Transform Data into Information

for Real-time Decision Support

Presented by **Penny Gunterman, OSIsoft**

© Copyright 2015 OSIsoft, LLC

What's the status?

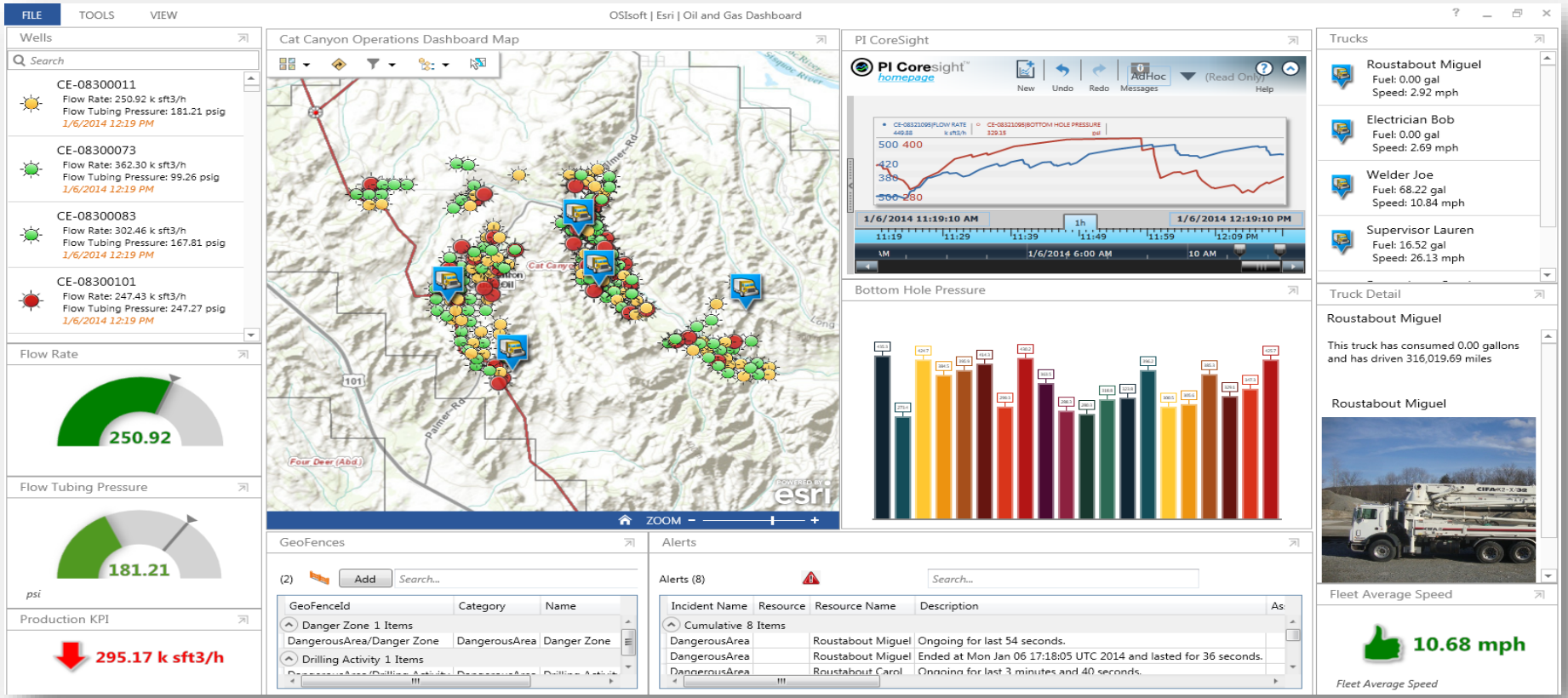
Is there a problem?

What do I need to do?

Information helps you make good decisions, quickly.

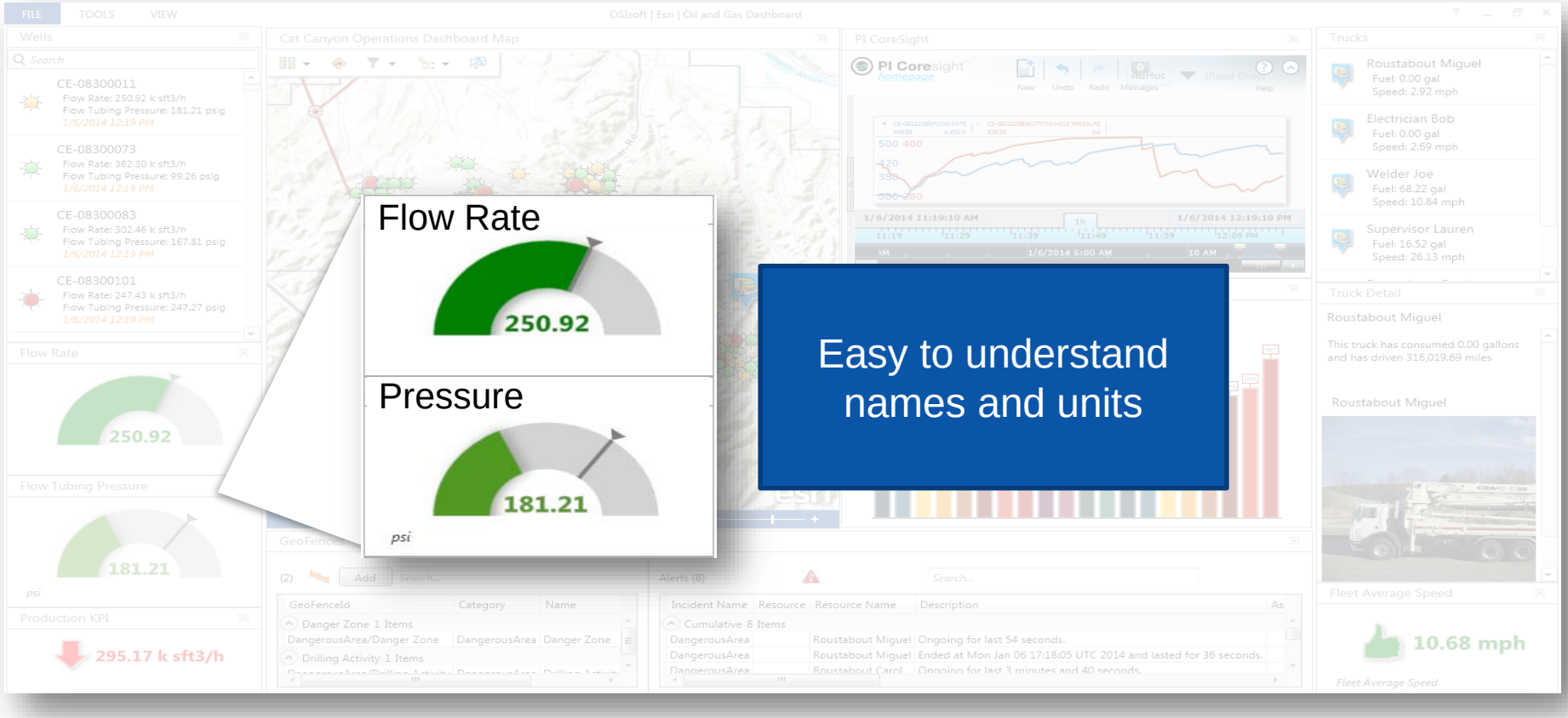
© Copyright 2015 OSIsoft, LLC

A look at decision-ready information



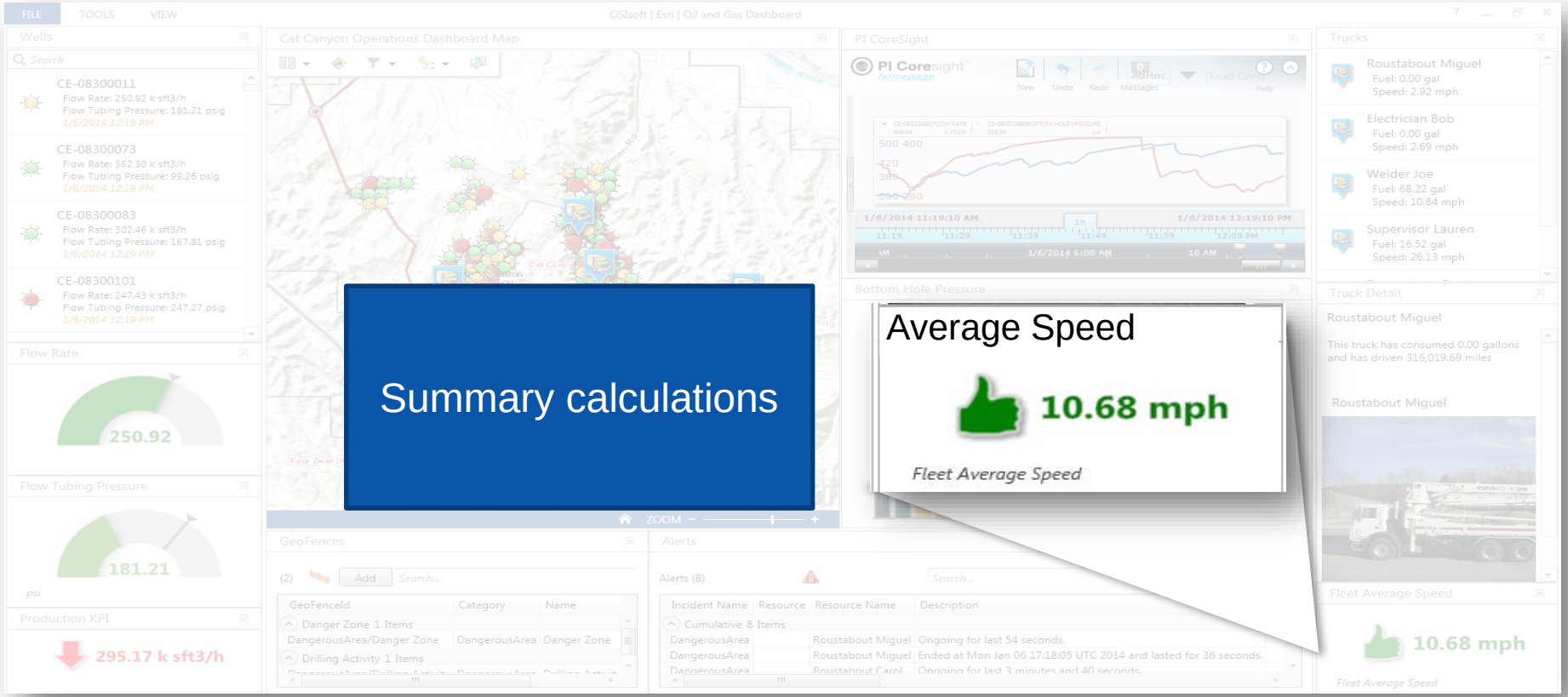
© Copyright 2015 OSIsoft, LLC

A look at decision-ready information



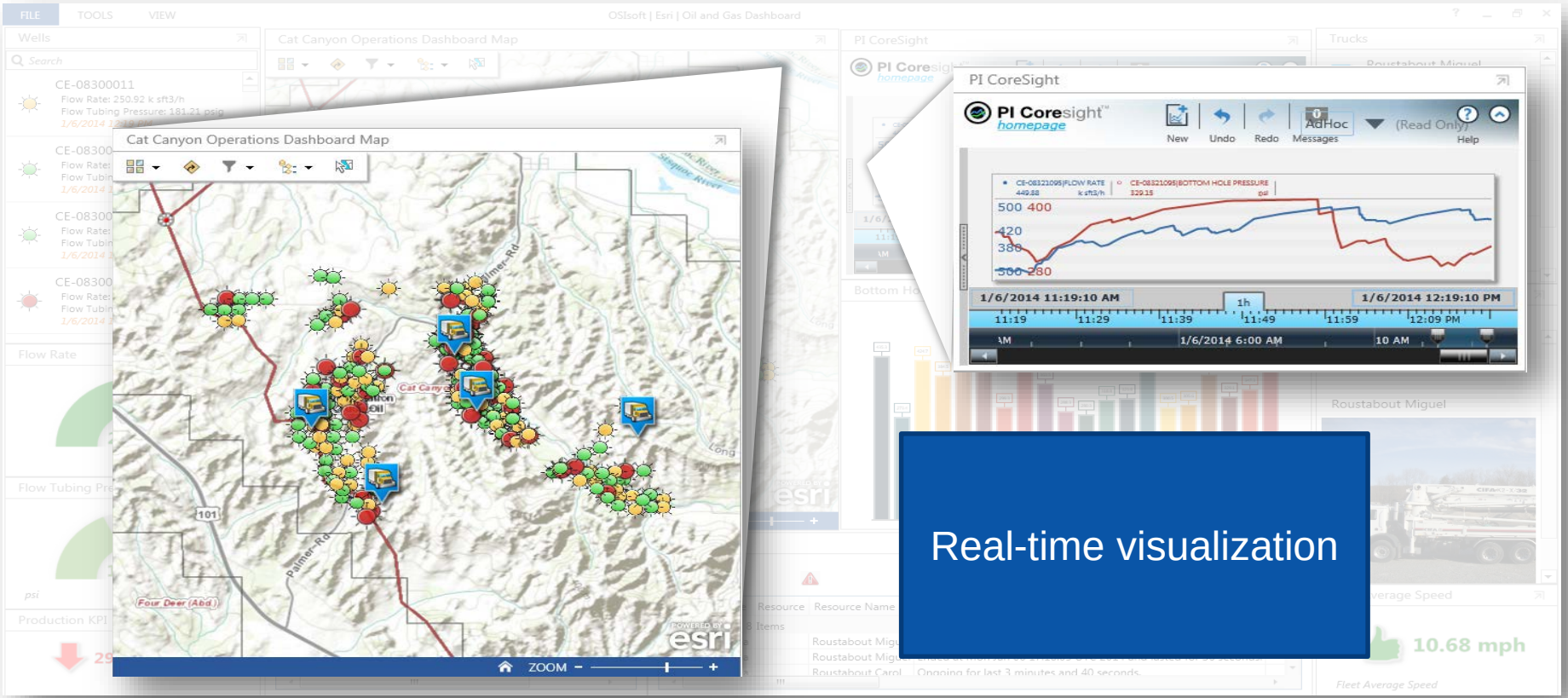
© Copyright 2015 OSIsoft, LLC

A look at decision-ready information



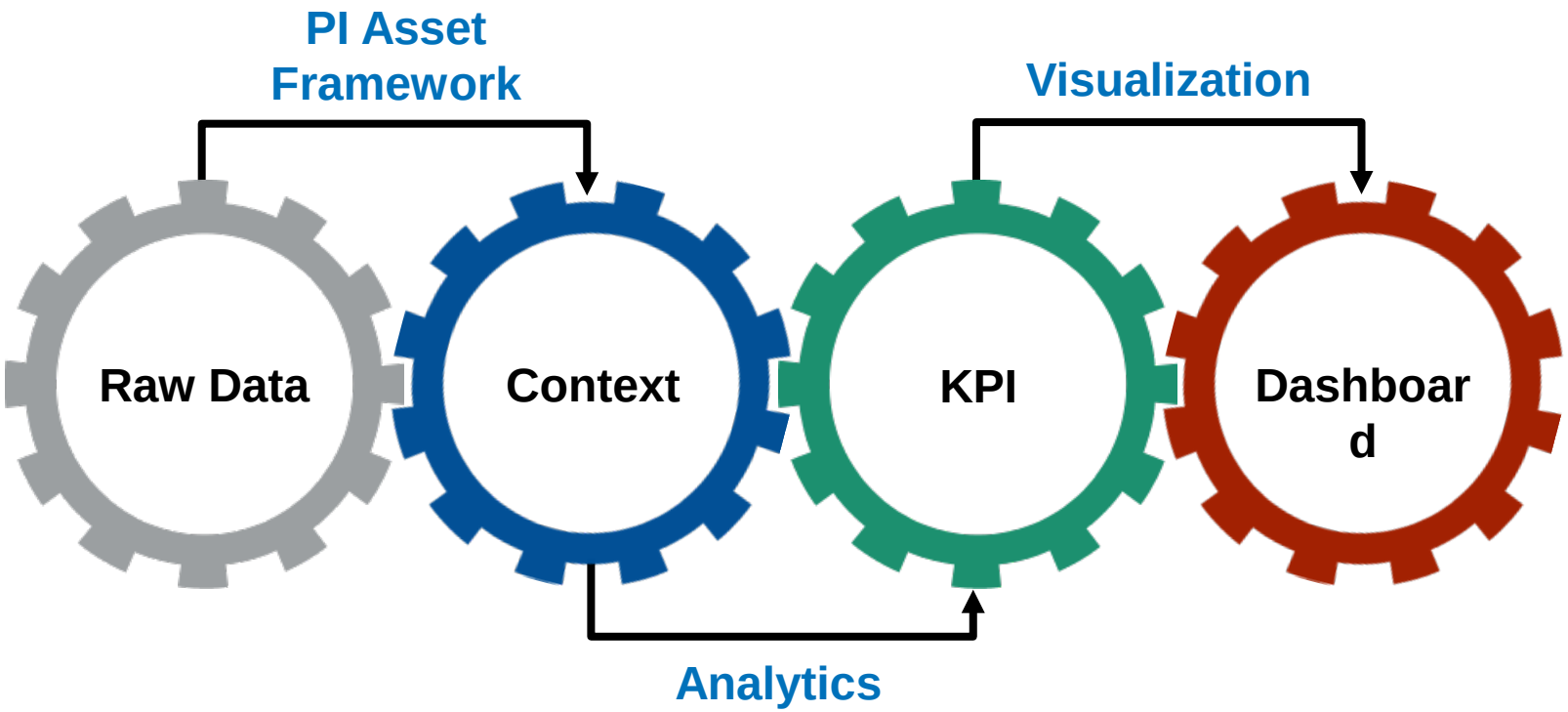
© Copyright 2015 OSIsoft, LLC

A look at decision-ready information

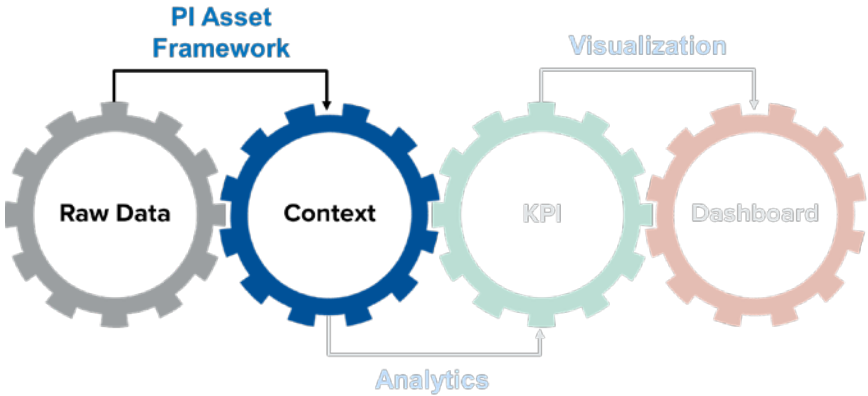


© Copyright 2015 OSIsoft, LLC

How do you transform data into decision-ready information?



© Copyright 2015 OSIsoft, LLC



Context and Standardization

© Copyright 2015 OSIsoft, LLC

What is context?

Upper limit:
50 kts

Wind speed 3.7 kts

Gabsheim, Germany

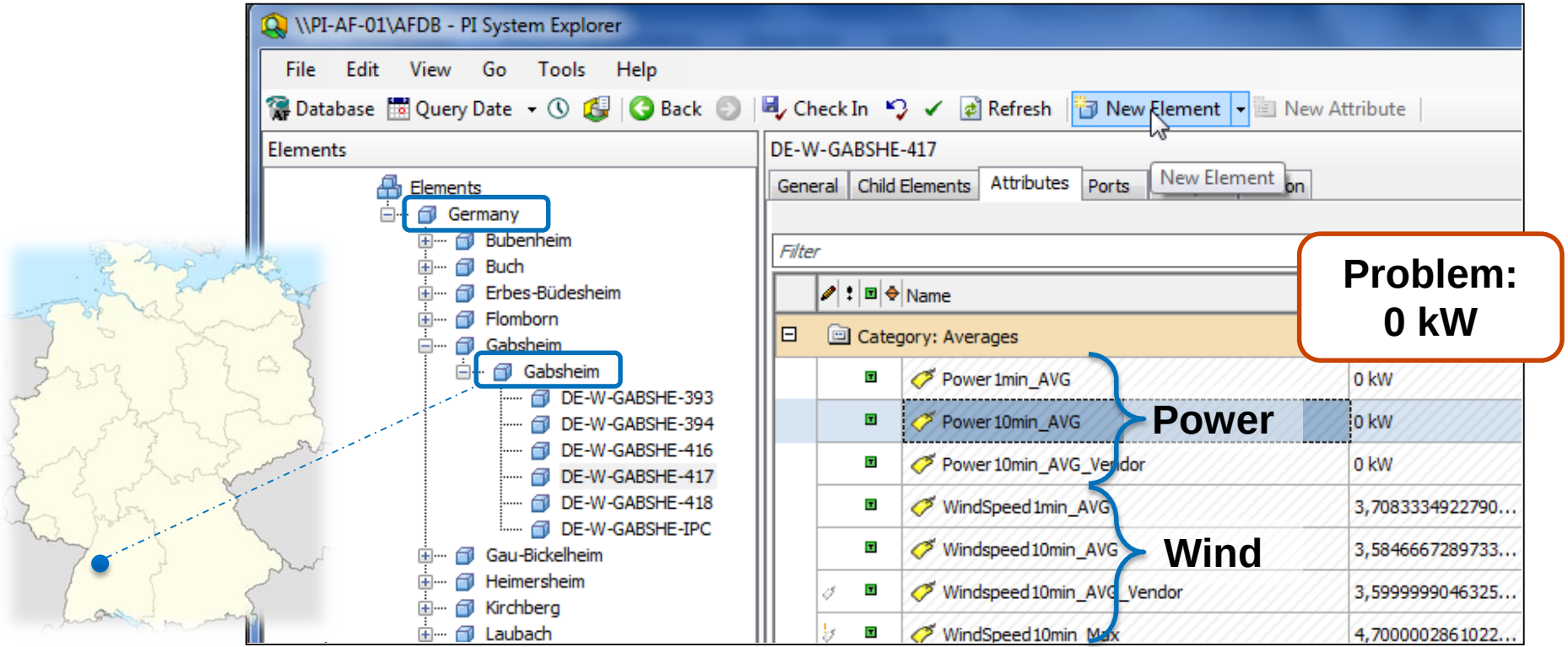
Acme Windmill

10 minute average

Power 0 kW

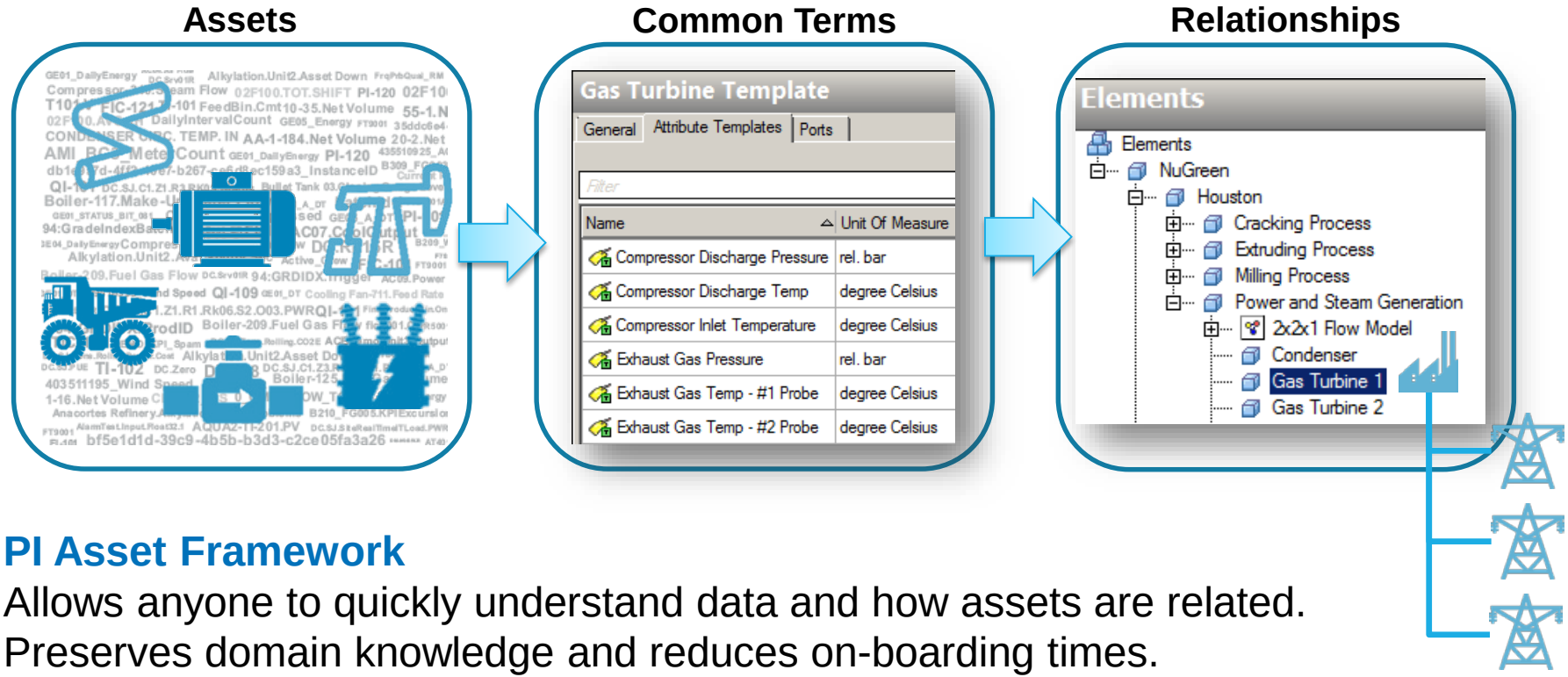
© Copyright 2015 OSIsoft, LLC

PI Asset Framework organizes context and relationships



© Copyright 2015 OSIsoft, LLC

Context leads to **faster** response



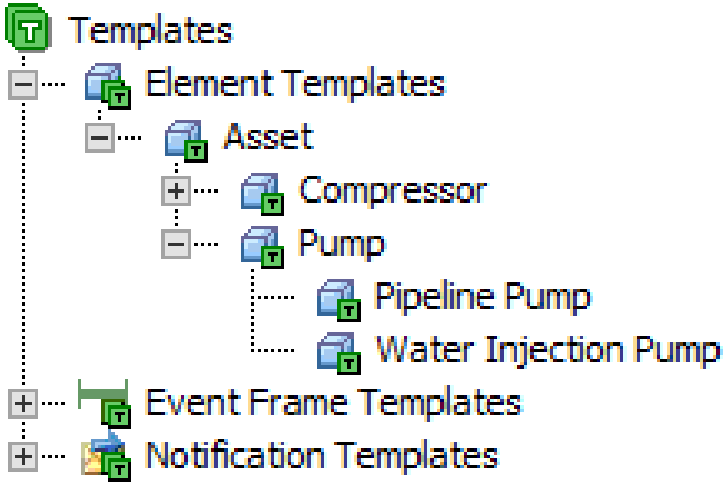
PI Asset Framework

Allows anyone to quickly understand data and how assets are related.
Preserves domain knowledge and reduces on-boarding times.

© Copyright 2015 OSIsoft, LLC

Templates enable rapid roll-out and **standardization**

- **Faster** deployment
  - Standardize attributes and KPIs
- **Facilitate** asset management
  - Centrally push updates to all assets
- **Reuse** visualization screens
  - See consistent displays for similar assets



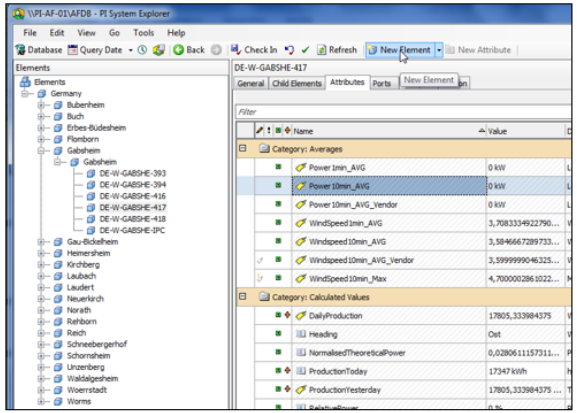
© Copyright 2015 OSIsoft, LLC

Renewable power company uses **PI Asset Framework** in strategy to **save 2.6M euros**

"Look and Feel" – Asset view in PI Asset Framework

juwi

- "Copy/paste" tree structure
- Standardization of Assets using Templates
  - generic (90%)
  - specific (5%)
  - analytics (5%)
- Triple structure views
  - Assets by location
  - Assets by owner
  - Assets by energy flow
- **Benefits of using PI AF**
  - Big time savings
  - No errors when adding new assets



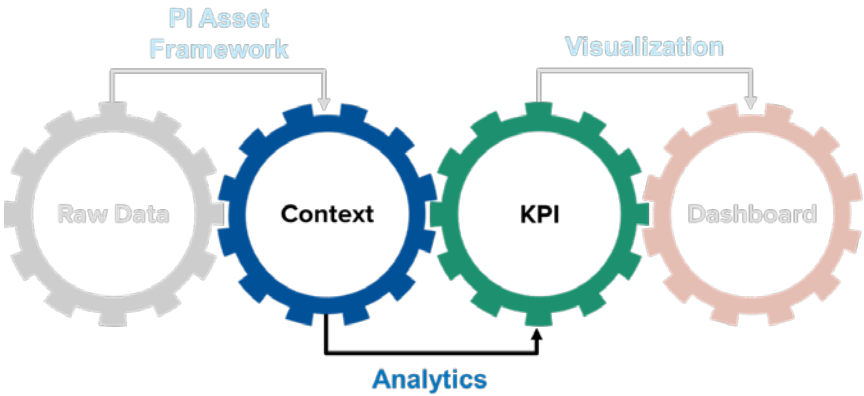
© Copyright 2014 OSIsoft, LLC.

"Before, it took us **1 week** to connect, **2 weeks** to find mistakes."

"[With PI AF] You pick **templates**, apply the template, and you can be quite sure that the values will be **correct**."

Dr. Thomas Weiss, JUWI

© Copyright 2015 OSIsoft, LLC

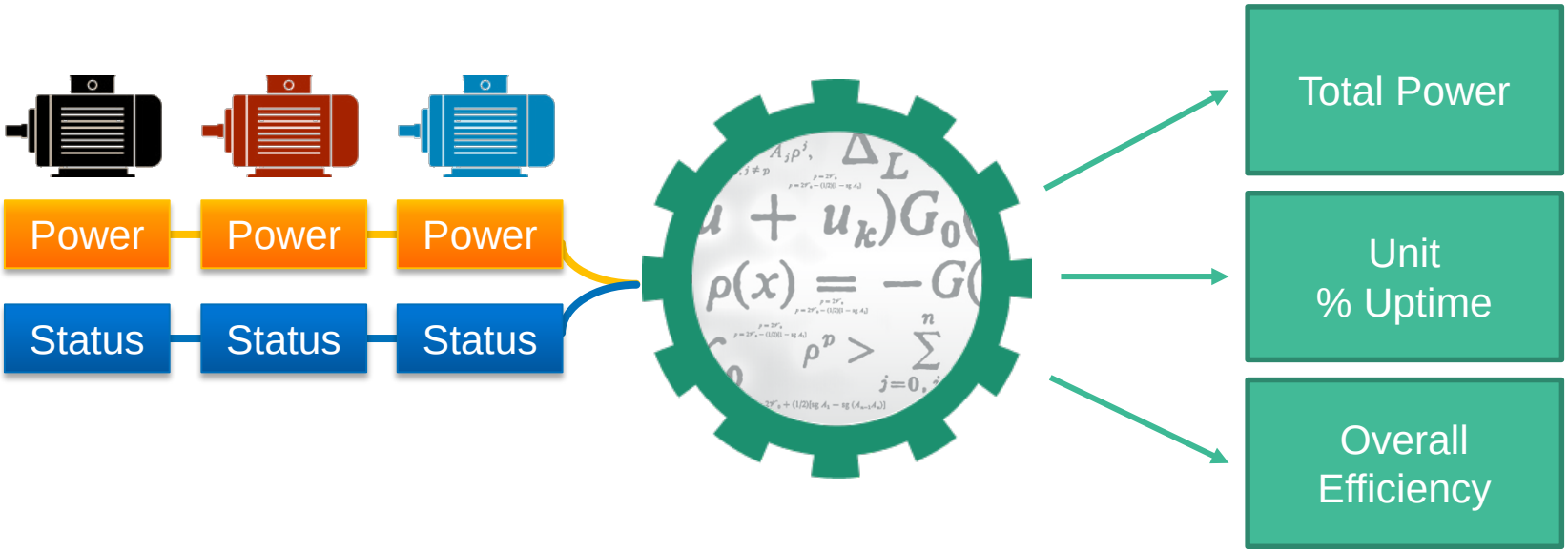


Calculations & KPIs

© Copyright 2015 OSIsoft, LLC

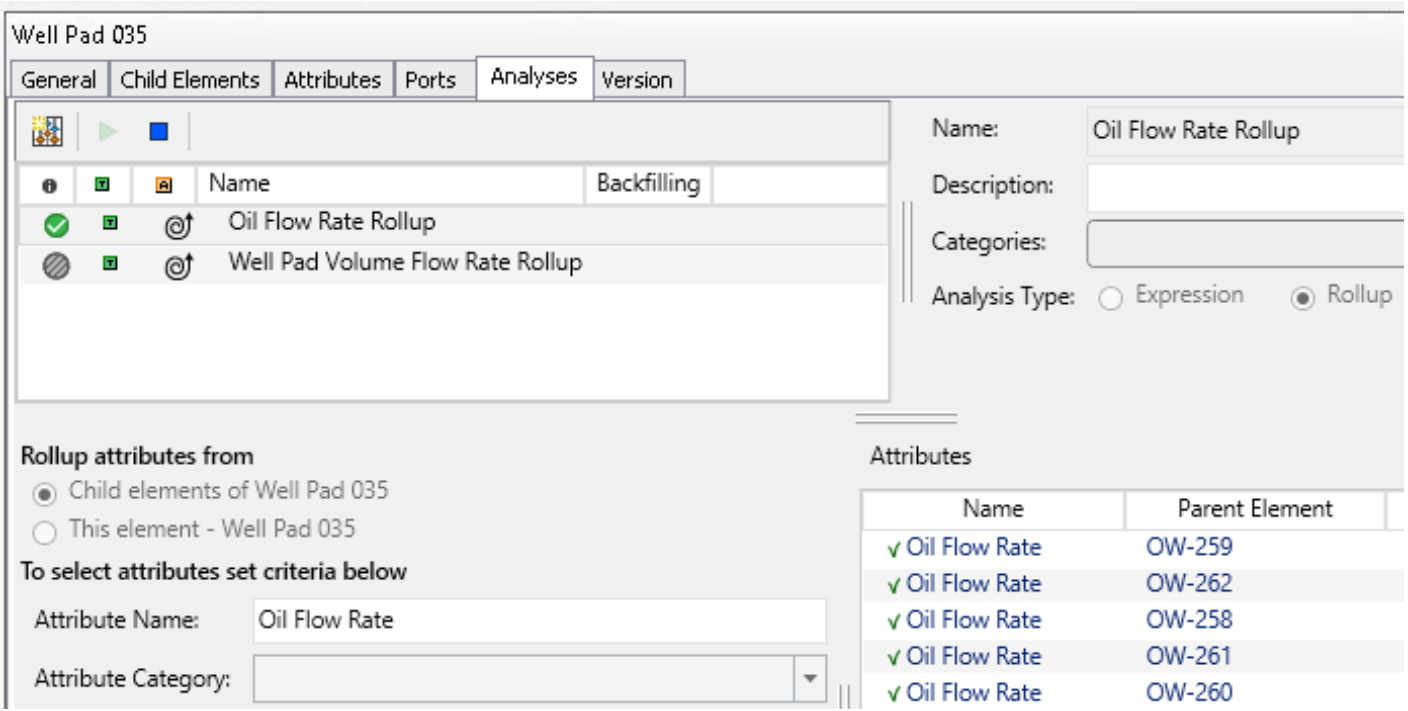
PI AF **templates** put data into a standard, **consistent** format

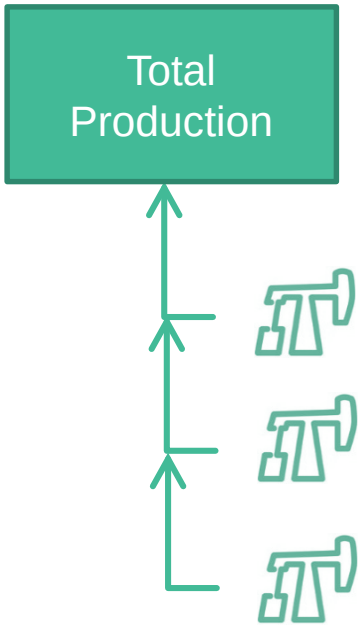
Asset analytics turns data into **KPIs**



© Copyright 2015 OSIsoft, LLC

Easily track **site-level** metrics with **rollup** capabilities





© Copyright 2015 OSIsoft, LLC

Heineken uses KPIs to save water, energy, and reduce costs

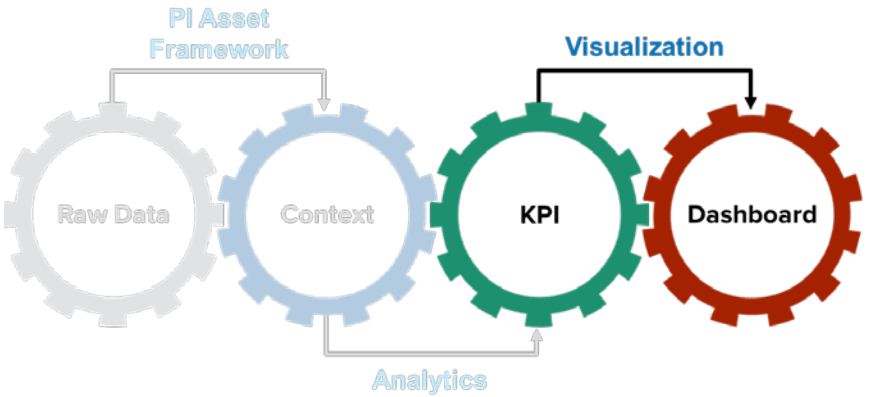
We can check in real time the efficiency, pressure, power, and flow.
Also we check efficiency values for the last 24 hours, last week, and last month.

Consuelo Carmona Miura

© Copyright 2015 OSIsoft, LLC

Demo

© Copyright 2015 OSIsoft, LLC



Real-time Visualization

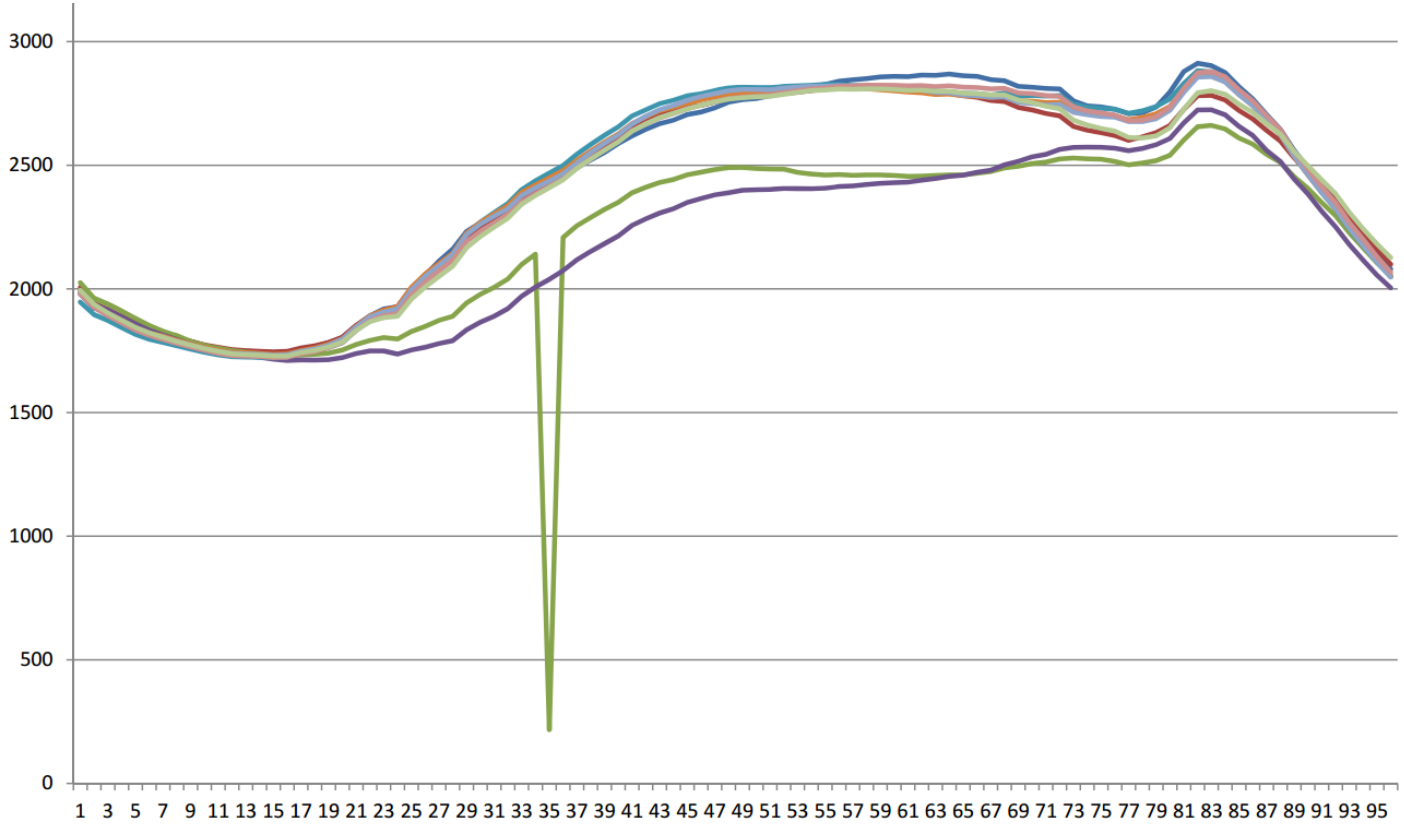
© Copyright 2015 OSIsoft, LLC

Can you see the problem?

4:30	1766.807	1770.041	1735.584	1712.094	1748.954	1760.249	1756.513	1746.813	1751.224
4:45	1782.593	1783.582	1740.005	1713.625	1763.2	1776.202	1772.523	1762.432	1765.907
5:00	1804.619	1804.311	1753.202	1722.105	1782.787	1798.3	1796.214	1783.199	1785.155
5:15	1851.697	1851.983	1775.265	1738.878	1833.121	1848.069	1846.02	1832.959	1832.181
5:30	1891.173	1889.403	1791.779	1749.428	1874.77	1890.169	1887.194	1871.383	1867.261
5:45	1918.68	1914.849	1803.538	1749.229	1901.105	1913.318	1905.974	1891.461	1883.946
6:00	1927.751	1928.128	1797.334	1736.343	1917.293	1927.759	1919.787	1900.453	1889.87
6:15	2001.637	2003.804	1827.463	1753.16	1994.741	2006.415	1996.289	1975.221	1958.406
6:30	2054.95	2058.036	1848.321	1764.349	2050.196	2060.041	2051.025	2028.24	2008.001
6:45	2112.258	2103.88	1872.549	1778.843	2095.131	2102.328	2094.292	2072.529	2050.109
7:00	2160.629	2137.386	1888.932	1790.602	2135.888	2143.732	2138.594	2116.436	2091.379
7:15	2232.516	2211.839	1943.359	1834.518	2220.943	2225.654	2219.614	2192.266	2166.789
7:30	2267.812	2254.537	1978.218	1865.147	2270.142	2268.746	2261.528	2233.358	2211.937
7:45	2294.774	2288.251	2006.233	1889.359	2308.142	2303.487	2294.172	2266.28	2249.907
8:00	2325.94	2322.89	2040.28	1920.23	2345.282	2336.993	2324.838	2299.474	2286.259
8:15	2370.621	2371.534	2099.076	1970.189	2400.857	2389.888	2377.086	2352.518	2342.512
8:30	2398.012	2401.169	2140.396	2007.306	2437.142	2420.344	2408.794	2385.162	2377.984
8:45	2427.269	2429.596	217.261	2038.443	2468.24	2449.527	2436.273	2415.056	2409.495
9:00	2452.356	2457.249	2208.352	2074.063	2499.239	2478.301	2465.481	2444.879	2441.46
9:15	2490.627	2502.216	2255.25	2117.835	2544.785	2520.463	2509.126	2488.076	2487.573
9:30	2521.597	2540.463	2288.521	2151.365	2584.2	2557.204	2550.518	2526.244	2525.164
9:45	2551.844	2575.42	2321.138	2182.995	2621.057	2593.661	2588.434	2561.901	2560.209
10:00	2588.298	2611.475	2350.499	2213.857	2655.357	2626.772	2622.822	2596.66	2594.748
10:15	2619.03	2650.911	2388.768	2256.956	2699.702	2668.777	2666.828	2638.944	2637.933
10:30	2645.652	2678.506	2411.097	2283.247	2724.45	2695.779	2698.503	2667.695	2667.878
10:45	2668.184	2703.642	2430.173	2307.043	2749.066	2720.254	2725.196	2691.454	2693.37
11:00	2682.564	2718.079	2442.608	2324.405	2763.242	2733.837	2741.958	2709.303	2710.661
11:15	2705.387	2736.648	2461.428	2349.543	2780.964	2750.594	2762.598	2728.487	2728.311
11:30	2715.591	2742.262	2472.007	2365.656	2788.949	2764.653	2778.697	2743.69	2742.778

© Copyright 2015 OSIsoft, LLC

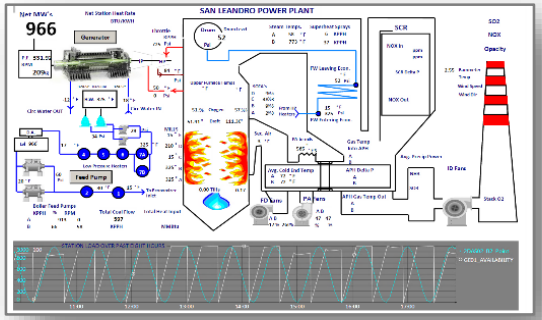
How about now?



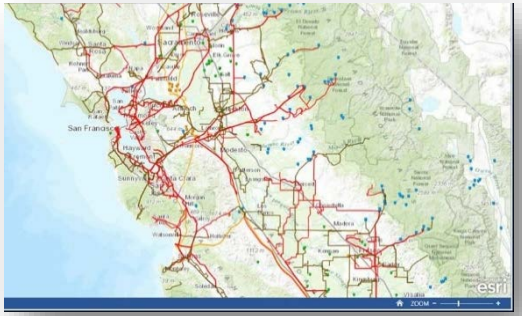
© Copyright 2015 OSIsoft, LLC

The **right visualization** makes information **consumable**

Operational view



Process view



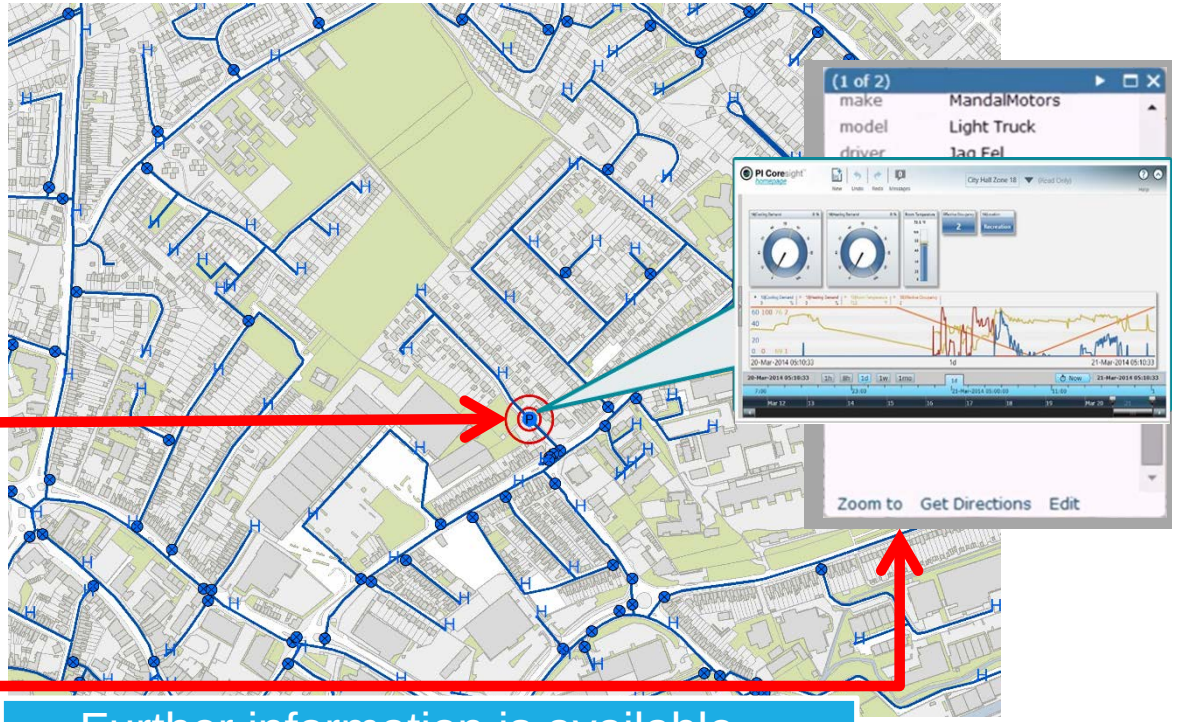
Geospatial view

© Copyright 2015 OSIsoft, LLC

Proactive network & asset management

Operator clicks on the asset on GIS display

Real-time information from the PI System for this asset is displayed

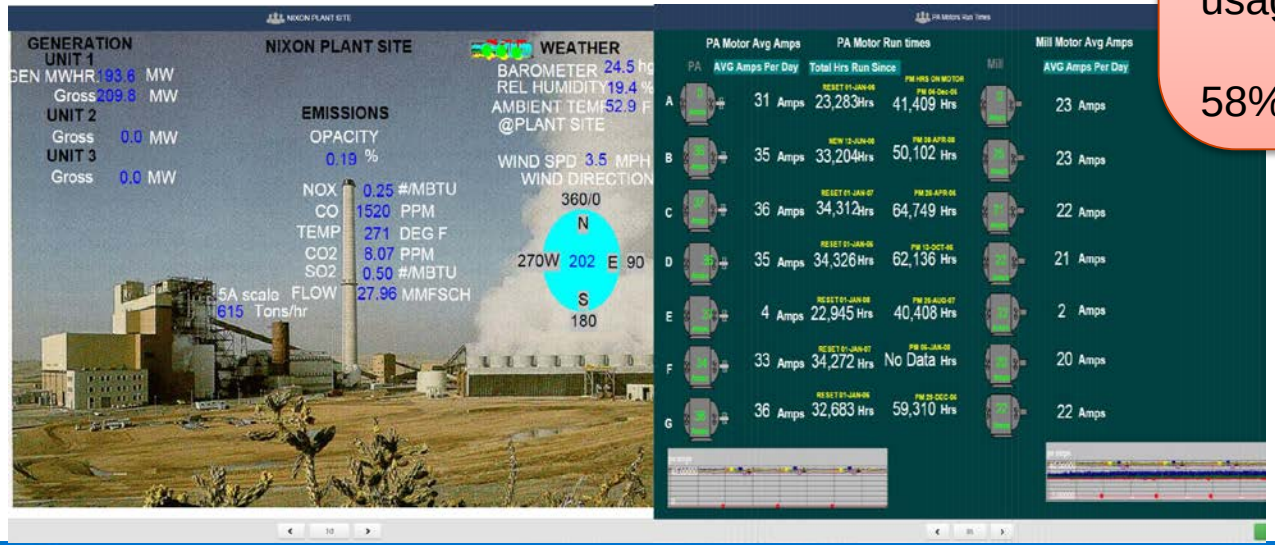


Further information is available - single click to access

© Copyright 2015 OSIsoft, LLC

Colorado Springs Utilities

Improving Business Processes through Operational Intelligence for Electric Generation



© Copyright 2015 OSIsoft, LLC

Operational Gains

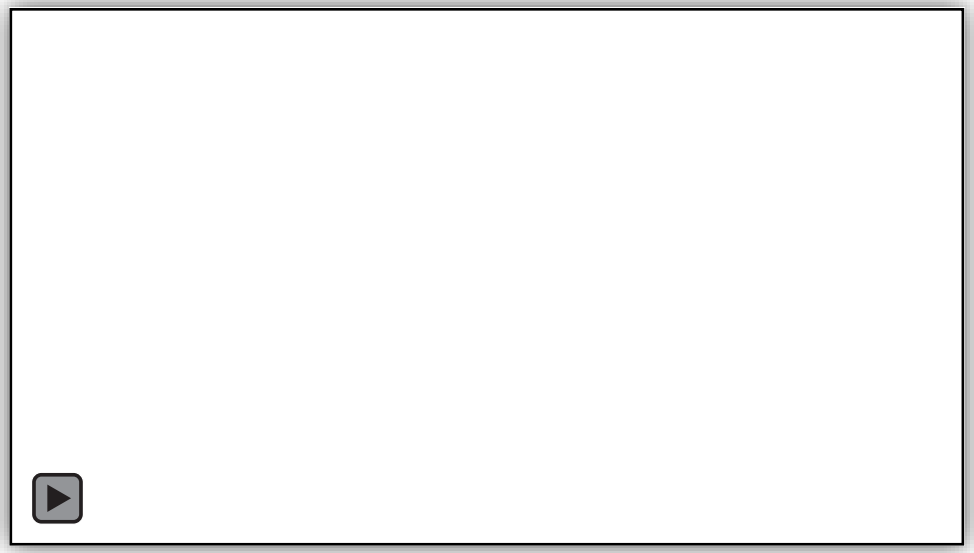
29% Reduction in resource allocation for inspections

30% Reduction in vehicle usage annually

58% Reduction in overtime

David Mora

© Copyright 2015 OSIsoft, LLC



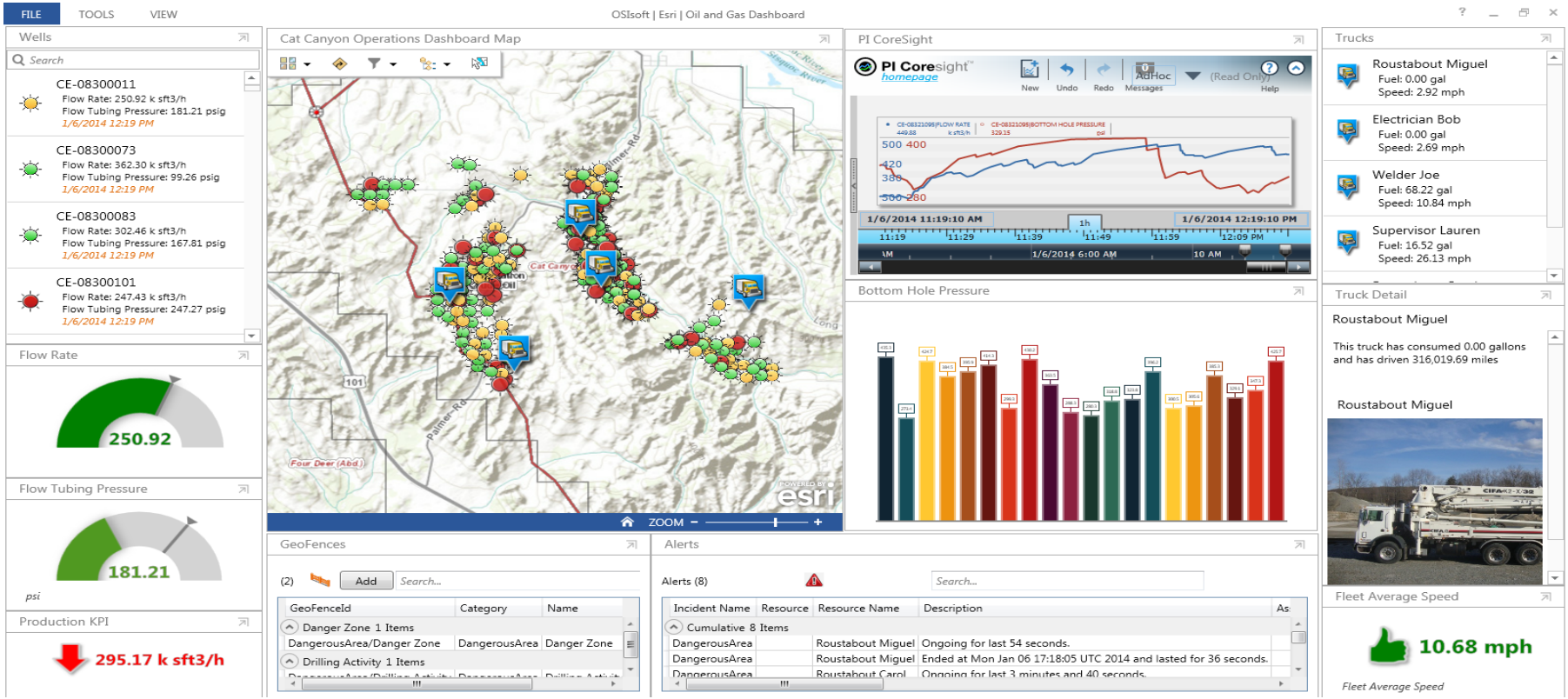
Demo

© Copyright 2015 OSIsoft, LLC

Summary

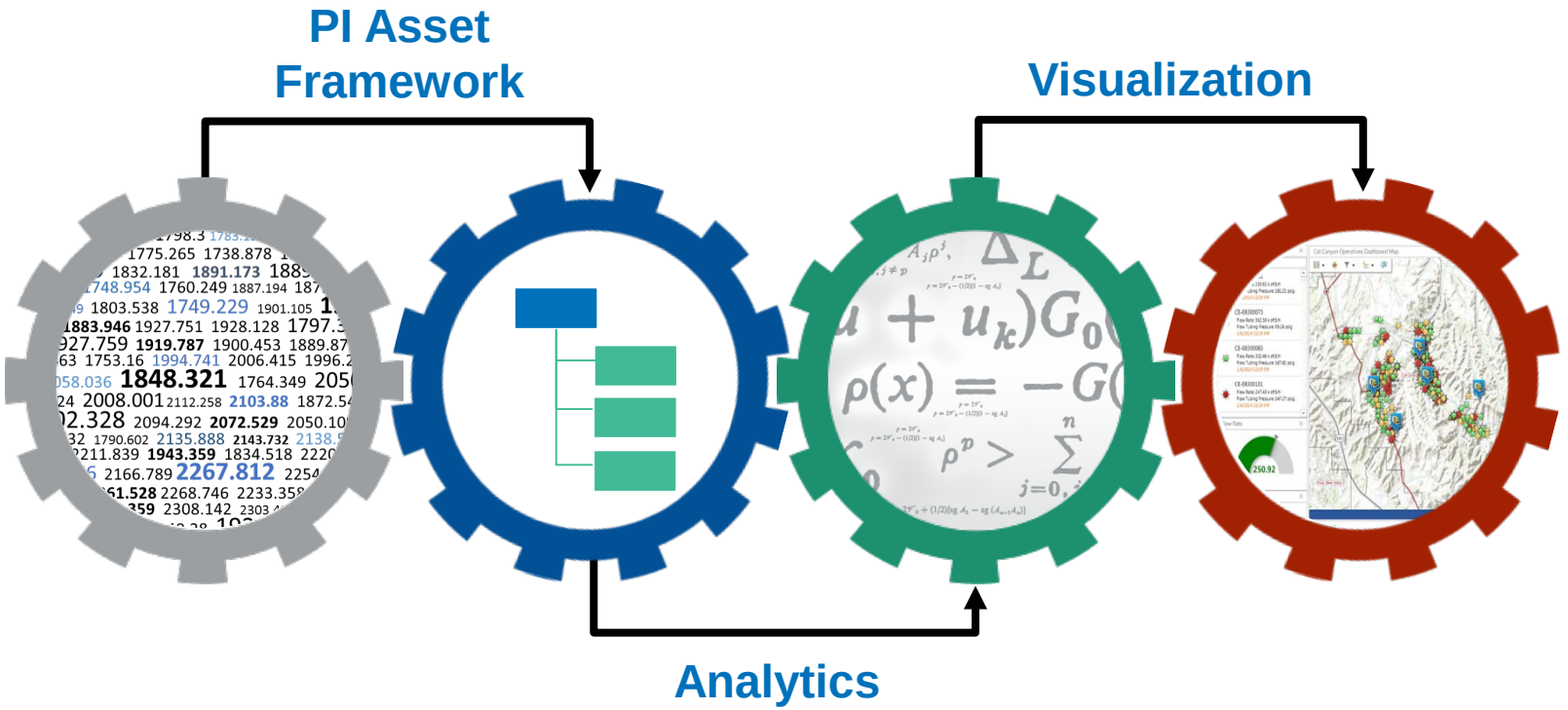
© Copyright 2015 OSIsoft, LLC

Improve process & operational workflows



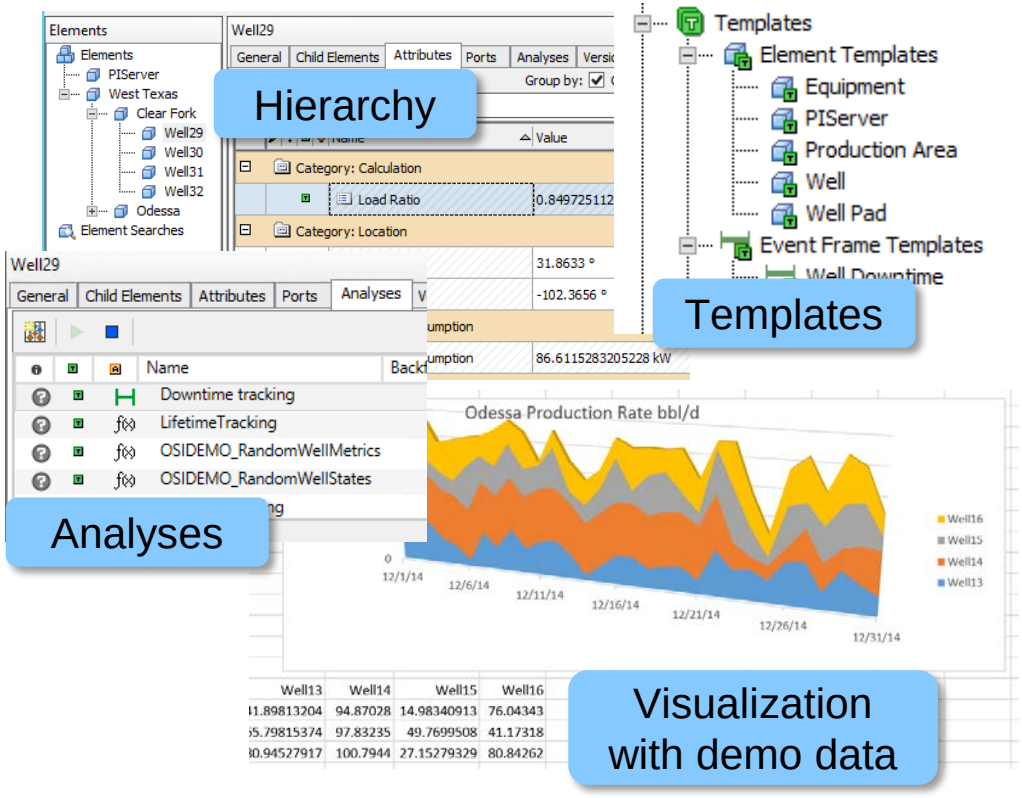
© Copyright 2015 OSIsoft, LLC

Make **faster**, **better** decisions with the latest **PI System tools**



© Copyright 2015 OSIsoft, LLC

Explore on your own with Asset-based PI Example Kits



- Learning tool & starting point for an Asset-based PI System
- Different industry examples
- Available to everyone on the TS Download Center
  - Search for “Example kit”

© Copyright 2015 OSIsoft, LLC

Contact Information

Penny Gunterman, PhD
hgunterman@osisoft.com
Product Marketing Manager
OSIsoft

© Copyright 2015 OSIsoft, LLC

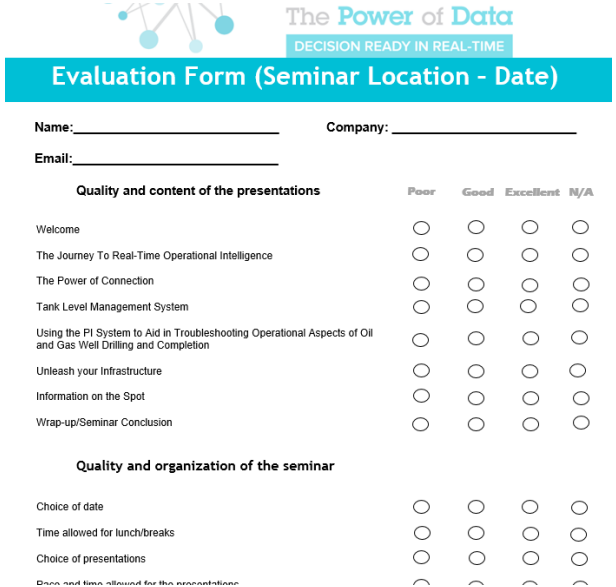
Questions

Please wait for the **microphone** before asking your questions

State your **name & company**

Please remember to…

Complete the Survey for this session



The Power of Data

DECISION READY IN REAL-TIME

Evaluation Form (Seminar Location - Date)

Name:_____ Company: _____

Email:_____

Quality and content of the presentations	Poor	Good	Excellent	N/A
Welcome	○	○	○	○
The Journey To Real-Time Operational Intelligence	○	○	○	○
The Power of Connection	○	○	○	○
Tank Level Management System	○	○	○	○
Using the PI System to Aid in Troubleshooting Operational Aspects of Oil and Gas Well Drilling and Completion	○	○	○	○
Unleash your Infrastructure	○	○	○	○
Information on the Spot	○	○	○	○
Wrap-up/Seminar Conclusion	○	○	○	○

Quality and organization of the seminar				
Choice of date	○	○	○	○
Time allowed for lunch/breaks	○	○	○	○
Choice of presentations	○	○	○	○
Pace and time allowed for the presentations	○	○	○	○

© Copyright 2015 OSIsoft, LLC

감사합니다

谢谢

Danke

Gracias

Merci

Thank You

ありがとう

Спасибо

Obrigado

© Copyright 2015 OSIsoft, LLC