Turning **insight** into **action**.

OSIsoft. USERS CONFERENCE 2011

Finding “The Sweet Spot” in the Paper Mill

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Agenda

- Introductions
- Background: History, Challenges, and Goals
- Centerline Proof of Concept
- Simplified Architecture
- The Results
- Next Steps

Casne Engineering, Inc

- OSIsoft Integration Partner
  - Professional Engineering
  - Control Systems
  - Technology Integration
  - Support desk services
- Utilities, Process Industries, Data Centers
- 30+ year track record

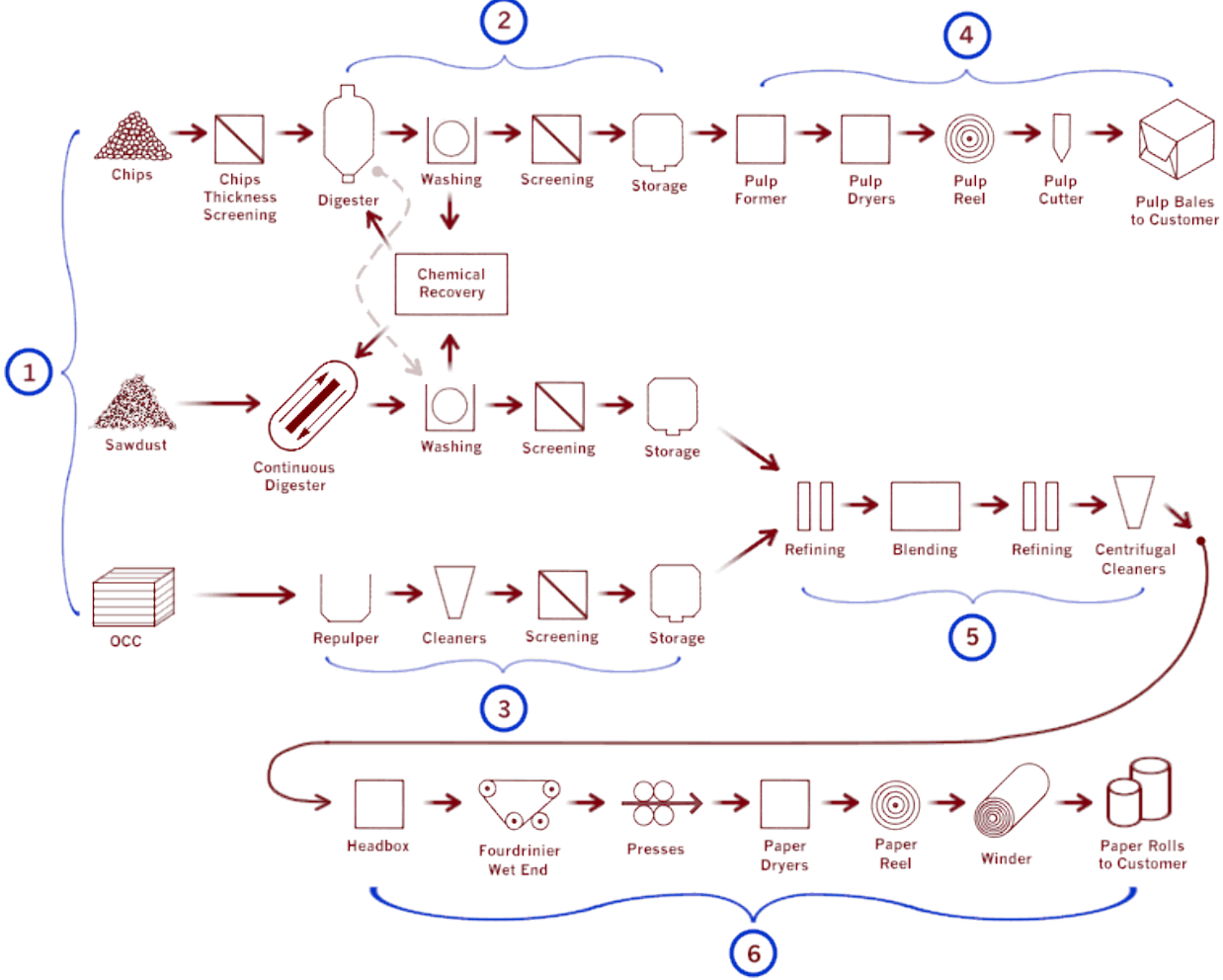
Port Townsend Paper Corporation

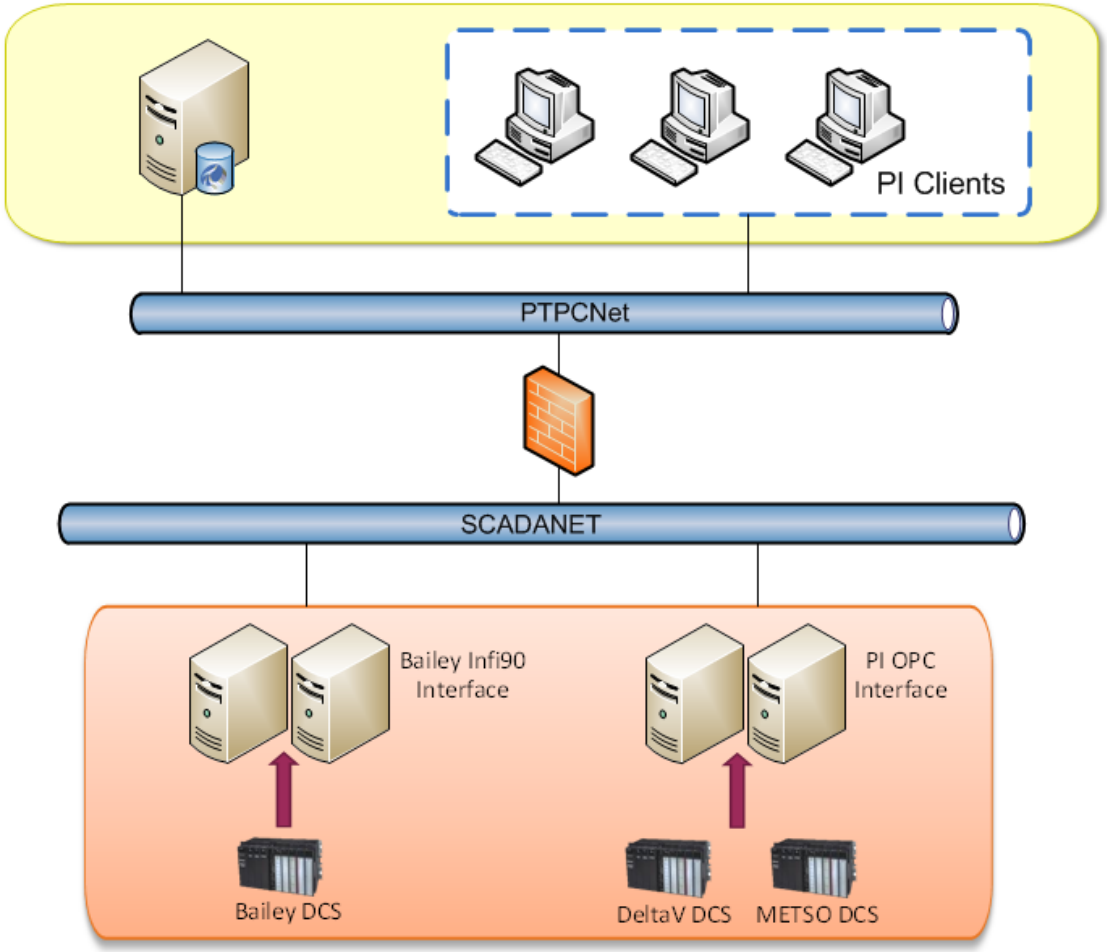
- Overview
  - Located in Port Townsend, WA
  - 280 employees
  - Produce unbleached Kraft paper, containerboard & market pulp
  - 300,000 tons per year

Port Townsend Paper Corporation

- Products & Markets
  - Kraft pulp & paper
  - Containerboard
  - Specialty products
- Blend of both virgin and recycled fibers
- Northwest softwood chips and sawdust
- Sister facility Crown Packaging in British Columbia

Process





Our PI System

PI Enterprise Server
- 5000 Tags
- Advanced Server Pack
- Data Access Pack

PI Bailey Infi90 Interface to BAILEY DCS (PM#1, Pulp Mil)

PI OPC Interface to METSO DCS (PM#2, OCC)

PI OPC Interface to DeltaV DCS (Boiler)

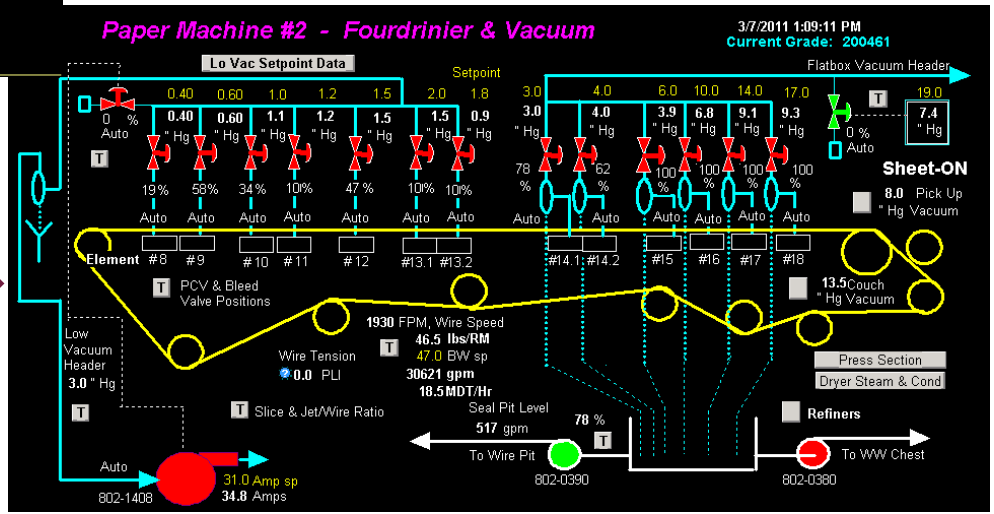
PI ProcessBook and PI DataLink (70 users)

PI SQC Client

PI Profile View

"Switchboard" PI ProcessBook Displays

- Used for Process Visualization



Product Quality Challenges

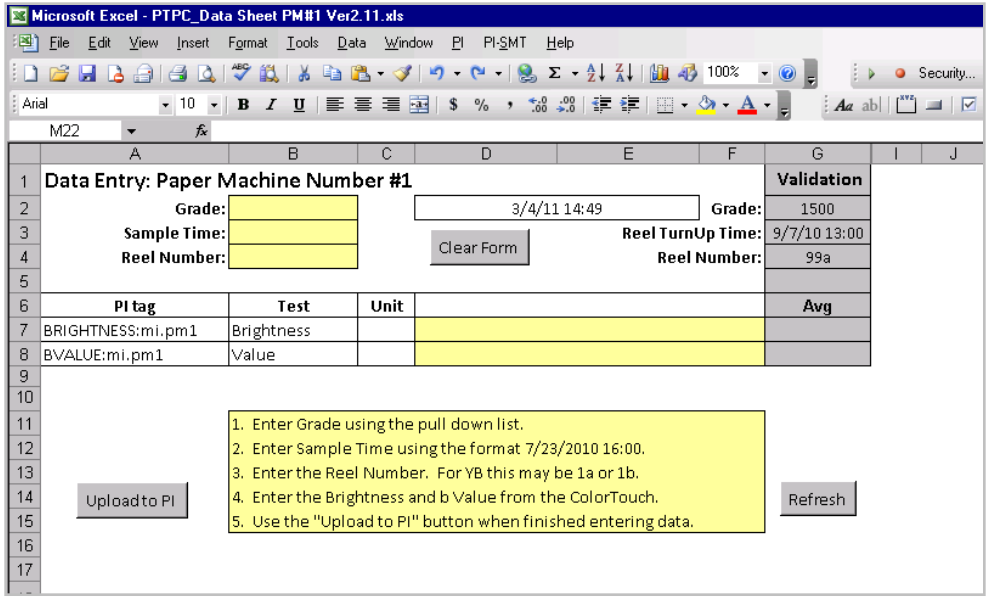
- Variation in raw material from batch to batch
- Multitude of machine setting changes between paper grades
- Variation in operator judgment
- Long periods of time between similar product runs

Centerline Proof of Concept

- Goals
  - Streamline QC data entry
  - Single source for quality and process targets
  - Get process information into the hands of the operators
  - Improve visibility & access to historical process information
  - Timely access to past quality and performance data
  - Quick and easy comparison of real time production data to historical performance data
  - Ability to communicate reasons for “off-spec” events

Solution

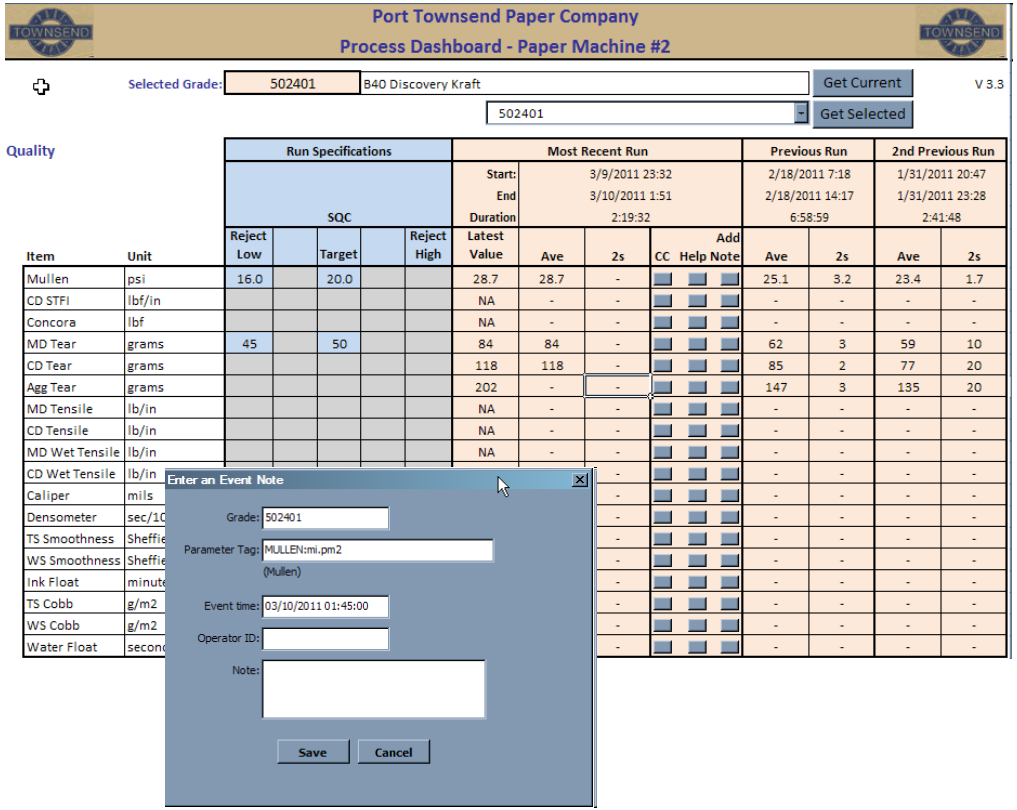
- Two Applications
  - Data Entry Application
    - **Collection of quality test results**
    - **Uploading into the PI System**
  - Process Dashboard
    - **Displaying current and historic Process, Quality & Economic Information compared to targets**
    - **Provide access to Action Trees & Event Notes**



QC Data Entry via the PI System

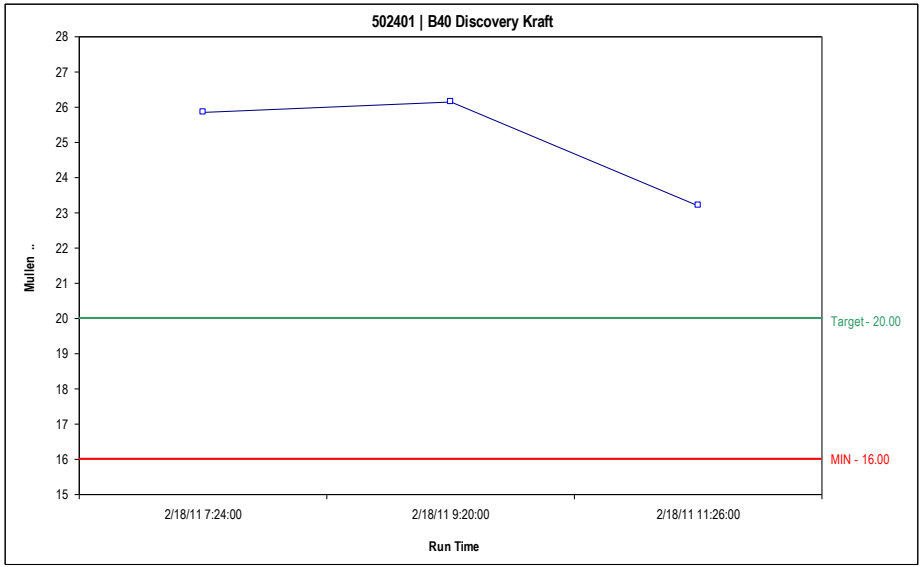
- Used to send quality data to PI for long term storage and use
- Microsoft Excel + PI DataLink = Operator familiarity
- Utilizes existing software licenses
- Simple, flexible, maintainable solution

Process Dashboard



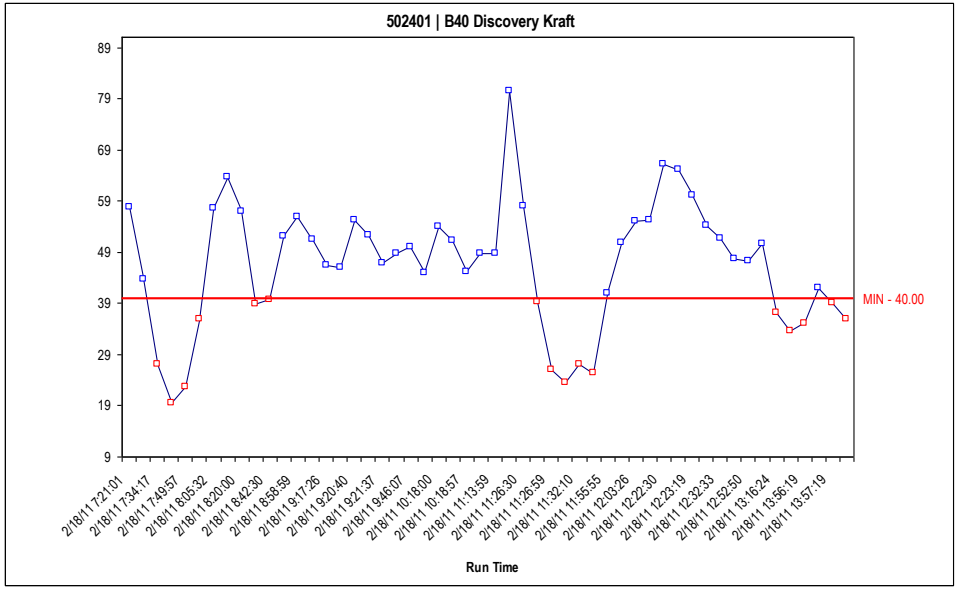
- Used by operators and managers
- Merge Data Streams
  - Quality
  - Process
  - Economic
- One-click Access to:
  - Operator notes
  - Quality Centerline charts
  - Action trees (future)

Centerline Charts



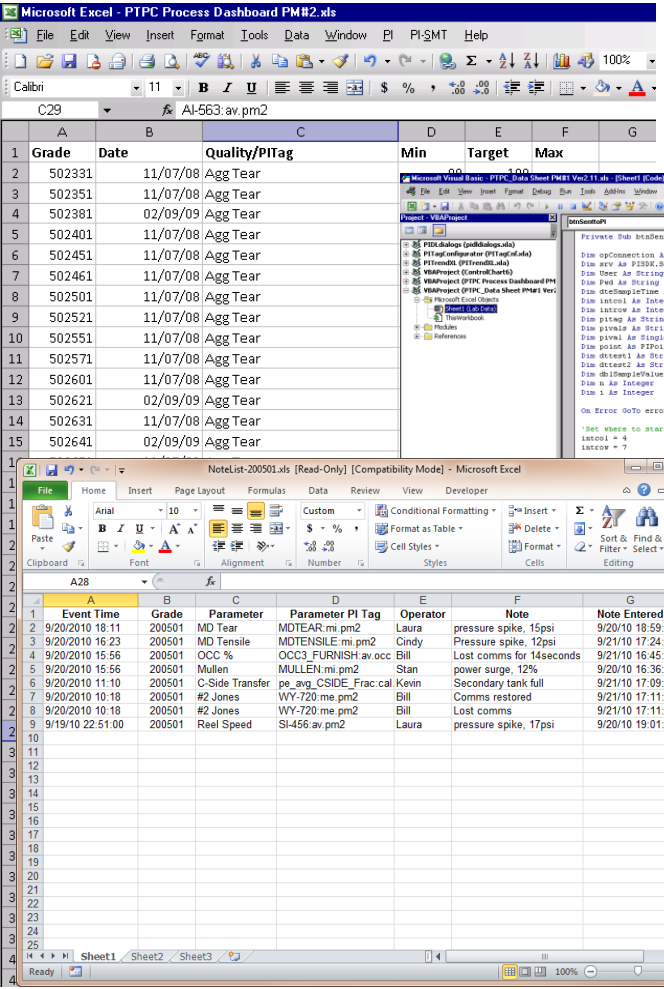
- Data from PI Server brought into Excel Charts
- Quick and easy access to quality information for same-grade runs

Centerline Charts



- Quick and easy access to Process data over time for a specific product grade
- Color Coded for Identifying Run Conditions
- Excel charts for consistent interface and easy use within reports

Simplified Architecture



- Simple = Better
- Flexible
- User Familiarity
- Cost Effective
- Maintainable

Results

- Goals met
  - ✓ Streamlined QC data entry
  - ✓ Real time monitor for machine parameters and quality performance compared to targets
  - ✓ Improved visibility & access to historical process information
  - ✓ Timely access to past quality and performance data
  - ✓ Quick and easy comparison of real time production data to historical performance data
  - ✓ Ability to communicate reasons for “off-spec” events

Results

- Tangible Benefits
  - Implementation is ongoing
  - Reduced product rejection rate
  - Standardized operating conditions
  - Improved communications amongst operators
  - Better understanding of “off-spec” events

Next Steps

- Complete implementation
  - Operator hands on training in classroom
  - Utilize operator input to develop Action Trees and Centerline Targets
- Expand Economics tab
- Develop system for continuous updates

Future Plans

- Integrate ABB Quality Management System with PI System
- Implement PI SQC
- Investigate PI Profile View
- Investigating Virtualizing our future upgrade to then PI 2010 architecture

Questions

- Contact information

Thank you

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