

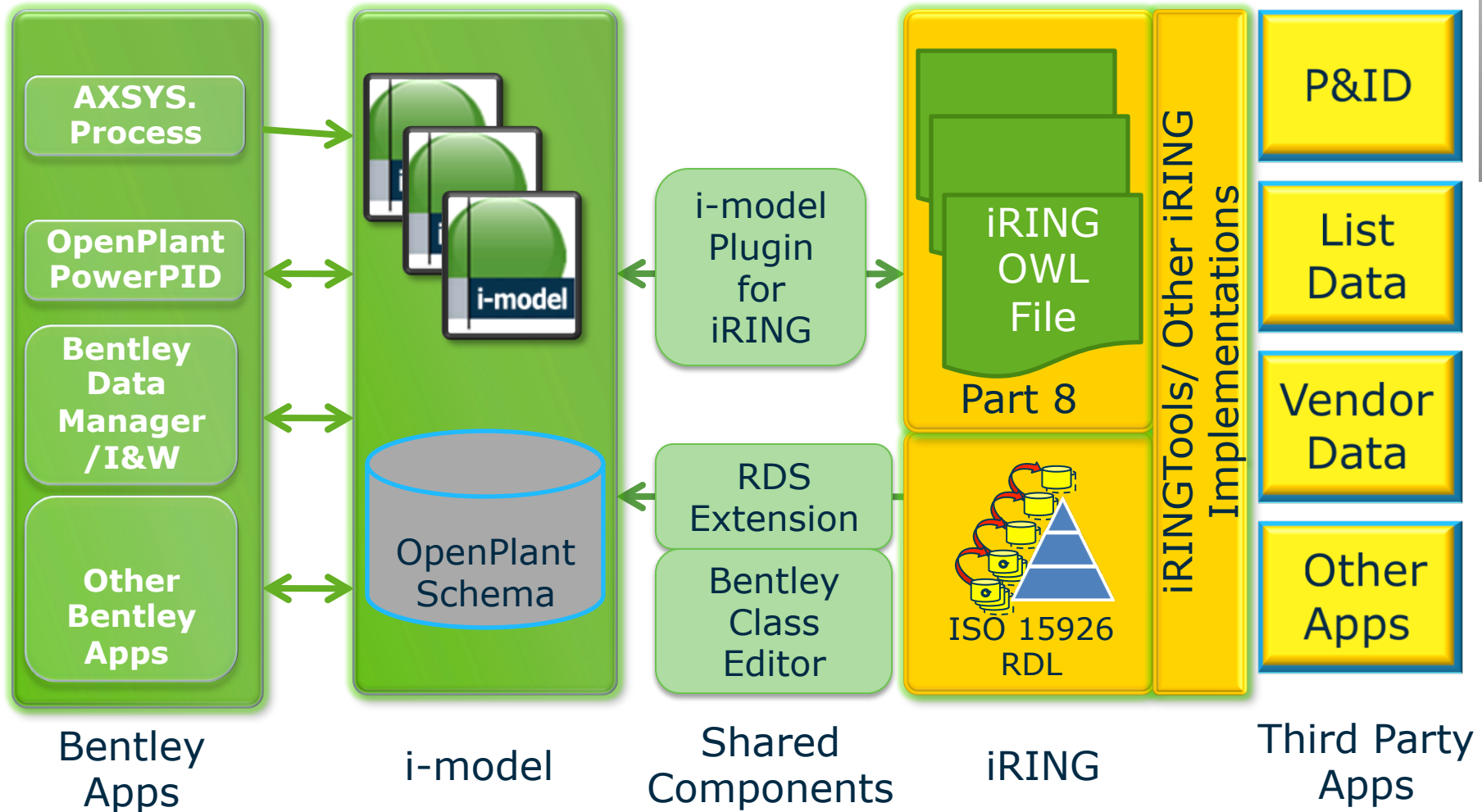
Bentley ISO 15926 Update

Glen Worrall, Bentley Systems Inc.

Presentation Overview

- Bentley iRING and OpenPlant Interoperability Environment
- iRING functionality delivered in latest product releases
- Bentley involvement in advancing iRING
- ISO 15926 in practice

Bentley iRING Interoperability Architecture



ISO 15926 mapping in OpenPlant Schema

Dictionary

URI – Uniform Resource Identifier

The screenshot displays the OpenPlant Schema interface. On the left is a tree view of classes, with 'Pipe Bend' selected. The main panel shows the 'PIPE_BEND' class definition under the 'Class' tab. The 'Name' is 'PIPE_BEND' and the 'DisplayLabel' is 'Pipe Bend'. The 'Schema' is 'OpenPlant.01.01'. The 'Description' is 'an artefact intended to change piping direction with a non-standard radius.' The 'IsStruct' is 'False', 'IsCustomAttributeClass' is 'False', and 'IsDomainClass' is 'True'. The 'BaseClasses' section shows 'BaseClasses[0]' as 'op:PIPING_COMPONENT'. Below this are 'Global Id Specification' and 'SyncID Specification' (both inherited from 'BENTLEY_BASE_OBJECT' in 'BentleyBase.01.00'). The 'ISO 15926 Definition Metadata' section is expanded, showing the 'DefinitionBackReference' as 'http://rdl.rdfacade.org/data#R49062090201', 'Entity Type' as 'http://dm.rdfacade.org/data#ClassOfInanimatePhysicalObject', 'Identifier' as 'RDS670904', 'Designation' as 'PIPE BEND', 'Creation Date' as '6/15/2006', 'Organization' as 'u20683', and 'Status' as 'Qualified'.

Property	Value
Name	PIPE_BEND
DisplayLabel	Pipe Bend
Schema	OpenPlant.01.01
Description	an artefact intended to change piping direction with a non-standard radius.
IsStruct	False
IsCustomAttributeClass	False
IsDomainClass	True
BaseClasses	
BaseClasses[0]	op:PIPING_COMPONENT
Global Id Specification	(inherited from BENTLEY_BASE_OBJECT in BentleyBase.01.00)
SyncID Specification	(inherited from BENTLEY_BASE_OBJECT in BentleyBase.01.00)
ISO 15926 Definition Metadata	(from PIPE_BEND in OpenPlant_Supplemental_ISO159...)
DefinitionBackReference	http://rdl.rdfacade.org/data#R49062090201
Entity Type	http://dm.rdfacade.org/data#ClassOfInanimatePhysicalObject
Identifier	RDS670904
Designation	PIPE BEND
Creation Date	6/15/2006
Organization	u20683
Creator	u20683
Status	Qualified

ISO 15926 mapping in OpenPlant Schema

Part 7 - Templates

The screenshot displays the OpenPlant Schema software interface. On the left, a tree view shows various equipment classes, with 'Pump' selected. The main window is divided into several panes. The top pane, titled 'Part7Templates', shows a table of properties and their origin classes. The 'Design Pressure' property is highlighted in blue. Below this table, there are buttons for 'Custom Attributes...', 'Override', 'Add...', and 'Remove'. The bottom pane, titled 'Metadata', shows the metadata for the selected property, including an 'IndirectPropertyScaleReal' property with a table of roles and values.

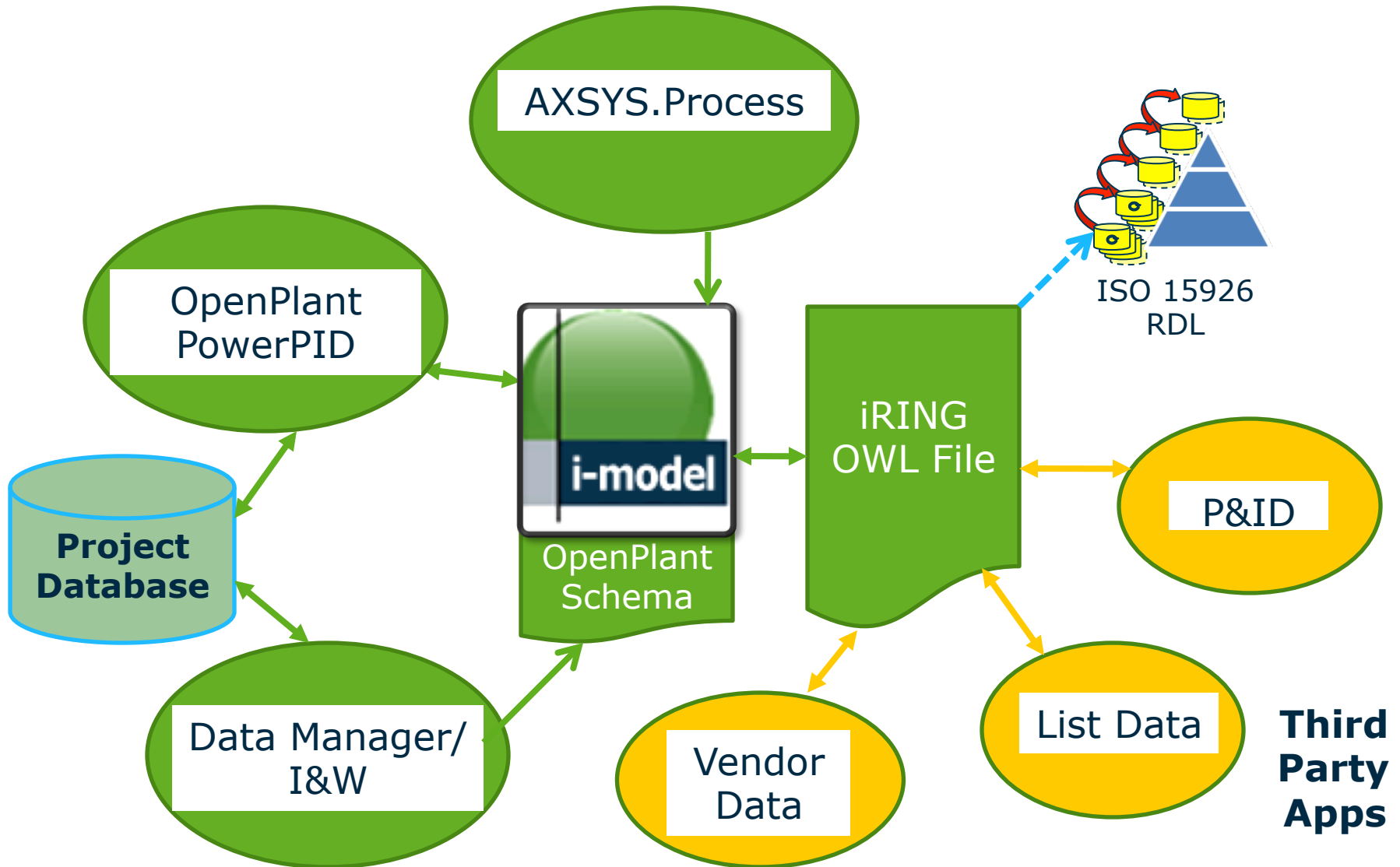
Class	Part7Templates	Properties	Relationships
Display Label			Origin Class
Description			op:Named Item
Design Code			op:Equipment
Design For Vacuum			op:Equipment
Design Pressure			op:Pump
Designer			op:Device
Device Type Code			op:Device

Metadata	Part7Templates
IndirectPropertyScaleReal	
IndirectPropertyScaleReal (from DESIGN_PRESSURE of PUMP in OpenPlant_Suppleme...	
hasType	ECProperty
hasPossessor	Instance
hasScale	Unit
valValue	Value

iRING Functionality in Bentley Products

- AXSYS.Process V8i Select Series 4 (Released)
- OpenPlant PowerPID V8i Select Series 4
- Bentley Data Manager V8i Select Series 3 (Released)
- Bentley Instrumentation and Wiring V8i Select Series 3 (Released)
- Scope of Data Exchange through iRING
 - List Data (1 D – Geometry not included)
 - Equipment List
 - Line List
 - Instrument List
- i-model from AXSYS and OpenPlant PowerPID includes complete model including graphics

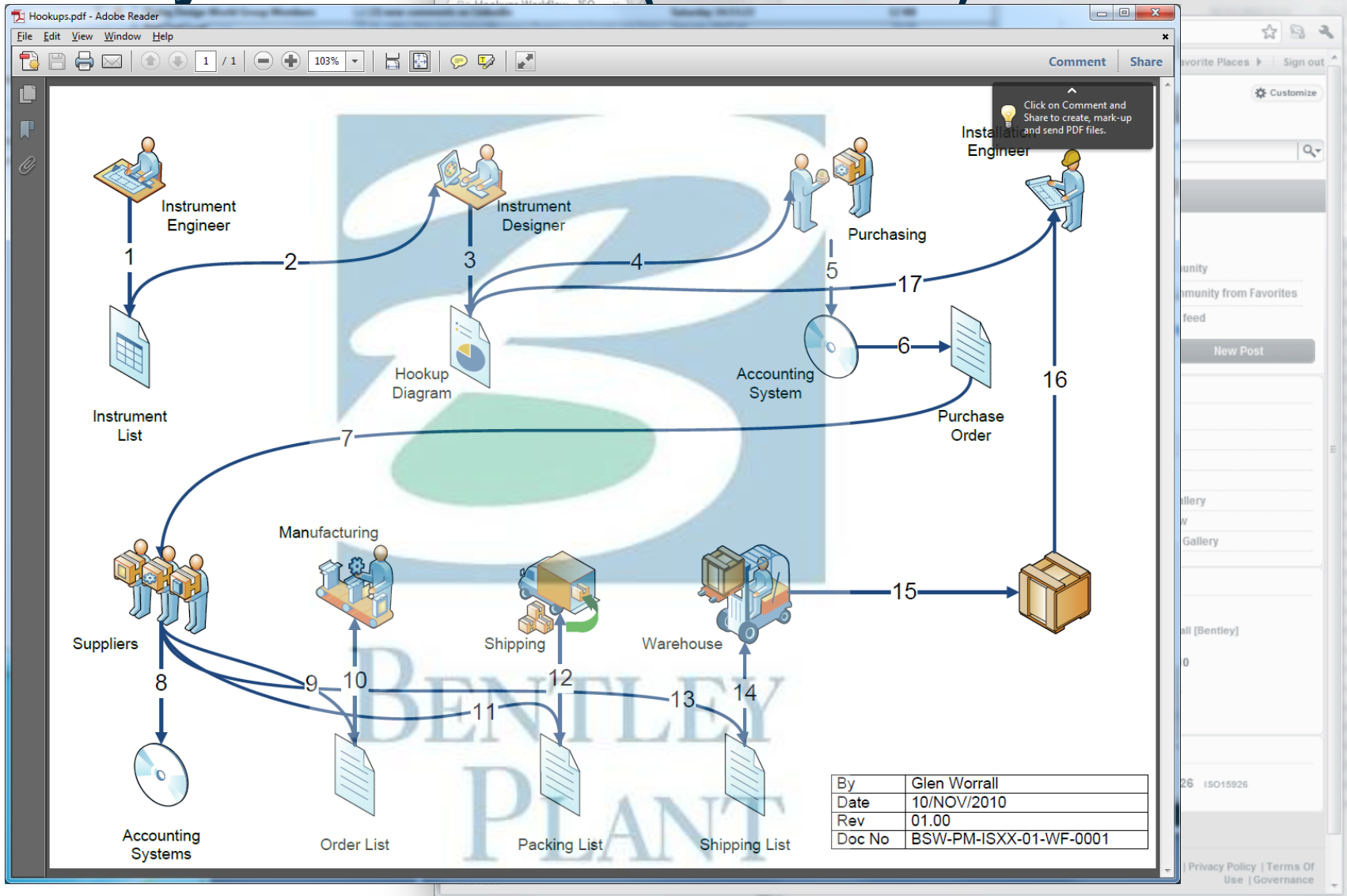
Possibility of iRING Workflow Scenarios



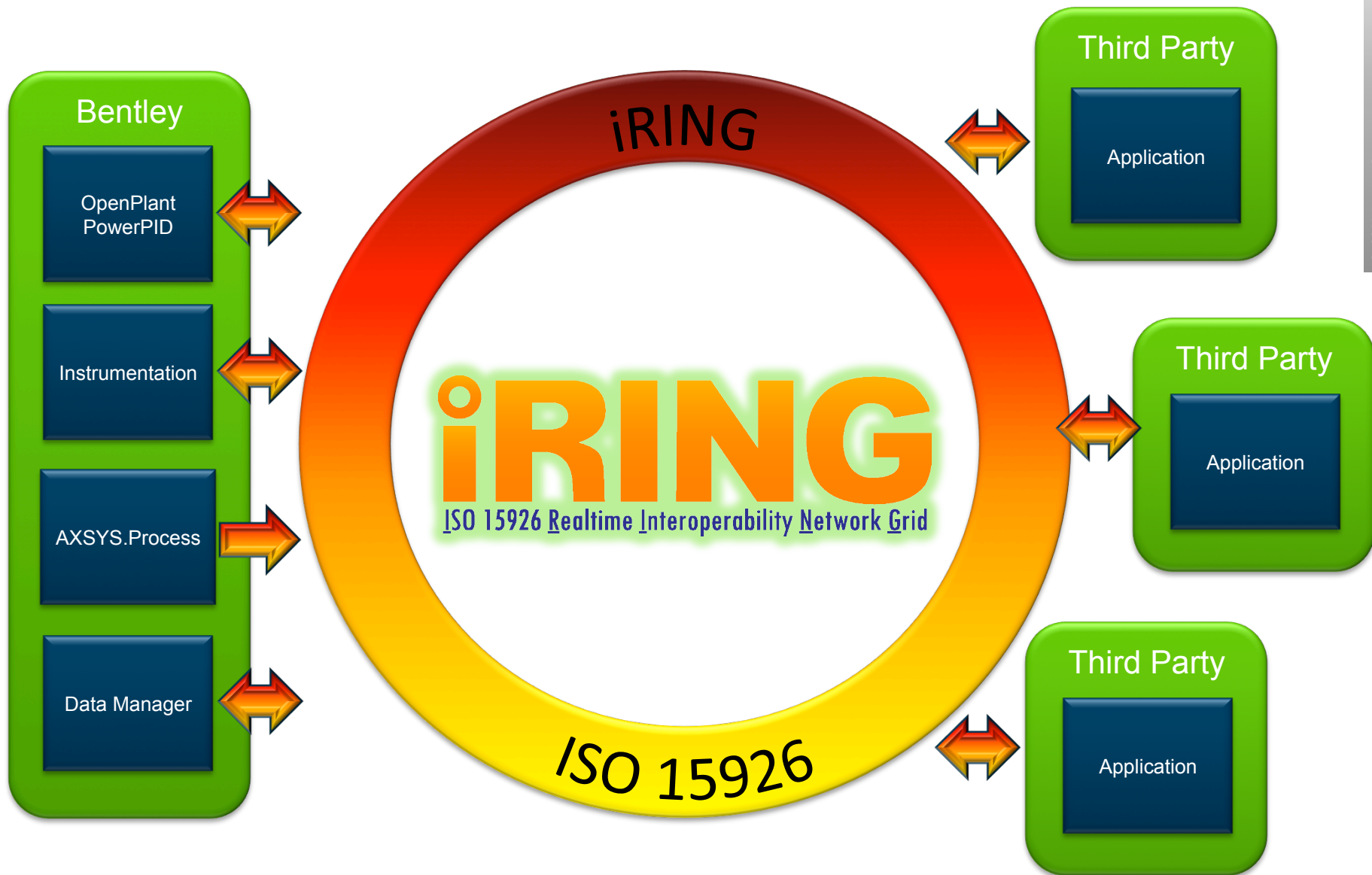
Bentley involvement in advancing iRING

- iRING Interface Project (IIP)
- ISO 15926 Primer
- ISO 15926 Part 9 co-authored by Rahul Patil
- FIATECH STAR Award for Keith Willshaw
- PCA - Geometry Special Interest Group (SIG)
- ISO 15926 on Bentley Communities and Facebook
- FIATECH Project - Collaborating with Neutral 3D Model

Bentley Communities (ISO 15926)



Direction of Data Flow



Interoperability

Pressure Transmitters



How can you prepare for ISO 15926?

- Join iRING User Group
- Join FIATECH and/or PCA
 - www.fiatech.org
 - www.posccaesar.org
- Identify your high value iRING use cases and interoperability workflows
- Start implementing Products and Technologies supporting iRING
- Make ISO 15926 a core strategy!!!
 - Active Collaboration is the key....

Thank you

Glen Worrall – Bentley Systems