

# Put yourself on the Map

Combine real-time operational intelligence with spatial analytics

*Esri + OSIssoft*

Presented by **Tapio Siltanen (Esri Finland)**  
**Chrystelle Ourzik (Esri Inc)**



# Analyze Assets On a Map



*“Layered maps, right-now maps, rewind-able maps  
... finally bringing together space and time.”*

# Combining Space and Time Together





# Introducing Esri

- Founded in 1969
- Based in Redlands, CA
- Privately held (Jack & Laura Dangermond)
- Leader in the market
- Employees/revenues
- Over 300,000 global customers
- Distributor network + partners





# GIS

## Used in Every Industry



Energy

Oil & Gas

Emergency Management

Retail

Manufacturing

Engineering

Transportation

Government

Mining

Facilities

Public Works

Telco

Utilities

# GIS Provides a Platform for Understanding

Visual

Integrative

Quantitative

Systematic

Comprehensive

Providing the Practical Means for  
Decision Making and Action

# GIS

## Monitoring and Predicting

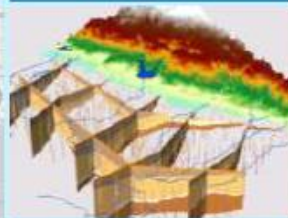
Capacity



Flooding



Climate Change



Resource Requirements

Traffic



Outages

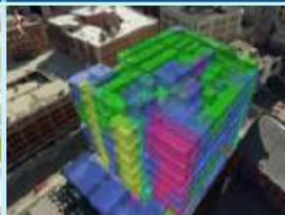




# GIS

## Analyzing and Improving

Operations



Safety



Facility  
Management



Asset  
Performance



Customer  
Response

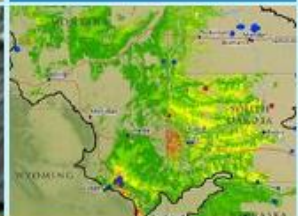


# GIS

## Managing and Taking Action



### Transportation



### Disaster Response



### Mobile Workforce



### Solar Potential





# GIS

## Collaborating and Communicating



Routing



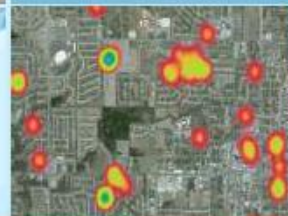
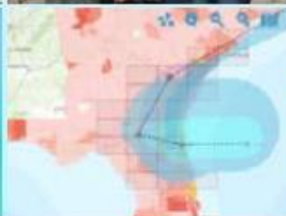
Supply Chain



Work Orders



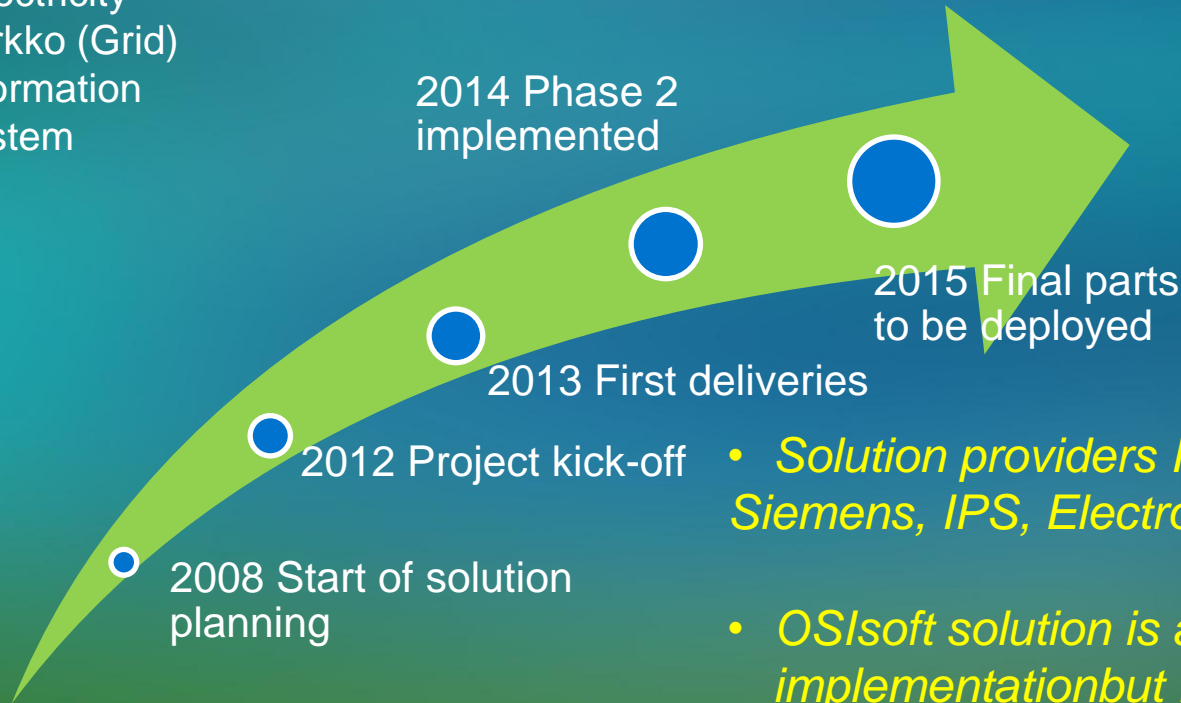
Events



Hotspots

# ELVIS-Project – Fingrid's Asset Management and Operation Solution

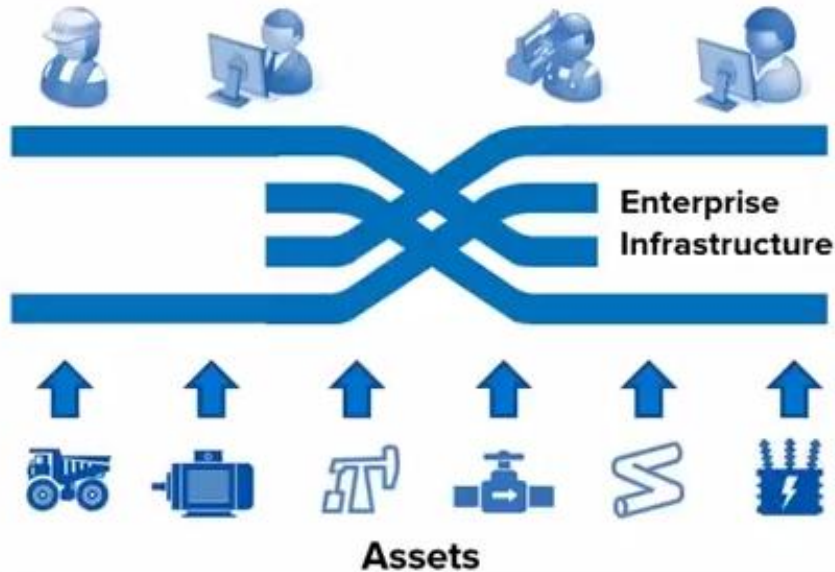
Electricity  
Verkko (Grid)  
Information  
System



- *Solution providers IBM, Esri, Informi GIS, Siemens, IPS, Electrocon*
- *OSIsoft solution is a key element of ELVIS-implementation but not a part of deployments. PI Server was delivered in 2006 and Processbook in 2012.*



Connect the *right data* to the *right people* in the *right context* for the *right decisions* in real-time

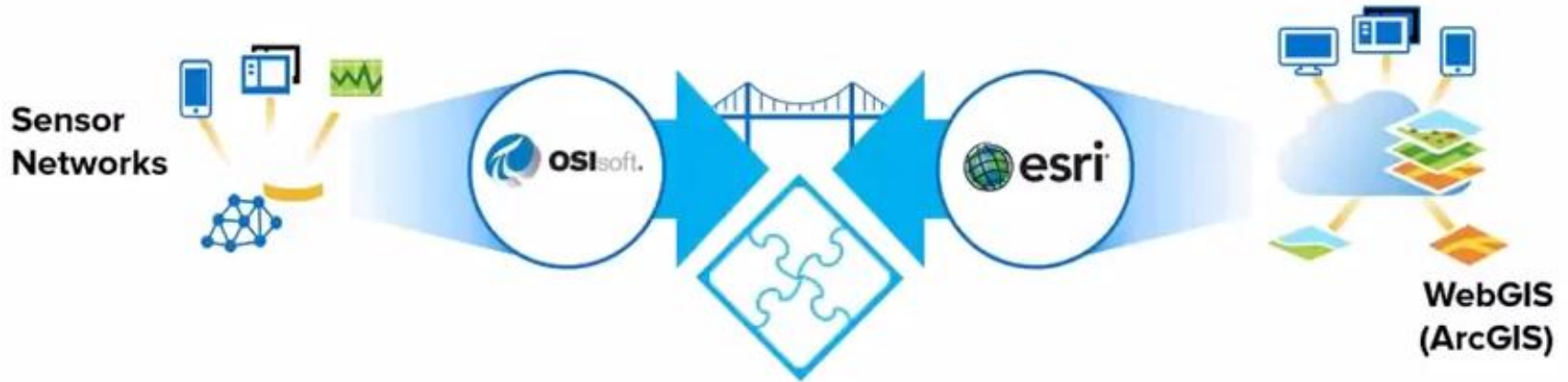


Usable | Actionable | Accountable

A strategy for making actionable decisions as an organization

# Two Companies One Vision:

We believe data in the hands of smart people can create amazing insights, business improvements, and value



# Operational Excellence with Real-Time GIS

- Improving Operational Planning and Daily Activities
    - proactive network & asset management
    - improving process & operational workflows
    - tracking, reporting, & compliance
  - Making Immediate and Actionable Decisions
    - situational awareness for emergency response
    - health, safety, and environment
- [Video](#)

The PI Integrator for Esri ArcGIS enables me to view real-time and historical operational data on an ArcGIS map in order to analyze assets and events in both space AND time.



Now I can see all the real time values from every asset on the map of where I currently am.

My daily maintenance plans are much more efficient now that I can see where all the performance issues are

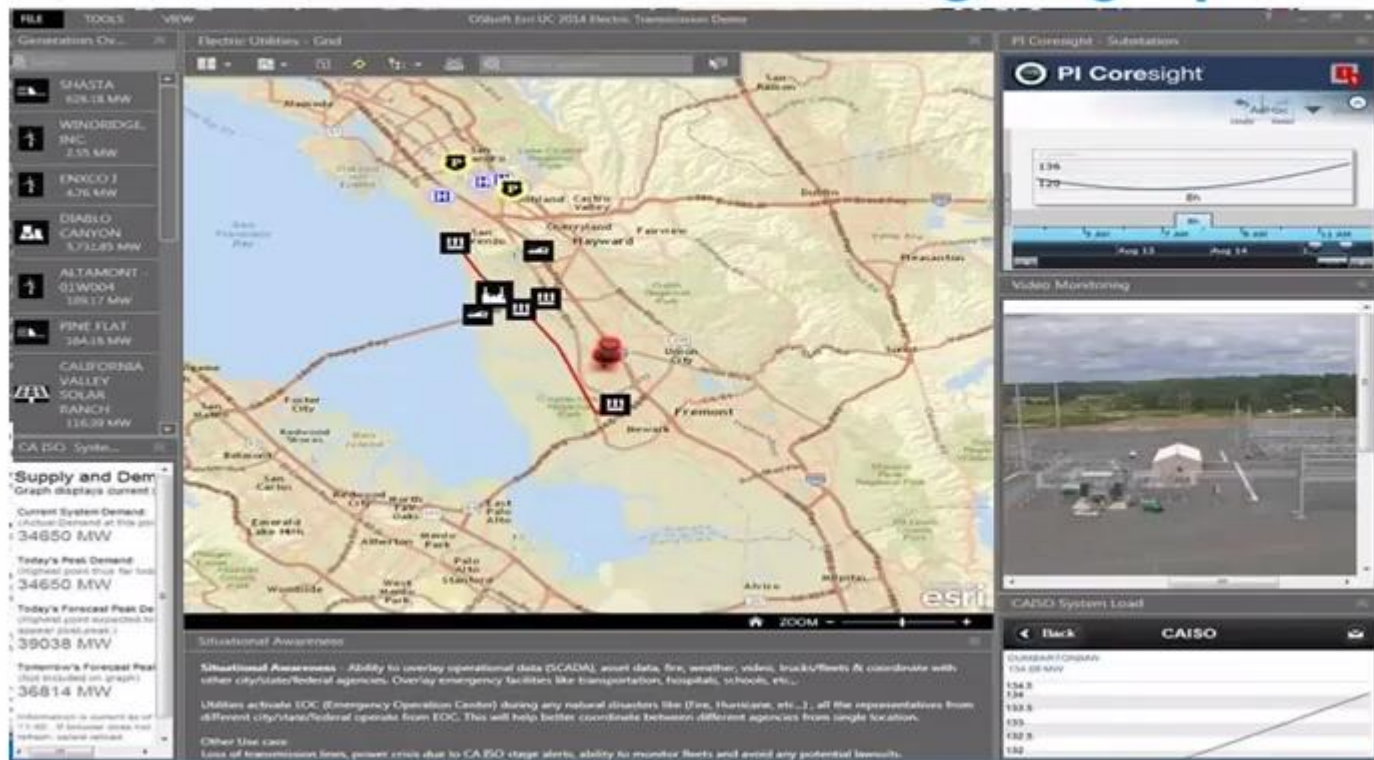
PI & ArcGIS Action

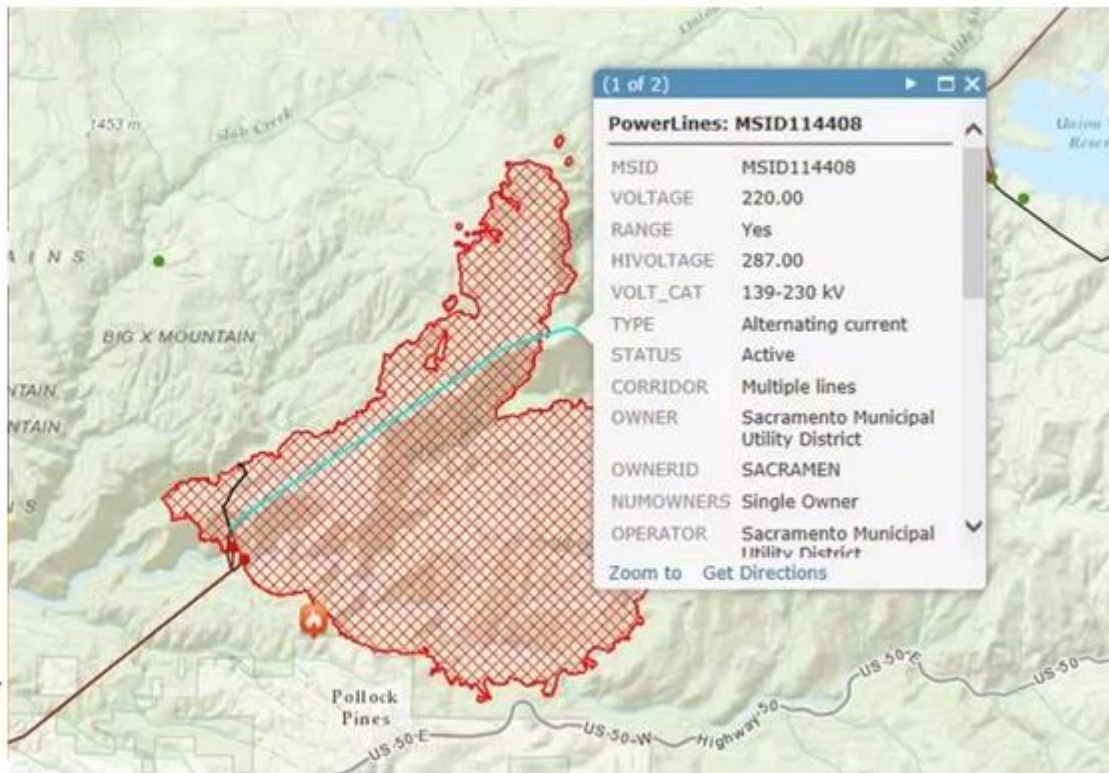
The central monitoring team notifies me if there are any safety hazards near my current location.

I can pull up historical trends directly from a map.



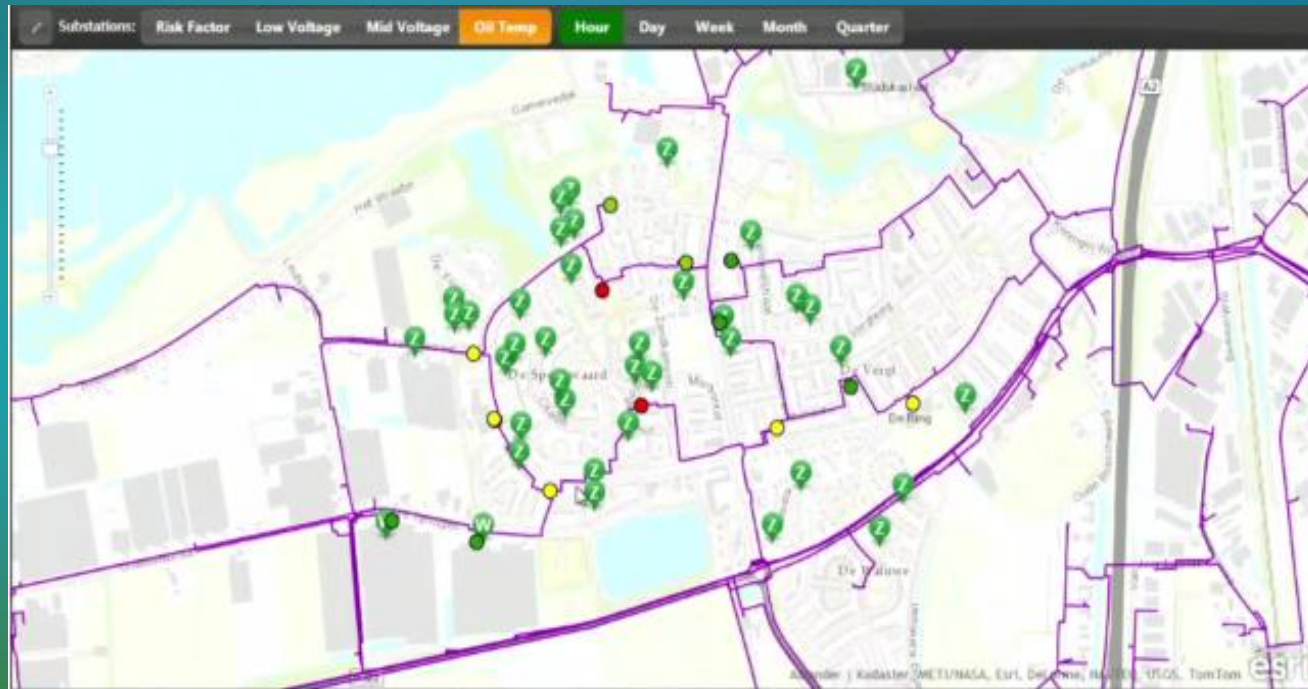
# Situational Awareness for Emergency Operations



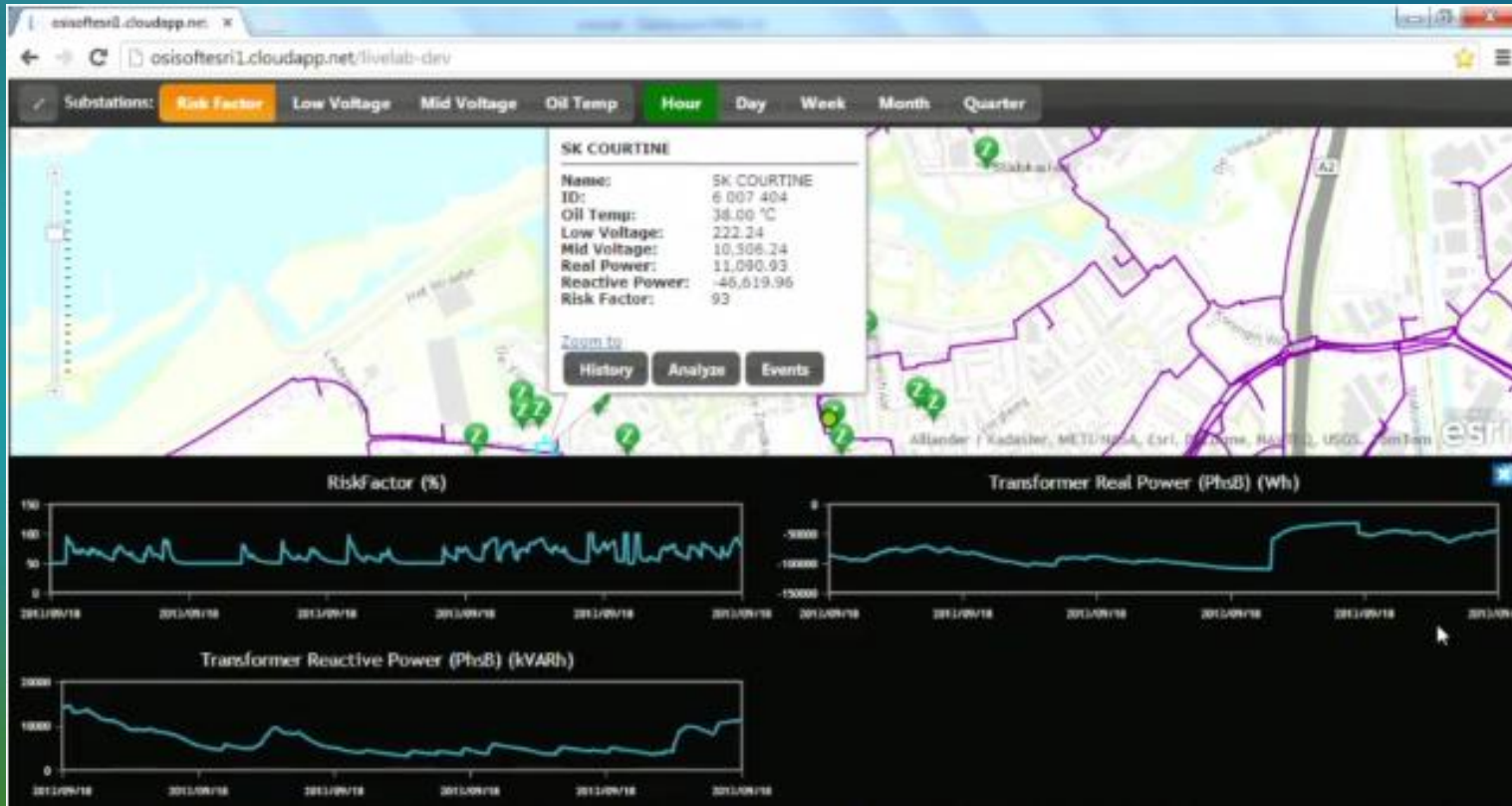


Situational Awareness for  
Improved Emergency  
Response

# Alliander Experience Center

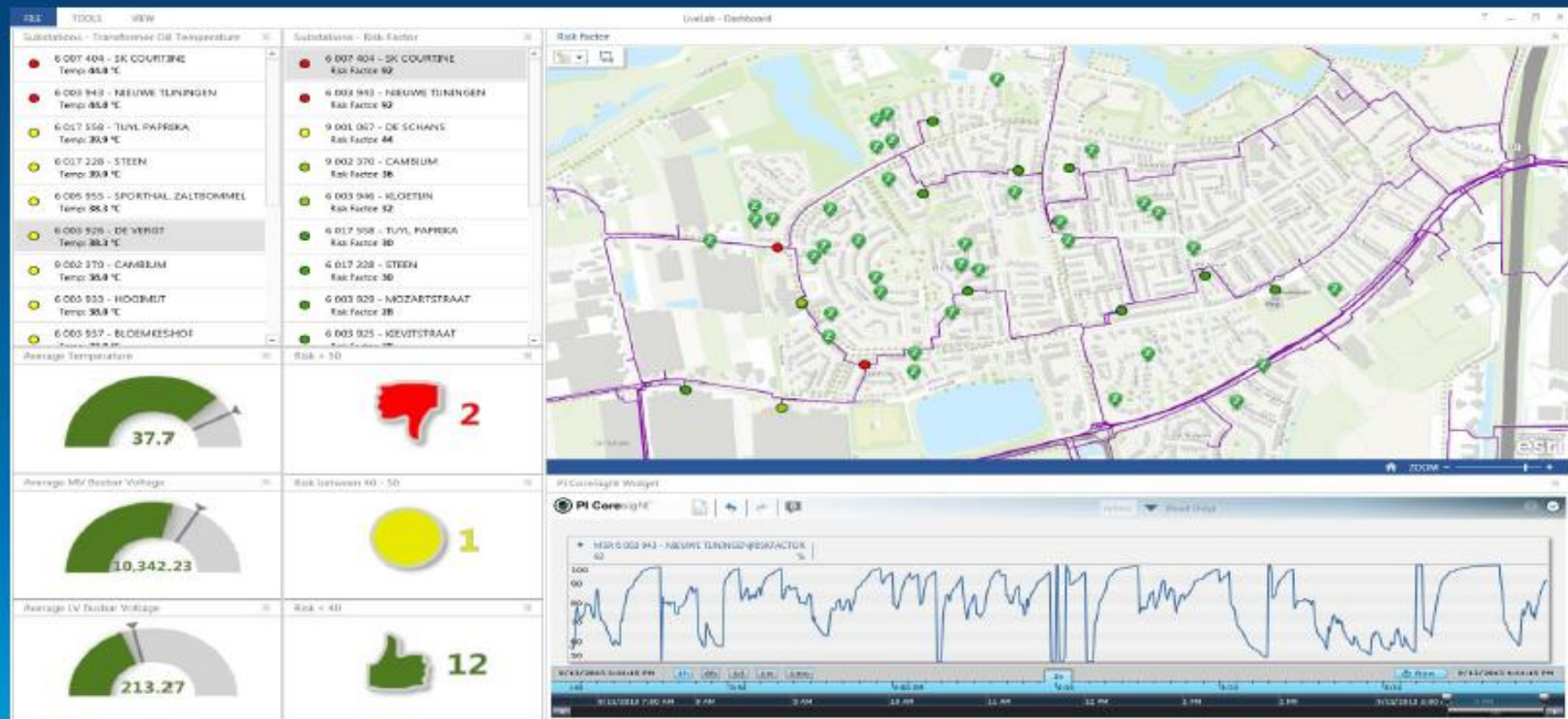


# Alliander Experience Center

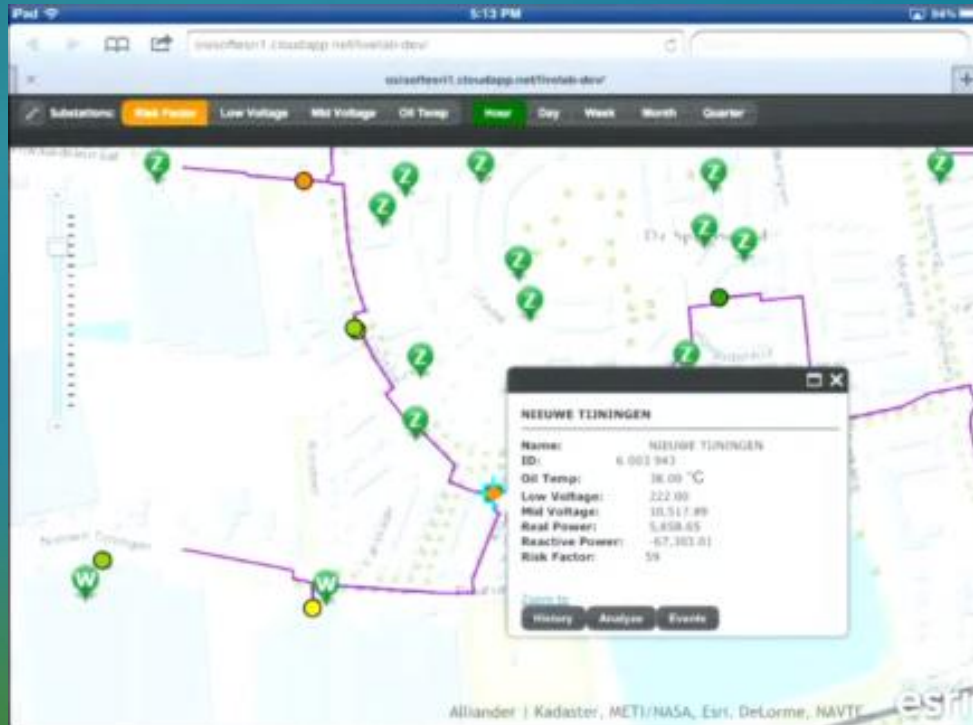




# Alliander Experience Center



# Alliander

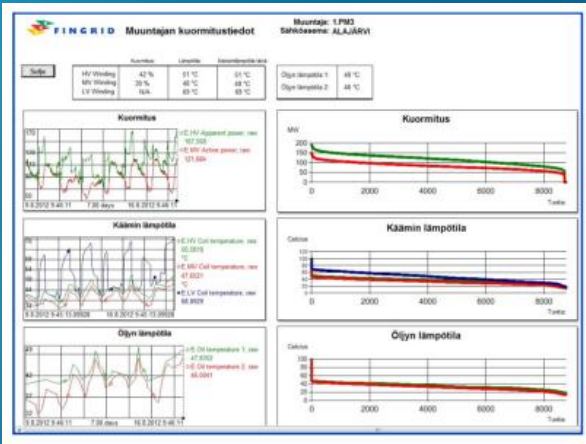


# FINGRID ELVIS

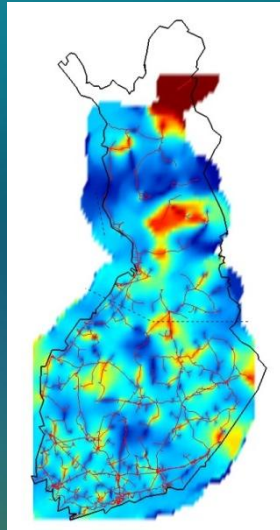
Assets from Maximo  
and locations from ArcGIS



Events from PI Integrator



Real time visualization



**Muuntaja: 1.PM1 (111314)**  
**Sähkösema: NURMIJÄRVI**

Naännäisteho HV: 184 MVA  
Naännäisteho max (1 vuosi): 325 MVA  
Kuorma: 46 %

Naännäisteho MV: 134 MVA  
Naännäisteho max (1 vuosi): 311 MVA  
Kuorma: 34 %

**Kuormitustiedot**

**Ilmankuivaimet**

**Lämpötilat**

Öljyn lämpötila 1: 41 °C  
Öljyn lämpötila 2: 41 °C  
HV kämin lämpötila: 37 °C  
MV kämin lämpötila: 38 °C  
LV kämin lämpötila: 49 °C  
Ulkolämpötila: 4 °C

HV Virta 251 A  
MV Virta 648 A  
LV Virta 3437 A

90

● Kaasunvalvontatila  
OLTC askel: 5 ASK  
Käämik. toim.kerrat: 1062

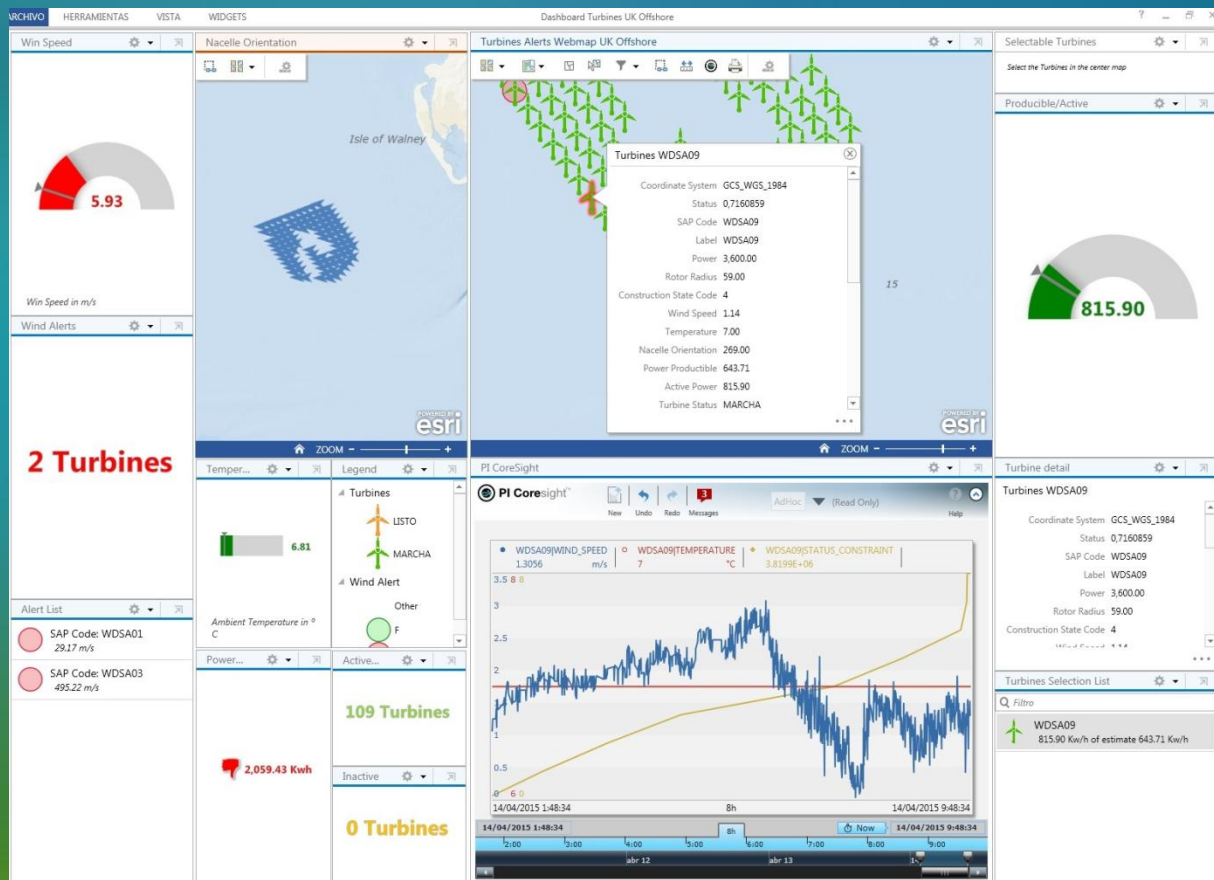
**Online DGA**

	Pitoisuus	Viikkokeskiarvo
H2 Vety	4 ppm	4 ppm
CO Hiilimonoksidi	166 ppm	172 ppm
C2H2 Asetyleeni	0 ppm	0 ppm
C2H4 Etyyleeni	0 ppm	0 ppm
CH4 Metaani	0 ppm	0 ppm
C2H6 Etaani	0 ppm	0 ppm
O2 Happi	0 ppm	0 ppm
CO2 Hiilidioksidi	0 ppm	0 ppm
H2O Kosteus	2 ppm	2 ppm
Kaasupitoisuus	0 ppm	0 ppm

**Kaasunvalvonta**

**Tapahtuma- / hälytyslista**

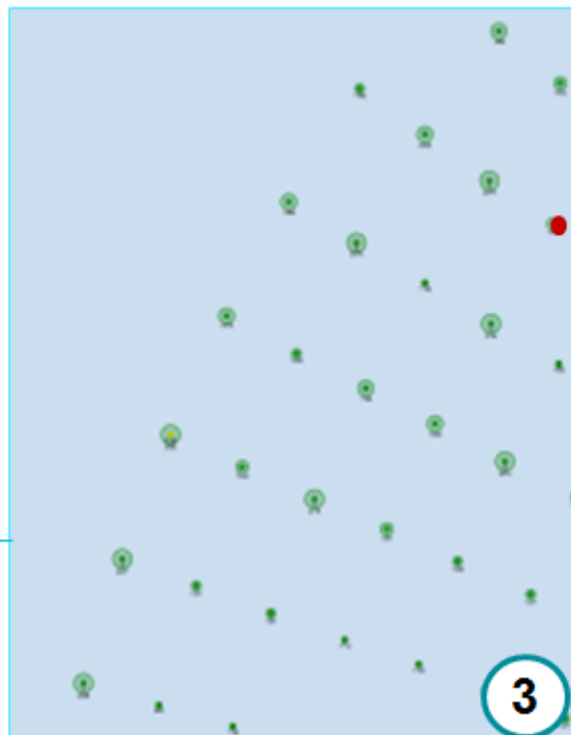
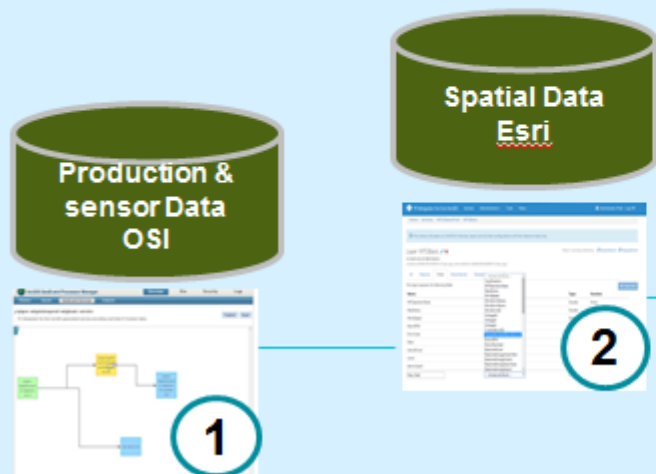
# Iberdrola Renewables





# DONG Energy

- OSIsoft PI integration with Esri GeoEvent Processor
- Display production and spatial asset location on maps



# GIS & Real Time Data Integration Will Transform Our Organizations

Our Partnership Enables This Transformation

Understand the Technology

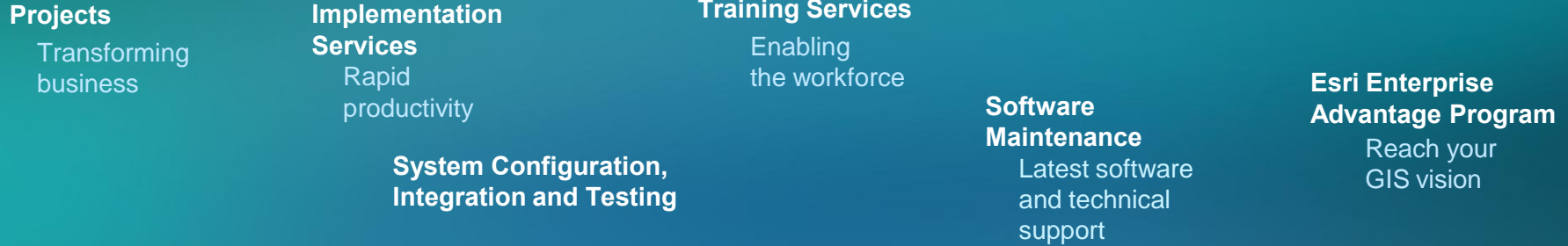
Demonstrate Use Cases

Share Successes

Show Business Value

*Extending and Leveraging Your Investments*

# FINGRID – Esri Professional Services for implementing ArcGIS-Platform



**AMS – Application Management Service**

# Thank You

[www.esri.com/osisoft](http://www.esri.com/osisoft)

[www.osisoft.com/corporate/gis](http://www.osisoft.com/corporate/gis)