Mobilize Field Operations for Utilities Using Mobile SAP Work Manager
Session ID # 83406
About the Speakers

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- Delivers large transformation technology projects across Global Enterprises
- 12 years SAP experience
- MsMIT from University of Virginia

Go HOOS!

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Key Outcomes/Objectives

Mobilize Field Operations for Utilities Using SAP Work Manager
Attend this session to learn how AES Utilities field technicians complete work and meet regulatory and compliance standards, specifically with preventive & reactive maintenance using SAP Work Manager on a mobile device.

• Hear lessons learned from this project
• Learn how SAP Mobile WorkManager digitize field operations
• Leverage SAP cloud for enterprise mobile solution
• See a live demonstration on how to complete work using a mobile device
• Overview how mobile fits into PWC’s SMART T&D approach
Agenda

1. **Overview and Context**
   1. AES Overview & Background
   2. AES ERP replacement for IPL & DPL
   3. DPL Substation IPS replacement – Infographic
   4. IPS Business challenges, scope & timeline

2. **Solution & Demo**
   1. SAP WorkManager 6.5.5, Benefits of WorkManager
   2. Enhancements – Measurement Points, Compliance, Attachments, GIS
   4. Demo – SAP WorkManager / SAP Cloud Platform

3. **PwC Advisory for Utilities Overview**
   1. PwC Overview
   2. SMART T&D integrated solution
AES is a Fortune 500 Global Power Company

4 Market-oriented strategic business units
4 Continents
15 Countries

AES Serves 2.4M customers

AES is energized by a global workforce of approximately 9,000 PEOPLE

$32.5B Total Assets owned & Managed
$10.7B Total 2018 Revenues
31,792 Gross MW in Operation*
4,440 MW Generation capacity under constructions

Fuel Type
- Coal: 37%
- Gas: 31%
- Renewables: 29%
- Oil/Diesel/Pet Coke: 3%

Mission
Improving lives by accelerating a safer and greener energy future.

Values
- Put Safety First
- Act with Integrity
- Move with Agility
- Have Fun through Work
- Strive for Excellence

* 22,232 proportional MW (gross MW multiplied by AES’ equity ownership percentage)
AES ERP replacement for IPL & DP&L

Current Landscape
- Inconsistent Core Processes
- Complex Technical Environment
- Local Technology Landscape Has Not Kept Pace

Project Objectives
- Implement common business processes across IPL & DPL
- Facilitate adoption of SAP global templates
- Enables improvements in local and global processes
- Reduce complexity of technology
- Deliver operational benefits

Timeline
- Analyze & Design (Fit Gap)
- Spec & Build
- Test
- Final Prep
- Post Go Live Support
- Role-based End User Training

2017 2018 2019
Dayton Power and Light IPS Replacement

1. Over 520,000 customers in 24 counties throughout the Miami Valley in Ohio
2. Service territory over 6,000 square miles
3. 154 electrical transmission and distribution substations
4. 8 Districts
5. Two technicians per district
6. ~450 Maintenance orders / year, multiple operations per order, multiple measuring points per operation
IPS Business challenges, scope, timeline

**Business Challenges:**
- Regulatory inspection of every equipment in cycles of 40 days
- Geographical distribution of substations
- Manual process (paperwork)
- Dated legacy solution
- No work scheduling in place

**Aggressive Timeline:**
- 6 – 8 months

**Scope:**
- Deploy SAP Workmanager mobile solution for Preventive and Corrective maintenance
- Leverage SAP’s Cloud Platform to deploy Agentry Service
- Simplify the measurement point screen & compliance date calculation
- Provide equipment manuals attached to the assets through WorkManager

Successful Go Live
Business Drivers for DPL Substations

- Workplace Safety
- Compliance
- Industry Standard IPSECA Work Management Process
- Digital Workforce

1. Work Identification
2. Work Planning
3. Work Scheduling
4. Work Execution
5. Work Closure
6. Work Analysis

Work Manager

- Initial Sync Performed (download Master Data)
- Delta Sync to pull down generated Work Orders
- Work Executed offline
- Create Notifications as needed
- Delta Sync to push up changes
SAP WorkManager

**Work Order Management**
- **SAP Mobile Solution**
  - Manage work orders and notifications, recording of problems, actions, time, parts, measurement readings, and attachments
  - Enable geographic information system (GIS) integration

**Flexible Connectivity**
- Access maintenance data and processes anytime, anywhere
- Manage existing work and asset data whether you’re online, offline, or occasionally connected
- Automate synchronization with the SAP backend at user-defined intervals

**Device Flexibility**
- Run natively on mobile devices
- Support iOS and Android phones and tablets and Windows laptops
- Support for SAP ERP and SAP S/4HANA as an asset management backend solution

**Deployment Flexibility**
- Choose between cloud or on premise deployment
- Use SAP Cloud Platform Mobile Services or SAP HANA Enterprise Cloud for cloud deployment
- Leverage SAP Mobile Platform for on premise deployment
SAP WorkManager Mobile Solution
Simplified Compliance

✓ Meet compliance by completing the work within timeframe
✓ Enhance the WorkManager screen to color code the Order and Operation based on compliance date

• RED – Work Overdue
• ORANGE Grace Period
• GREEN Within Compliance
Simplified Data Collection

- Simplified Measurement Read Screen
- Reduced number clicks
- Integrated validation within mobile solution
- Automated Notification Trigger
Future Scope - Integration with ESRI GIS

- ESRI map guided work execution
- Know the work location on the map
- Know the asset location on the map
- Create GIS tags for assets based on the map
  - Point
  - Linear
  - Polygon
- Turn by turn driving direction
- Show the work near me
SAP WorkManager Key Benefits to AES

Meet Compliance Requirement
Timely processing of workorders, notifications, asset master data whether online or offline. Avoid cost of the missed compliance due to color coding the Orders, Operations and ensure assets are serviced in a timely manner.

Reduce paper trail
Asset measurement data visible in the backend immediately for further processing. Asset manuals available in offline mode for reference.

Improved decision making and reduce risk
Better visibility into operational activities and Maintenance history from the mobile device and the backend SAP.

Increased Asset uptime and reduced maintenance backlog
SAP WorkManager – AES WM Architecture

- SAP S/4-1610 in the SAP Enterprise Cloud
- Agentry Mobile Service in the SAP Cloud Platform
- WINDOWS10 Devices
DEMO – SAP WorkManager 6.5.5
Completing Readings on Work Orders
Creating Notifications
Finding Manuals and SO Prints
Work Manager Lessons Learned

• Involve field technicians from early on to make them familiar with the mobile solution – **For User adoption**
• Perform data volume sizing to make sure the cloud can handle the data (Full SYNC) – **Avoid surprises after GoLive**
• Address device management and device security – **Audit**
PwC Overview

PwC Global SAP placemat
Helping our clients maximize the value of their SAP investment

Our practice:
- SAP consultants in over 59 countries
- Consultants trained on S/4HANA

SAP Alliance:
- Global Partner* & top 3 Partner in 7 countries
- S/4HANA on-prem & cloud Partner & #2 for global certifications
- SAP software license impact

SAP credentials:
- S/4HANA projects** with 105 live in 38 countries
- S/4HANA product Advisory Council member

What are PwC unique differentiators?
- PwC is unique in our value to clients and do not compete with the commoditized SI’s
- We build upon legacy relationships with our clients and find new opportunities to provide roadmaps for large, complex business transformation work.
- PwC IP for BXT digital driven customer co-creation events as well as our agile delivery methodology
- S/4HANA P3 global industry templates, Enterprise Insights, Leonardo industry solutions, and our analytics tools.
- Expansion of our SAP practice into other lines of business such as Tax, Assurance, Finance Effectiveness and Deals enable us to deliver world class projects
- “Hiring smarter”, recruiting the best talent from top universities as well as growing our direct admit partner team with highly skilled product and industry experience from leading competitors.

Industry Focus
- Consumer
- HighTech
- Industrial Products
- Utilities
- Energy
- Pharma
- Retail
- Aero & Defense

Alliance Contacts:
- Global: Jacqueline Towers
- US & LATAM: Mayra Cedeno
- EMEA: Sandra Collins
- APJ: Dipanwita Ghosh
- CAN: Doug Hommy

Integrated Solutions*
- Finance Transformation
- HR Transformation
- Source2Pay
- Connected Supply Chain
- Smart Factory
- Sales & Marketing Excellence

These focus areas cover all core products in SAP’s Intelligent Enterprise portfolio
*Many other industry focused integrated solutions will align with our Global Industry PoV’s

What the Analysts say about PwC

Worldwide Consulting
- GartnerLeader

Financial Management Consulting
- GartnerLeader

Business Transformation
- Forrester Leader

Digital Transformation & Systems Integration
- IDC Leader

Procurement Consulting
- AML Leader

SAP implementation services
- IDC Leader

*2018 calendar year results; based on 17 partners
**S/4 stats as of Feb 19, 2019
The Power & Utilities Industry is Changing

Emerging Disruptive Technology
New technologies enabling utility modernization

Shifting Utility Economics
Changes to revenue sources and distribution

Expanding Customer Requirements
Increased need to drive customer engagement
These rapidly changing trends to digitize and integrate can be overwhelming, time consuming and expensive.

Our client’s are asking for future looking industry solutions that allow them to visualize “what good looks like” and allows them to more rapidly deliver innovation, integration and business improvement.

**Work Management Solution**
Providing consolidated system and process to standardize and simplify operations.

**Asset Management Solution**
Providing lean asset-location hierarchy for accurate rendering of assets and up-to date and compliant asset maintenance.

**Scheduling Solution**
Providing transparency into crew availability and flexibility to make last minute changes without losing productivity.

**Mobile Solution**
Providing mobile devices to streamline the data collection process and increase overall efficiency in the field.

**T&D/Customer:**
Immediate and transparency into crew Availability and flexibility to make last minute changes, we solve the short cycle/long cycle challenge.

**Real Time FERC T&D:**
Providing a single, simple solution to FERC data and reporting.
S/4 SMART T&D End to End Working Integrated Solution

Industry platforms for business needs and usability

3rd Party Analytics

Mobile execution updates

SAP Work Manager

Schedule & dispatch updates

Grid Ops Apps

Updates for Customer requested work

Work for scheduling

Asset data

Customer requested work

Delivery model maximizing efficiency and innovation

Leap T&D Business Capabilities

Agile delivery approach
S/4 HANA SMART T&D Provides Utility Outcomes that Matter

**Improved Workforce Productivity**
- Increased demand in Power & Utilities for easy to use solution to streamline scheduling and dispatch processes
- Focus on safety
- Easy to use Digital tools
- Accurate Crew Utilization Rates
- Centralized Resource Allocation
- Real Time Schedule updates and flexibility
- Overview of work and historical records
- Capture & view as-built on Mobile
- Embedded asset criticality, FMEA, and Risk
- Seamless asset integration between systems
- Risk based Inspections with Sensors or on Mobile
- Auto sync new assets
- Generate Key Reports
- Eliminate Paper in Plants with eWP
- Reduce Complexity
- Improve Scheduling, Dispatch, and Work Status
- Engage Modern Workforce with Mobile
- Maximize GIS tools for T&D / Customer
- Simplified planning
- Automated scheduling of work orders / inspections
- User & security controls to meet compliance
- Easy & quick generation of compliance reports

**Predictable Asset Performance**
- Establish Asset Location Hierarchy and System of Record
- Enable transformative capabilities for mobile work execution and advanced scheduling & dispatch
- Managed alignment between Design – As-Built – Operation Data
- Clear link between lot, item, and asset
- Shared Asset characteristics across all System of Use
- Single point of tracking
- Clear audit trail
- Multiple parties can input data

**Modern Workforce**
- Redefine compliance through preventative maintenance, work order supervision and compliance reporting
- Key Drivers for configuration / Materials Traceability
- Key Drivers for configuration / Materials Traceability are “Where does this item come from?” and “Where are similar items installed?”
- Managed alignment between Design – As-Built – Operation Data
- Clear link between lot, item, and asset
- Shared Asset characteristics across all System of Use
- Single point of tracking
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**Improved Compliance**
- Enablers:
  - Clean Data
  - Digital/Mobile
  - Standard Process
  - Dashboards
  - RPA
  - ML/AI
  - Standard Process
  - BOTs
  - Forward Metrics
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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:
http://info.asug.com/2019-ac-slides
Q&A

For questions after this session, contact us at
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Thank You

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