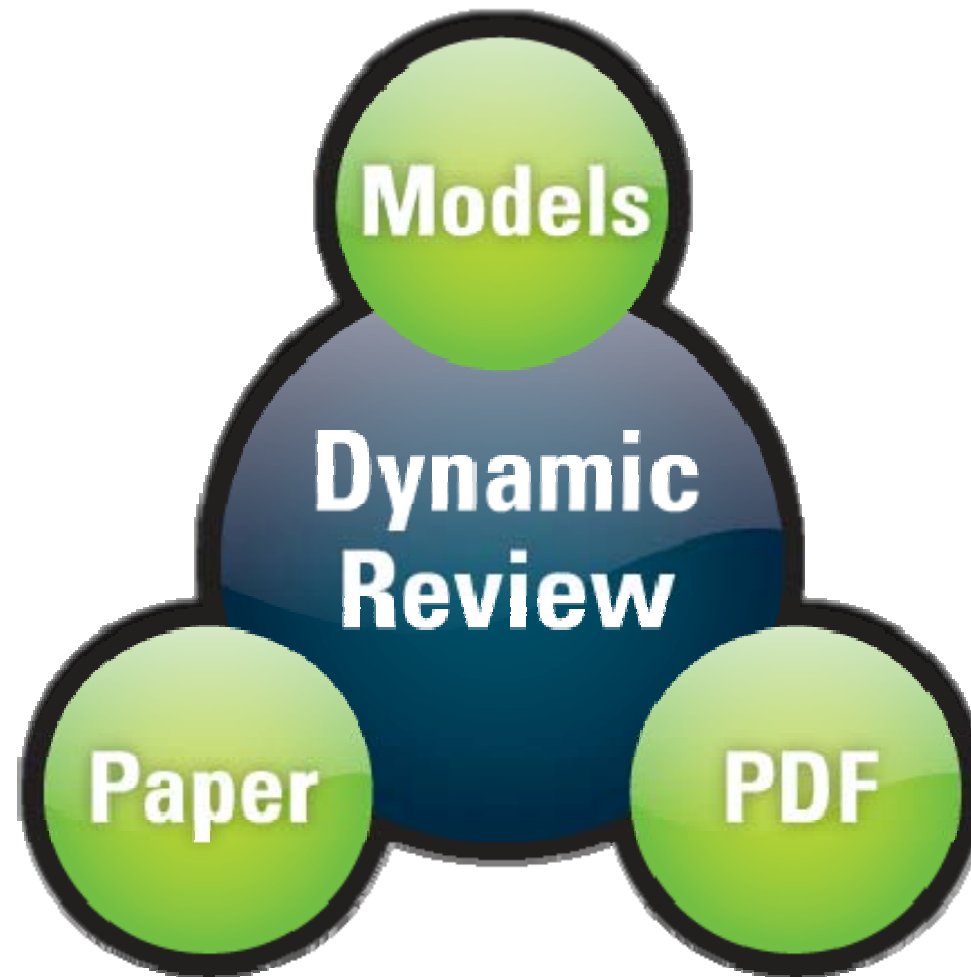
- Get the right information to right people fast
- Manage design development & change processes
- Enable “dynamic” interoperability workflow

Integrate Project Delivery

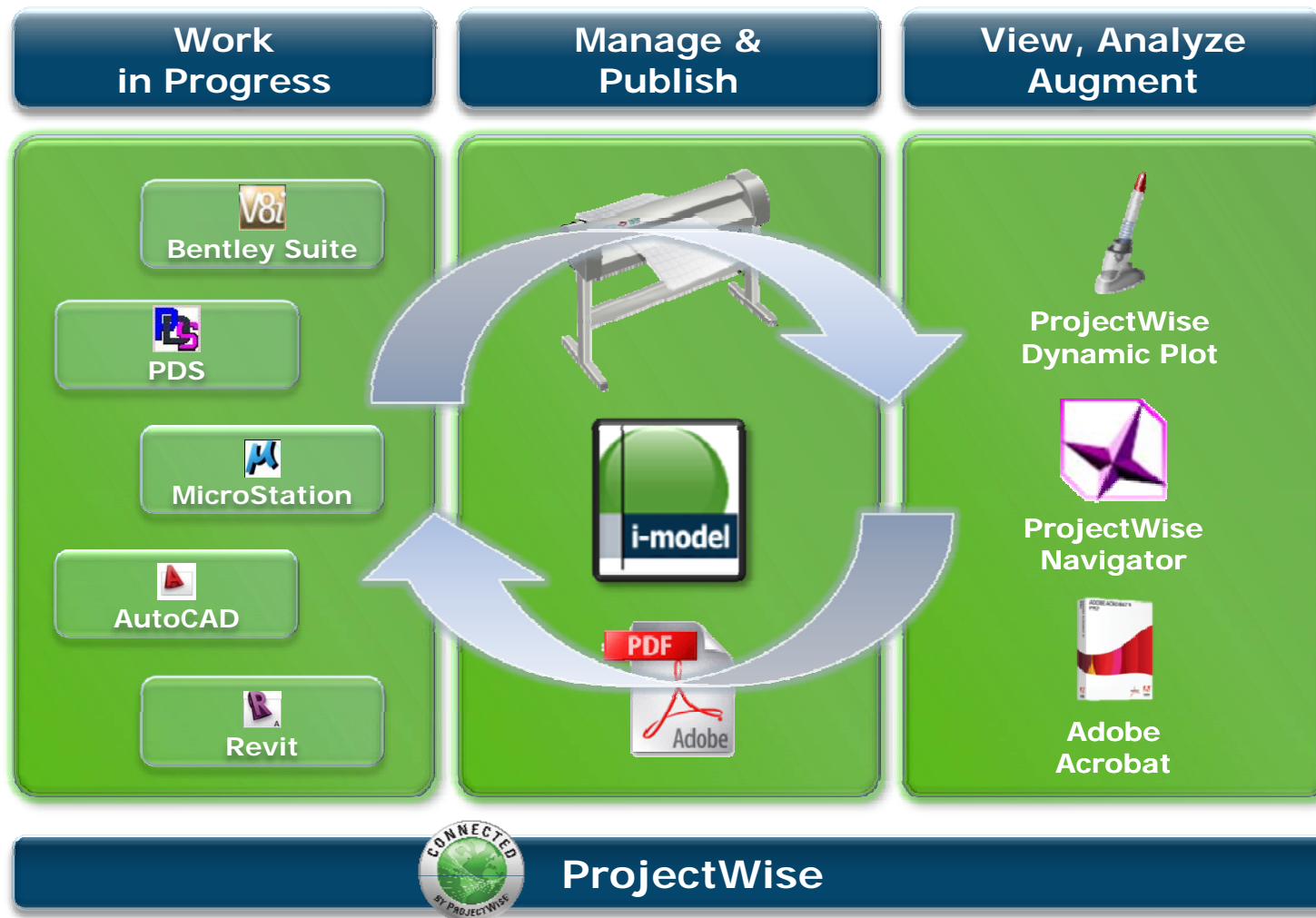
- Improve project certainty with greater insight
- Eliminate errors to reduce change orders on site
- Simulate what-ifs & speed time to market



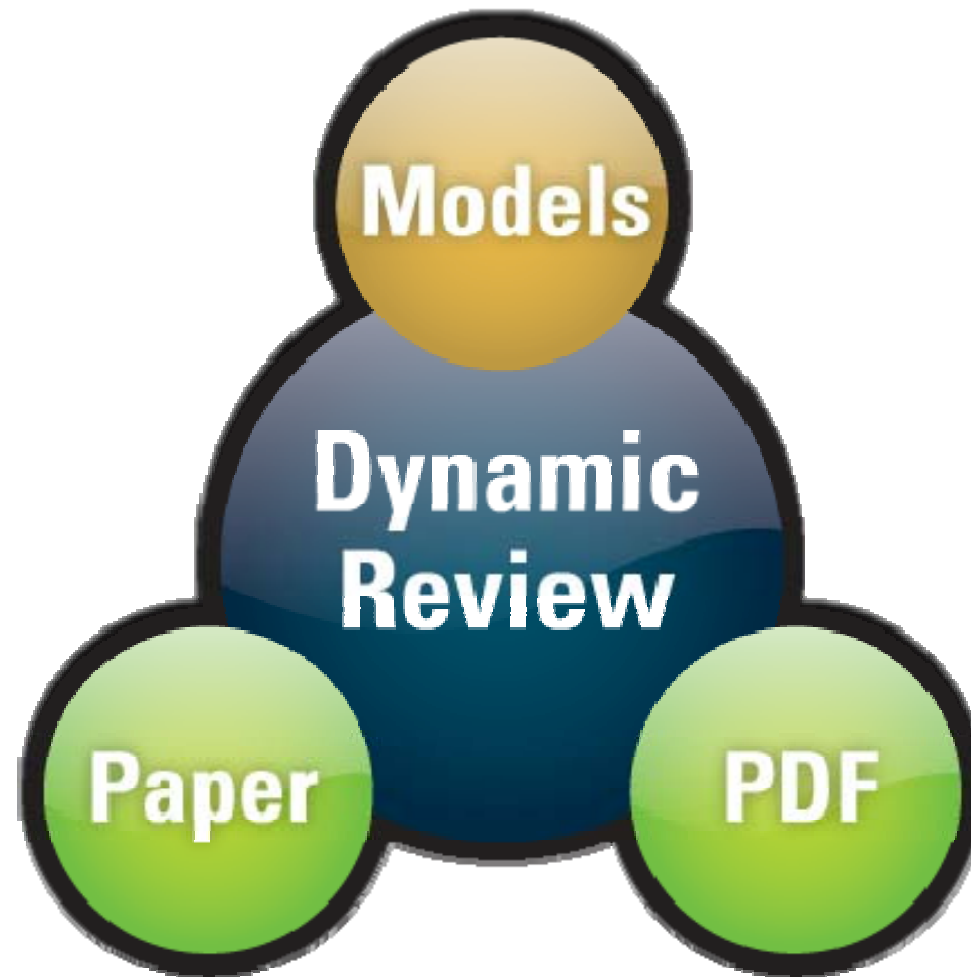
Dynamic Review Process



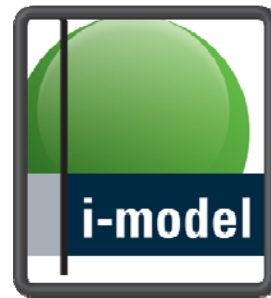
Dynamic Collaboration Workflows



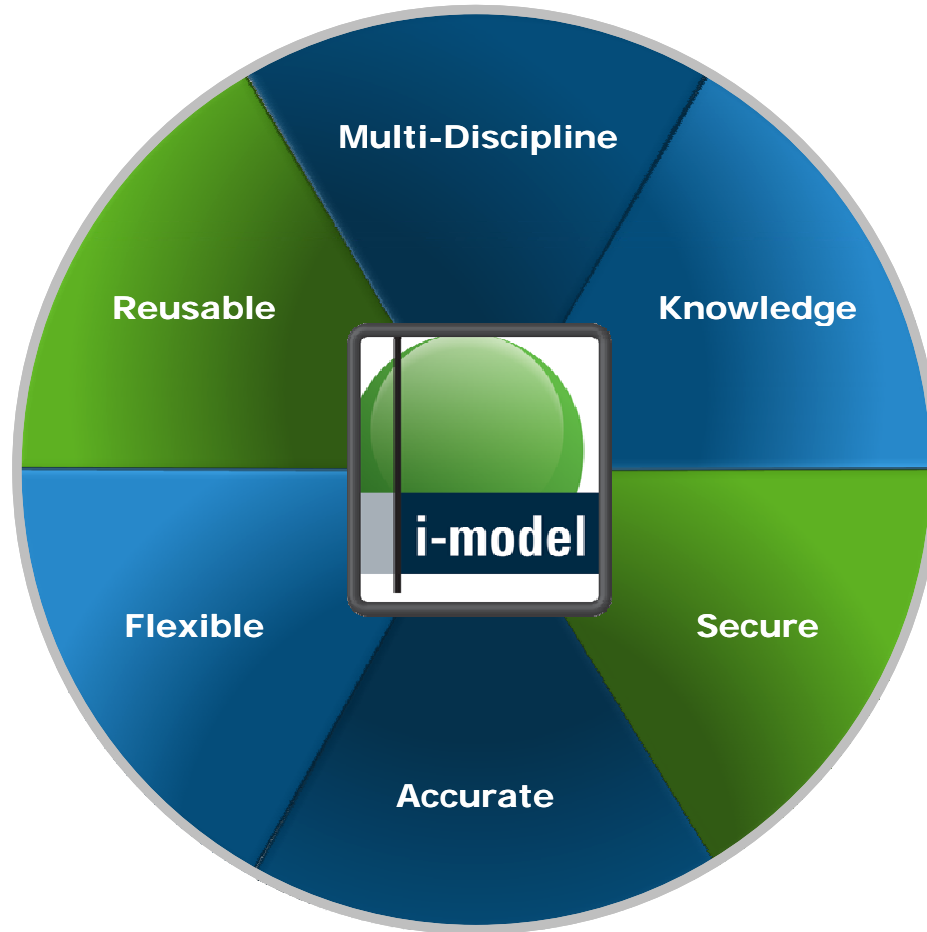
Dynamic Review for Models



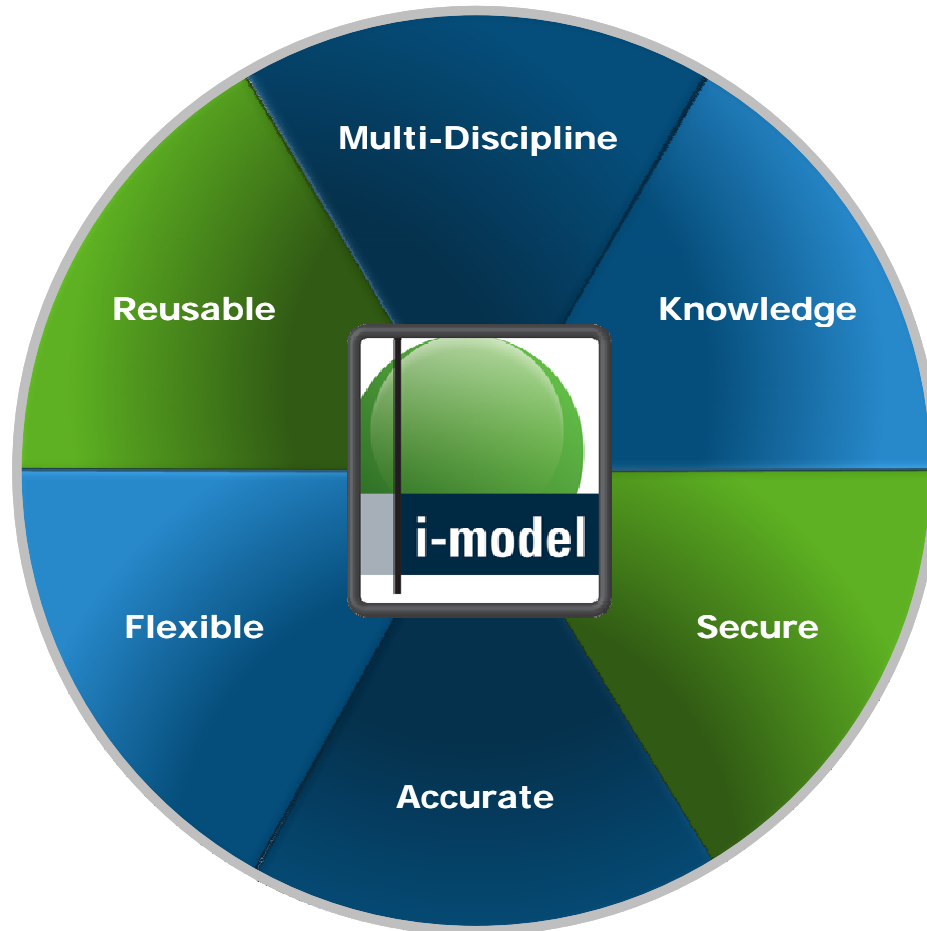
What is an i-model?



What is an i-model?



What is an i-model?



Information Rich + Reliable + Optimized for Purpose

What is an i-model?



Multi-Discipline

Information Rich



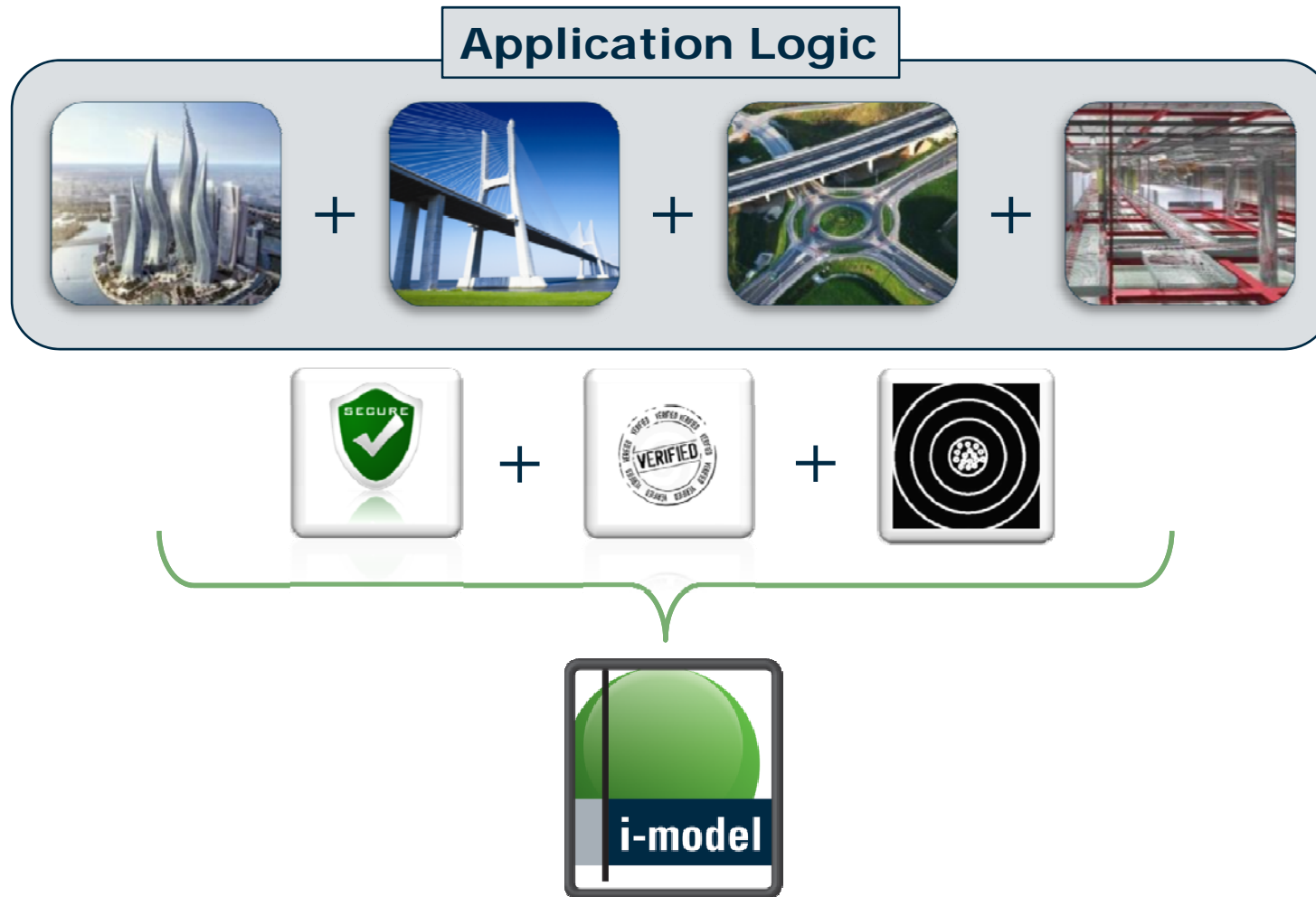
Multi-Discipline + Self-Describing

Reliable



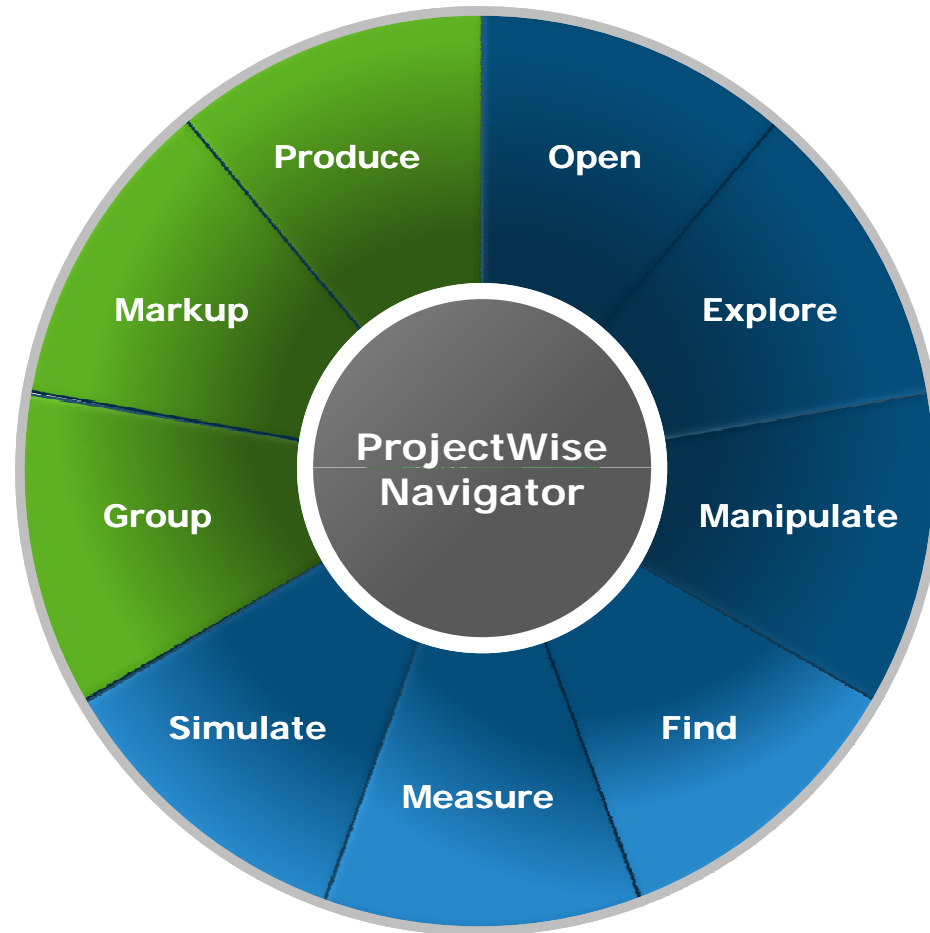
Multi-Discipline + Self-Describing + Secure

Knowledgeable



Multi-Discipline + Self-Describing + Secure + Provenance

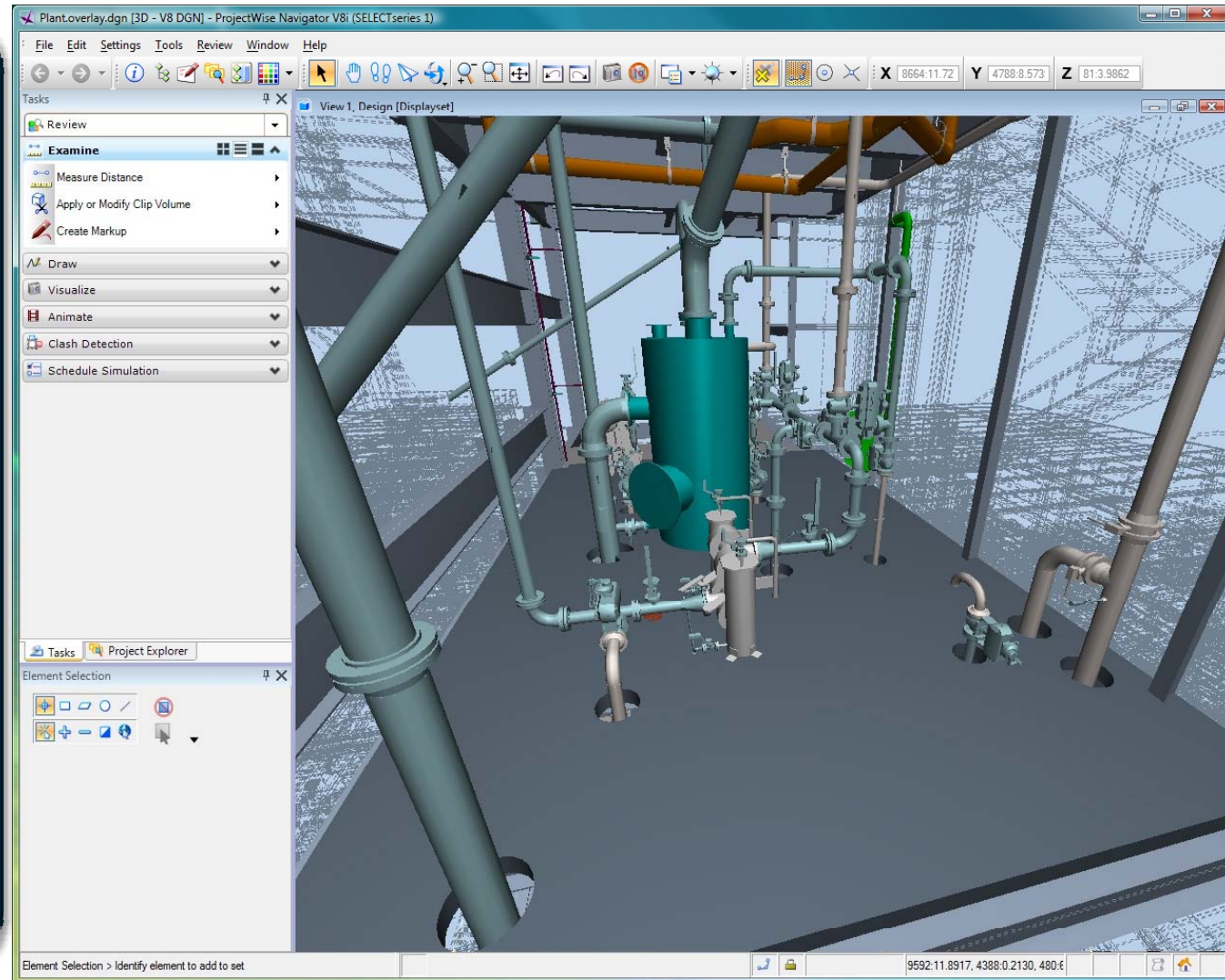
ProjectWise Navigator



View + Analyze + Augment

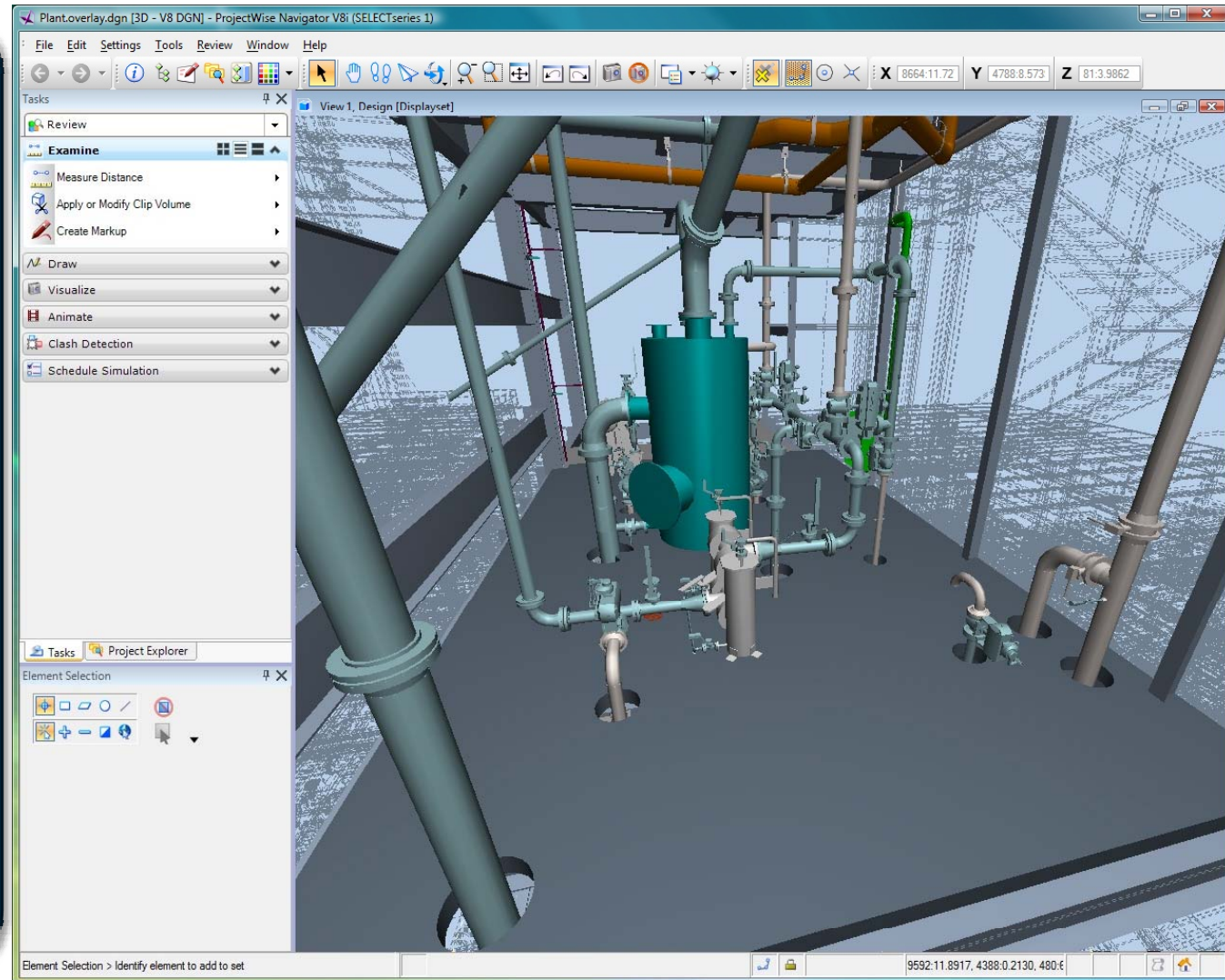
Interface

- Review specific tasks
- “Mainstream” approach to icons and menus
- Less clutter and distractions
- Easy to learn and adopt.
- Highly contextual



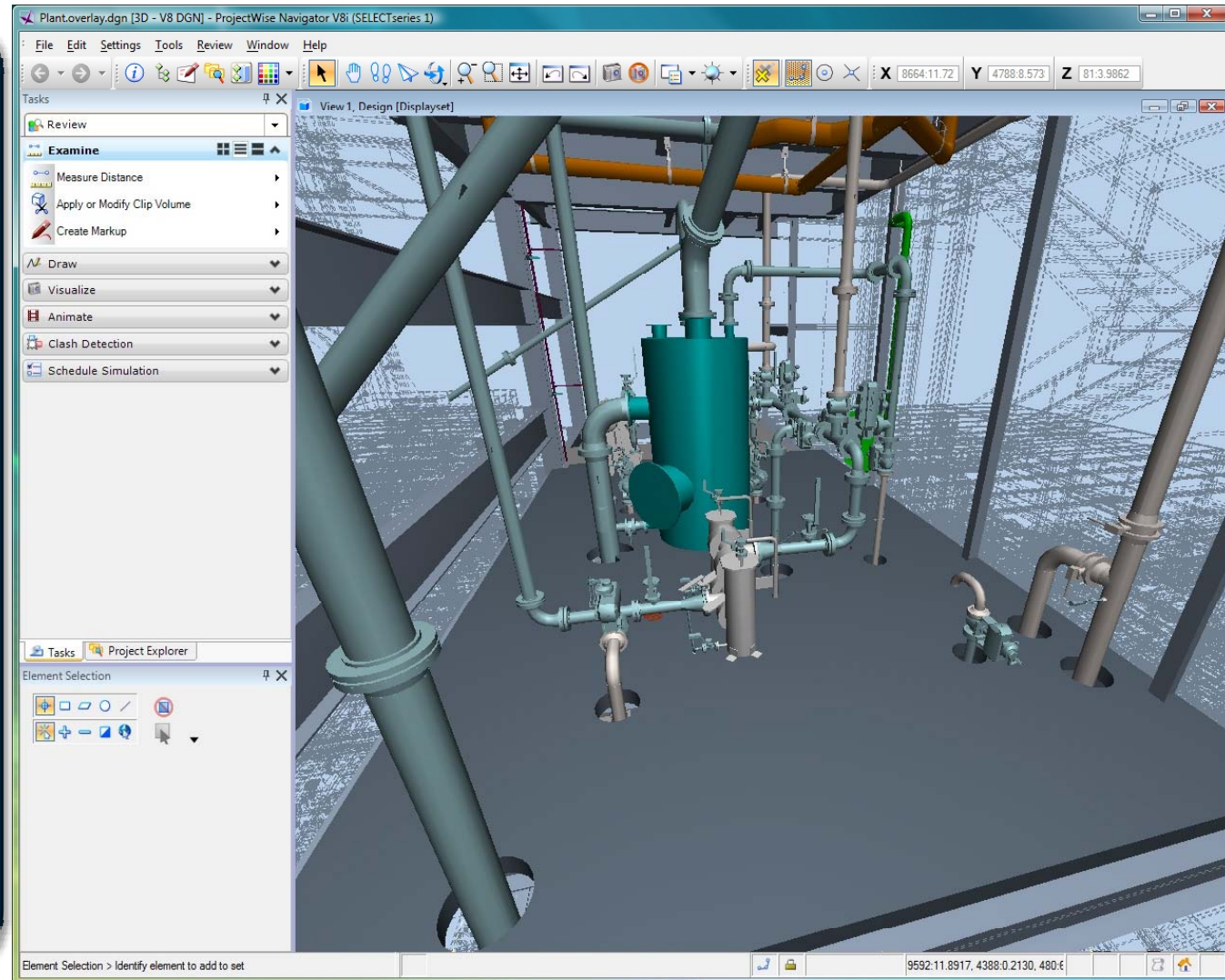
3D Navigation

- Logical choices
- Logical control
- Mouse or keyboard
- Flexibility



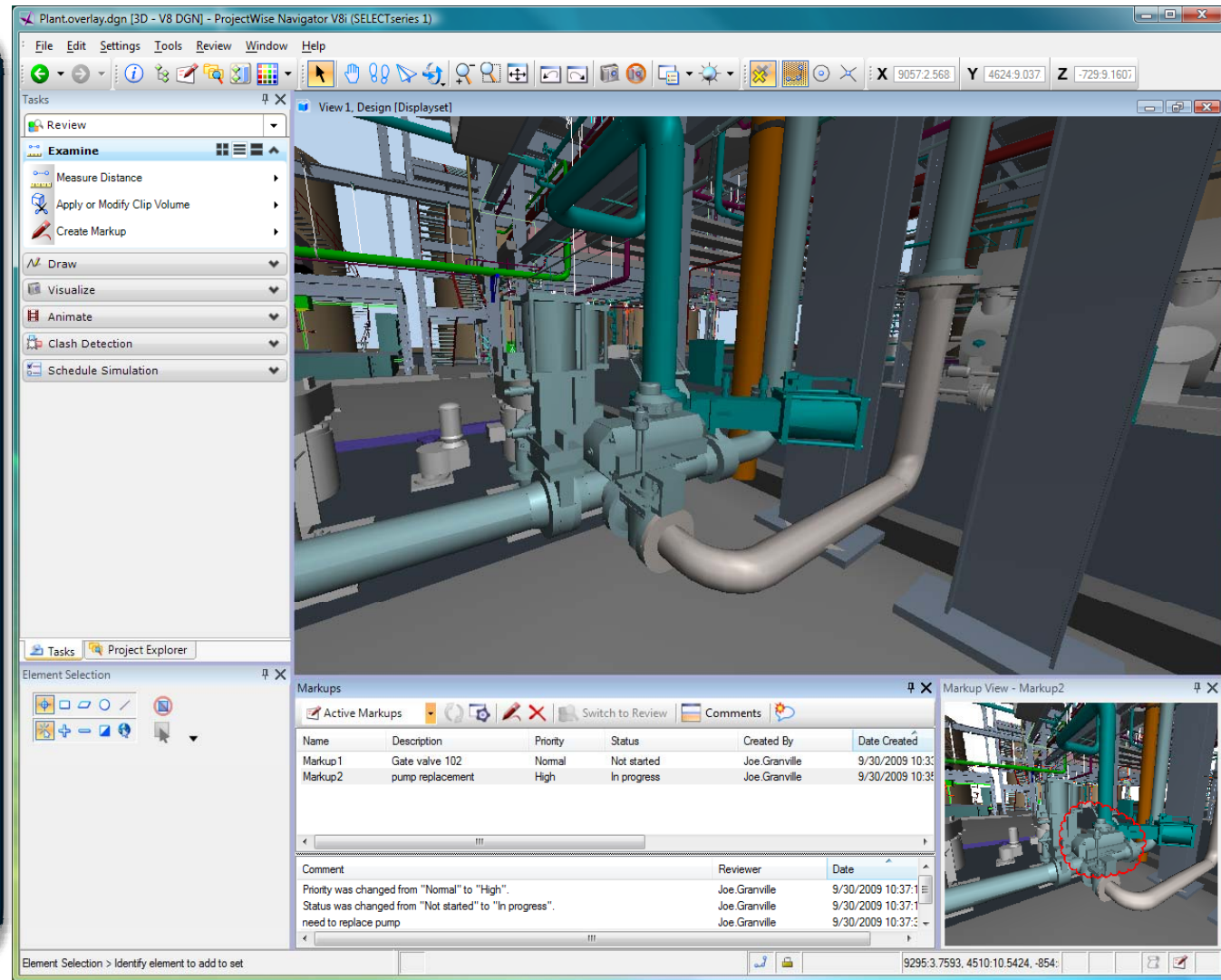
Dynamic Views / Sectioning

- Control section planes dynamically in view
- Change the display and shading of sectioned geometry
- Preserve sections views for recall
- Create markups on section views



Markup

- Create markups of 2D and 3D files
- Track status and other information for each markup
- Store comment history for individual markups
- Create PDF hard copies



Data Interrogation

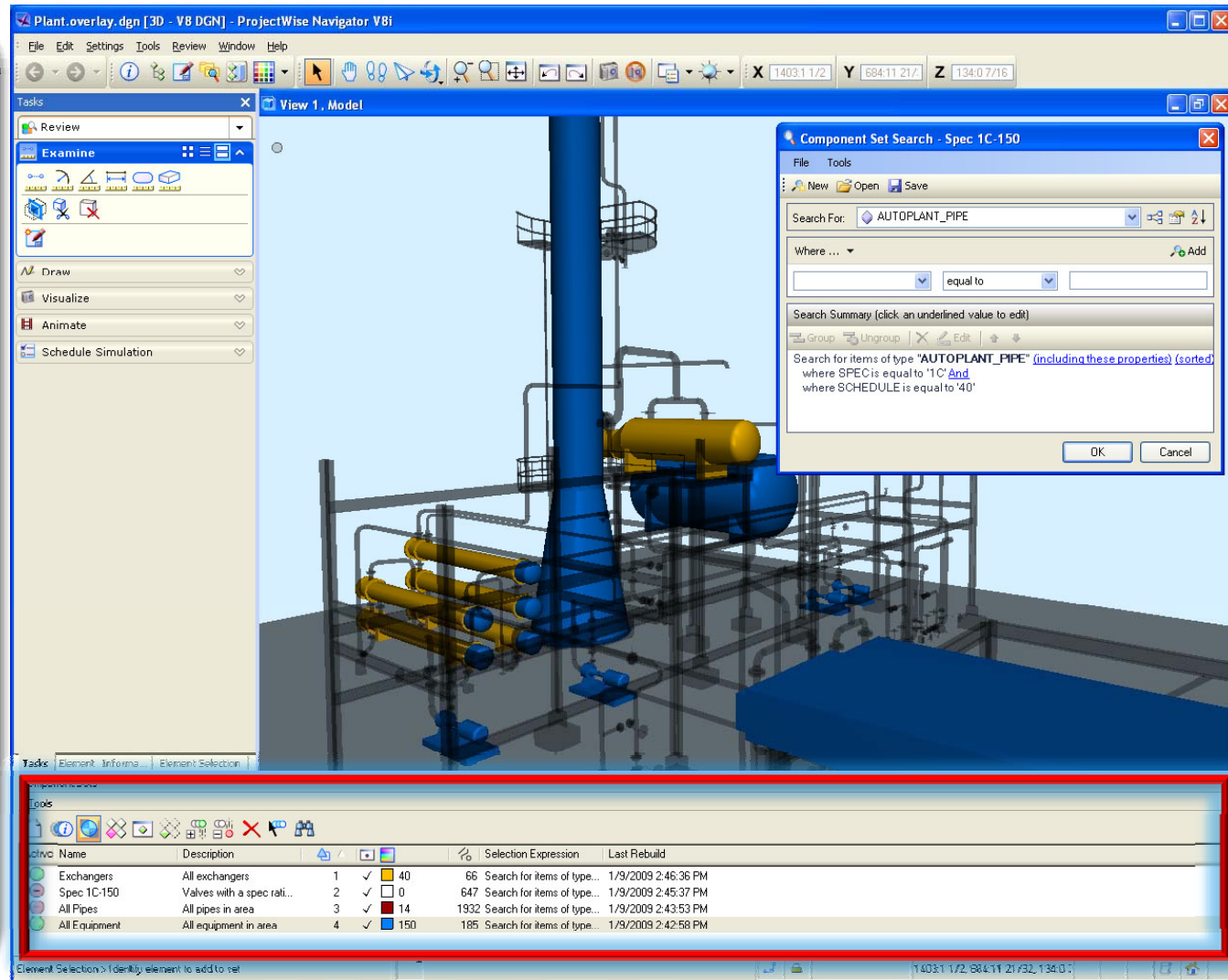
- Browse all component information stored in the file
- Display relevant properties of individual components
- Query components

The screenshot displays the Bentley ProjectWise Navigator V8i interface. The main window shows a 3D model of a plant structure. Three windows are highlighted with red boxes:

- Engineering Content browser:** A tree view showing a hierarchy of components. The 'ACTIVE' pane lists various components, including '50E-101A-CYL', '50E-101A-HEAD', '50E-101B', '50E-101B-CYL', '50E-101B-HEAD', '50E-101C', '50E-101C-CYL', '50E-101C-HEAD', '50E-101D', '50E-101D-CYL', '50E-101D-HEAD', '50E-101E', '50E-101E-CYL', '50E-101E-HEAD', '50E-102', '50E-104A', '50E-104B', '50P-101A', '50P-101B', '50P-104A', '50P-104B', '50TW-101-BASE', '50TW-102', '50V-101', 'RECTANGLE750EA', 'RECTANGLE752D4', 'RECTANGLE7927F', 'RECTANGLE792F7', 'AUTOPLANT_LINENUMBER', 'AUTOPLANT_NZL', and 'AUTOPLANT_PIPE'. The '50TW-102' component is selected.
- Engineering Content Details:** A table showing properties for the selected component 'Component - AUTOPLANT_EQP'. The table includes fields such as POSY, POSZ, WEIGHT_DRY, POSX, NAME, DES_TEMP, INSUL_THK, INSULATION_SPEC, INSULATION_THK, DESCRIPTION, EQUIPMENT_NO, DESIGN_PRESS, DESIGN_TEMP, DES_PRES, VENDOR, ACTIVITY_FLAG, DESIGN_SOURCE, LAYER, MATRIX, ATTRIBUTES, RANGE, LEVEL_NAME, INSUL_SPEC, TAG, LING_DESC, EQUIP_NO, AUTOPLANT_CLASS, and AUTOPLANT_COMPID.
- Search:** A search dialog box with the search criteria 'AUTOPLANT_EQP' and the search type 'equal to'. The search summary indicates that the search is for items of type 'AUTOPLANT_EQP' (including these properties).

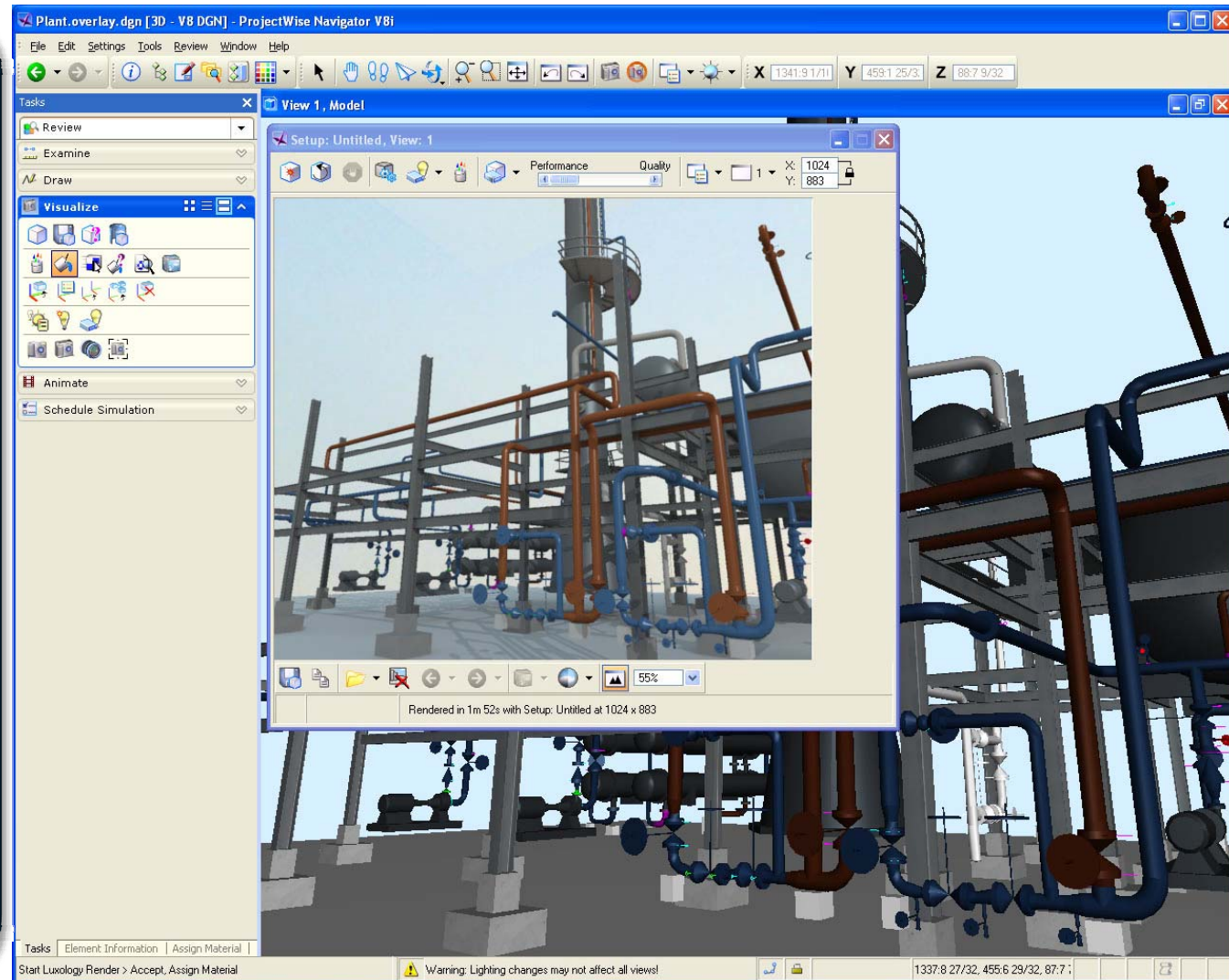
Item Sets

- Create persistent, reusable item queries
- Change color and transparencies of graphics for status visualization
- Update sets based on changes to engineering data
- Isolate and zoom to graphics



Rendering

- Photo Realistic rendering capabilities with new luxology rendering engine
- Apply materials and textures to geometry
- Add lighting for realistic shadows
- Render scenes created in MicroStation
- Save to a wide variety of image formats



Clash Detection

- Detect clashes across different application data
- Review results graphically
- Status tracking and commenting
- Generate Reports
- Rule suppression to reduce unwanted clashes

The screenshot displays the Bentley ProjectWise Navigator V8i interface. The main window shows a 3D model of a plant with a red pipe and a blue steel beam. The 'Clash Detection' task is active, and the 'Clash Detection - Pipe vs Steel (17 clashes)' window is open. The 'Results' tab shows a table of detected clashes.

Name	Status	Type	Clearance	Assigned To	Found By	Found On	Accepted By	Accepted On	Assign
Clash001	New	Hard	Less Than...		Joe.Granville	2009-09-3...			
Clash002	Accepted	Hard	Less Than...		Joe.Granville	2009-09-3...	Joe.Granville	2009-09-30 11...	
Clash003	Follow Up	Hard	Less Than...		Joe.Granville	2009-09-3...			
Clash004	New	Hard	Less Than...		Joe.Granville	2009-09-3...			
Clash005	Assigned	Hard	Less Than...	Markup	Joe.Granville	2009-09-3...			Joe.Gra
Clash006	New	Hard	Less Than...		Joe.Granville	2009-09-3...			

Schedule Simulation

- Import and export scheduling information from Microsoft Project and Primavera
- Create new schedules and tasks
- Dynamically modify tasks events
- Preview results graphically
- Generate animations

The screenshot displays the Bentley ProjectWise Navigator V8i interface. The main window shows a 3D model of an industrial facility with various structures and piping. The left-hand side contains a 'Tasks' panel with categories like 'Review', 'Examine', 'Draw', 'Visualize', 'Animate', 'Clash Detection', and 'Schedule Simulation'. Below this is the 'Project Explorer' and 'Element Selection' panels. The bottom window is the 'Animation Producer', which features a Gantt chart showing task durations from Thursday, 7/26/2007 to Wednesday, 5/21/2008. Below the Gantt chart is a 'Schedule Panel' table.

Name	Type	Start	Finish	Start Color	Finish Color
Separator Bay East	Constructive	Thu, 9/13/2007 08:00:00	Tue, 1/8/2008 17:00:00	Green	Yellow
03 Erect Stl. Sep Bay E, Lvl 3	Constructive	Mon, 12/17/2007 08:00:00	Tue, 1/8/2008 17:00:00	Green	Yellow

Presentation

ProjectWise Navigator Advantage



Customizable and Easy to Use

- Open multiple file types with single software solution
- Explore models naturally and intuitively in real-time
- Manipulate view settings to interactively change display

Efficient and Intelligent Analysis

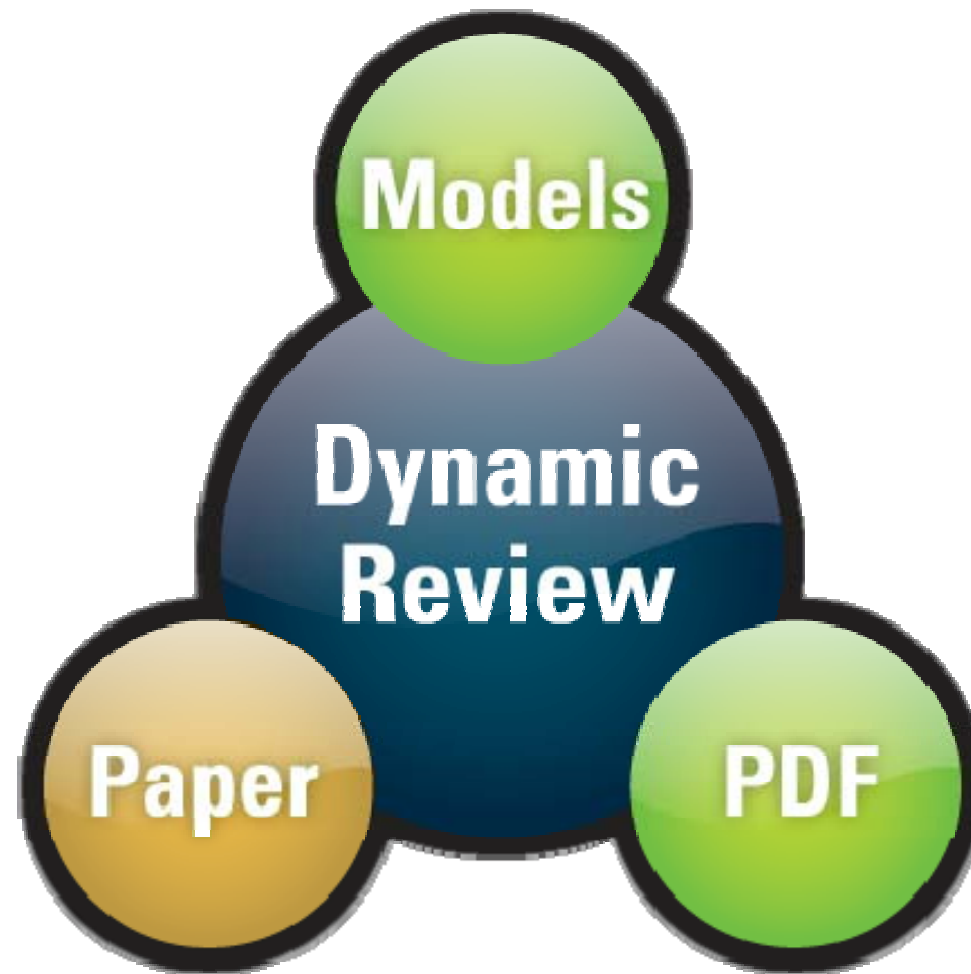
- Find business intelligence behind geometry
- Measure with complete engineering precision
- Simulate schedules and resolve clashes dynamically

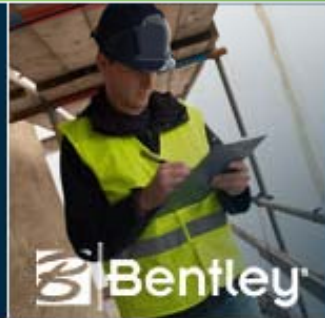


Organized and Extensible

- Group and classify items to extend intelligence of content
- Markup the model, register and preserve comments
- Produce images, animations, and intelligent 2D/3D PDFs

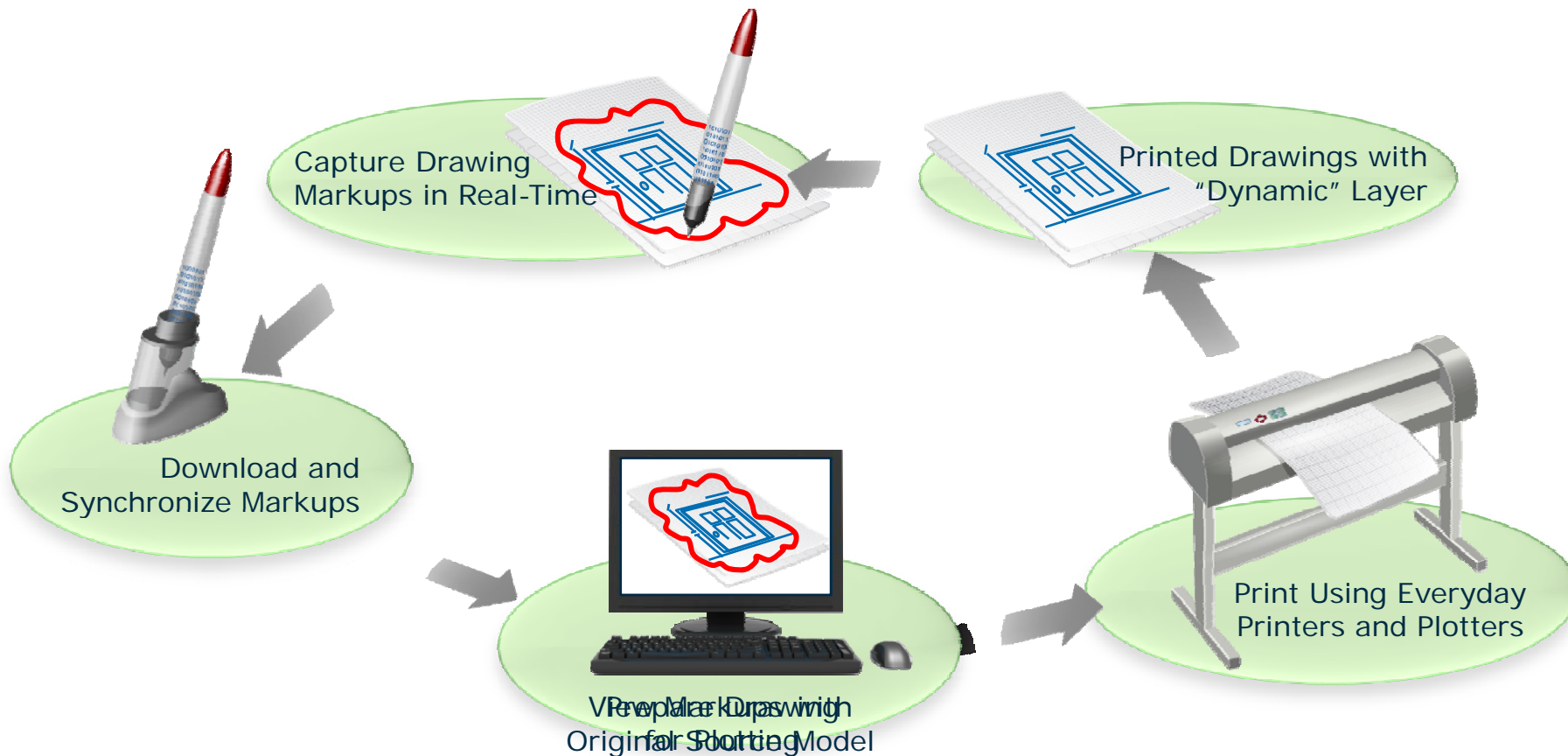
Dynamic Review for Paper



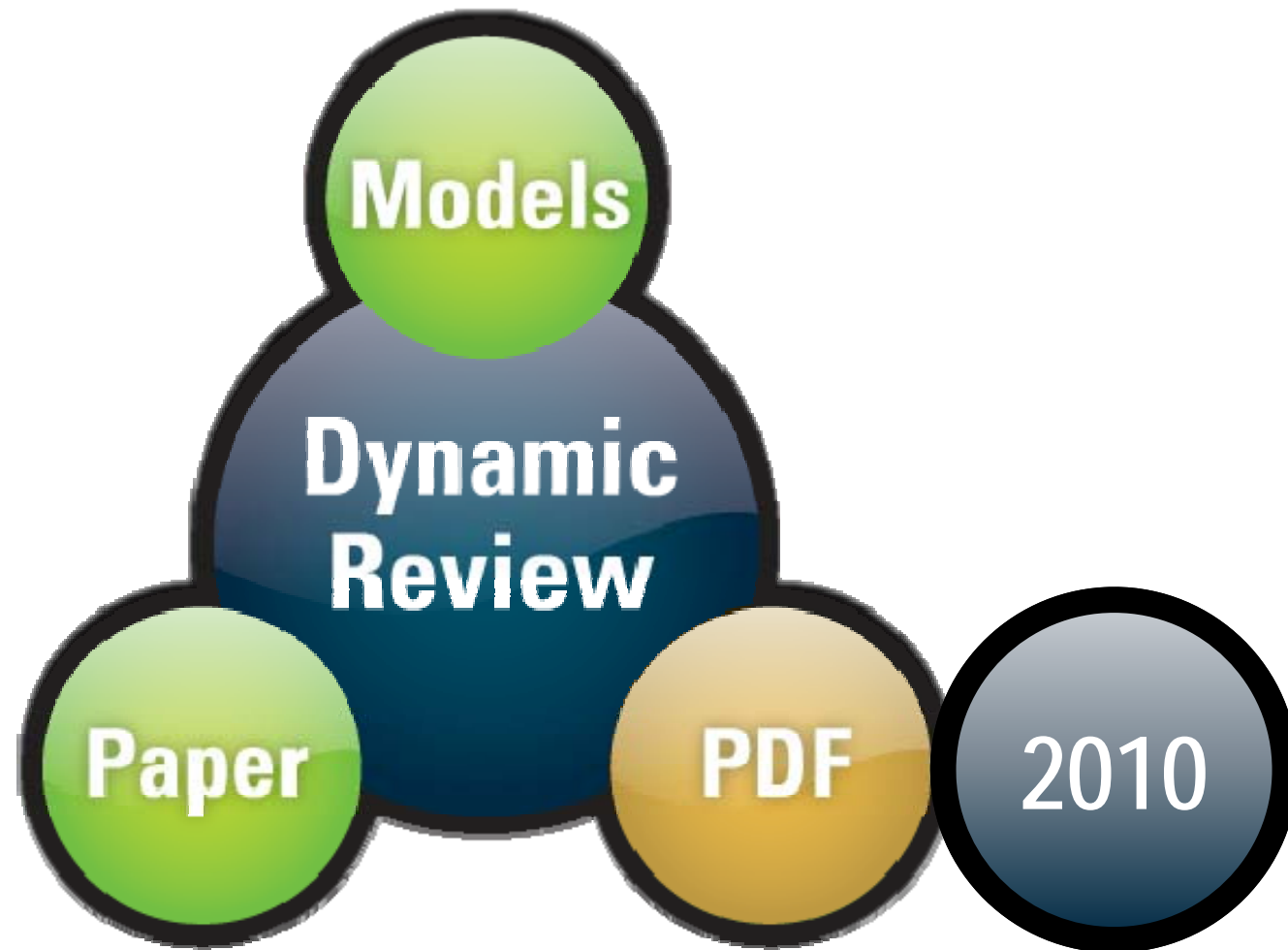


ProjectWise Dynamic Plot

Bringing Paper into the Digital Age



Dynamic Review for PDF



Dynamic Collaboration Advantage



Complete Reusable Information

- Information rich content from multiple sources
- Reliable status with complete engineering precision
- Optimized for purpose and schema independent for reuse

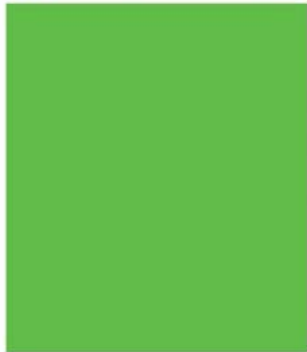
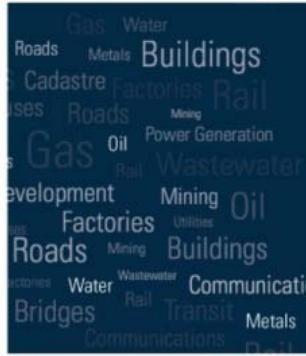
Integrated Software Offerings

- Customizable and simplified view & review software
- Intelligent and efficient way to analyze information
- Organized and Extensible way to markup files



Reliable Change Management

- Automated process for publishing project deliverables
- Managed “dynamic” review and commenting workflows
- Complete comment history record of who did what & when



Thank-you