BLOCK & TACKLE
Leveraging Process for Results

APQC’S 2012 Process Conference & Training
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The Houstonian Hotel, Club & Spa - Houston, Texas
A New Approach To Process Management In A Rapidly Changing Industry

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Houston, 25th of October 2012
Third Largest Renewable Energy Company in North America

EDPR operates in 19 states across a broad geographic swath of the United States.
What do We have in Common with ER
Handling Wind Farm Performance Problems is like Triage
Choosing between Process and Case Management

Easier to build a case management system than it is to plan for multiple exceptions in a process

Mostly Yes
Mostly No

Is work repetitive?

Deliverables, Processes, Procedures
Execute according to context of specific instance

Goals, guidelines, constraints

Execute according to process description

Traditional Process Management
Case Management

Using processes for non repetitive work leads to rapidly increasing complexity in a process model
Main Features of a Case Management Framework

Owner

- Business Rule(s)
- Solution
- Goal(s)
- Guidelines
- Subject Matter Experts
- Event

+ System
The COBRA Case Management System was born
Key System Focus Areas

1. **Coordination**
   - Minimum required process steps
   - Constant chain of custody
   - Due dates for each activity

2. **Prioritization**
   - Quantitative measure of significance
   - Communicated problem priority level to employees
   - Common standardized escalation metrics

3. **Communication**
   - Automated notifications
   - Process performance benchmarking
   - Transparency to sites and other internal customers

4. **Tracking**
   - All pertinent information attached to issue
   - Establish Knowledge Base
   - Feed recommendations into lessons learned process
Formalizing the Guidelines
• Task-oriented transactions provides accountability at every level
• Clear allocation of resources
• Seamless handoffs between project leads
• Ad-hoc subtask functionality
Prioritization
Communication
Tracking

Developing the Risk Matrix

Algorithm consists of 5 factors:

From User Input
- Duration
- Frequency
- Megawatt Impact

From Database
- Average Load Factor (NCF)
- Average Power Price

- Risk algorithm designed to better track and prioritize issues
- Automate the ranking to allow for a fair and unbiased schema
- Account for the financial risk to EDPR on a case-by-case basis
Every case is automatically assigned a Risk Priority Number

- Identifies key issues and initiatives to work on
- Requires minimal input from the user to reduce bias
## Social Collaboration

### Email Integration

**CM20120361** has a new note: The generator issue was found to be a serial defect - the appropriate parties have been notified.

(received via email)

1 minute ago  

**Title**  
Generator Rotor Failure

**RPN Score**  
389

**Dashboard**  
http://cobra.corp.org/suite/apps/case_management/allCases/proc/533871125

> **Everyone** EDPR.
> I'm having trouble getting in touch with the Twin Groves wind farm regarding the small parts order. Does anyone know what the status is?

1 minute ago  

**PowerPulse** The new PowerPulse for 04 April has been posted.

A moment ago  

**PowerPulse: 04 April (PDF)**  
http://cobra.corp.org/suite/doc/1333

### Notes

- Notes primarily used a medium for case updates
  - 281 notes since system go-live
  - 3 – 4 notes per active case

![Collaboration Notes Log](http://cobra.corp.org/suite/apps/case_management/allCases/proc/533871125)

Chris Goldsberry - 2012-03-23 22:52

Generator rotor winding analysis document posted to the case library. The RCA shows that the windings on the rotor have been severely damaged and will need replacement.

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### Knowledge Engine

COBRA intelligently searches for similar cases to new entries

- Prevents duplicate issues and saves effort for subject matter experts
- Allows users to collaborate on shared experiences and learn from already solved issues
- Increases risk score of problems previously not thought to be widespread

<table>
<thead>
<tr>
<th>Case</th>
<th>Title</th>
<th>Case Type</th>
<th>Current Stage</th>
<th>RPN</th>
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</thead>
<tbody>
<tr>
<td>CM20110219</td>
<td>Conduct Test of Turbine Pitch Optimization (TPO) Software</td>
<td>Turbine Control Software</td>
<td>Solution Documentation</td>
<td>63</td>
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<td>CM20110194</td>
<td>Twin Groves BOP system check prior to over rating turbines</td>
<td>Turbine Control Software</td>
<td>Solution Review</td>
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<td>CM20110188</td>
<td>Turbines Blown Line Fuses at Blue Canyon Y During Grid Events</td>
<td>Turbine Components</td>
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<td>CM20110138</td>
<td>Turbine Temp reduce power and gear oil level low stop</td>
<td>Faults</td>
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<td>CM20110106</td>
<td>Develop system to track and take action on turbine warnings</td>
<td>Turbine Control Software</td>
<td>Closed</td>
<td>132</td>
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<tr>
<td>CM20110088</td>
<td>Pitch Manual &amp; Turbine Manual</td>
<td>Faults</td>
<td>Solution Documentation</td>
<td>537</td>
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<tr>
<td>CM20120044</td>
<td>Power Curves on lower Efficient Turbines</td>
<td>Turbine Control Software</td>
<td>Solution Documentation</td>
<td>78</td>
</tr>
</tbody>
</table>
Future expansion: Mobile

- Over half of company employees are in ‘field’ locations
- Mobile allows cases to be entered instantly, remove duplication of effort, or capture detail as it happens
Case Dashboard provides immediate assessment of case progress, important details, associated documents, and latest information.
COBRA has already shown value

- **Knowledge Base with over $100M worth of issue solutions since August last year**
  - Searchable knowledge base with detailed issue solutions, including context for decision making
  - Track frequency of issues affecting major suppliers over time
  - Support for Liquidated damage claims

- **Integration of Case Management with organization goals and KPIs**
  - Monthly status updates and metrics

- **Over 10GB of files accessed over 3,000 times**
  - Moving towards goal of reducing email issue tracking and document sharing
Lessons Learned and Best Practices

1. Map and define your processes **before** you implement a tool
   - Ensure that you involve all applicable process stakeholders in process and solution development, testing, and use

2. Keep solutions as intuitive for the end users as possible
   - What’s the minimum amount of information needed to start work?

3. Ensure that case management is integrated into your everyday work
   - Mandate for all new requests to a First Level Support through COBRA
   - Monthly status meetings changed to focus on case progress
**It’s Important to Think Big But Start Small**

Case Management is a Framework that is adaptable to many Areas inside a Company

<table>
<thead>
<tr>
<th>Area</th>
<th>Case Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Assessment</td>
<td>Meteorological Tower Installation, Site Design, Suitability Analysis</td>
</tr>
<tr>
<td>Procurement</td>
<td>Request for Proposals, Supplier Qualification, Exceptional Purchases, Issue Management</td>
</tr>
<tr>
<td>Origination</td>
<td>Bid Management, Investment Analysis, Cost Estimates,</td>
</tr>
</tbody>
</table>

Case Management can be considered in any situation which is heavily influenced by the presence of ‘knowledge work’, instead of performing physical tasks.
Thank You for Your Attention

Questions?

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