

# PQDashboard User's Group

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## Survey Results

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# Sample Size

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There were 7 survey participants

# Degree of Satisfaction in 4 Areas

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- Data Collection
- Data Processing
- Data Use and Dissemination
- System Maintenance

1. Satisfied
2. Somewhat Satisfied
3. Situation is OK
4. Somewhat Dissatisfied
5. Dissatisfied
6. No Opinion

# Satisfaction with Data Collection

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- With the meters?  
Somewhat Satisfied (range 1-4)
- With data transport and communications?  
Situation is OK (range 1-5)
- With the central data acquisition system  
Somewhat Satisfied (range 1-3)
  
- Biggest challenges?
  - Slow downloads
  - IP communications to all sites
  - Dial-up meters
  - Data handlers for vendor's IEDs

# Satisfaction with Data Processing

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- Event data storage and retrieval?  
**Somewhat Satisfied** (All are somewhat satisfied)
- Trending data discovery and visualization?  
**Situation is OK** (range 1-4)
- Software for ad-hoc engineering studies  
**Somewhat Satisfied** (range 1-2)
- Ability to share data and enable collaboration  
**Situation is OK** (range 1-5)
- Biggest challenges?
  - Getting the data into Excel
  - Single tool to process data from all devices
  - Creating useable data
  - Need more automation to alert to issues

# Satisfaction with Data Use and Dissemination

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- Event data discovery and visualization?  
Somewhat Satisfied (range 1 to 3)
- Trending data discovery and visualization?  
Situation is OK (range 1-4)
- Software for ad-hoc engineering studies  
Somewhat Satisfied (range 1-5)
- Ability to share data and enable collaboration  
Situation is OK (range 1-5)
  
- Biggest challenges?

# Satisfaction with System Maintenance

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- System setup and configuration?  
Somewhat Satisfied (range 1 to 3)
- Vendor support services?  
Situation is OK (range 1-4)
- Biggest challenges?
  - Vendor responsiveness
  - Licensing Requirements

# Overall Result

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- In all area's that are individual points of dissatisfaction and as well as those that are satisfied.
- On average, there is “some” satisfaction in all areas.
- The lowest scoring (least satisfaction) items are:
  - Data transport and communications
  - Trending data discovery and visualization
  - Ability to share data and enable collaboration
  - Vendor support services



# Suggestions for EVENT Data Management & Use

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- Data from multiple devices should be shown in one location
- Integration with other systems such as asset management databases, SCADA, historians, GIS databases, planning models, outage coordination models, etc.
- Customized email to key areas rather than relying on vendor emails that show just the worst phase magnitude
- We struggle with time-sync of our meters. e.g., 8650's can be out by 30 seconds due to Measurement Canada requirements for demand calculations. An intelligent way of aggregating waveforms from different meters could help with this. It could use one, or a combination of these approaches:
  - Group based on event similarities (e.g., same sag duration, but different depth)
  - Group based on time offset over time (e.g., one meter is always x seconds behind the other)

# Suggestions for TRENDING Data Management & Use

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- An easier to use trending tool
- Using Dashboard rather than each vendor's software
- Trending tool that is not only vendor agnostic but also data type and rate agnostic: PQM trend data (Ten Minute Min/Max/Avg), SCADA RTU (sample every few seconds), PMU (rms sample every cycle), Waveform (1000s of samples per cycle), etc.
- Steady state alarming. Refine the processing of steady state alarming to focus on the legitimate alarms. Common nuisance alarms include:
  - Momentary/complete outages produce a low voltage alarm
  - Low/high PF alarm, but with low loading (typical on re-closer near the end of long lines)
  - Pst/Plt high alarms for intervals where a sag/swell occurred (i.e., IEC 4-30 flagged intervals)
  - P,Q,S alarming on negative power flow. Most of the time this is a real condition and not a concern (e.g., DG, reverse flow through N/O device, capacitor bank on circuit.)