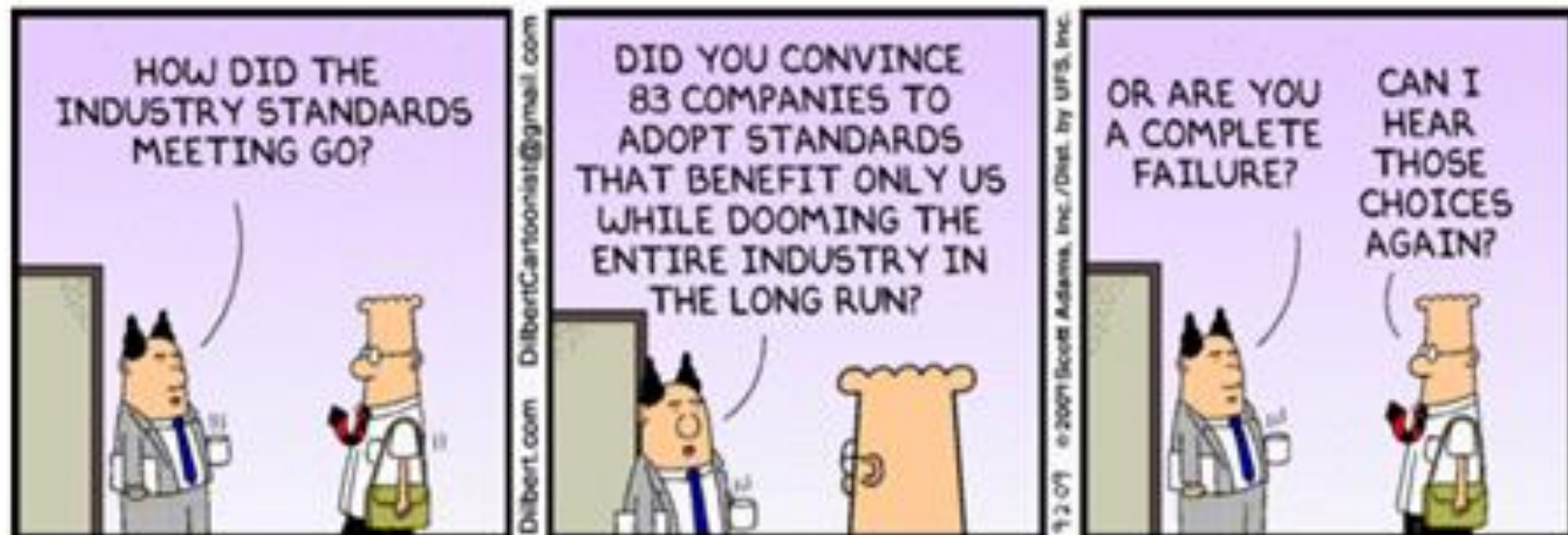


Endorse, Implement, Embed

“Interoperability is the ability of a system or a product to work with other systems or products without special effort on the part of the customer.” – Margaret Rouse, TechTarget

Or How Many Others View Standards



The Digitization of E&P



What's going on in my business?

- When prices are HIGH – insight into asset
 - Resource to Reserves
 - Complex reservoirs/ low oil recovery
 - IOR/EOR
 - Supply Chain – can they keep up with me
 - Major Capital Projects
 - On time/ on budget

What's going on in my business?

- When prices are LOW - transparency
 - Operational efficiency
 - Where are the costs I can reduce
 - Where are the bottlenecks I can eliminate
 - Integrity & Maintenance
 - Supply Chain
 - Where are the costs I can reduce
 - Is there hidden value/ inefficiency in how I operate

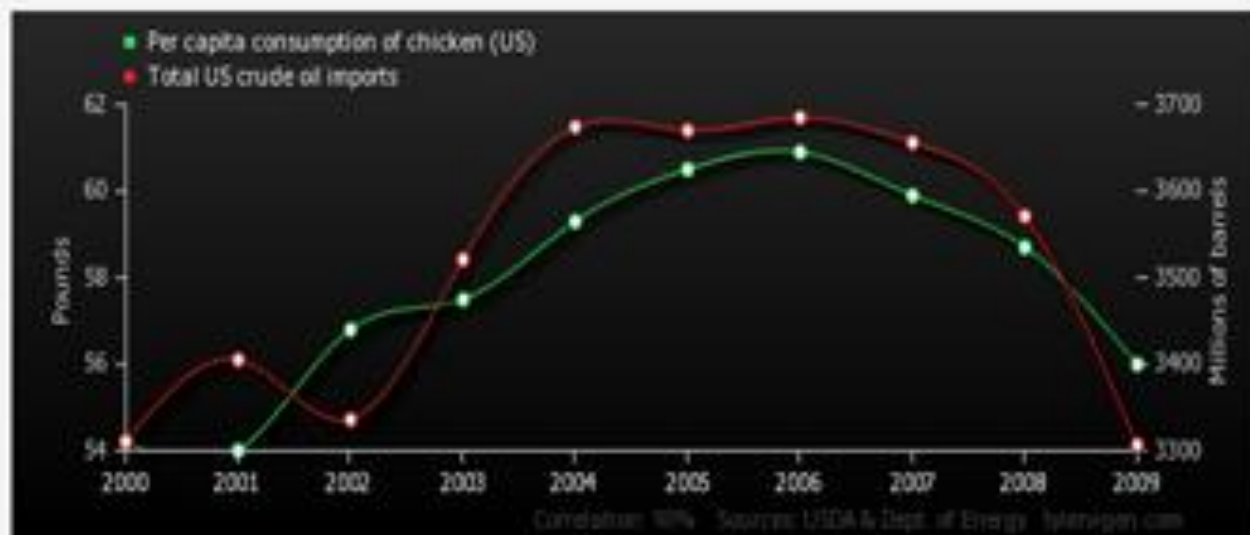
Predictive Analytics



Per capita consumption of chicken (US)

correlates with

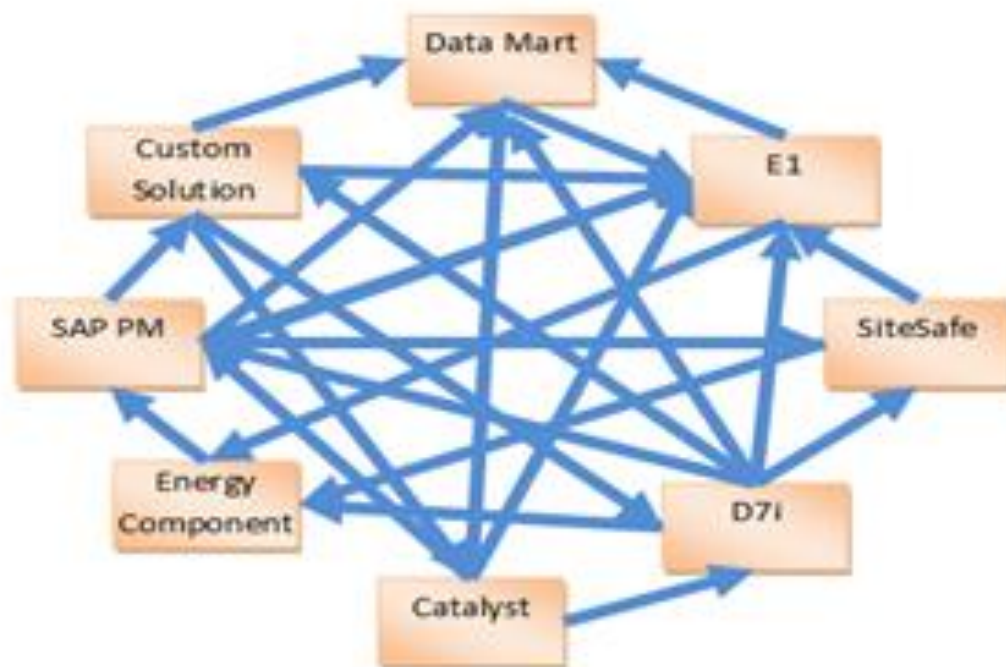
Total US crude oil imports



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Per capita consumption of chicken (US) Pounds (USDA)	54.2	54	56.8	57.5	59.3	60.5	60.9	59.9	58.7	56
Total US crude oil imports Millions of barrels (Dept. of Energy)	3,311	3,405	3,336	3,521	3,674	3,670	3,685	3,656	3,571	3,307

Correlation: 0.899899

The Challenge of Point to Point Integration



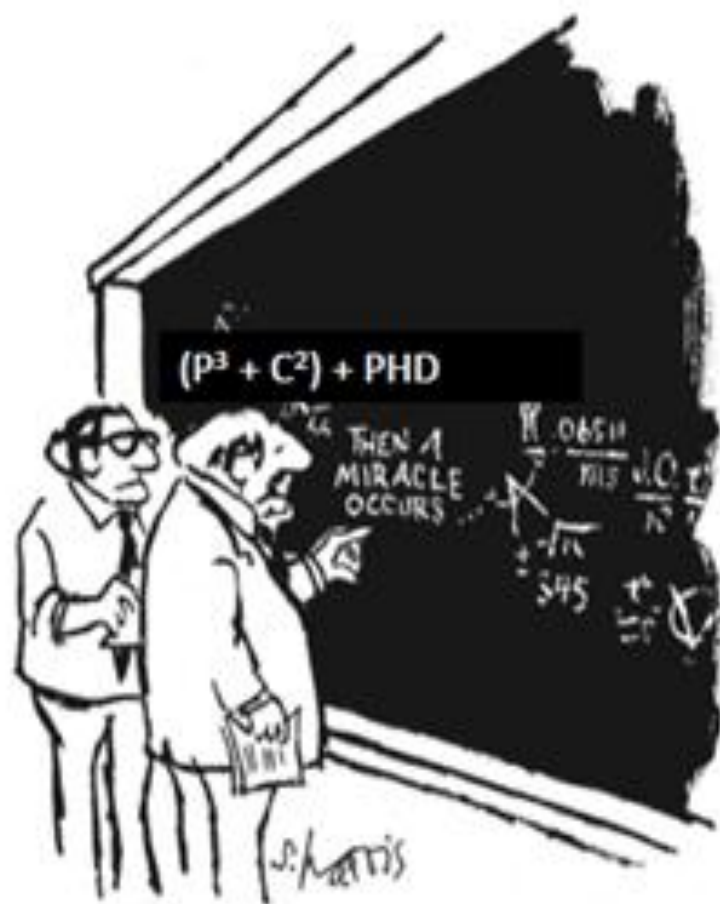
Point-to-point Integration Example

But You can't ignore data management practices

- Big Data Strategy
- Governance
 - Standards
 - Stewardship
 - Data Quality
- Master and meta-data Management
- Systems of Record
- Enterprise Content Management
- Real-time data (operational data stores and historians)
- Architecture & Data Virtualization

Industry Ask

- Allow your SMEs to participate
 - Talent leaving the industry, will we remember how we used to do this?
- We need you to participate
 - On Individual Standards Boards
 - On the Operator Advisory Panel
- Design for Interoperability
 - Based on existing standards



"I THINK YOU SHOULD BE MORE EXPLICIT HERE IN STEP TWO."