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### ISO 15926 and Bentley

Manoj Dharwadkar, Ph.D. Director, Data Interoperability PCA FORUM 2009 AND MEMBERS MEETING Kuala Lumpur, October 20-21, 2009



#### **Presentation Overview**

• Bentley's portfolio and the interoperability challenge

• Bentley's commitment to ISO 15926

• The benefits associated with interoperability

• OpenPlant – Current solutions built around ISO 15926



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### A Portfolio for Interoperability



### **Bentley:** Sustaining Infrastructure



*Our mission is to provide solutions to Design – Build – Operate the world's infrastructure with the goal of:* 

- Sustaining our society
- Sustaining the environment
- Sustaining the profession

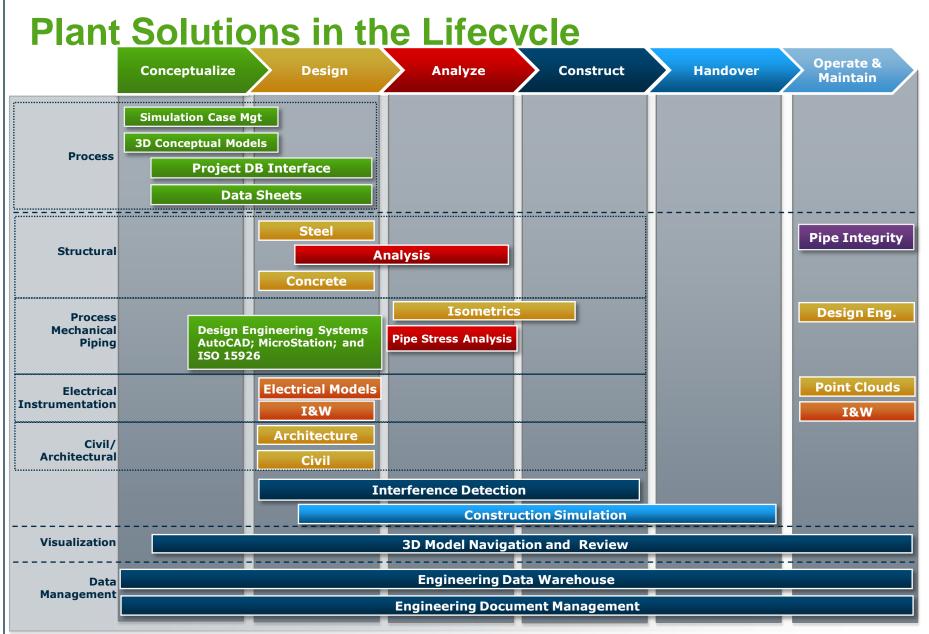




### **Solutions**







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### **Interoperability vs Integration**

- Integration
  - Integration is the idea that data or information on a *given* program can be read or manipulated by *another* program using an *agreed* format
- Interoperability
  - Interoperability describes the capability of *any* program to *share* data and information via a published set of protocols *without* the need to agree on a format



### **Integration vs. Interoperability**

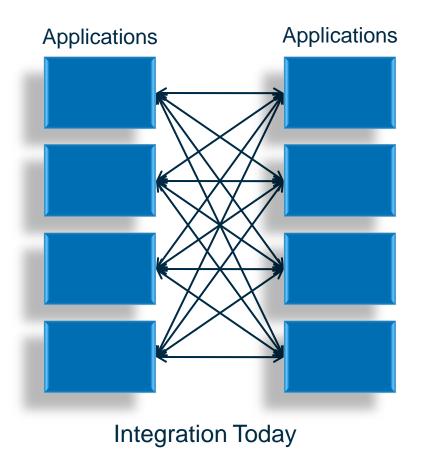


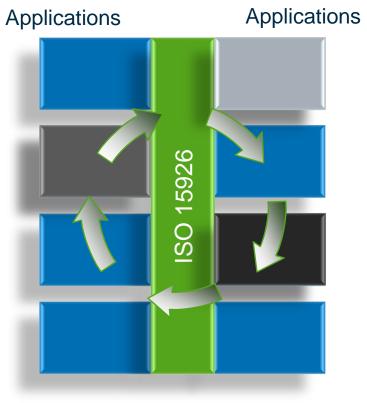




### **Application Interoperability**

#### The Problem





#### Interoperability Tomorrow

The Next Step



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# Bentley's commitment to ISO 15926



### **Bentley's commitment to Open Standard: 2008 FIATECH CETI Award winner**

### FIATECH



#### About the CETI Award:

In an effort to encourage innovative construction-related technologies that benefit the industry, FIATECH has established the CETI Awards - Celebration of Engineering & Technology Innovation - to recognize significant achievements in technology deployment and implementation in the capital projects industry.



### **Bentley's participation in ISO 15926**

- Active member of FIATECH and POSC Caesar
- Co-founder of FIATECH ADI Project
- Steering Committee member of IDS-ADI
- Active participation in the Camelot and Avalon projects
  - Bentley is driving the completion of iRING Protocols from the Technology Provider Perspective
- Collaborating with other leading participants on ISO 15926 implementation
- Actively implementing ISO 15926 and providing feedback to improve the standard



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### Let's talk about benefits



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# What are the Benefits of adopting ISO 15926?

- Select software that best-fits your organization
  - No need to change based on the project needs
  - Integrate with your other systems
  - Maximize your personnel, minimize re-training
  - It's the "green" thing to do
- Access to all data across lifecycle
  - Data always available for re-use
  - Legacy storage in a non-proprietary format
- Large and small organizations benefit equally
  - Benefits irrespective of organization size or geographic distribution



# What are the Benefits of adopting ISO 15926?

- Flexibility in project team
  - Different project members can use different tools can still share data
- Choice of tools on revamp
  - On Brownfield sites, don't need to use same tools that were originally used for project
- Greater competition
  - For owners greater choice of engineering contractors
  - For engineering contractors greater choice of software tools



# What are the Benefits of adopting ISO 15926?

- Foster innovation
  - Lowers cost of entry for new solution providers into the plant market
  - New specialized tools can be leveraged for their benefits without having to recreate the complete infrastructure
  - Easy to pass existing information for new analysis, designs, etc.
- Technology Providers need it to provide cost effective interoperability solutions



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### **OpenPlant Introduction**

Applying ISO 15926 Today



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### **Our Vision** ...

- Data interoperability using Industry Standards
- Open & Common Information Model
- Bentley OpenPlant<sup>™</sup> products designed for the distributed world;
  - Uses ISO 15926 reference data natively
  - Quick access & sharing of data, facilitating collaboration
  - Provides complete, consistent & correct data throughout the plant lifecycle
  - Provides an integrated, functionally complete set of solutions supporting key engineering disciplines

### The Benefits ...

- Achieves standardization across key plant lifecycle workflows
- Reduces the time to implement & learn
- Increases end-user productivity
- Improves plant safety & performance
- Delivers greater return on investment in information
- ISO 15926-based Open Information Model offers true data & application interoperability lowering overall cost of ownership

### Our Solution ... Bentley OpenPlant<sup>™</sup>

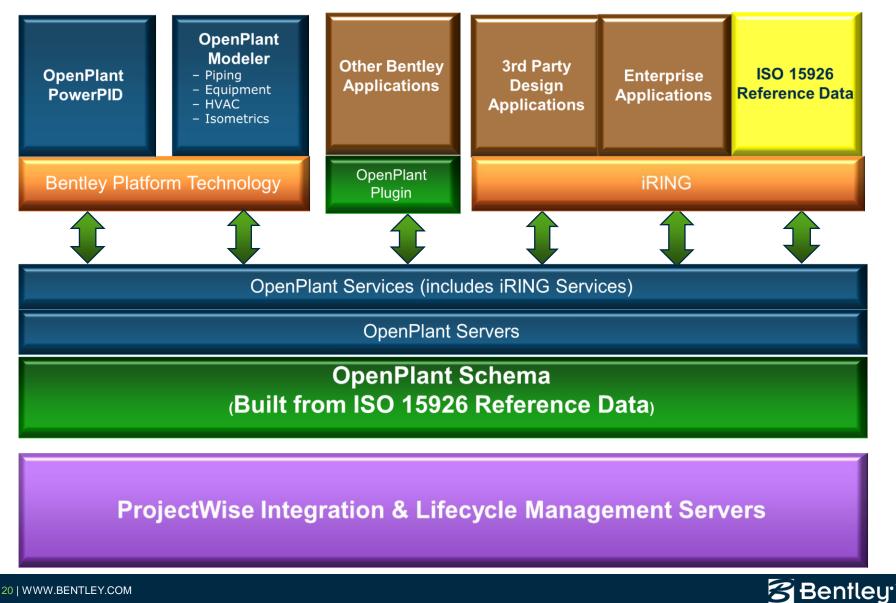


### What is OpenPlant?

- OpenPlant is the next generation of Bentley's plant design products
- OpenPlant is based on ISO 15926 for interoperability
- OpenPlant lets engineers collaborate in an open environment
- OpenPlant is designed for the distributed world
- OpenPlant leverages Bentley's proven technology
- OpenPlant stimulates innovation by delivering greater flexibility, adaptability and productivity



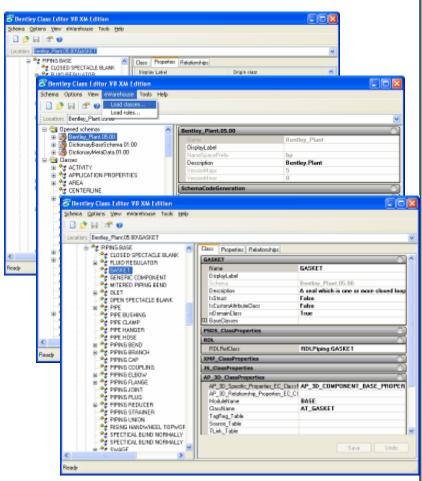
#### **Bentley OpenPlant Technology**



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### Bentley Class Editor is used to build and maintain OpenPlant Schema

- Uses ISO 15926 dictionaries
- Engineering Friendly View of Reference Data
- Information model building
- Simplified mapping interface





### Summary

- Adoption and participation in ISO 15926 is a benefit to the entire industry
- OpenPlant Schema based products and services uses ISO 15926 Reference Data
  - OpenPlant PowerPID
  - OpenPlant Modeler
  - ProjectWise PDx Dynamic Review
  - ProjectWise LifeCycle Server
  - OpenPlant iRING Services (implementation in progress)
- Bentley is actively participating to accelerate industry adoption of ISO 15926
- Start to think about new ways of working for tomorrow



### **Questions?**



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### Thank You!!

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