

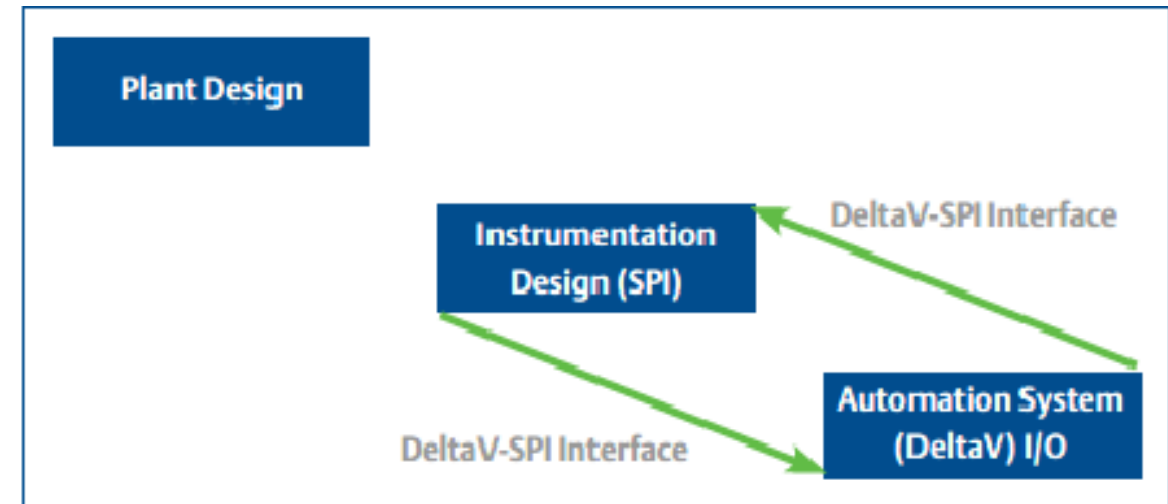
# DeltaV SPI Integration Update

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5/14/2019

# DeltaV SmartPlant Instrument Integration

- Background
  - Bi-directional file mode transfer to SPI
  - Seamless exchange of I/O Card and Instrument data
  - Includes multiple types of I/O
    - Conventional
    - HART
    - Fieldbus
- Benefits
  - Reduced DeltaV Engineering Hours
    - Eliminate need to define I/O from scratch on DeltaV
    - 10-15% in configuration time
  - Reduced SPI database setup hours
  - Standardizes DeltaV data in SPI



**Figure 1** – Project workflow diagram.

# Current Status

- Software Version
  - Current version supported is DeltaV version 13
  - Minimum DeltaV version 10.3
- DCS Items Supported
  - M Series and S Series Controllers
  - HART I/O & Fieldbus
  - CHARMS
  - Classic I/O Cards
  - Instrument signal data
  - PK Controller not supported
- SIS Status
  - Currently not supported

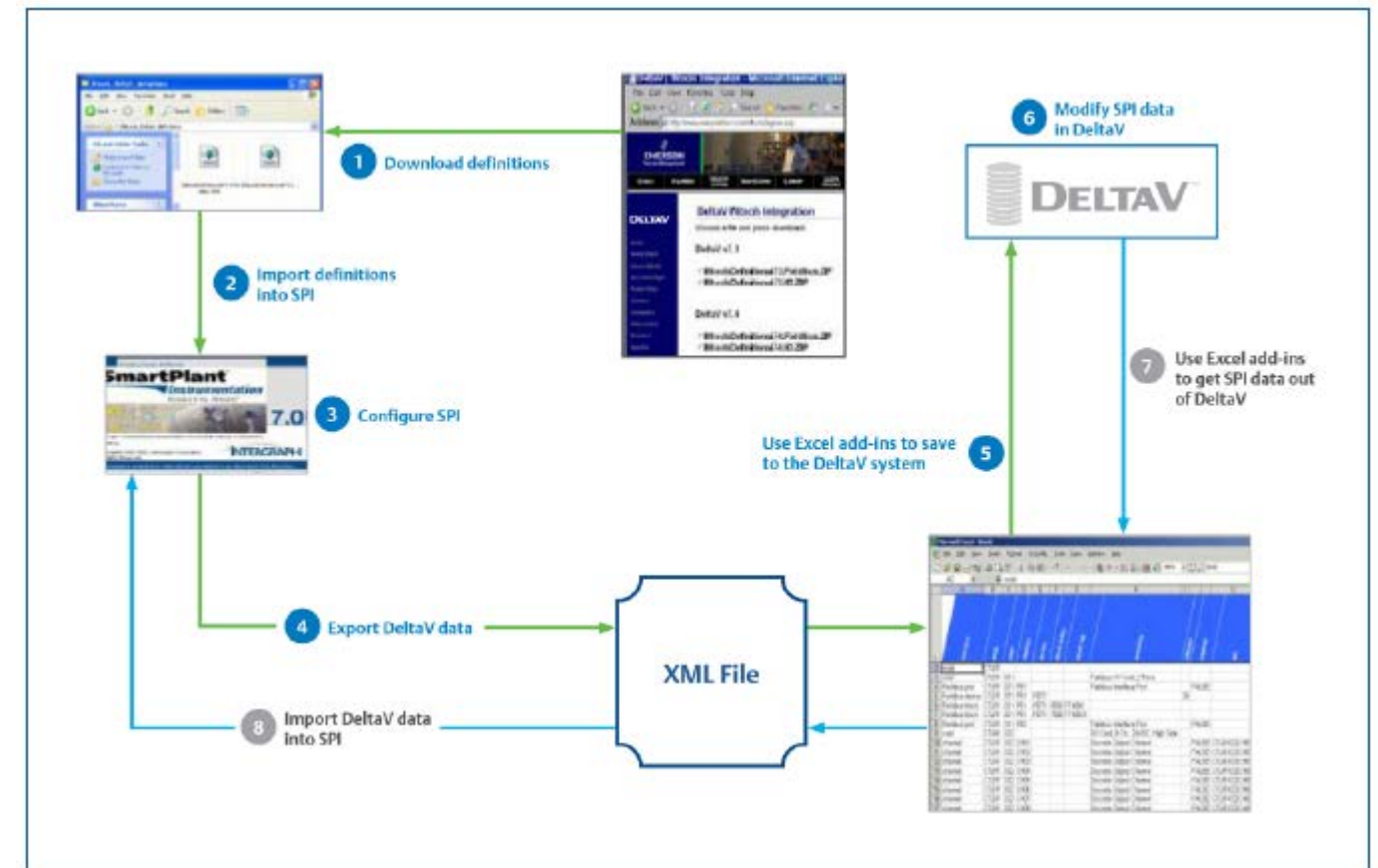


Figure 2 – DeltaV–SPI workflow.

# Road Map

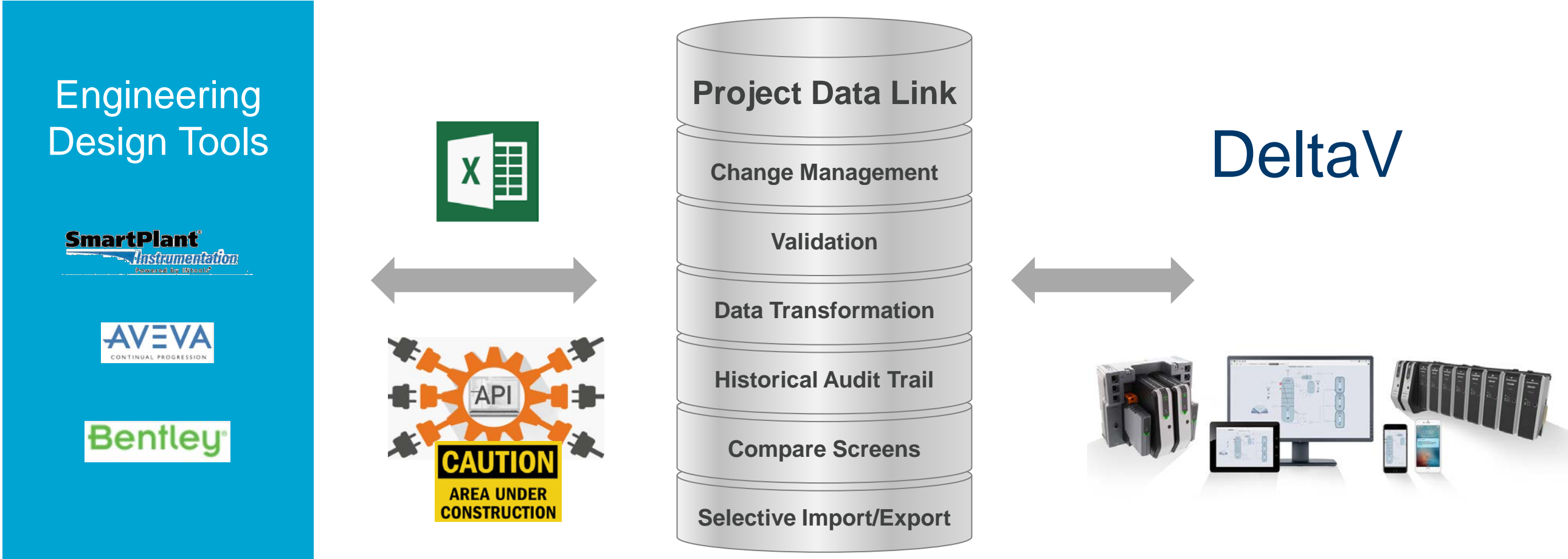
- Update Status
  - DeltaV version 14: 3<sup>rd</sup> quarter 2014
  - PK Controller: 3<sup>rd</sup> Quarter 2014
- Moving Forward
  - Project Data Link
  - Emerson software
  - SPI Emerson Definitions
  - Management of Change Tool

The screenshot shows a software dialog box titled "Wiring Equipment Properties - I/O Card". It has four tabs: "General", "Control System", "Category Properties", and "Associate Symbols". The "General" tab is active. The "Name" field contains "AI Card, 8 Ch., 4-20 mA, HART, Series 2". There are "< Previous" and "Next >" buttons to the right of the name field. Below the name field is a checkbox for "Apply naming convention" which is unchecked. The "Panel" field contains "DeltaV". There is another checkbox for "Double width" which is unchecked. A "Details" section is expanded, showing a "Description" field with "AI Card, 8 Ch., 4-20 mA, HART, Series 2". Below this are several fields: "Type" (dropdown menu showing "AI\_BCH\_HART\_4-20\_SER"), "Sequence" (dropdown menu), "Manufacturer" (dropdown menu showing "Emerson Process"), "Rack" (text field with "1"), "Model" (dropdown menu), "Slot" (text field), and "Series" (text field with "Series 2"). At the bottom of the dialog are four buttons: "OK", "Cancel", "Delete", and "Help".

# Project Data Link Integration with EPC Engineering Tools

EPC

Emerson



**Project Data Link acts as Middleware Between Engineering Design Tools and Emerson Tools & Platforms**

# Optimized Data Exchanges – Revision Management

**Field Changes**

**TAG Additions**

Project Data Link - Exchange

Import Customer Data

Container Selection: No Container Customer Data: Pressure Transm... Pressure Transm... 2-120 Schema Mapping Rule Set: Rosemount Pressure Ext

Import Scope Filters

Tag:  Addition (11)  Deletion (7)  Modification (12)  Unchanged

Show only: [Select] Show Errors: [Select]

View: Show/Hide Columns Multi-level sort Find View History Jump To

Customer Data processed using Schema Mapping Rule Set					Tag Data in Project Data Link as retrieved on 23-Oct-2018, 19:28:09				
Tag	Category	Description	Line Number	Equipment	Tag	Category	Description	Line Number	Equipment
128PIT -049	Pressure	CONDENSER 7 VAPOR PRESSURE	20"-PCG136003-...	0	128PIT -049	Pressure	24"-WQ128557-3...	0	
128PT -002A	Pressure	CONDENSER 7 VAPOR PRESSURE	20"-PCG136003-...	0	128PT -002A	Pressure	30"-PGH128003-...	0	
128PT -005	Pressure	CONDENSER 7 VAPOR PRESSURE		199922	128PT -005	Pressure		199922	
128PTZ -004A	Pressure	CONDENSER 7 VAPOR PRESSURE	80"-PCG128407-...	0	128PTZ -004A	Pressure	80"-PCG128407-...	0	
131PT -471	Pressure	CONDENSER 7 VAPOR PRESSURE	76"-PCG131002-...	0	131PT -471	Pressure	76"-PCG131002-...	0	
136PT -103	Pressure	E13611 TS OIL PRES	28"-PCG136001-...	0	136PT -103	Pressure	E13611 TS OIL PRES	28"-PCG136001-...	0
136PT -104	Pressure	E13612 PRES TO C13801	24"-PCG136015-...	0	136PT -104	Pressure	E13612 PRES TO C13801	24"-PCG136015-...	0
136PTZ -031A	Pressure	D13641A I/L PRES	20"-PCG136003-...	0	136PTZ -031A	Pressure	D13641A I/L PRES	20"-PCG136003-...	0
136PTZ -041A	Pressure	D13641B I/L PRES	20"-PCG136007-...	0					
590PT -003	Pressure	HP FLR K.O. DRM V-59001	N/A	99251					
590PT -010	Pressure	LP FLR TO CONT VT THRM OXD A-59003	12"-BLF590011-1...	76439					
590PT -014	Pressure	PE U VT TO LP MULT PT GRD FLR A-59004	10"-BLF590010-1...	76439					
590PT -018	Pressure	EMER RLF TO LP MULT PT GRD FLR A-59004	30"-BLF590601-1...	77544					
590PT -028	Pressure	HP FLR FRM HP FLR K.O. DRM V-59001	72"-BF590002-11...	99251					
590PT -032	Pressure	LP FLR TO CONT VT THRM OXD A-59003	20"-BLF642101-1...	76439					
590PT -055	Pressure	HP FLR TO HP ELEVATED FLR A-59002	72"-BF590004-11...	115782					
600PT -902	Pressure	N2 TO HEXENE VAP RETURN ARM SPOT#8	2"-N600010-11001	77544					
600PT -904	Pressure	N2 TO BUTENE VAP RETURN ARM SPOT#4	2"-N600009-1100...	77544					
642PT -054	Pressure	K-64203 INLET PRESS	2"-BF642308-110...	101894					
					136PT -131	Pressure	IA PRES TO 136UZV131		
					136PT -425	Pressure	IA PRES TO 136UZV425		

Displayed Tags: 30 of total 126

Save to File Import Cancel

Project Data Link Version 3.02.13 © 2018 Emerson. All rights reserved.

**TAG Deletions**

Comparison User Interface provides quick insights into data to proactively identify integrity and completeness issues reducing rework and optimizing data exchanges

**DeltaV Distributed Control System**

**White Paper**  
March 2017

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## **DeltaV™ SmartPlant Instrumentation Integration**

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This paper is intended for instrumentation and Distributed Control System (DCS) project engineering people. This group will gain an understanding of how to use the DeltaV–SPI interface and learn what kinds of savings this solution offers.