

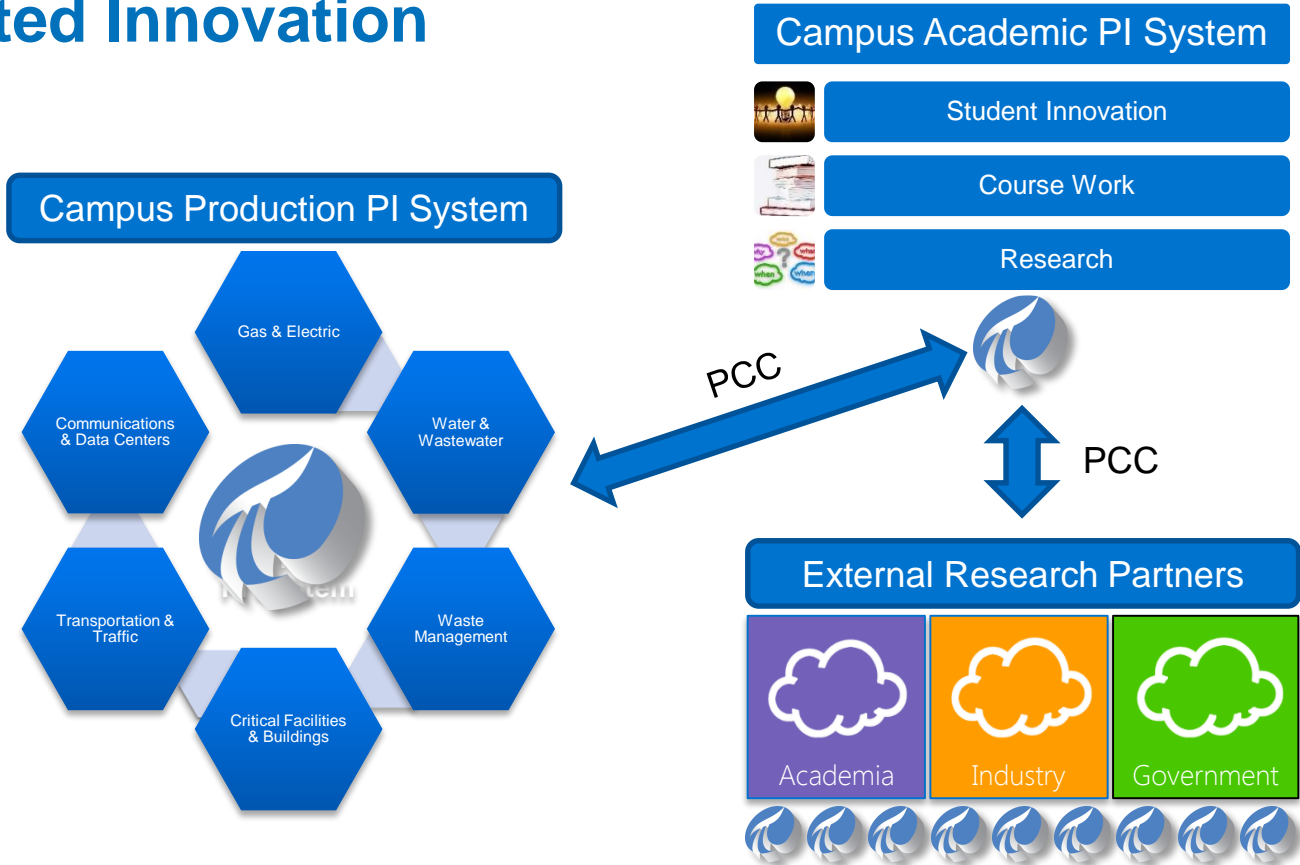


Academia and Industry Collaboration Workshop

Innovation via a New Paradigm

Presented by **Michael Wilson, Group NIRE**
OSIsoft Academic Team

Connected Innovation





Using the PI System to Analyze Wind Farm Data

Presented by **Michael Wilson**
Director of Business Development

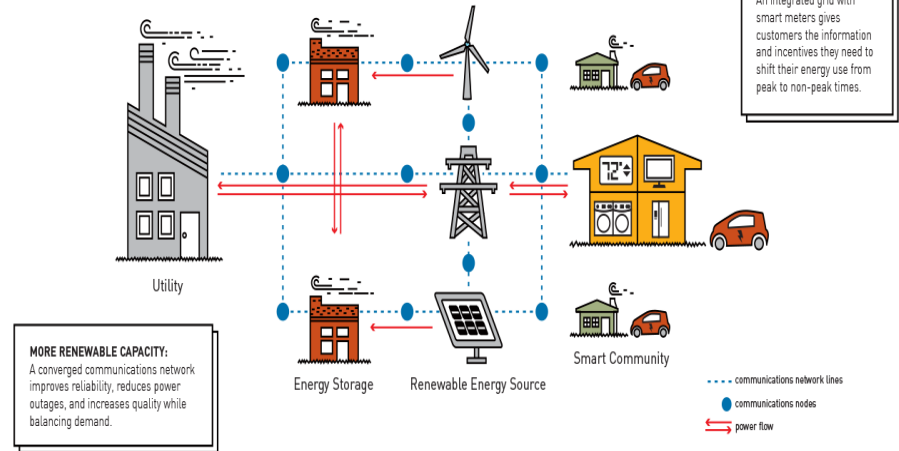


Group NIRE focuses on Real-World Testing

- Created by Texas Tech University in 2010
- NIRE stands for the National Institute for Renewable Energy
- Niche in the market
 - Provides field demonstration site for companies to go beyond modeling/simulations
 - Companies test their solutions/prototypes on the electric grid.
- Industries who use Group NIRE
 - Wind
 - Solar
 - Energy Storage
 - Cyber Security
 - Internet of Things
 - Energy Management

GRID MODERNIZATION

INSTANTANEOUS RESPONSE AND INTEGRATION: The electricity grid joins the digital age with fast, reliable and secure communications that enable automated, optimized grid management. Efficiency and speed will drive down rates.



PI System solved our problem



TEXAS TECH
UNIVERSITY.

COMPANY and GOAL

Group NIRE was formed by Texas Tech University to provide a field demonstration site for companies looking to modernize the power grid.

CHALLENGE

How does TTU receive real-time data from a 249.7 MW wind farm?

- 115 2 MW and 11 1.7 MW GE turbines

SOLUTION

OSIsoft's PI System

- Group NIRE used the PI system to allow TTU to collect, analyze, and visualize large amounts of high-fidelity data

RESULTS

TTU now has full access to real time data

- 1) The National Wind Institute
- 2) Department of Electrical and Computer Engineering
- 3) Department of Computer Science

Contact Information

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Collaboration Workshop -- Objective

Participants will outline a collaborative research project that is driven by data sharing among academic and industrial partners. The project should be small-scale, with clearly defined goals. Think low-hanging fruit.

At the end of the workshop, the outline will be presented in a mini poster session. The facilitator of your group will record ideas on a flip board that will serve as the poster.

Now, let's begin the workshop....

Please join the facilitator for your group at the easel marked with your group number.

If you don't know your group number, please check with the registration desk.

Part 1: Industry Challenges

Suggested Time: 10 min

Industry representatives should share business challenges and goals.

Discussion Starters:

- *Given no constraints over budget or people, what pain point would you tackle literally today?*
- *What is a big problem you see coming in the future, sort of a tip of the iceberg?*
- *What in-house knowledge are you lacking?*
- *Are there important projects that you simply don't have time to pursue?*
- *What part of your business would most benefit by innovation?*
- *Are you already engaged with academic researchers?*

Part 2: Define Project Statement

**Suggested Time:
15 min**

Your group will decide on an industry challenge to address and define a research hypothesis or project statement.

Industry representatives should discuss their business challenges and goals. The entire group should brainstorm to find potential collaborative research topics. Keep in mind that we are looking for small-scale research projects that have clearly defined goals. Think low-hanging fruit.

Discussion Starters:

- *Which industry challenges align with academic research capabilities?*
- *Can we think of a small-scale project to address one of the challenges?*

Part 3: Outline Outcomes, Requirements

**Suggested Time:
20 min**

After you've defined a project statement, spend time further defining the project. Outline a few desired project outcomes and requirements. Focus your thoughts on three areas:

- Project outcomes
- Data needs / needs from industry
- Required university resources

Continue the conversation on PI Square!



<https://pisquare.osisoft.com/groups/academic>