Driving Operational Excellence through OT-IT Integration & Pre-built Geospatial Enabled Actionable Insights for Utilities

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24th January 2017
Variety of Business Challenges

- **Aging infrastructure** with increasing capital needs to replace and upgrade
- **Increased Customer Expectations**
- **Uncertain economy** and financial instability
- **Changing workforce**
- **Regulatory and legislation compliances** - Reliability and Availability

- **Environmental Stewardship** – Energy efficiency, carbon reduction etc.
- **Climate Changes** impacting the demand and cost of assets maintenance
- **Need of Actionable Role** based insights for informed decision making
Nexus of Technology Trends Impacting

- IT & OT Convergence
- Advanced Metering Convergence
- Cloud Computing & SaaS
- Mobile & Location Aware Technology
- In Memory Computing
- Big Data
- Communication Technology
- Predictive Analytics
- Sensor Technology
- Social Media & Web 2.0
Operational Excellence can help you improve stakeholder value and maximize profits

100% COMPLIANCE
Best quality SERVICES
No complaints
Gain: Sustainable Business

OPERATIONAL EXCELLENCE
Faster Data Access
KPI Managers
Business Intelligence
Effect: Cost Reduction

360° INFORMATION FLOW
Information at finger tips
Real time performance monitoring
Gain: Satisfied Customers and Stakeholders

BEST IN BUSINESS
Continual Improvement
Industry Trend setter
Gain: Profit maximization
ROLTA BRINGS COMPREHENSIVE & UNIQUE TECHNOLOGY SOLUTIONS

BIG DATA
- Operational Technology (OT) Systems
- Advanced Spatial Analytics
- Geospatial Fusion Platform
- GIS, Mapping, Data Creation
- Fusion of IT, Operational and Engineering Data
- Engineering Information Systems (EIS)
- Engineering Designs, Models, Digitization, Data Quality

ROLTA SOLUTIONS BRING 100x VALUE OF DATA
Turning Technologies into Outcomes: Create-Fuse-Drive Insights
Comprehensive and In-depth Cross Functional Coverage
Business Process Driven Knowledge Model – 3000+ KPIs

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<tr>
<td>Real Time Monitoring</td>
<td>Asset Historian</td>
<td>Availability</td>
<td>Health</td>
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<td>Portfolio Management</td>
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<td>Energy Utilization</td>
<td>Failure Analysis</td>
<td>PM Compliance</td>
<td>Environment</td>
<td>Vendor Performance</td>
<td>Project Plan &amp; Schedule</td>
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<td>Asset Explorer</td>
<td>Worst Actor Analysis</td>
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<td>Turnaround Management</td>
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<td>Reliability Clock</td>
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<td>Outage Analysis</td>
<td>Security</td>
<td>Demand Analysis</td>
<td>Cost Tracking</td>
<td>Stakeholder Value</td>
<td>Netback Analysis</td>
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Unified Performance Integrity Model brings cross-functional visibility & modularity
Operational Excellence
Power Distribution Performance Monitoring

Power Distribution Network Reliability Indices and Root Cause Analysis of Power Interruption

Business Need:
- Integrated utility power network performance indices and drill-down into root cause analysis

Rolta Solution:
- Rolta OneView™ for role-based industry-specific insights
- Rolta iPerspective™ for connecting multiple, disparate systems
- Rolta OnPoint™ for embedded spatial analytics

Key Impact:
- Proactively Detect power interruption and Identify Root cause of Power failure.
- Improved Power network Availability and Utilization, tracking of power failure.
- Identify top worst affecting feeders and Analysis
- Link Power Sub-station on Geospatial Map
Asset Health & Condition Monitoring

Enterprise Dashboard

Data Quality Dashboard

Tag wise Missing Data Heat Map

Exploratory Analysis
Asset Health & Condition Monitoring

Operating Limits

Service Tag Trends & Performance

Process Support & Utility Systems

Add Comments
Asset Health & Condition Monitoring

Critical Variable Identification

Diagnostic Analysis

Real Time Alerts
Water Distribution Performance Management

Customer Satisfaction Analytics and real-time Tracking of Assets

Business Need:
• Integrated utility asset performance indices, customer satisfaction indices, drill-down into root cause analysis

Rolta Solution Innovation:
• Rolta OneView™ for role-based industry-specific insights
• Rolta iPerspective™ for connecting multiple, disparate systems
• Rolta OnPoint™ for embedded spatial analytics

Key Impact:
• Proactively Detect Hazardous Conditions before Utility Works.
• Improved Asset Availability and Utilization, Improved demand tracking and forecasting.
• View Utilities Assets & Assets Details as Features and Text overlay respectively on Spatial Map.
• Link Documents to Assets on Geospatial Map
Water Distribution Enterprise Dashboard

Ashford Reservoir

Unaccounted Water Last Day: 3,383.00 m³
DMA with Max Demand - 02960: 306.00 m³
Available Distribution Storage Reservoir Capacity: 9,946.00 m³
Lowest Reservoir Level: 75.00%
Missing Meter Data: 46.00 meters

Region Map

Unaccounted Water - Weekly

- Missing Demand

19 October, 2016
Situational Awareness: Operational Service Desk

Operations Service Desk

DMA | Zone | Cust No | Cust Type | Postal Code
---|------|--------|----------|------------
1234 | Kings Rd | 3300 | Commercial | TW61AP
1234 | Kings Rd | 4400 | Retail | TW61WA
2345 | East RdL | 3310 | # | TW61EW

Customer No | Work Order Type | Work Order Number
---|---------------|---------------
3300 | WSP | W0660
3300 | WSP | W0846
3300 | LED | #
3300 | M & R | W0611

Job Status

Start Time | Priority | Timer | Description
---|----------|------|---------------
01:46 | P2 | 11:15 | Isolation, Excavation, Modelled
01:46 | P3 | 11:15 | Isolation, Excavation, Modelled

General data | Resource data
---|---------------
General Detail | General Description | Status
Cluster | # | #
Telemetry | Kings Road tour:55% | 14:30pm
Tracker | Fred Jones | 14:15pm
 Valve Ops | 6 acacia avenue | Closed
 Watermain | Logger Id | none
Waste Water Prediction Analytics Solution
GAS - Distribution Performance Monitoring

Quantitative Risk Analysis (QRA - Pipeline Integrity)

PipeLine: Salt Lake Pij

QRA Index

- 0
- 37.50
- 100

Probability Scale

- 0
- 7.50
- 10

Impact Scale

- 0
- 5.00
- 10

Document Links for CH - 3

Right of Way (ROW)

As-Built Drawing

Test Certificate

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<th>Comissioning Date</th>
<th>Pipe Size</th>
<th>Thickness</th>
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• Role based integrated actionable insights with cross functional visibility
• **3000+** pre-built business critical scenarios and KPIs with Vertical specific Knowledge Model
• Pre built OT-IT, Geospatial & Engineering integration
• Real time, Diagnostic, Predictive, Spatial Analytics,
• Instant ROI

Thank You