The Use of Real-Time Data to Support Operations at Entegrus

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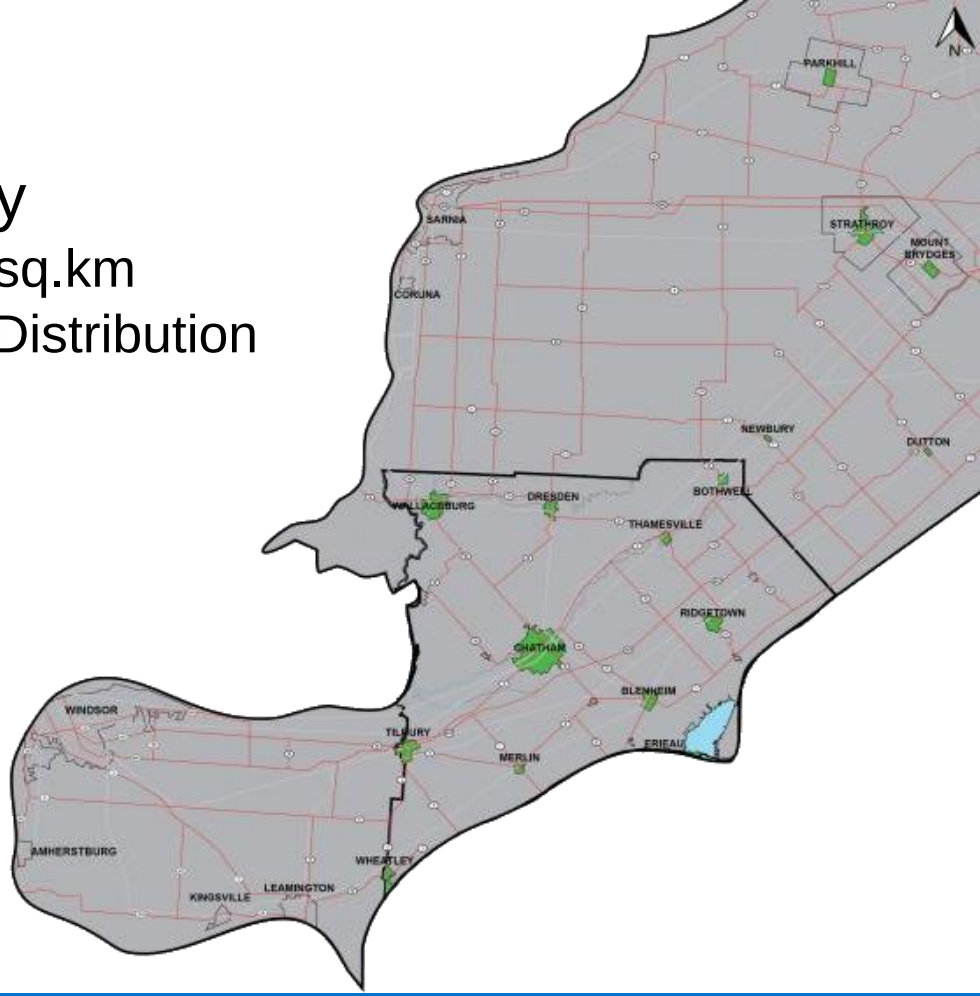
Agenda

- A little bit about Entegrus
- Business Challenges
- Entegrus' Solution
- Conclusion

Entegrus Powerlines

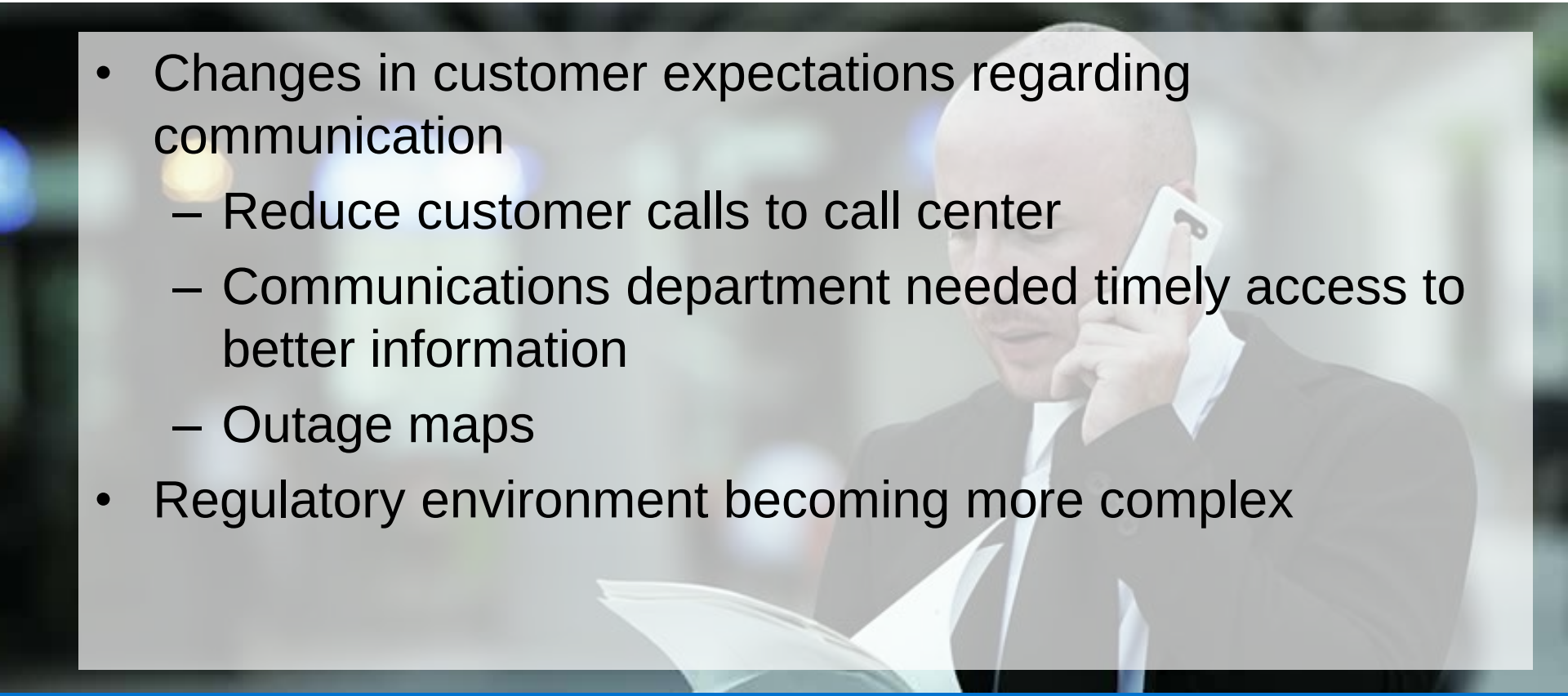
- Electrical Distribution Utility
  - 16 Urban Pockets over 2500 sq.km
  - Primarily 27.6 kV and 4.1 kV Distribution
- 100 Employees
- 40,000 Customers
- OSISoft User Since 2012
- ESRI ArcGIS with
- Survalent SCADA
- Harris Northstar CIS



Business Challenges

- First appearance of Big Data in the utility
  - Limited time archival of smart meter and SCADA data
- Multiple consumers with differing data needs
  - Retention of granular data not just min, max, avg
- Complex verification, estimation and reporting
  - MDM/R, Regulatory Exercises

Business Challenges

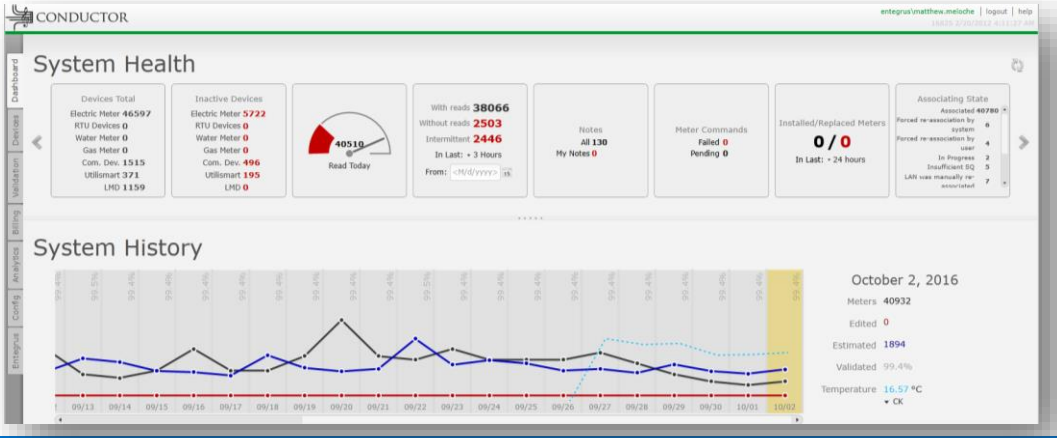


- Changes in customer expectations regarding communication
  - Reduce customer calls to call center
  - Communications department needed timely access to better information
  - Outage maps
- Regulatory environment becoming more complex

Entegrus' Solution

Conductor MDM

- Backed by the PI System
- Business Intelligence layer
- Permanent record of all meter data and metadata
- Integration with metering, reporting, customer information and IT security systems

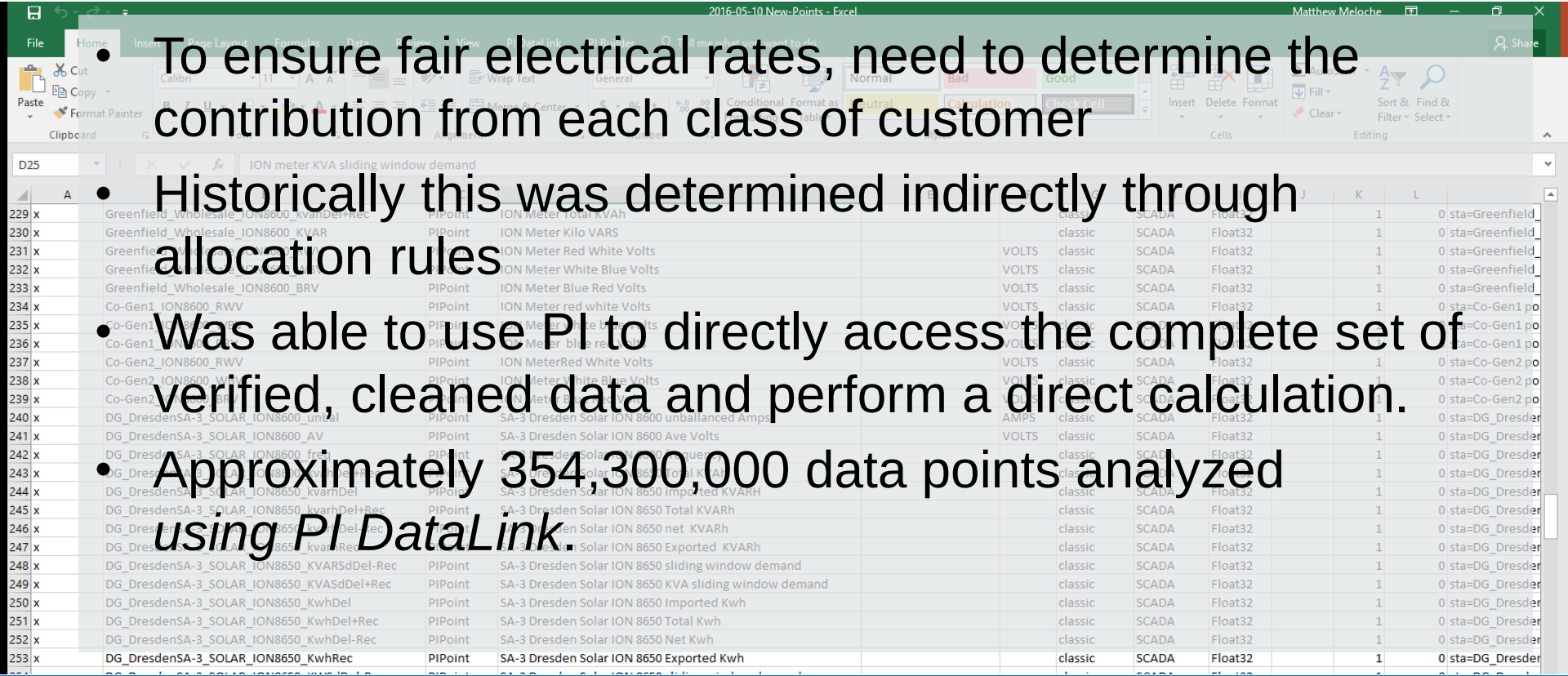


PI as SCADA Historian

- Integration between the PI System and the SCADA system
- Recording of all status and analogs
- Ability to replay sequence of events
- Managed through PI Builder

Example: Demand Allocation

- To ensure fair electrical rates, need to determine the contribution from each class of customer
- Historically this was determined indirectly through allocation rules
- Was able to use PI to directly access the complete set of verified, cleaned data and perform a direct calculation.
- Approximately 354,300,000 data points analyzed *using PI DataLink*.



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231	x	Greenfield_Wholesale_ION8600_RWV	PIPoint	ION Meter Red White Volts		VOLTS	classic	SCADA	Float32	1	0	sta=Greenfield_
232	x	Greenfield_Wholesale_ION8600_WBV	PIPoint	ION Meter White Blue Volts		VOLTS	classic	SCADA	Float32	1	0	sta=Greenfield_
233	x	Greenfield_Wholesale_ION8600_BRV	PIPoint	ION Meter Blue Red Volts		VOLTS	classic	SCADA	Float32	1	0	sta=Greenfield_
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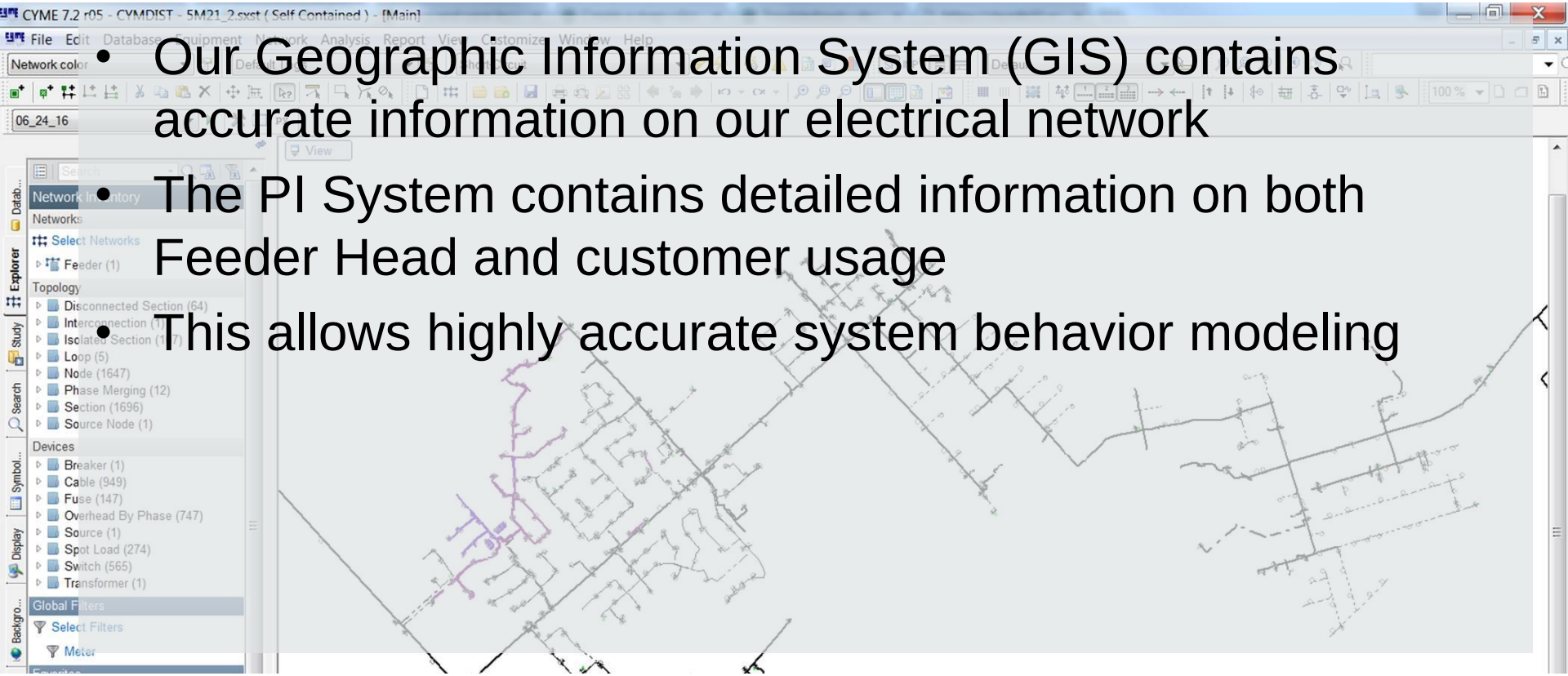
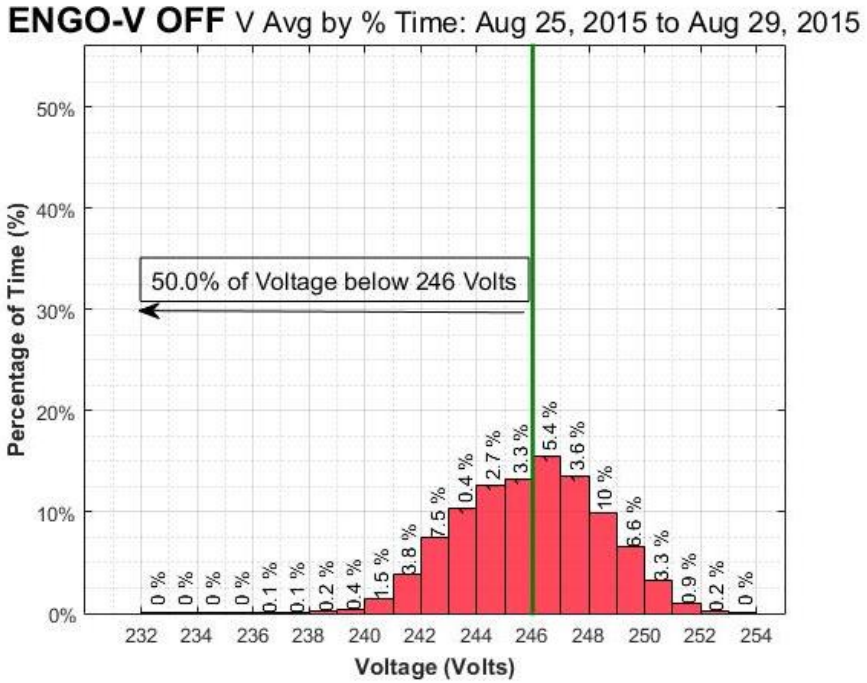
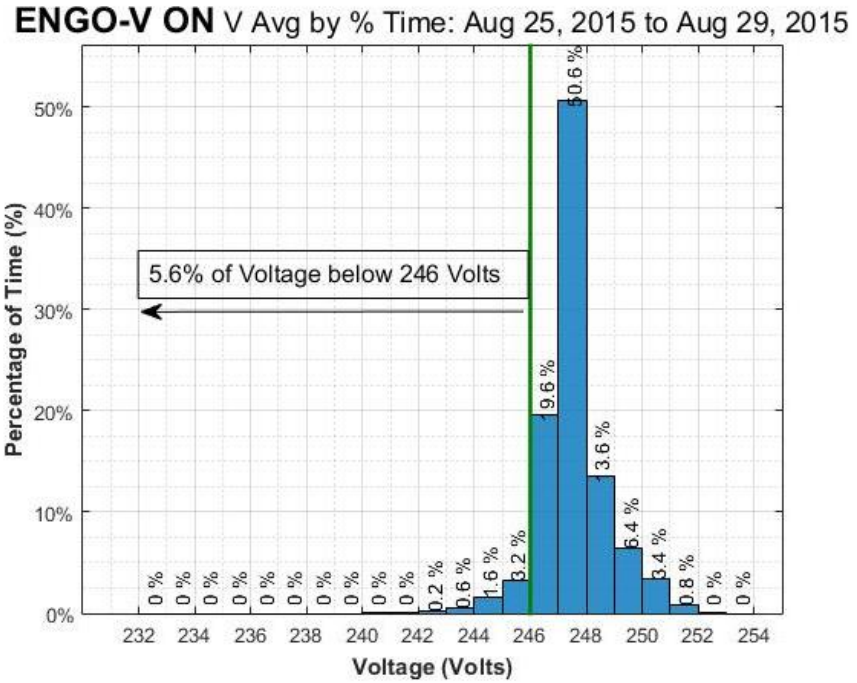
Example: Engineering Analysis

- Our Geographic Information System (GIS) contains accurate information on our electrical network
- The PI System contains detailed information on both Feeder Head and customer usage
- This allows highly accurate system behavior modeling

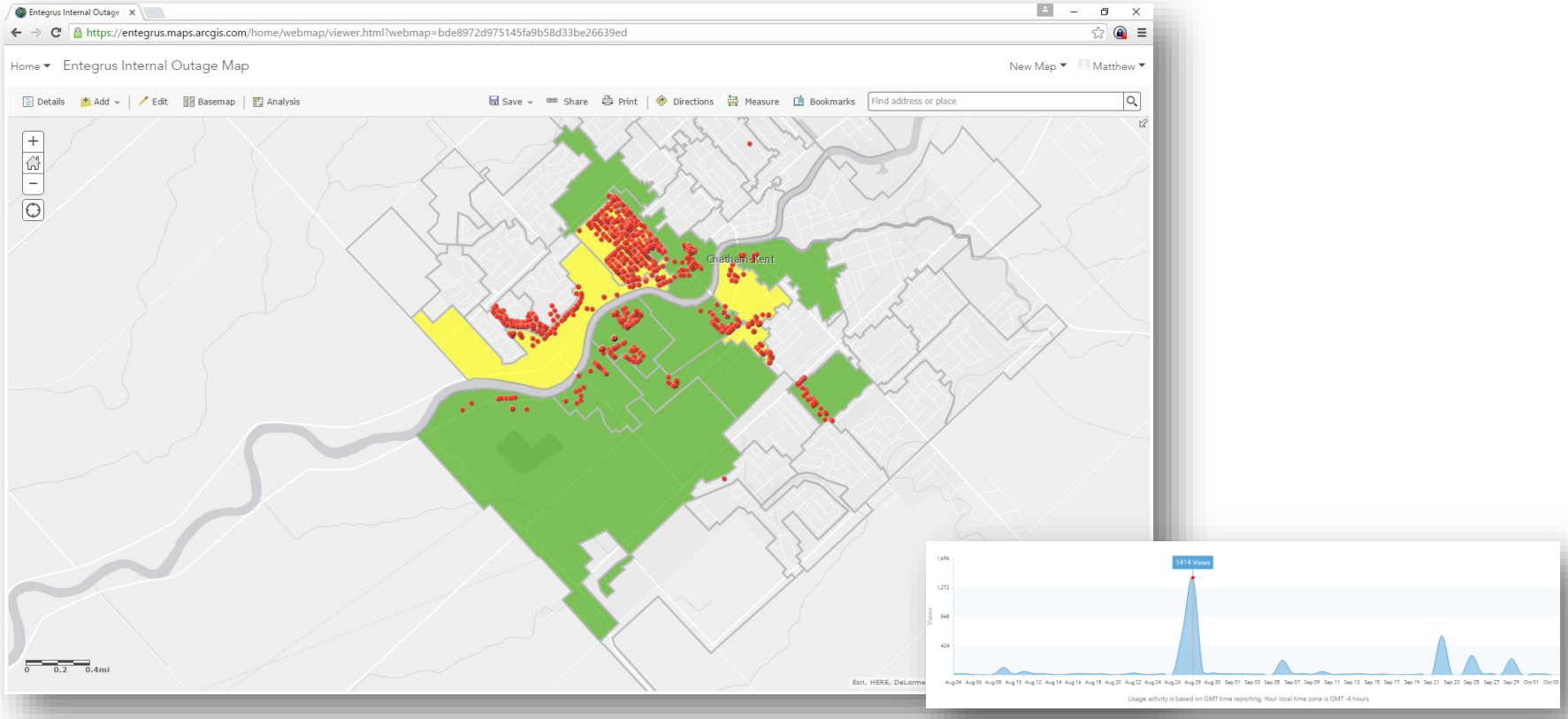


Example: Smart-Capacitor Placement



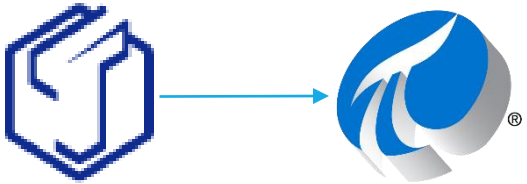


Example: Customer Notification

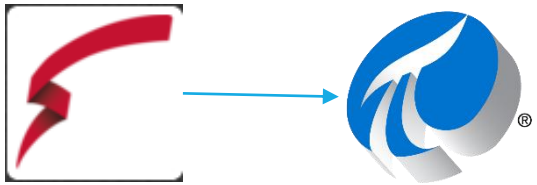


Entegrus Solution Architecture

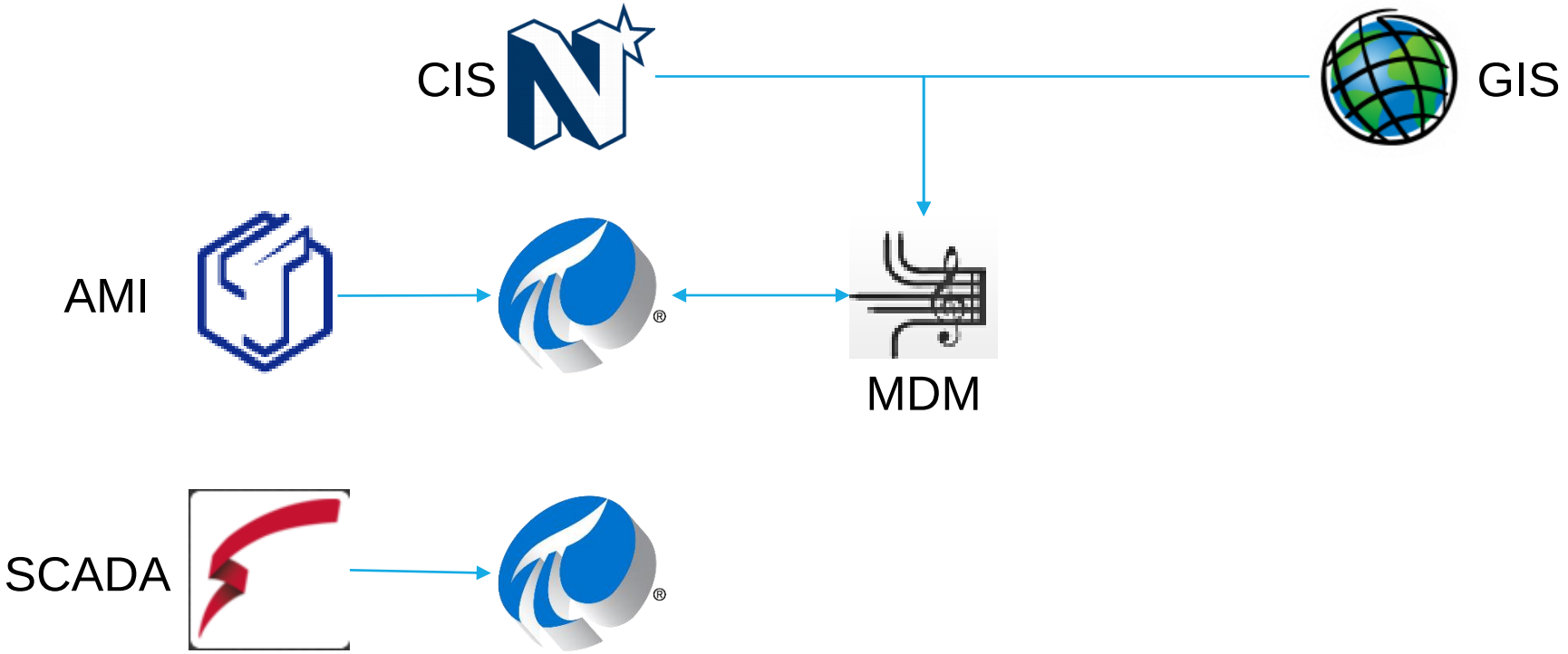
AMI



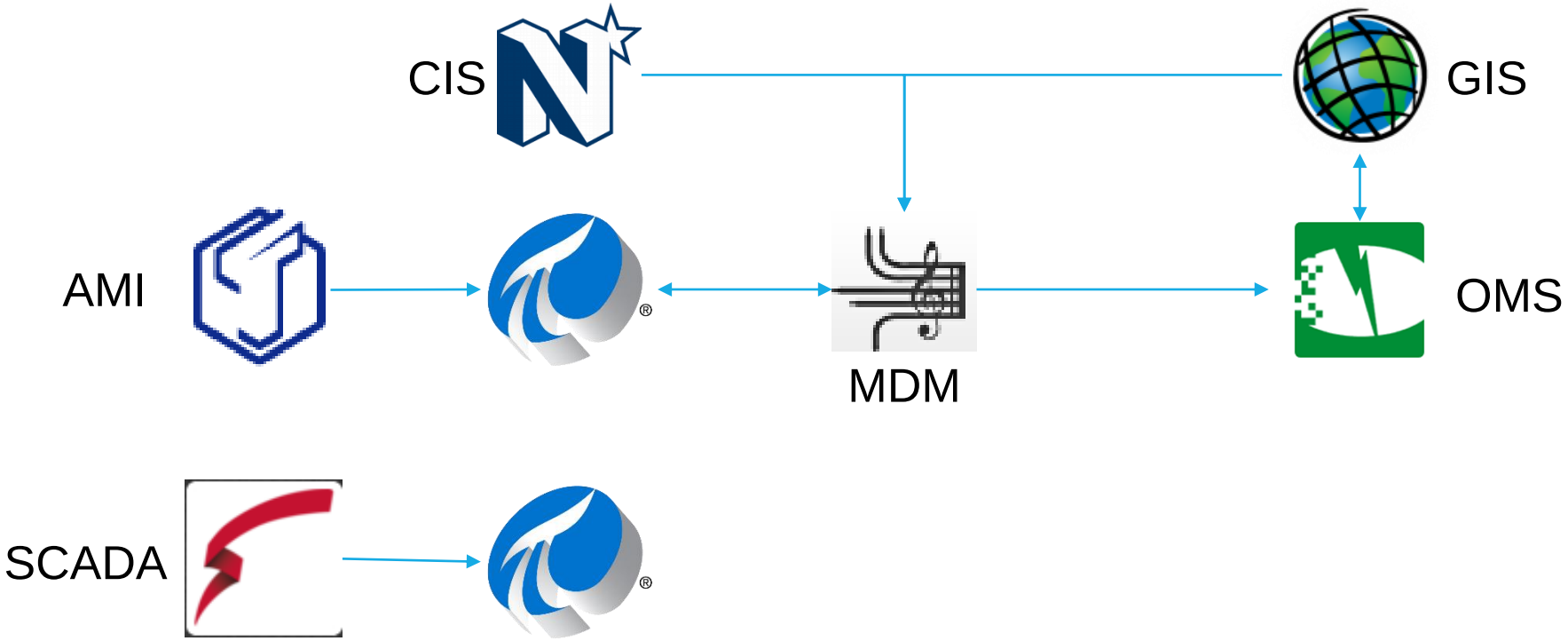
SCADA



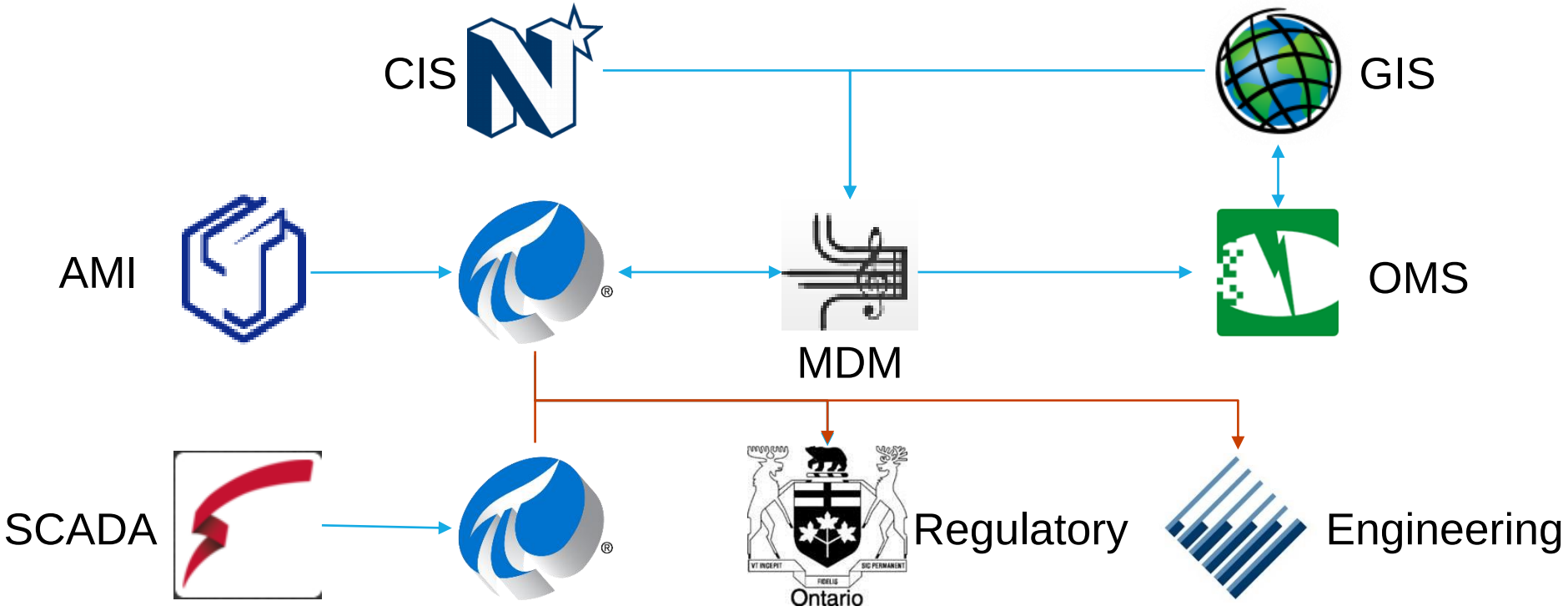
Entegrus Solution Architecture



Entegrus Solution Architecture



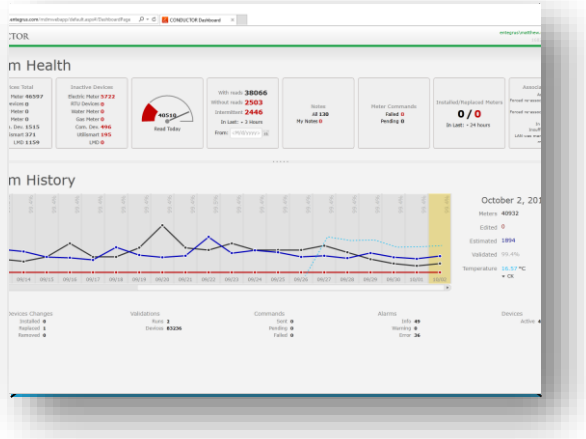
Entegrus Solution Architecture



In Closing

COMPANY and GOAL

Entegrus Powerlines, an Local Distribution Company needed a stable consistent data Concentration, distribution and archival platform



CHALLENGE

Eliminate data silos and enable the transformation of our distribution grid

- Huge increase in data volumes
- Rapidly increasing regulatory, customer and engineering requirements

SOLUTION

Integrate the PI System with existing enterprise systems to provide a central place to access and store our operational data

- Integrations via Multispeak, ICCP, direct ODBC
- Data Access via Web services, SQL and PI DataLink

RESULTS

Using the PI System, Entegrus has been able to leverage existing investments to enable new applications and better customer service

Contact Information

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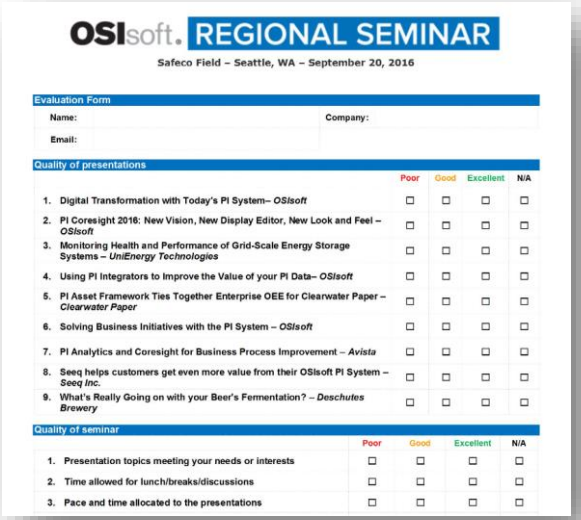
Questions

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

State your **name & company**

Please remember to…

Complete the Survey for this session



OSIsoft. REGIONAL SEMINAR

Safeco Field – Seattle, WA – September 20, 2016

Evaluation Form

Name: Company:

Email:

Quality of presentations

	Poor	Good	Excellent	N/A
1. Digital Transformation with Today's PI System– *OSIsoft*	☐	☐	☐	☐
2. PI Coresight 2016: New Vision, New Display Editor, New Look and Feel – *OSIsoft*	☐	☐	☐	☐
3. Monitoring Health and Performance of Grid-Scale Energy Storage Systems – *UniEnergy Technologies*	☐	☐	☐	☐
4. Using PI Integrators to Improve the Value of your PI Data– *OSIsoft*	☐	☐	☐	☐
5. PI Asset Framework Ties Together Enterprise OEE for Clearwater Paper – *Clearwater Paper*	☐	☐	☐	☐
6. Solving Business Initiatives with the PI System – *OSIsoft*	☐	☐	☐	☐
7. PI Analytics and Coresight for Business Process Improvement – *Avista*	☐	☐	☐	☐
8. Seeq helps customers get even more value from their OSIsoft PI System – *Seeq Inc.*	☐	☐	☐	☐
9. What's Really Going on with your Beer's Fermentation? – *Deschutes Brewery*	☐	☐	☐	☐

Quality of seminar

	Poor	Good	Excellent	N/A
1. Presentation topics meeting your needs or interests	☐	☐	☐	☐
2. Time allowed for lunch/breaks/discussions	☐	☐	☐	☐
3. Pace and time allocated to the presentations	☐	☐	☐	☐

Thank You