Leveraging Operational Data to Support Business Decisions

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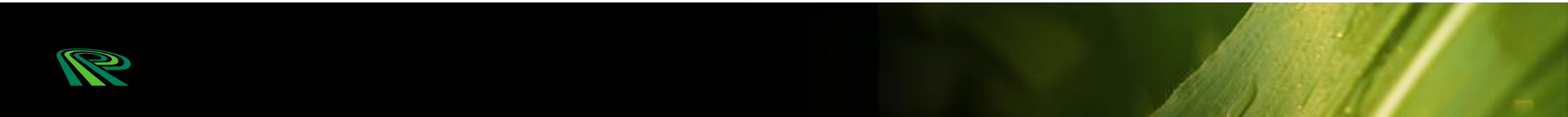
Agenda

- Why PI in PotashCorp?
- PI System Capabilities
- PI System Implementation in PotashCorp
  - PI System Standards and Data Validation
  - PI AF Hierarchy and Template Development
  - PI System Governance
- PotashCorp PI Solution Examples



Why do we need an Enterprise Historian?

Our Vision:

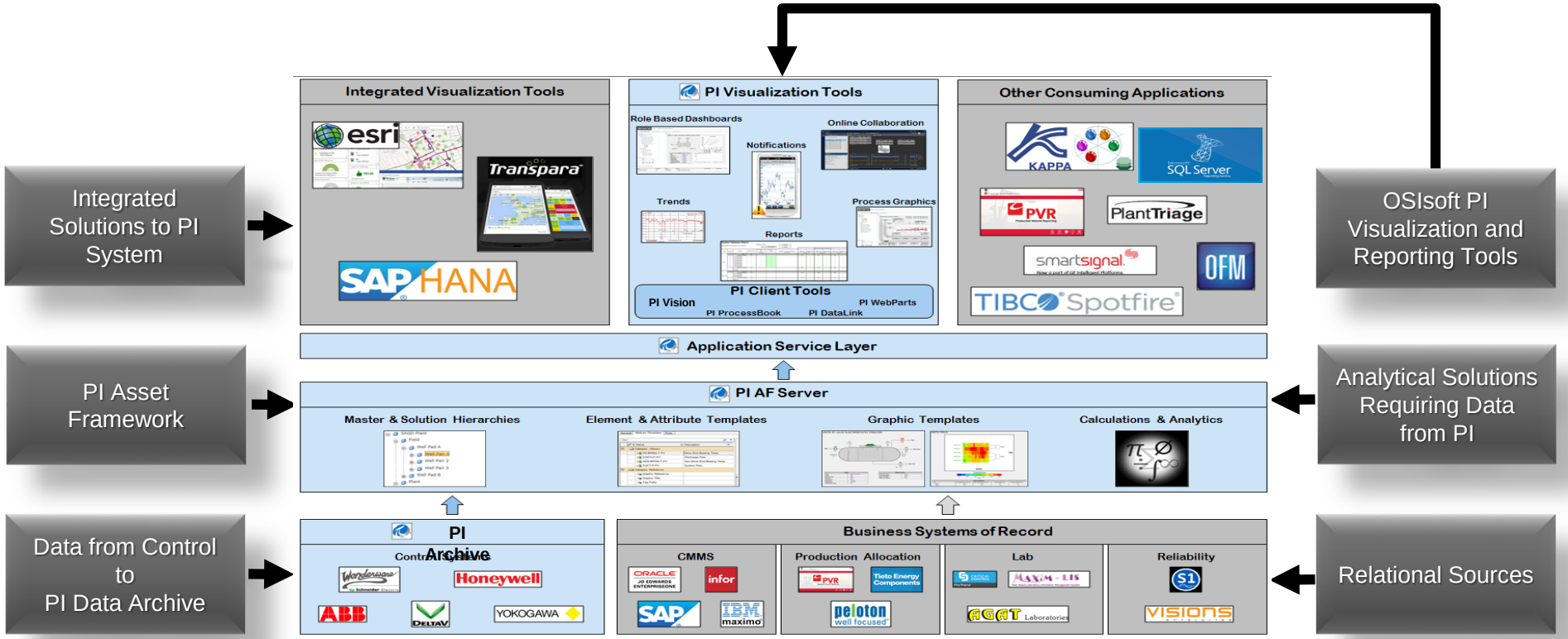
- Current Practice:
  - Decisions based primarily on historical metrics and reports.
- Goal:
  - Enhance decision making with real-time operational data by implementing an Enterprise corporate data historian.
- Approach:
  - Collaborate with PotashCorp business systems to provide timely information to the user community.

Why PI in PotashCorp?

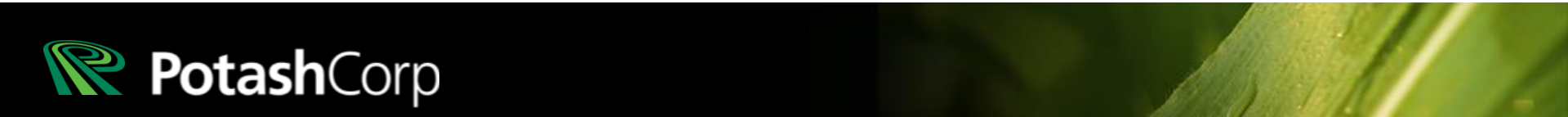
- OSIsoft's PI System is our Enterprise data historian:
  - Full Enterprise security capabilities.
  - Manages hundreds of thousands of tags at high scan rates, for the life of the assets.
  - Manages hundreds of users with no performance impact.
  - Leverages hundreds of managed interfaces to easily collect data from ANY control system.
  - Shares data effectively with analytics and other business systems using standard interfaces.
  - Jointly developed interfaces (PI Integrators) with vendors to share data with advanced analytics such as SAP Hana and Microsoft Azure.

PI System Capabilities

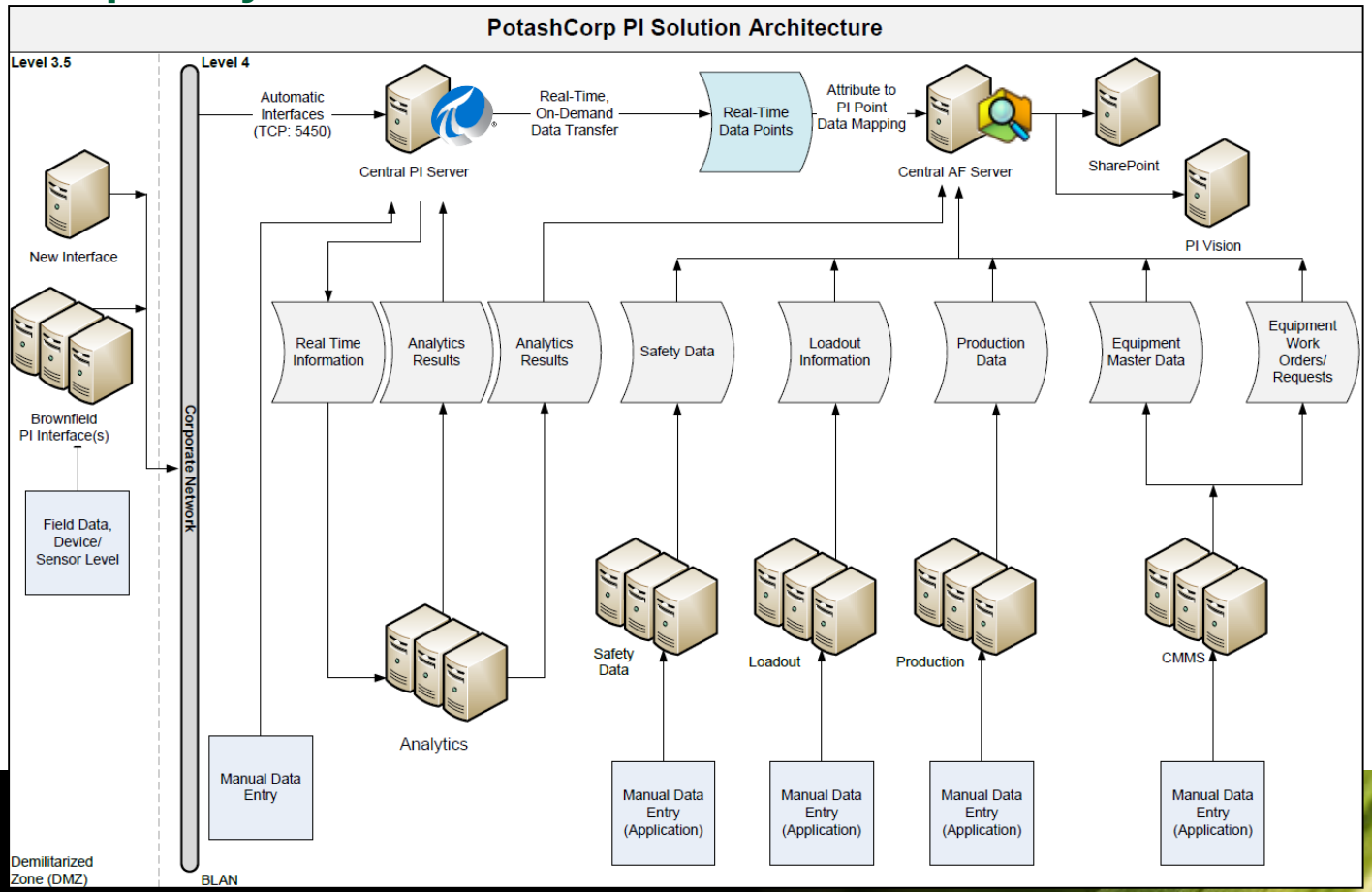
PI System Structure and Capabilities



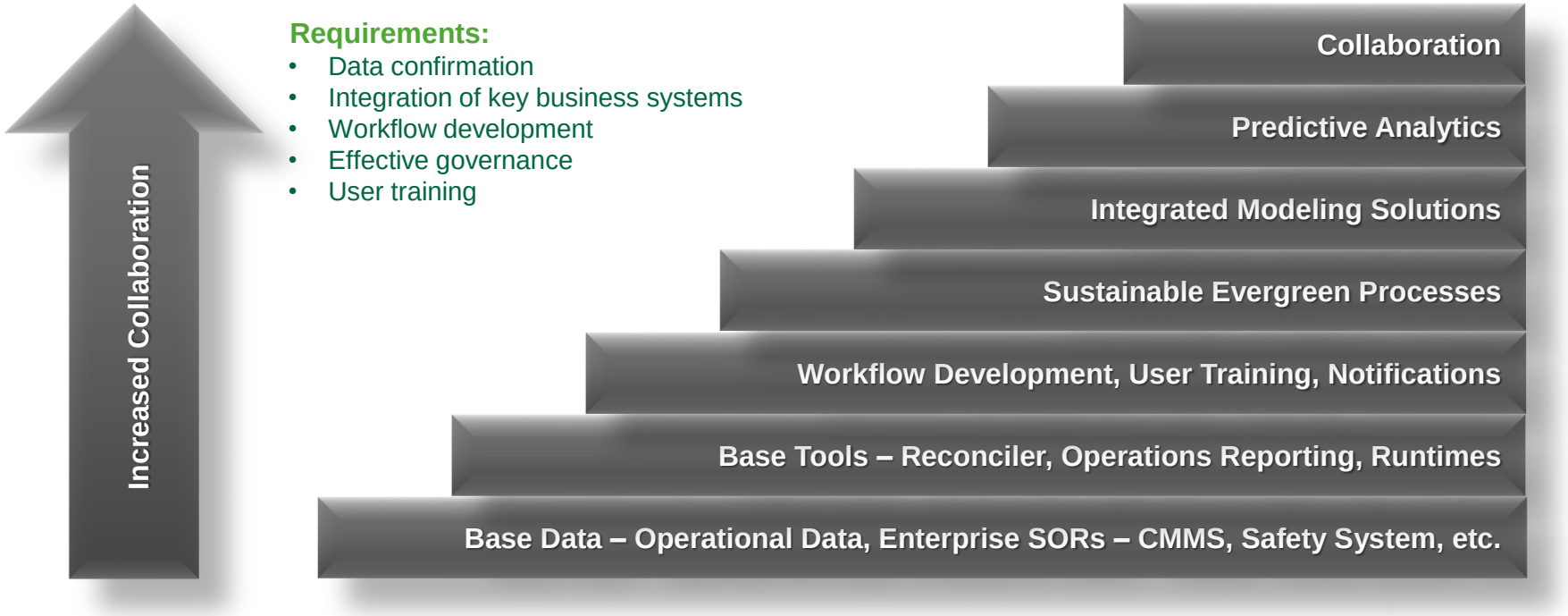
PI System Implementation at PotashCorp



PotashCorp PI System Architecture



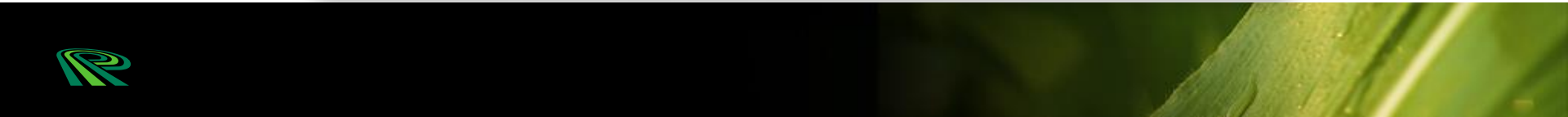
PotashCorp PI System Upgrade Approach



PI System Standards and Data Validation

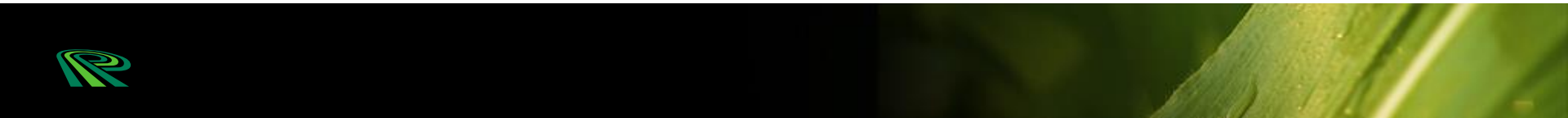
- Worked with the user community to develop a common tag naming standard across all sites
- Benefits of the new tag naming standard:
  - Allows the PI user community to easily locate and understand the PI data
  - Facilitates easy generation and maintenance of reports, process graphics, and dashboards
  - Developed PI AF templates to efficiently add new assets, equipment, reports, etc.
  - Enables PI AF elements to leverage common single display/report formats
  - Reduces the time for site administrators to manage and maintain the PI System
- Reviewed all tags, renaming and validating the source data

Data has to be trusted to be used



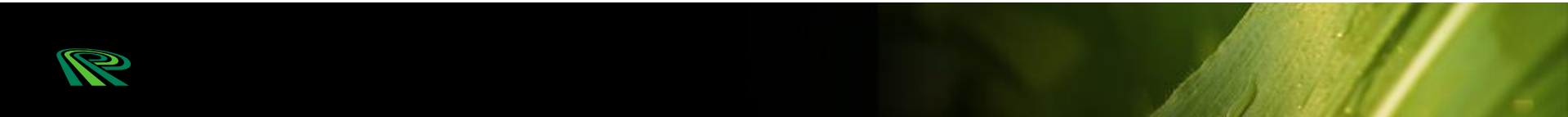
AF Hierarchy and Templates

- Developed PI AF hierarchy that compliments the Computer Maintenance Management System (CMMS) structure
- PI AF templates were developed for critical equipment and reporting
- PI AF hierarchy structure and templating ensures consistency across all sites



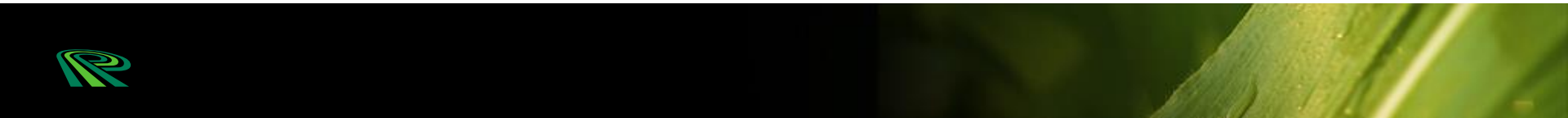
AF Integration to Corporate Systems

- Select data from Corporate Systems is made available to PI System users for context
- Integration of Corporate Systems in PI AF:
  - Loadout Information
  - Underground Production Data
  - Computer Maintenance Management System
  - Production and Inventory Data
  - Safety Data



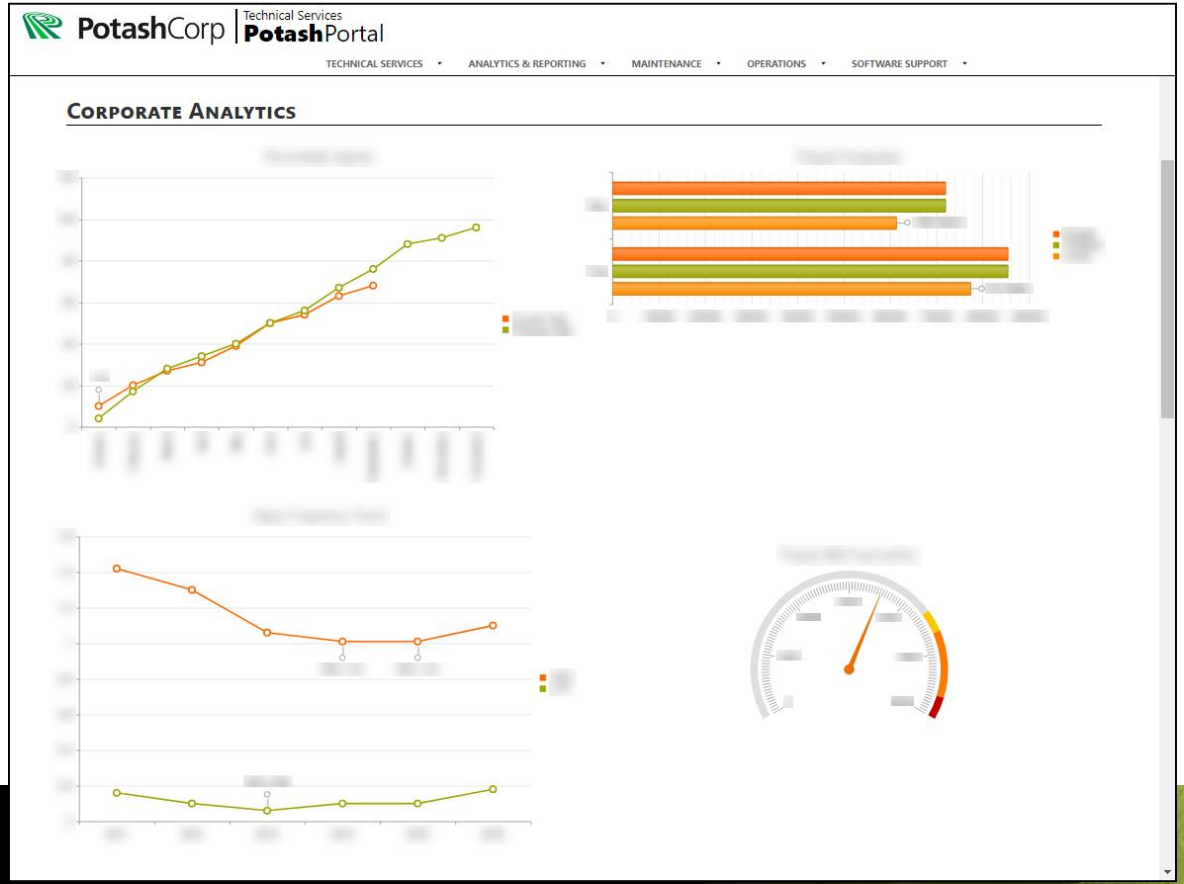
PI System Governance

- PI System Governance is required to ensure accurate, timely data for the user community
- PI System Governance is dependent on the following:
  - Establishing a cross disciplinary governance board and steering committee to govern the PI System
  - Identifying and assigning the roles and responsibilities of each member
  - Creating a set of standards, processes and procedures appropriate to manage the PI System
  - Developing an evergreen process to ensure data governance will be refreshed as changes occur in the data, systems, personnel or corporation

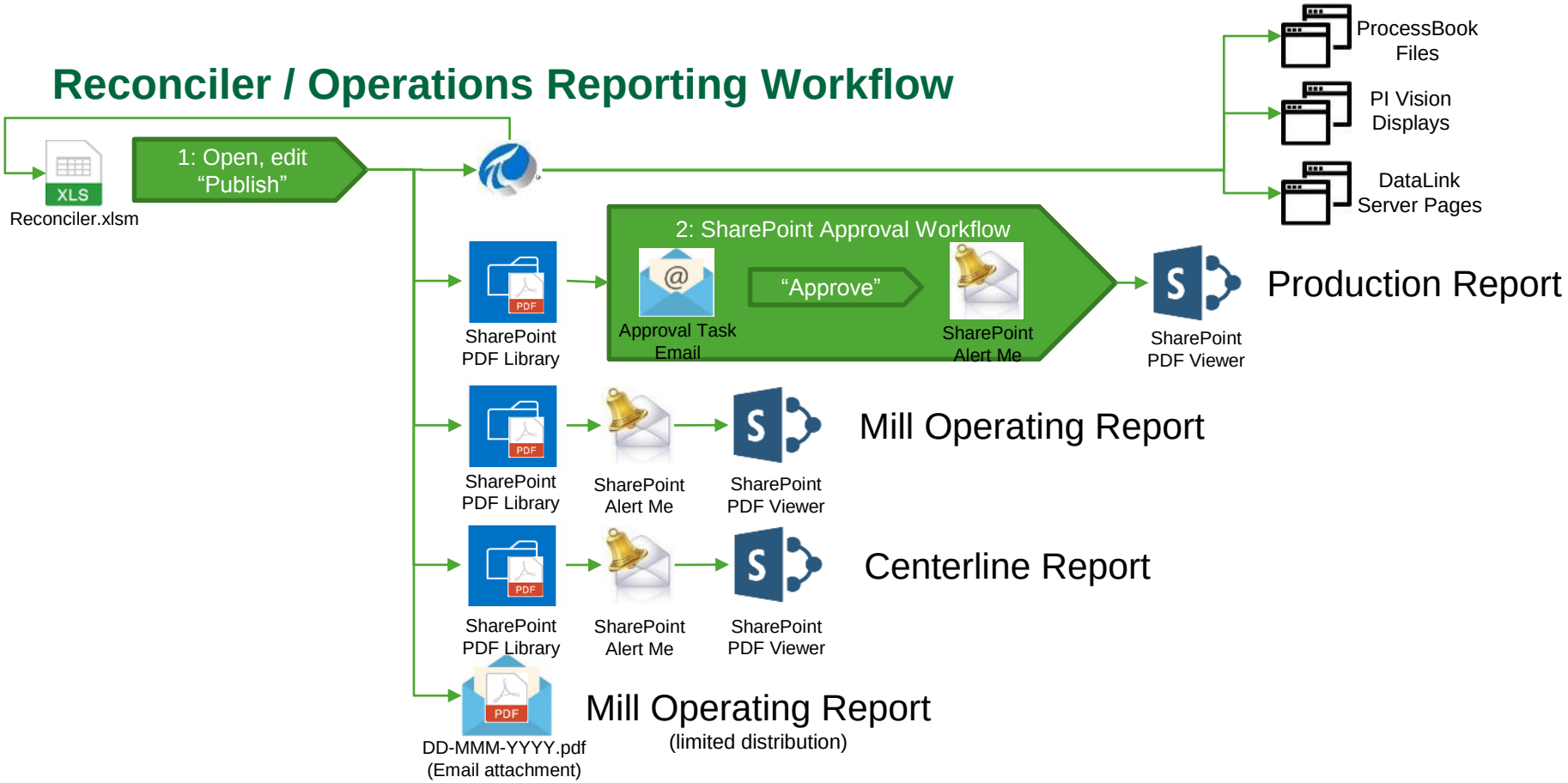


PotashCorp PI Solutions

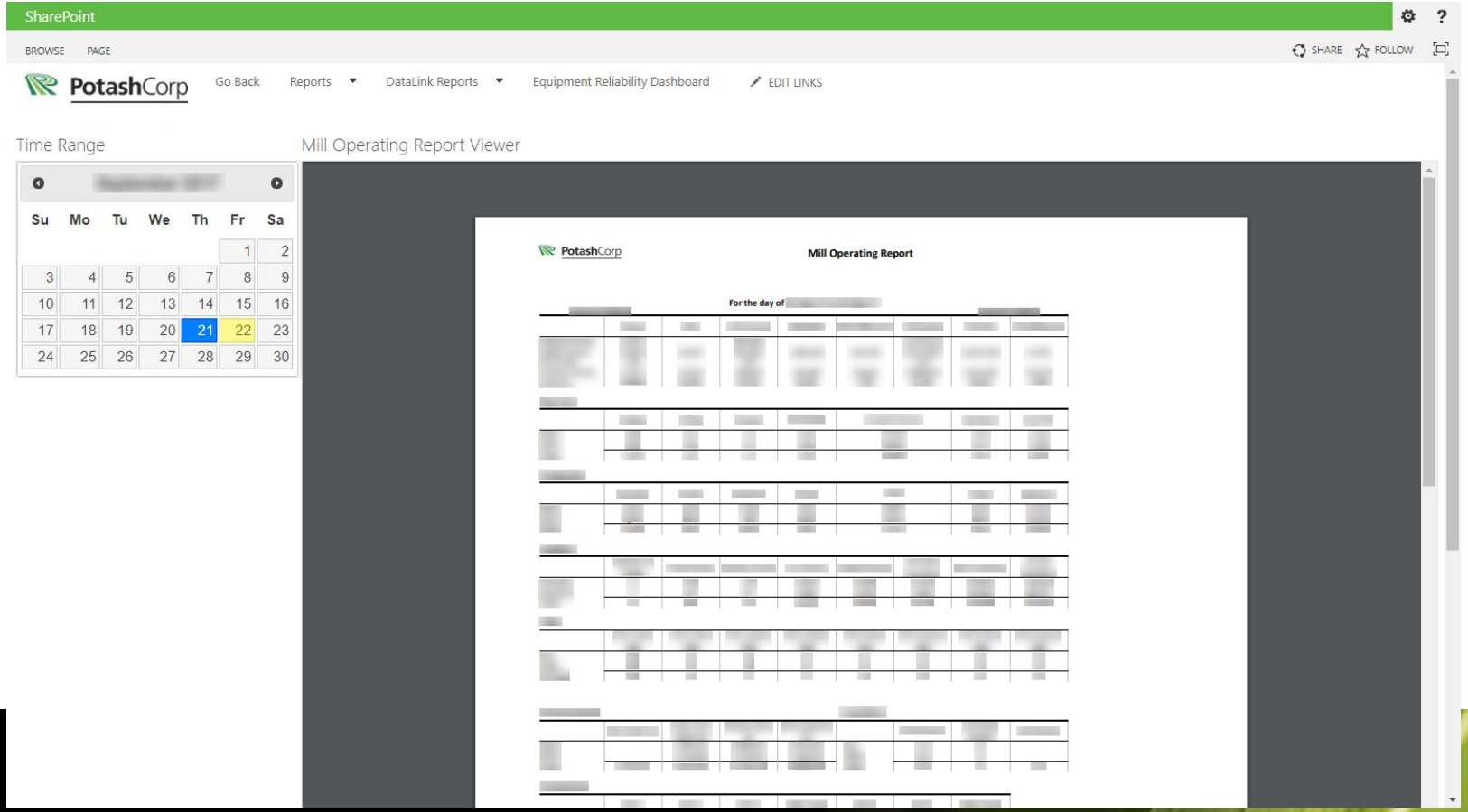
Screenshots – Potash Portal



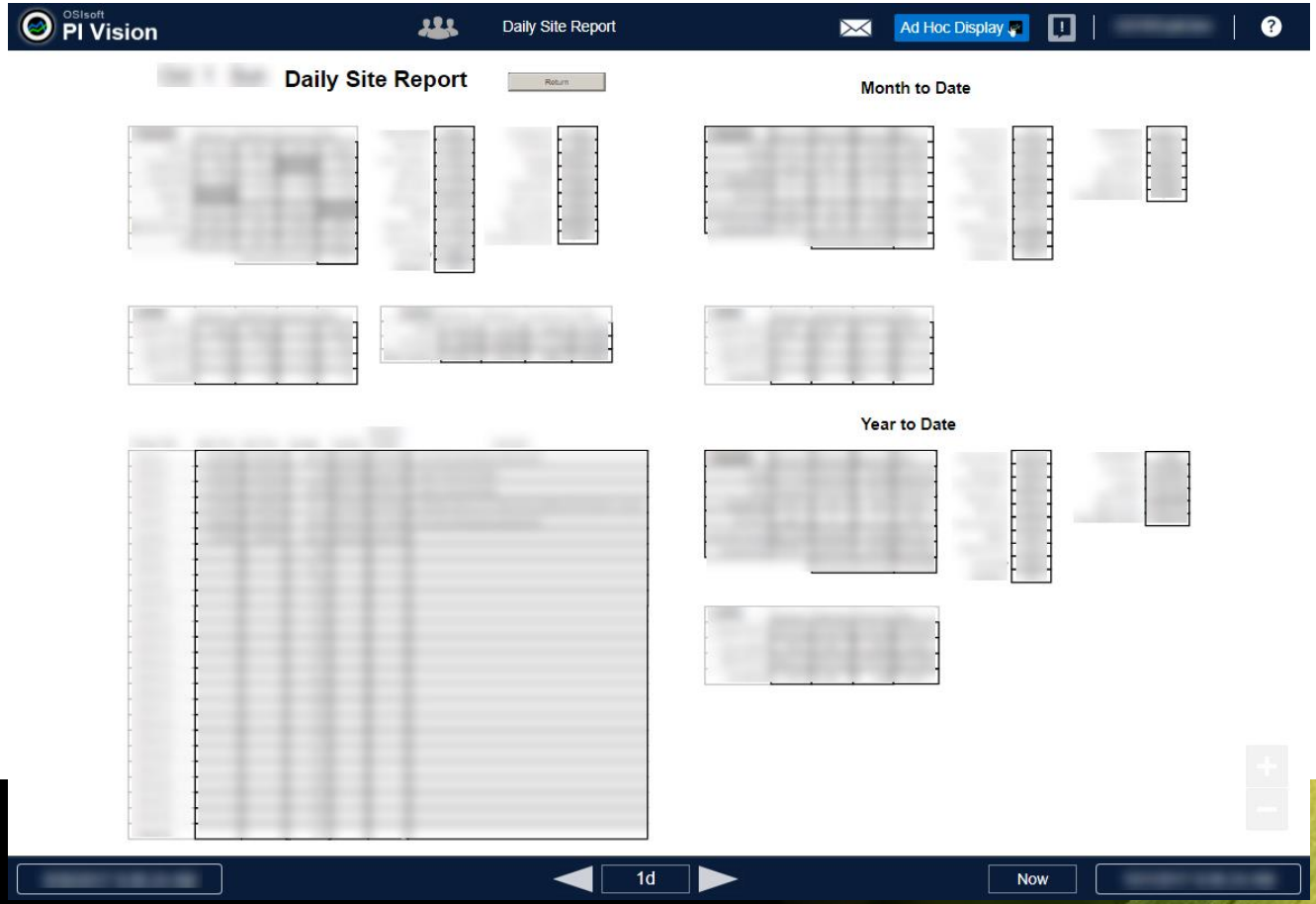
Reconciler / Operations Reporting Workflow



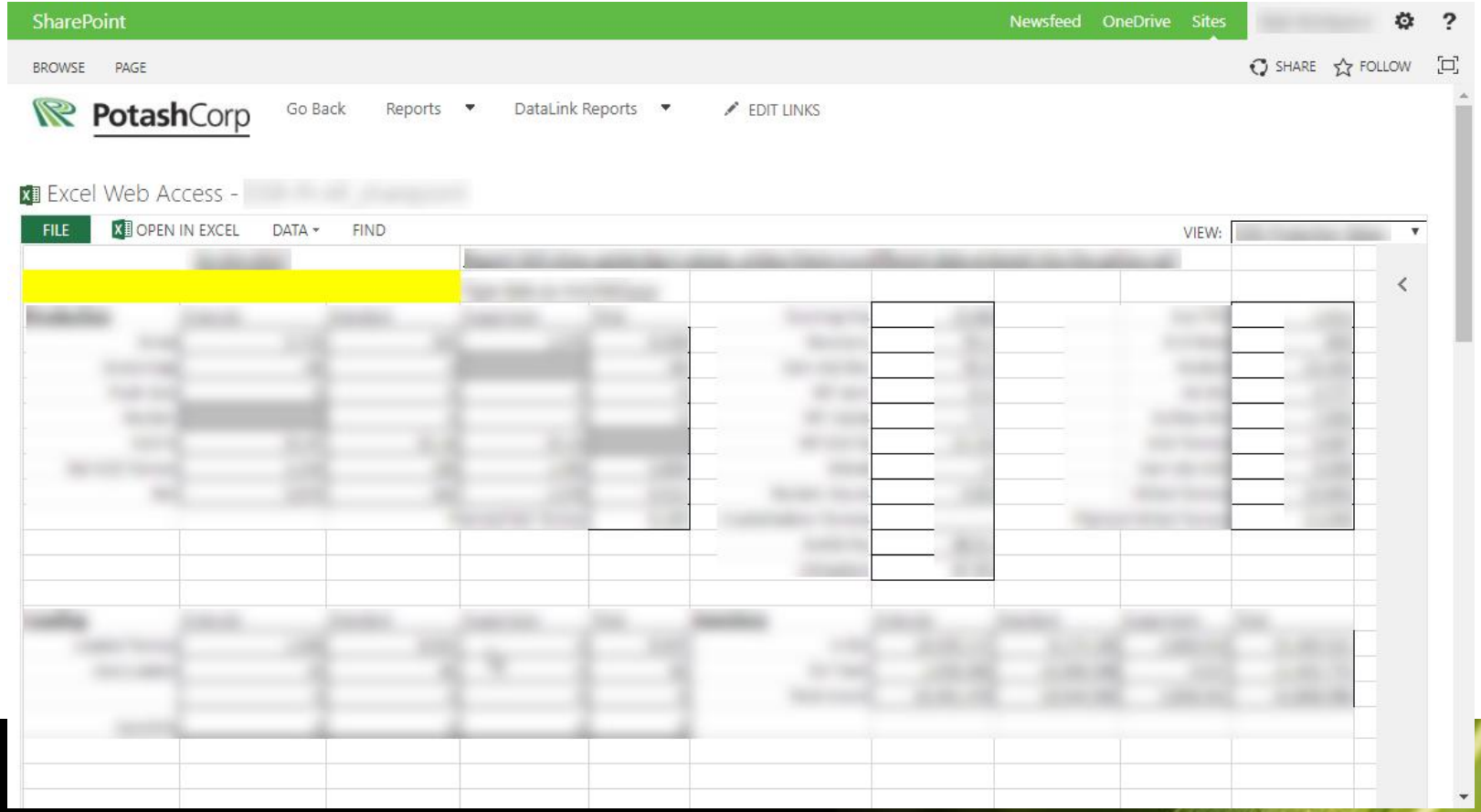
Screenshots – PDF Report Viewer



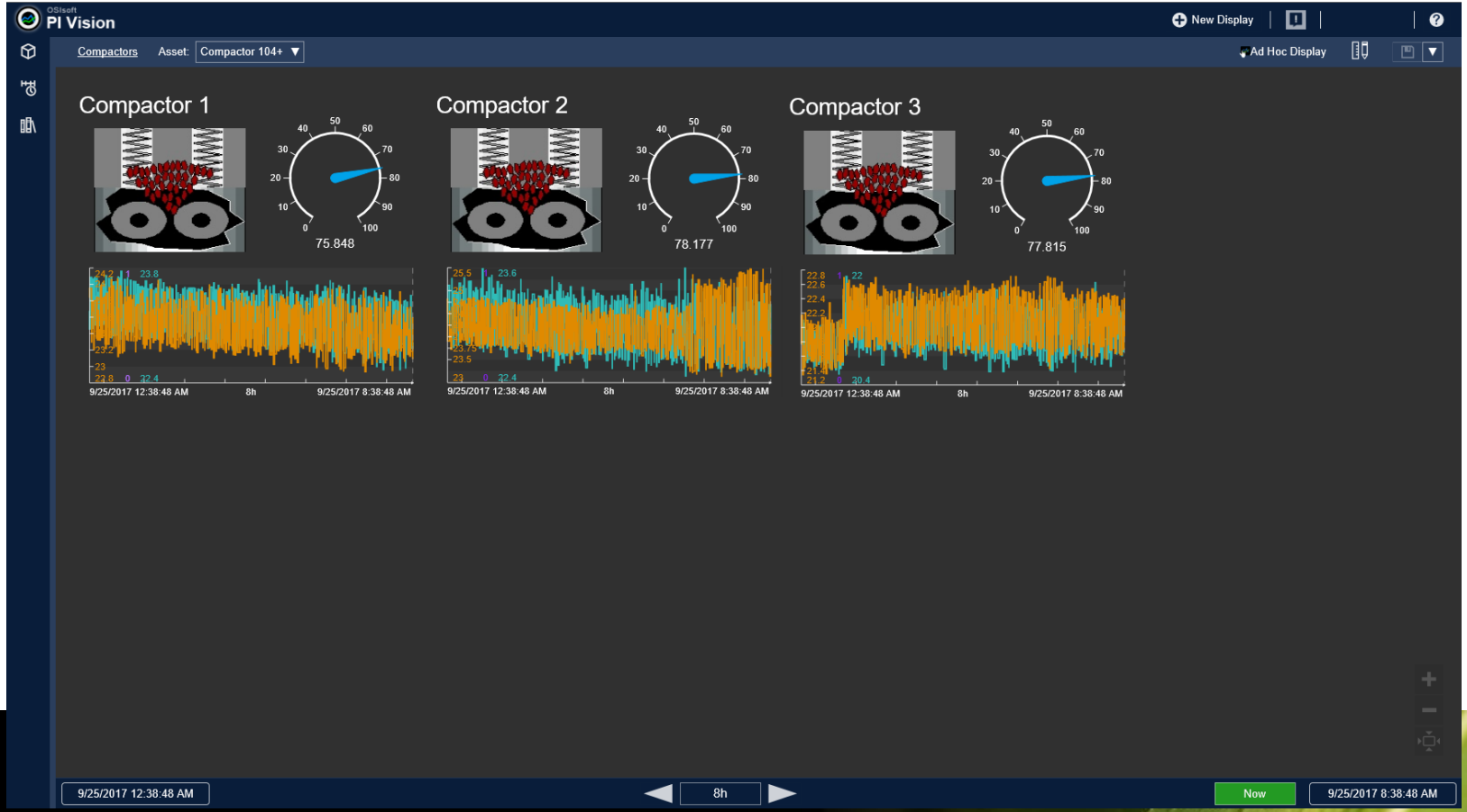
Screenshots – PI Vision Report



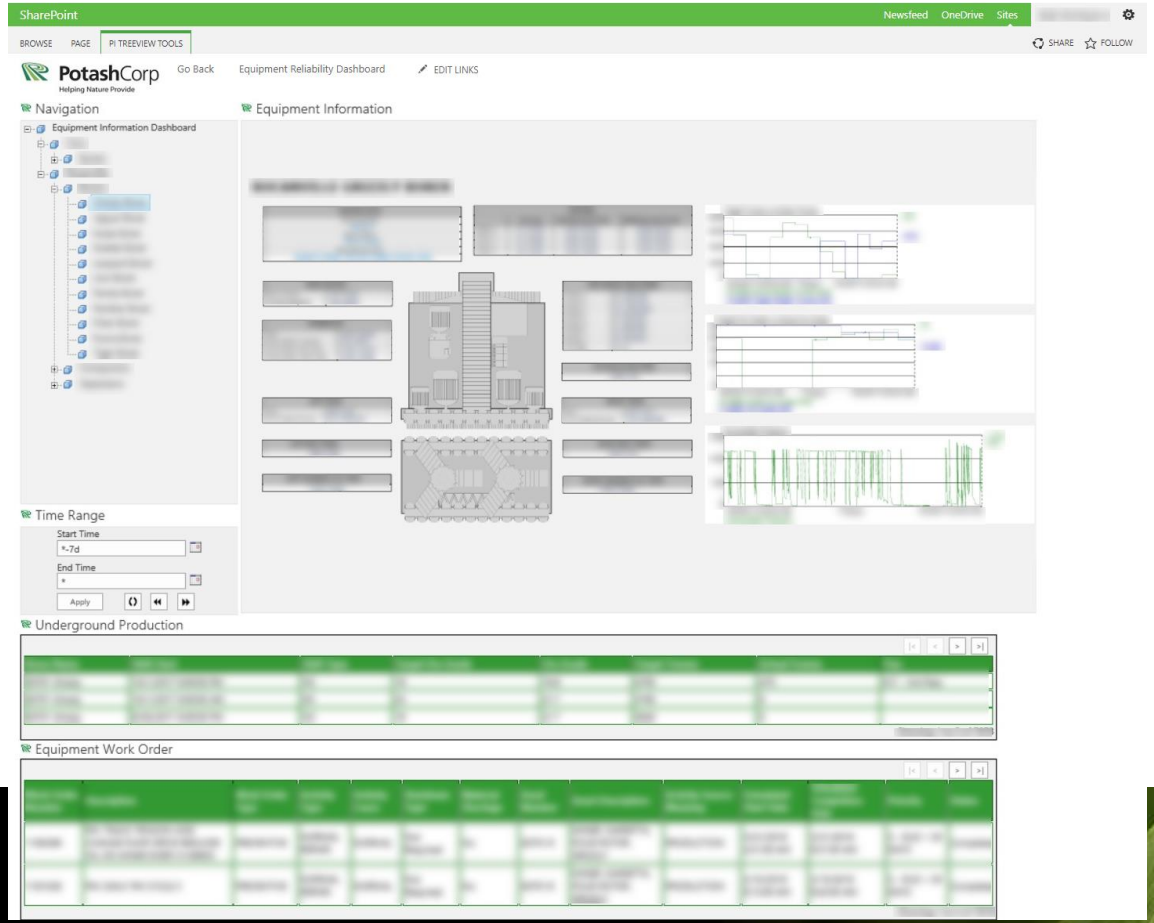
Screenshots – DataLink Server Report



Screenshots – PI Vision



Screenshots – WebParts Equipment Dashboard



Leveraging Operational Data to Support Business Decisions

COMPANY and GOAL

PotashCorp, the world's largest fertilizer company by capacity, with operations in 7 countries, **is leveraging operational data** to help feed the world.

PotashCorp
Helping Nature Provide

mera

CHALLENGE

Required consistent operational data that users could trust and easily access to make informed decisions

- Operational data that differed site to site
- Users could not locate data easily and had issues trusting the data
- PI AF was not in place

SOLUTION

Implemented PI AF and expanded client tools to provide users access to operational data.

- PI AF leveraged the corporate hierarchy in CMMS
- Validated and standardized all data in the PI System
- Integrated key business solutions
- Deployed PI client tools

RESULTS

Created a trusted source of operational data that can now be readily leveraged for business solutions

- Implemented Potash Portal for management reporting
- Deployed reconciliation engine to simplify daily production reporting
- Leveraging data foundation to support added functionality

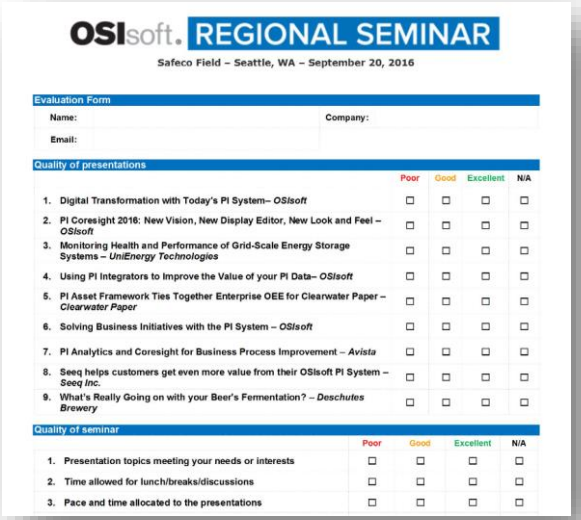
Questions

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

State your **name & company**

Please remember to…

Complete the Survey for this session



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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

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