

The background of the image is a dark blue gradient with a faint, stylized pattern of triangles. Overlaid on this is a semi-transparent image of the San Francisco skyline, including the Golden Gate Bridge on the left and the Transamerica Pyramid on the right. The text is centered and reads:

OSIsoft®

USERS CONFERENCE 2016

April 4-8, 2016 | San Francisco

TRANSFORM
YOURWORLD



Enterprise Level Situational Awareness for Assets and Infrastructure

Presented by **Marshall Worthey**

CRITIGEN

Who is CRITIGEN ?

Our vision is to transform the way our world thinks and communicates

Our mission is to unlock the power of location
by integrating spatial relationships and technology with business data and processes,
leveraging our unique perspectives and innovations
to revolutionize decision-making



CRITIGEN

- We are a premier, full-lifecycle provider of:
 - Enterprise integration of geospatial data and systems
 - Geospatial application development (web, desktop, mobile)
- We are an Esri GIS Platinum Partner
- We connect Esri GIS with:
 - PI System and PI Integrator for Esri ArcGIS
 - SAP Mobile, HANA, EAM, and other ERP
- Our customers are in the Commercial, and Federal, State and Local government markets

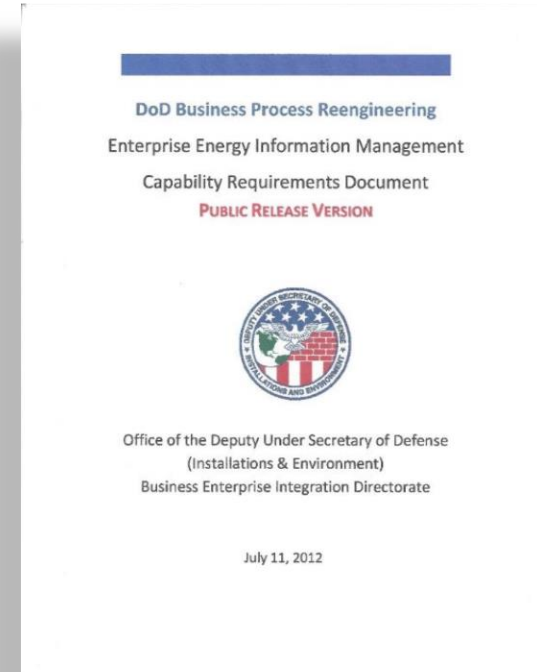
Strategy + Process + Technology



Business Challenge: Obtain actionable information from enterprise to asset across DoD

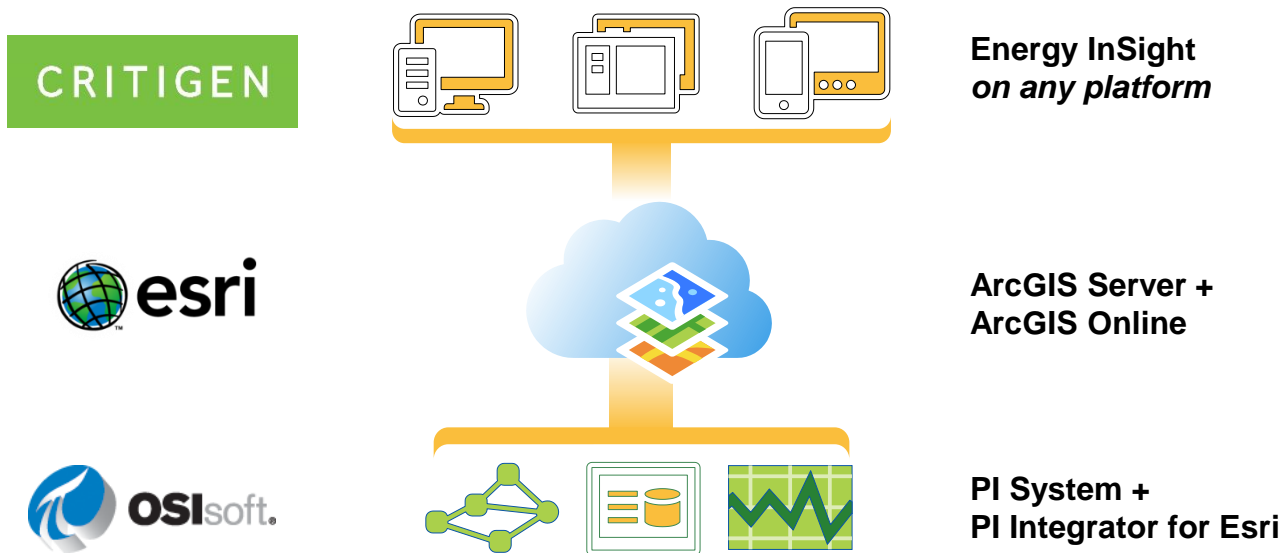
- With more than 350,000 buildings and 600,000 road vehicles, the federal government is our nation's largest energy consumer
- Federal mandate: Increase efficiency:
 - Monitor energy consumption (installation to building)
 - Identify opportunities to gain efficiencies
 - Facilitate reporting

USACE Challenge: Monitor energy consumption for 200+ Installations with hundreds of smart metered buildings each – without drowning in the data



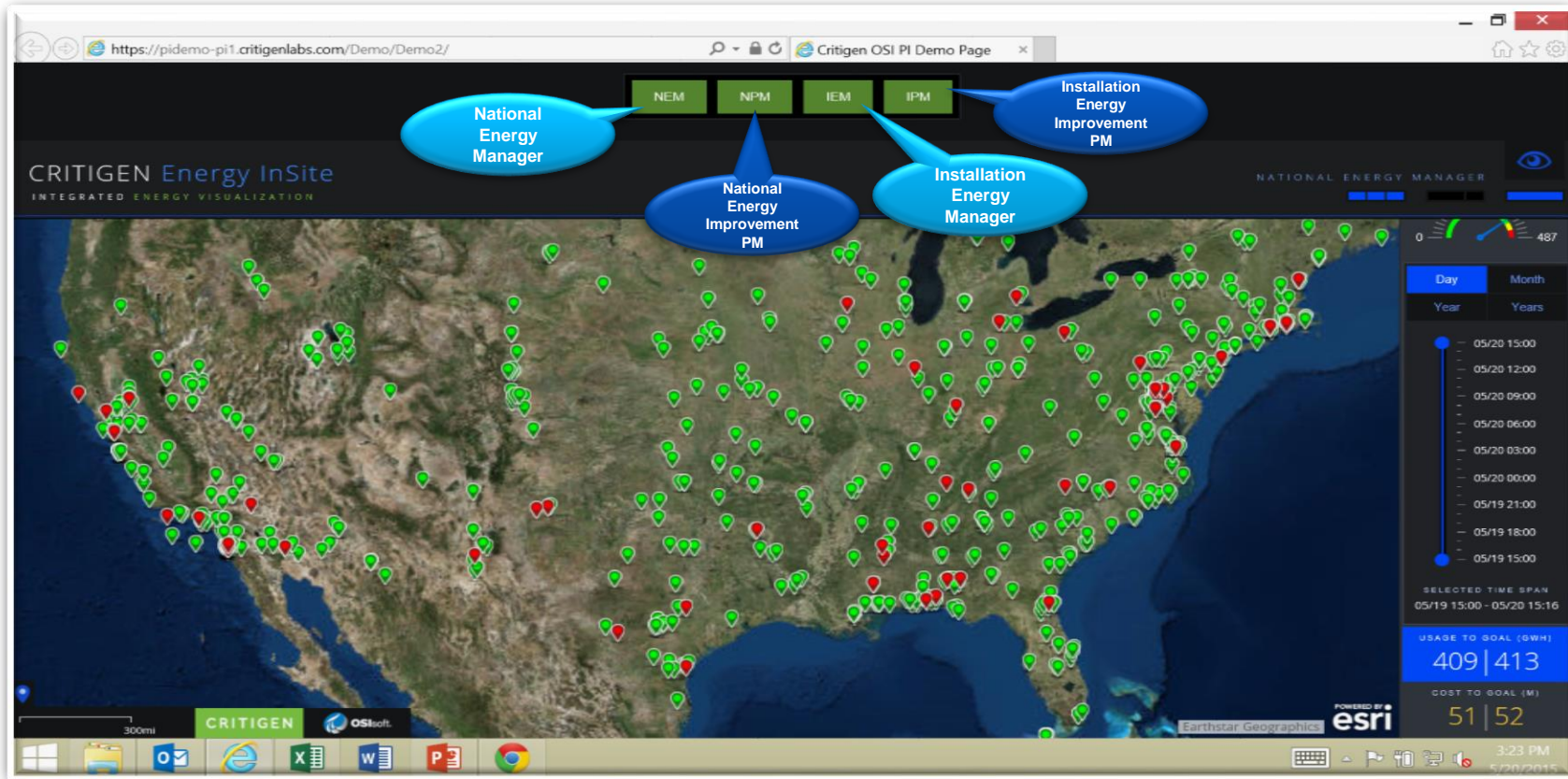
"The ability to collect, analyze and monitor Information across the enterprise is crucial"

How the PI System was Applied



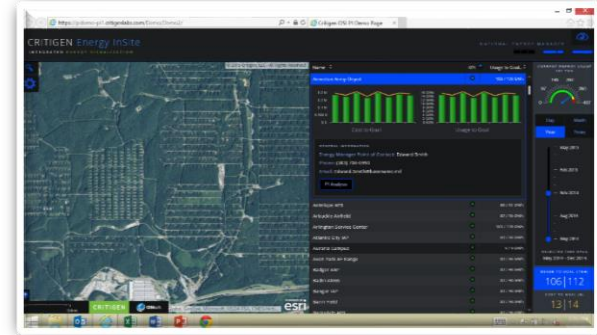
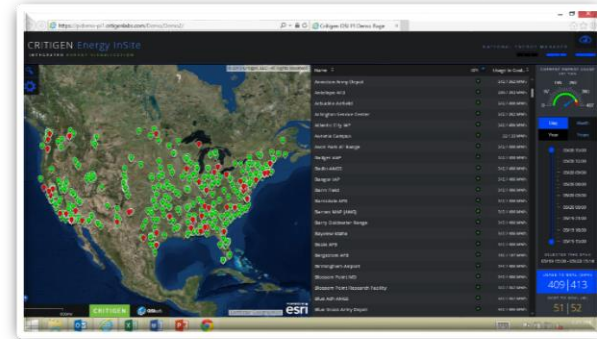
Data Driven, Actionable Knowledge Across the Enterprise

Role Based Access for Users



Enterprise View: National to Installation

- **Executive enterprise view of energy performance by organization:**
 - ✓ Installation
 - ✓ Command (e.g. AMC)
 - ✓ Region
- **‘At-a-glance’ enterprise view for decisions and policy that:**
 - ✓ DePlcts energy consumption vs. goals via the integration of sensor data, PI System and GIS
 - ✓ Identifies installations targeted for energy improvement projects
 - ✓ Ties to business systems (e.g. real property systems) to associate with asset owner or tenant
 - ✓ Ties energy consumption to policy/plan compliance
 - ✓ Provides information at the installation or across the enterprise



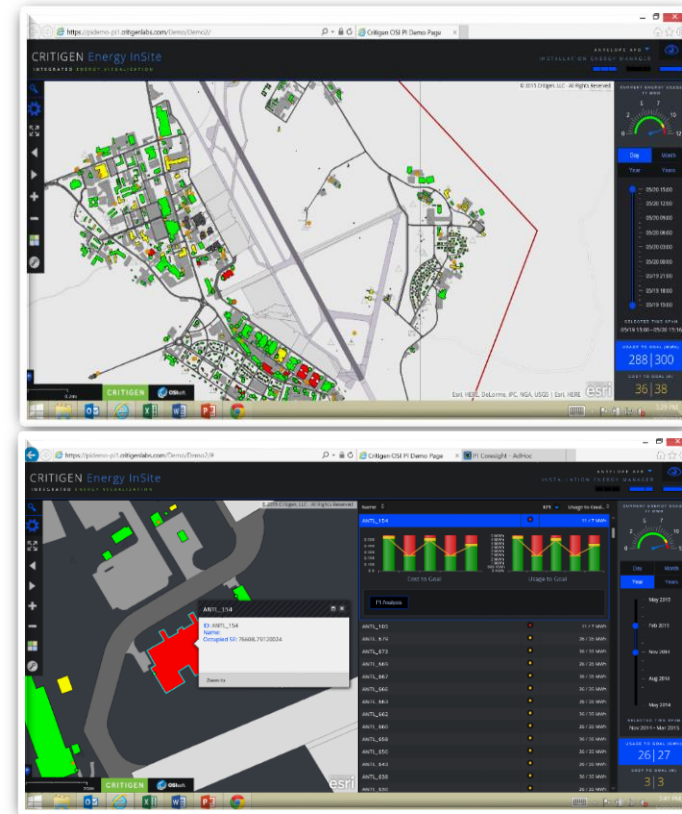
Installation View: Installation to Building

- Provides energy/facility managers with an installation view of energy performance by:

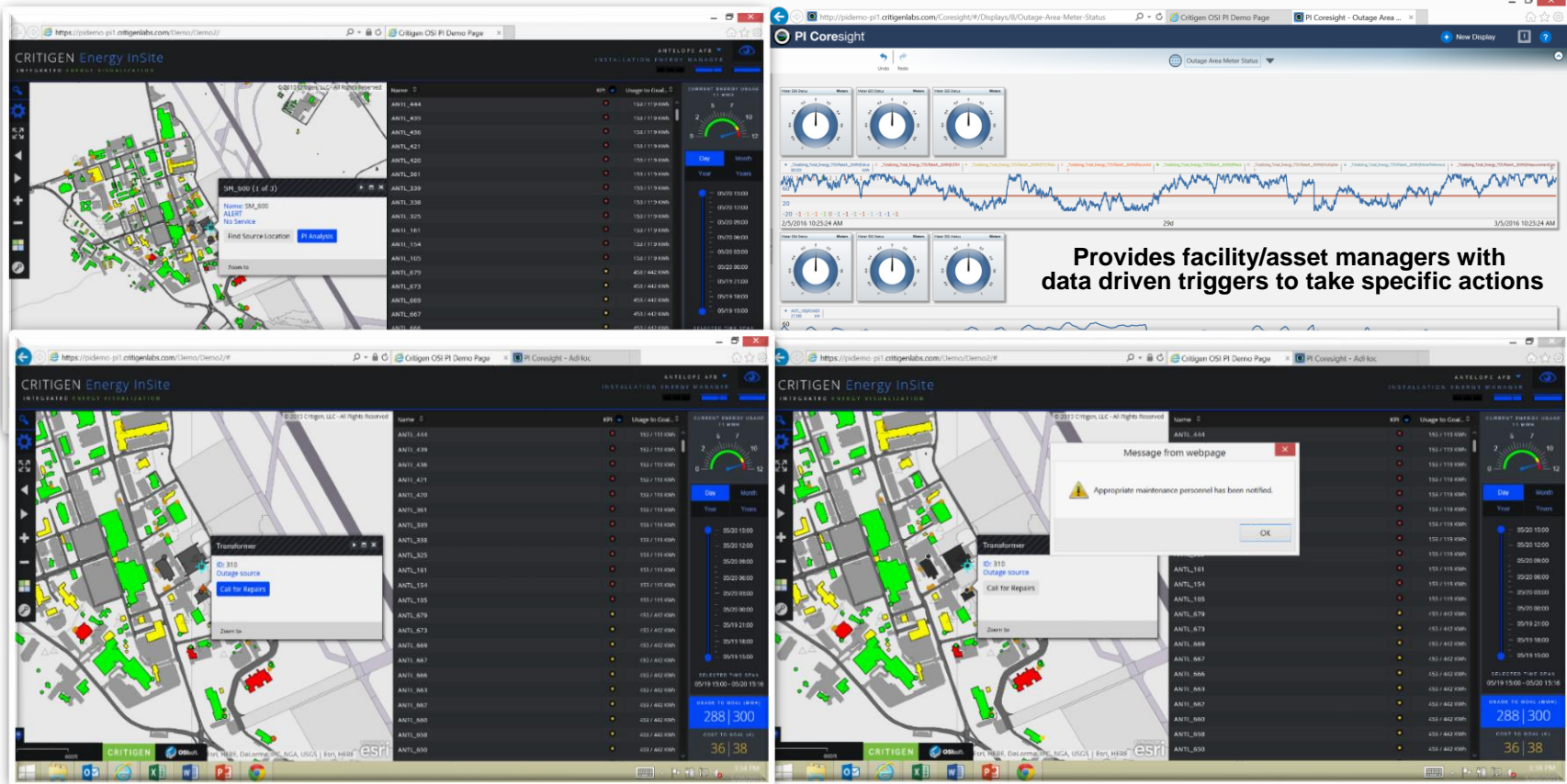
- ✓ Depicting energy consumption vs. goals via the integration of sensor data, PI System and GIS
- ✓ Installation roll up
- ✓ Facility (e.g. Building Number)
- ✓ Meter or other asset

- Provides an 'at-a-glance installation view that:

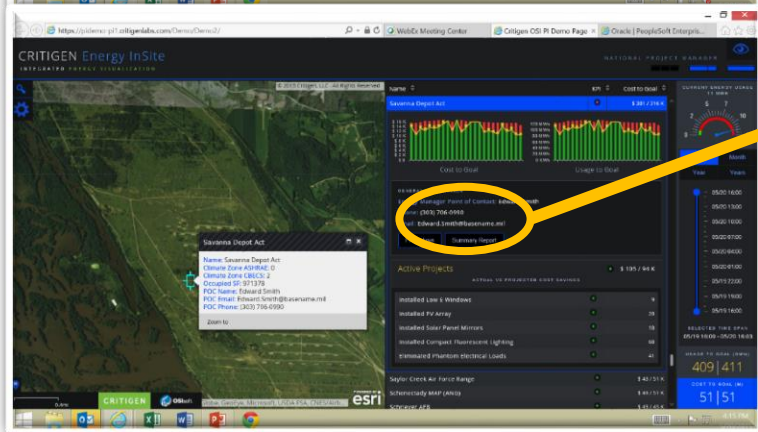
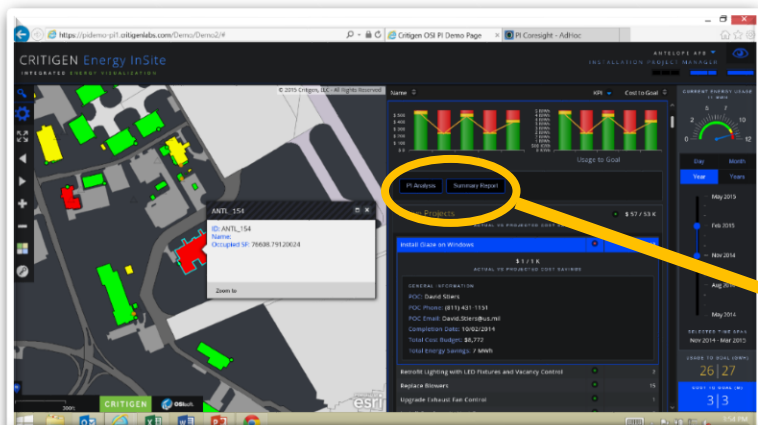
- ✓ Ties to business systems (e.g. real property systems) to associate with asset owner or tenant
- ✓ Ties condition, alerts and status to the map – at any point in time



Installation: Energy Use, Troubleshooting and Notification



National and Installation PM Roles: FEMP 3.0 Reporting



Building Energy Project Summary:

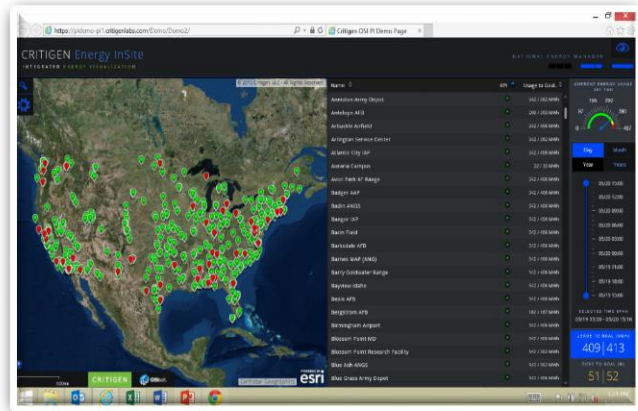
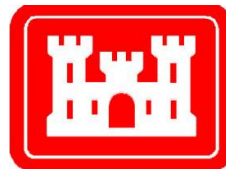
ANTL_154

Item	Completion Date	Total Energy Savings (MWh/yr)	Estimated Total Cost Savings	Total Cost Savings	Total Cost Budget	Payback Period (Months)	POC Name	POC Email	POC Phone
Install Glass on Windows	10/12/2014	7335	\$1,200.00	\$800.00	\$6,772.00	13	David Stiers	david.stiers@us.af.mil	(811) 331-1111
Retrofit Lighting with LED Fixtures and Vacancy Control	4/2/2014	51100	\$35,000.00	\$36,151.00	\$47,385.00	2	Kim Farley	kim.farley@us.af.mil	(811) 335-1964
Replace Blowers	4/2/2014	8609	\$8,800.00	\$4,000.00	\$51,326.00	13	Diane Franklin	diane.franklin@us.af.mil	(822) 420-2434
Upgrade Exhaust Fan Control	4/2/2014	100317	\$5,000.00	\$11,060.00	\$11,060.00	1	Curly	Curly.Armitage@us.af.mil	(833) 980-2751
Install 2 medium-size heat exchangers	7/5/2014	82110	\$1,800.00	\$4,500.00	\$15,034.00	5	Jennifer Wynn	jennifer.wynn@us.af.mil	(844) 266-1518
Install new roof insulation	4/2/2014	34178	\$1,340.00	\$1,340.00	\$14,182.00	11	Aaron Dwyer	Aaron.Dwyer@us.af.mil	(800) 444-8889
		522901	\$18,040.00	\$10,890.00	\$108,441.00				

Using InSite to meet the goals of the USACE WAVE program

COMPANY and GOAL

USACE Huntsville Energy Information Management Program required a prototype for the Wide Area Visualization Environment to monitor energy consumption at installations based on user role



CHALLENGE

Monitor energy consumption for 200+ Installations with hundreds of smart metered buildings each – without drowning in the data

- Federal policies and mandates driving the need
- Integration of operational intelligence with place and time

SOLUTION

Integration of smart meter data stored in the PI System with GIS and real property data via the PI Connector for ArcGIS in an intuitive user interface

- PI System
- PI Coresight
- PI Integrator for Esri ArcGIS
- ArcGIS for Server
- Agile Development of Custom UI Driven by OSD and USACE requirements

RESULTS

USACE Huntsville is utilizing InSite to demonstrate WAVE functionality and goals across the DoD to drive the EIM program forward

- WAVE Development is in progress
- Initial deployments expected GFY 17

Contact Information

Marshall Worthey

Federal Program Manager

Critigen

Marshall.worthey@critigen.com

(719) 651-9361



Questions

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



State your **name & company**

Please remember to...

Complete the Online Survey for this session

Download the Conference App for OSISoft Users Conference 2016



- View the latest agenda and create your own
- Meet and connect with other attendees

Download on the App Store
GET IT ON Google Play
HTML

search **OSISOFT** in the app store



<http://ddut.ch/osisoft>

감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado

*PI System integration with GIS makes the
Map your Dashboard*

The background of the entire image is a dark blue gradient. On the left side, there is a faint, stylized illustration of a suspension bridge, likely the Golden Gate Bridge. On the right side, there is a faint silhouette of a city skyline, including the Transamerica Pyramid. The OSIsoft logo is positioned at the top center.

OSIsoft®

USERS CONFERENCE 2016

April 4-8, 2016 | San Francisco

TRANSFORM
YOUR WORLD