

ORACLE'S PRIMAVERA PORTFOLIO MANAGEMENT (OPPM) AT AMEREN

DAVID BULLARD

Manager, Project Controls, Ameren Missouri Power Operations Services

JANUARY 19, 2016



Agenda

- Ameren overview and webinar expectations
- Demand for portfolio management tool
- OPPM overview
- Due diligence and selection basis
- Initial implementation and adoption
- Next steps and best practices

Ameren Overview

Ameren

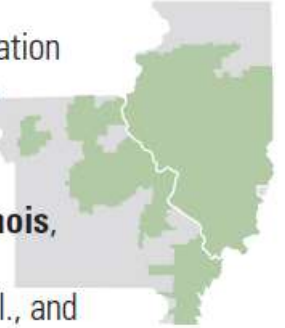
- Ameren Missouri, Ameren Illinois, Ameren Transmission
- 64K-square mile service area in Illinois and Missouri
- 2.4M electric customers, 900K gas customers
- Net generation capacity of nearly 10,200 MW
- More than 7,500 circuit miles of transmission lines

Ameren Missouri

- 1.2M electric customers – 63 counties, 500 towns
- (1) nuclear energy center
- (4) coal energy centers
- (3) hydro energy centers
- (2) renewable energy centers (landfill gas, solar)
- CTG fleet

Ameren Corporation (Ameren) is the parent holding company of:

- **Ameren Illinois**, based in Collinsville, Ill., and
- **Ameren Missouri**, based in St. Louis, Mo.



Expectations

- Focus is Ameren Missouri Power Operations
- Will cover due diligence and implementation
- Will not cover details of calculations or business processes
- Information indicating future outage timing is hidden

Demand for Portfolio Management Tool

Power Ops' selection and implementation of OPPM was driven by our company's culture and need for Continuous Improvement.

OPPM's configurability by users (not IT, not Oracle) have made it a perfect fit for multiple use cases at Ameren, both financial-based and non-financial-based.

Demand for Portfolio Management Tool

- Excel-based project justification and prioritization (ISP)
 - Heavy user input of data stored in other Ameren repositories
 - Snapshot perspective
 - Configuration by external resources
 - Optimizer readiness and logic

Demand for Portfolio Management Tool

- Portfolio decomposition and capital allocation
 - Limited availability of attributes in corporate budget tool
 - Iterative Excel-based activity
 - Data memorialization
 - Accessibility of reports, presentations, etc.

Demand for Portfolio Management Tool

- What we did NOT want!



OPPM Overview

- OPPM = Oracle's Primavera Portfolio Management
 - Web-based analysis platform
 - Configurable
 - Process-driven

OPPM Overview

- Scorecards
 - Spreadsheet-like
 - Easy export
 - Configurable
 - Sorting
 - Indicators
 - Columns (categories)

Projects	EIT Owner	Segment	Life Cycle	Project Type	Strategy Score	Status	Funding Status	Total Planned Cost (\$)
1. ED - Emergency System	Tronky, Bob	IT/Utilities	Complete	Care	80	Open	Funded	180,000
2. Hubcity Phase 2 - Corequisite Platform	Manager, Farhain	Advice & Health Management	Complete	Discretionary	88	Open	Funded	180,000
3. In Dev - Supply Chain	Tronky, Bob	Advice & Health Management	Complete	New Product	86	Open	Funded	200,000
4. Decorum - Sample Collection System	Tronky, Bob	Advice & Health Management	Complete	Maintenance	83	Open	Funded	120,000
5. ED - Contact Tracer System	Greif, Gene	Advice & Health Management	Complete	Maintenance	81	Open	Funded	100,000
6. ED - Automated Payment System	Greif, Gene	Utilities	Complete	Care	78	Open	Funded	100,000
7. ED - PCR Screen Software Project	Tronky, Bob	Advice & Health Management	Complete	Discretionary	76	Open	Funded	130,000
8. Empower AHT	Stahelhuber, Executive	Utilities	Complete	New Product	75	Open	Funded	180,000
9. ED - Queue Management	Manager, Application	Protection	Complete	Discretionary	74	Open	Funded	100,000
10. ED - Knowledge Portal	Stahelhuber, Executive	Utilities	Complete	Discretionary	72	Open	Funded	700,000
11. Decorum - ACSX Payable (Legacy)	Tronky, Bob	Corporate & Other	Complete	Maintenance	70	Open	Funded	400,000
12. Decorum - Electronic Records Manage...	Greif, Gene	Utilities	Complete	Maintenance	62	Open	Funded	100,000
13. Decorum - HIE Advanced Technology	Hitchell, Linda	Advice & Health Management	Flag Out	Maintenance	62	Open	Proposed	150,000
14. Decorum - HR Web	Greif, Gene	Advice & Health Management	Flag Out	Maintenance	60	Open	Funded	250,000
15. Upgrade - Wireless Data Collection	Greif, Gene	Asset Management	Complete	Care	60	Open	Funded	340,000
16. Upgrade - Global Configuration Portal	Stahelhuber, Executive	Corporate & Other	Flag Out	Improvement/...	60	Open	Funded	120,000
17. ED - Web-based Training	Greif, Gene	Asset Management	Complete	New Product	60	Open	Funded	140,000
18. Decorum - Process-based Framework	Hitchell, Linda	Utilities	Complete	Maintenance	60	Open	Funded	200,000
19. Advanced Contact Management	Greif, Gene	Advice & Health Management	Supplemental and Training	Strategic Initiative	60	Open	Funded	30,000
20. Upgrade - Network Integrations	Hitchell, Linda	Protection	Complete	Maintenance	60	Open	Funded	60,000
21. ED - BPP System	Greif, Gene	Asset Management	Complete	Discretionary	59	Open	Funded	150,000
22. ED - MPPA Compliance System	Stahelhuber, Executive	Advice & Health Management	Complete	Care	59	Open	Funded	220,000
23. In Dev - Customer Billing	Tronky, Bob	Protection	Complete	Customization	58	Open	On Hold	290,000
24. Upgrade - Healthcare Performance System	Greif, Gene	Asset Management	Flag Out	IT Roll Through	58	Open	Funded	100,000
25. Upgrade - Worker's Compensation	Greif, Gene	Asset Management	Complete	Care	58	Open	Funded	440,000
26. Decorum - Flood Assets	Manager, Farhain	Asset Management	Flag Out	Maintenance	54	Open	Funded	240,000

OPPM Overview

- Forms
 - Automatic compilation
 - Multiple field types
 - Inputs
 - Calculations
 - Imported
 - Configurable
 - Field width
 - Edit security

The screenshot displays a web-based form titled 'CONCEPT DEVELOPMENT' for a 'Client-Centric 360 Degree' concept. The form is organized into several sections:

- 1.1 What's New / Description:** Item Name: Client-Centric 360 Degree. Description: Tools and techniques designed to integrate many disparate sources of data and application functionality, and expose the data so it can be tagged and orchestrated for consumption by many types of users in a user-friendly interface.
- 1.2 Who's Concept / Information:** Manager: Vincent Jeanne. Segment: Advice & Wealth Management. S.U.T. Owner: Cliff Lane. Advisor Capability Platform: Financial Planning & Advice.
- 1.3 What's New / Core / Summary:** Idea/Concept Estimated Cost: 475,000. Idea/Concept Estimated Benefit: 600,000.
- 1.4 What's New / Impact / Plan:** Idea/Concept Proposed Start Date: 10/02/11. Idea/Concept Estimated # of Days: 120.
- 1.5 What's New / Collaborative / Score:** Idea/Concept Confidence: High. Idea/Concept Value Index: 389. Concept Sale Score: 6.67.
- 1.6 Comments / Issues:** Comment / Issue field.

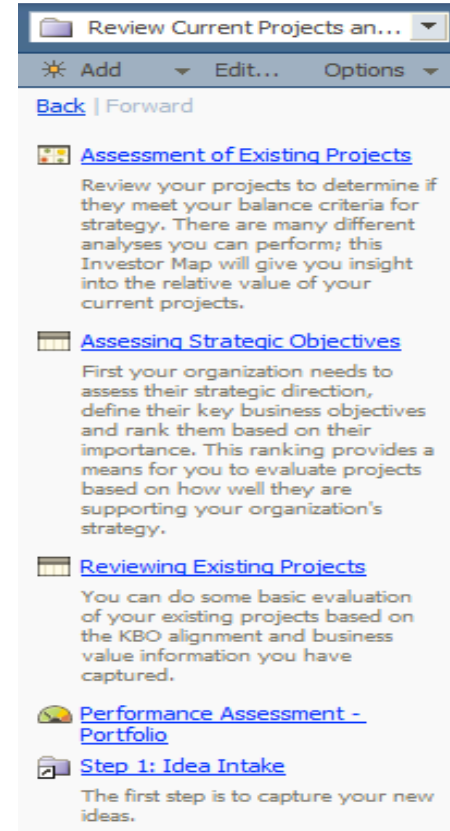
OPPM Overview

- Investor Maps
 - Visual decomposition
 - On-the-fly adjustments
 - Status change
 - Portfolio removals and additions within scenarios
 - Dimensions
 - X and Y axes
 - Bubble size, color, and status indication
 - Portfolio and bucket compliance



OPPM Overview

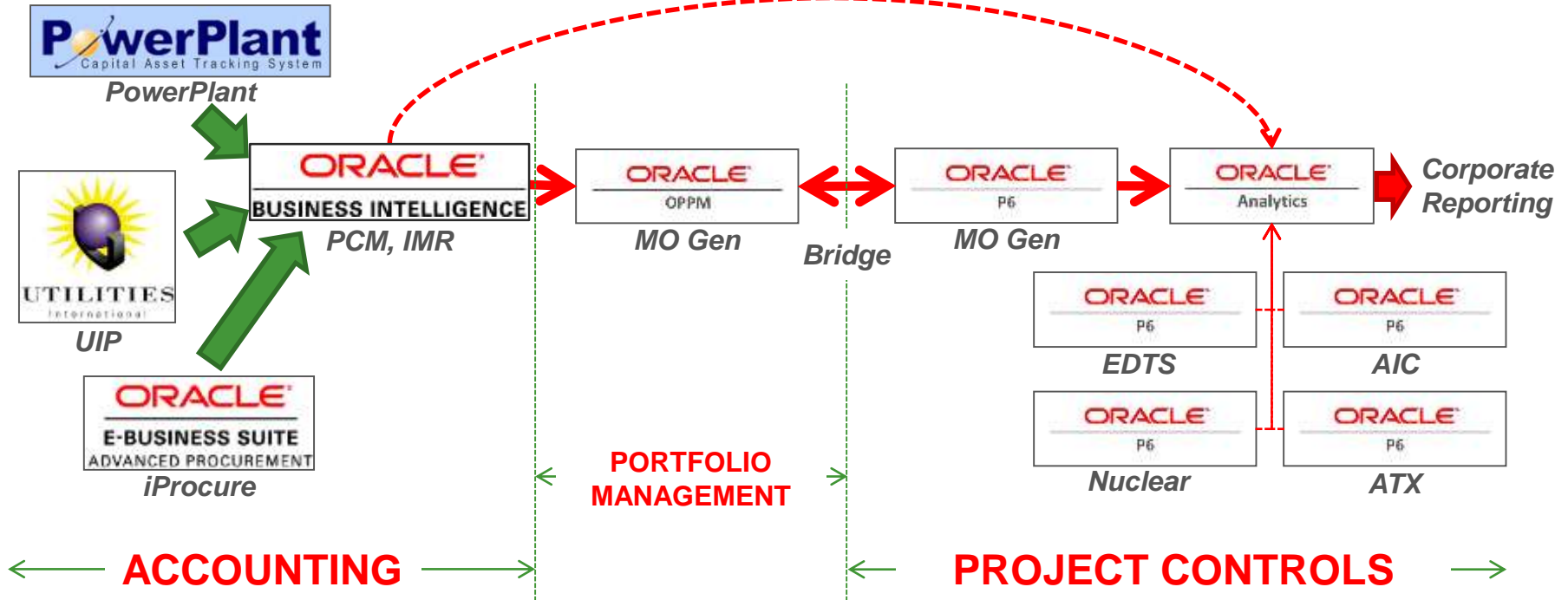
- Processes / Guide Pane
 - “Bookmark” views and data sets
 - Layout organization-specific processes
 - Flexible sequencing
 - Provide explanations, definitions, etc.



The screenshot shows a web application interface with a title bar "Review Current Projects an..." and a menu bar with "Add", "Edit...", and "Options". Below the menu bar are "Back" and "Forward" navigation links. The main content area lists five project assessment options, each with a small icon and a brief description:

- Assessment of Existing Projects**: Review your projects to determine if they meet your balance criteria for strategy. There are many different analyses you can perform; this Investor Map will give you insight into the relative value of your current projects.
- Assessing Strategic Objectives**: First your organization needs to assess their strategic direction, define their key business objectives and rank them based on their importance. This ranking provides a means for you to evaluate projects based on how well they are supporting your organization's strategy.
- Reviewing Existing Projects**: You can do some basic evaluation of your existing projects based on the KBO alignment and business value information you have captured.
- Performance Assessment - Portfolio**
- Step 1: Idea Intake**: The first step is to capture your new ideas.

Due Diligence and Selection



Due Diligence and Selection Basis

- Existing Oracle footprint at Ameren
- Collaborative, web-based platform supports mobility
- Minimal long-term dependence on IT and Oracle
- Out-of-the box bridge to P6
- Flexibility across business lines
- Data memorialization
- Simple sharing via e-mail links

Initial Implementation and Adoption

- Critical pre-purchase activities
 - Define and document process(es) and calculations
 - Leverage Oracle Solution Consultants
 - Implementation workshop
- Maximize value of training
 - Need for Java expertise can be minimized during this phase
 - Work to get one “go-by” category of various types

Initial Implementation and Adoption

Start small, KISS, and get some early wins

- Replace ISP
 - Behind-the-scenes complexity and stakeholder buy-in
 - Simplify justifications without sacrificing key inputs and calculations
 - Provide multiple perspectives simultaneously
 - Safety
 - Customer
 - Shareholder

Initial Implementation and Adoption

- Replace ISP (input form)

PROJECT SUMMARY	
Project Name:	RI U2 - #3 FW HEATER REPL
Lead RMC:	OGV
Project Lead:	19611 - Becker, Matt E
Unit:	Rush Island 2
Mandatory/Discretionary:	2. Discretionary
Project Driver:	6. Other Reliability & Operation
Comments:	This project has two key drivers related to unit operation. The existing heaters have many plugged tubes, resulting in a negative impact on unit efficiency. This project will result in a 0.3% efficiency improvement by virtue of replacing the plugged heat exchange surface area. This project will also result in removal of copper heat exchange surface area from the unit, which is key for water chemistry and safety.
SAFETY	
Impact:	3%-5% Incident Reduction, 2-3 Years
O&M SAVINGS DURING EXECUTION	
Project Non-Fuel O&M Savings (\$000):	
DRIVER - BEN TOP 10	
Score:	
DRIVER - RENEWABLES	
Score:	
DRIVER - SWO's	
Score:	
DRIVER - CTG's	
Score:	
DRIVER - OTHER REGULATORY COMPLIANCE	
Violation Rating:	
Regulation Certainty:	
Time Frame:	
DRIVER - OTHER RELIABILITY & OPERATION	
Annual Forced Outage Day Reduction:	
Annual Non-Fuel O&M Savings (\$000):	
Efficiency Improvement (%):	0.3

Initial Implementation and Adoption

- Replace ISP (scoring results)

PROJECT SCORING OUTPUTS	
Safety Score (Max = 5):	3
Regulatory Compliance Score (Max = 5):	
Total Annual Savings:	290.4
Total Investment:	1,937.2
Payback (Years):	6.7
Customer Index (Max = 5):	4.4
Estimated In Service:	
Regulatory Lag (Months):	6
Project Non-Fuel O&M:	
IRR, %:	

Initial Implementation and Adoption

- Support capital allocation / budget process
 - Process guide pane (“script”)
 - Minimal workflow supports on-the-fly adjustments
 - Investor Maps and pre-defined scenarios expedited process
 - Instantaneous outputs to support capital request

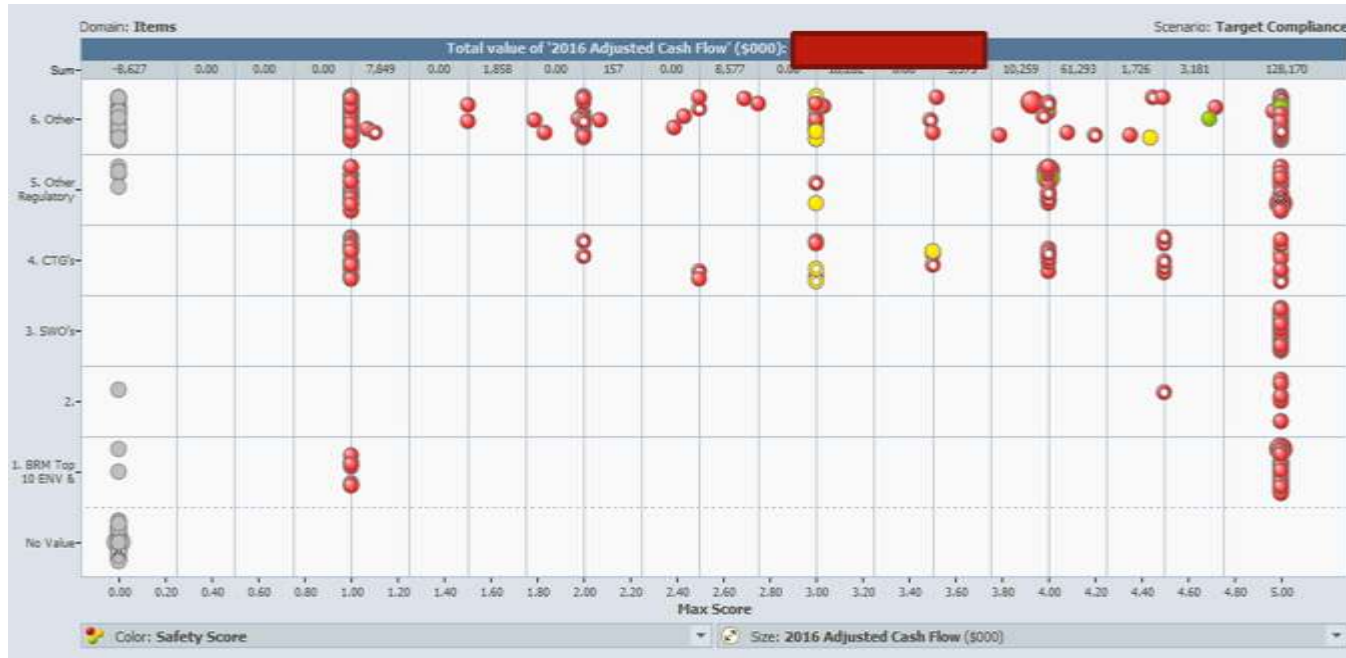
Initial Implementation and Adoption

- Support capital allocation / budget process

Items	Project Name	Max Score	Max Score Override	Safety Score	Lag (Months)	Customer Index	Unit	Efficiency Improvement (%)	Annual Forced Outage Day Reduction	Other O&M (\$000)	Comments
1	11260	5.0	—	1	30	5.0	Rush Island Com...	—	—	6,031.0	—
2	11541	5.0	—	1	6	5.0	Sioux 1	1.6	0	0.0	already approved and outage...
3	11561	5.0	5	5	6	4.0	Sioux 1	0.0	25	320.0	already approved and in prog...
4	12009	5.0	—	1	37	5.0	Labadie 3	1.0	1	—	—
5	14343	5.0	—	2	18	5.0	Labadie 4	—	—	—	—
6	14350	5.0	5	1	7	1.3	Labadie 2	—	1	—	—
7	14374	5.0	5	1	14	0.0	—	—	—	—	should have \$84k in 2016 - lat...
8	14770	5.0	—	1	12	5.0	Labadie 2	1.0	1	—	—
9	14836	5.0	—	1	37	5.0	Labadie 3	1.0	1	—	—
10	15702	5.0	—	1	18	5.0	Sioux 2	0.1	5	250.0	This needs to move up to 201...
11	16597	5.0	—	1	13	5.0	Labadie 4	—	1	—	—
12	16795	5.0	—	1	18	5.0	Labadie 3	1.0	—	—	—
13	19202	5.0	5	1	5	0.0	—	—	—	—	—
14	21094	5.0	—	1	37	5.0	Labadie 3	1.0	1	—	—
15	21097	5.0	—	1	37	5.0	Labadie 3	1.0	1	—	—
16	21098	5.0	—	1	37	5.0	Labadie 3	—	1	—	—
17	21254	5.0	—	1	18	5.0	Labadie 3	—	1	—	—
18	21255	5.0	—	1	30	5.0	Labadie 4	—	1	—	—
19	21257	5.0	—	1	7	5.0	Labadie 2	—	1	—	—
20	21261	5.0	—	1	12	5.0	Labadie 4	1.0	—	—	—
21	21292	5.0	—	1	12	5.0	Labadie 4	1.0	—	—	—
22	21433	5.0	5	1	7	0.9	Labadie 2	—	1	—	—
23	21645	5.0	—	1	7	5.0	Labadie 2	—	1	—	—

Initial Implementation and Adoption

- Support capital allocation / budget process



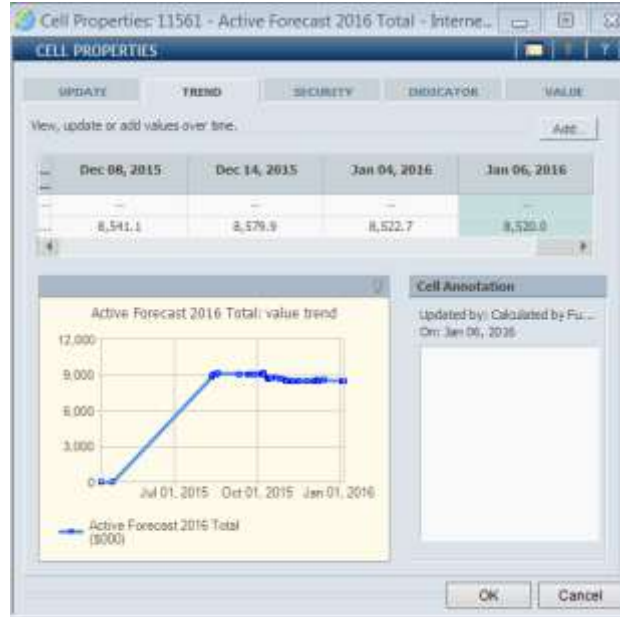
Initial Implementation and Adoption

- Support capital allocation / budget process



Initial Implementation and Adoption

- Support capital allocation / budget process
 - Category trend / data memorialization



Initial Implementation and Adoption

- Outage planning
 - Communicate current and proposed unit outage schedule

Portfolios	Outage Change Type	Outage Programs	Outage Start Date in Genesis	Outage End Date in Genesis	Genesis Duration (Days)	Proposed Start Date	Proposed End Date	Proposed Duration (Days)	Start Date Change (Days)	Duration Change (Days)	Chemical Clean	BRM Association
Future Outages												
1 Rush Island 1	—	▲ R1	Mar 17,	Jun 10,	85	Mar 17,	Jun 10,	85	0 ▲	0 ▲	Y	ENV-03: C...
2 Rush Island 2	—	▲ R2	Sep 10,	Dec 21,	102	Sep 10,	Dec 21,	102	0 ▲	0 ▲	Y	ENV-03: C...
3 Rush Island 2	—	▲ R2	Mar 27,	May 30,	64	Mar 27,	May 30,	64	0 ▲	0 ▲	—	—
4 Labadie 1	—	▲ L1	May 13,	May 28,	15	May 13,	May 28,	15	0 ▲	0 ▲	—	—
5 Labadie 1	—	▲ L1	Feb 24,	Apr 29,	64	Feb 24,	Apr 29,	64	0 ▲	0 ▲	—	—
6 Labadie 2	—	▲ L2	Sep 08,	Nov 17,	70	Sep 08,	Nov 17,	70	0 ▲	0 ▲	—	OPS-09: L...
7 Labadie 2	—	▲ L2	Sep 11,	Dec 11,	91	Sep 10,	Dec 11,	92	-1 ◆	1 ▲	Y	OPS-04: L...
8 Labadie 2	Change	▲ L2	May 07,	May 29,	22	May 07,	Jun 02,	26	0 ▲	4 ▲	—	—
9 Labadie 3	—	▲ L3	Sep 11,	Dec 12,	92	Sep 11,	Dec 12,	92	0 ▲	0 ▲	—	OPS-01: L...
10 Labadie 3	—	▲ L3	Feb 19,	May 27,	97	Feb 19,	May 27,	97	0 ▲	0 ▲	Y	OPS-02: L...
11 Labadie 4	—	▲ L4	Mar 05,	May 15,	71	Mar 05,	May 15,	71	0 ▲	0 ▲	—	—
12 Labadie 4	—	▲ L4	Feb 15,	May 25,	100	Feb 15,	May 25,	100	0 ▲	0 ▲	Y	OPS-08: L...
13 Sioux 1	—	▲ S1	Sep 10,	Dec 15,	96	Sep 10,	Dec 15,	96	0 ▲	0 ▲	—	—
14 Sioux 1	—	▲ S1	Sep 14,	Dec 01,	78	Sep 14,	Dec 01,	78	0 ▲	0 ▲	—	—
15 Sioux 1	—	▲ S1	Feb 26,	Apr 24,	57	Feb 26,	Apr 24,	57	0 ▲	0 ▲	Y	—
16 Sioux 2	—	▲ S2	Sep 09,	Dec 10,	92	Sep 09,	Dec 10,	92	0 ▲	0 ▲	—	—
17 Sioux 2	—	▲ S2	Feb 20,	Apr 04,	43	Feb 20,	Apr 04,	43	0 ▲	0 ▲	Y	—
18 Sioux 2	—	▲ S2	Mar 18,	May 20,	63	Mar 18,	May 20,	63	0 ▲	0 ▲	—	—
19 Heramec 1	—	▲ M1	Apr 16,	May 08,	22	Apr 16,	May 08,	22	0 ▲	0 ▲	—	—
20 Heramec 1	—	▲ M1	Jan 28,	Feb 25,	28	Jan 28,	Feb 25,	28	0 ▲	0 ▲	—	—
21 Heramec 2	—	▲ M2	Apr 16,	May 08,	22	Apr 16,	May 08,	22	0 ▲	0 ▲	—	—
22 Heramec 2	—	▲ M2	Jan 14,	Feb 25,	42	Jan 14,	Feb 25,	42	0 ▲	0 ▲	—	—
23 Heramec 3	—	▲ M3	Oct 18,	Nov 06,	19	Oct 18,	Nov 06,	19	0 ▲	0 ▲	—	—



Initial Implementation and Adoption

- Resource utilization
 - Dynamic capital spend data for engineers and managers
 - Utilize data from corporate budget tool
 - Organization chart appearance
 - Minimal manual updates

Initial Implementation and Adoption

- Resource utilization

Portfolios	Project Name	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)
POS Open Projects - 09M Mechanic...	—	15,795.3	82,795.1	68,498.0	59,088.9	36,388.8	35,678.3
1 POS Open Projects - Betz	—	6,582.2	5,304.9	588.5	2,208.2	4,160.9	6.3
2 POS Open Projects - Leingang	—	2,318.8	18,778.6	1,340.5	21,317.5	11,320.7	0.0
3 POS Open Projects - Morse	—	1,404.1	4,048.0	5,265.7	5,171.0	3,020.2	0.0
4 POS Open Projects - Riegler	—	1,894.5	19,646.8	25,265.7	1,510.1	2,999.9	99.0
5 POS Open Projects - Schmalz	—	650.6	20,509.9	7,324.2	21,123.7	14,758.9	35,573.0
6 POS Open Projects - Solecki	—	247.4	9,026.3	25,069.4	7,616.4	0.0	0.0
7 POS Open Projects - Stumpf	—	0.0	2,238.3	2,934.2	—	—	—
8 POS Open Projects - Ventura	—	2,697.7	3,242.3	709.8	142.0	128.3	0.0

Items	Project Name	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)
POS Open Projects - Riegler	—	1,894.5	19,646.8	25,265.7	1,510.1	2,999.9	99.0
1 14836	LBD U1 AUX COOLING H2O COOLERS REPL						
2 16591	LBD U1 Dog Bone Seal Replacement						
3 20177	SIoux UNIT2 BFP SYSTEM IMPROVEMENTS						
4 21097	LBDS - U3 Dog Bone Seal Replacement						
5 22784	Sioux Fuel Oil Storage Tank System						
6 27365	LBDS - 3B CWP Butterfly Valve Rpl						
7 28108	LBD DRY FLY ASH CONVERSION						
8 28111	Sioux Control Room HVAC Optimization						
9 30077	Sioux High Pressure Raw Water Pumps						
10 3012C	MER U1BU2 Load Gas Refurbishment						
11 3078T	Mer Gas Line Replacement						
12 308C3	LBD U2 LUBE OIL COOLER REPL						

- POS-Sr. Director
- **TECH SUPPORT****
- 09A-Director
- 09A-TG Manager 1
- 09A-TG Manager 2
- 09A-Perf. & Reli. Manager
- **DAM SAFETY, HYDRO, CIVIL****
- 09H-Director
- 09H-DS&L Manager
- 09H-H&CE Manager
- 09H-Environmental Manager
- ***** PE (09M)*******
- 09M-Director
- 09M-Sr. Manager
- 09M Electrical-Manager
- 09M I&C-Manager
- 09M Mechanical-Manager
- *****EPE (09V)*******
- 09V-Director
- 09V-Manager



Initial Implementation and Adoption

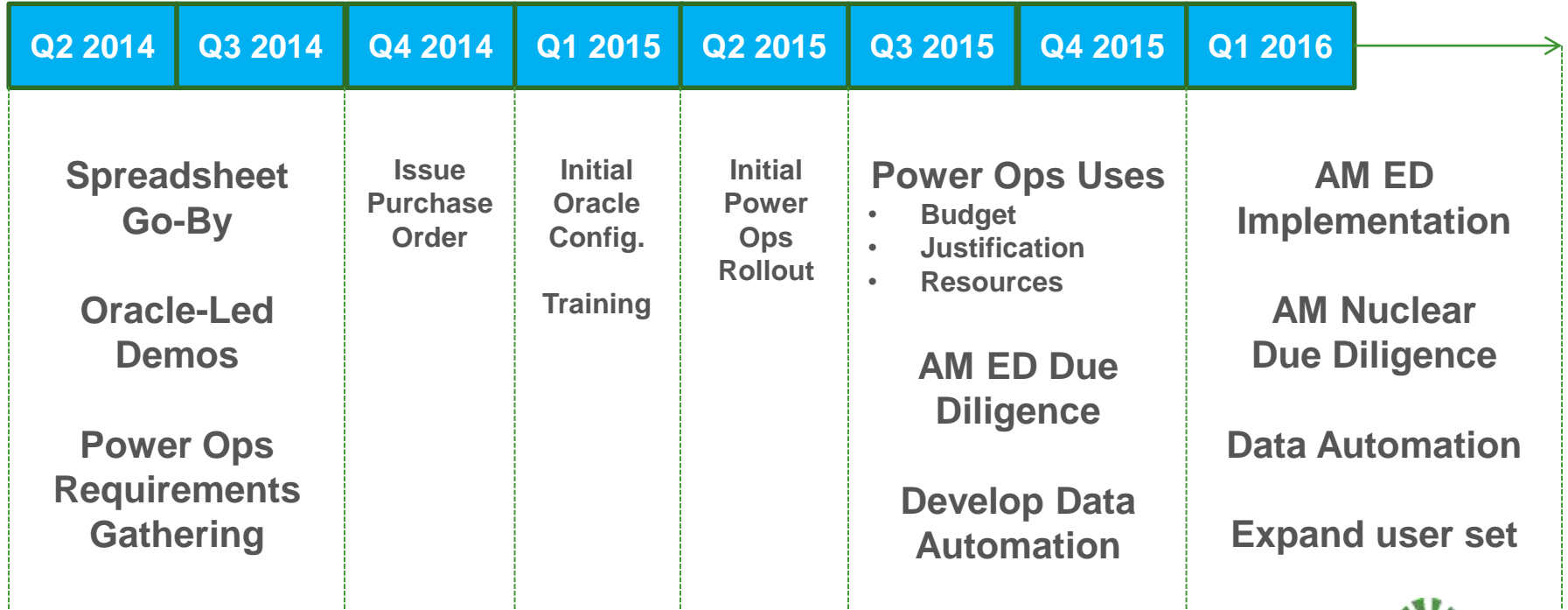
- Risk management
 - Manual data import from enterprise BRM tool
 - Associate capital projects to risks they mitigate
 - Exploring project risk integration in Primavera P6

Initial Implementation and Adoption

- Risk management

Items	CCR Project	Project Name	Estimated In Service	BRM Groups	BRM ID	BRM Impact Timing	2015 (\$000)	2016 (\$000)	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2015-2020 (\$000)
Generation (D...							25,251.0	228,323.5	148,835.9	218,794.3	93,246.3	88,915.0	693.0
1	30809	No	MER-U4 PRECIP. 4C7 WIRE & TR SET REPL	Dec 01, 2016	OPS Other	209 - Peramex Precipitator Outages and Derates	Current Year						
2	30508	No	LBD-U3 LOWER SLOPE REPLACE	May 01, 2019	Boilers	835 - Labadie U3 Waterwall Lower Front and Res...	6 - 10 Years						
3	30530	No	LBD-U3 Reheater Replacement	May 01, 2019	Boilers	840 - Labadie U3 Reheater Tube Leaks	6 - 10 Years						
4	23581	No	LBD - U2 LOWER SLOPE REPLACE	Nov 01, 2018	Boilers	844 - Labadie U2 Waterwall Lower Front and Res...	6 - 10 Years						
5	300TH	No	LBD-U4 Repl Reheater (Headers & Asse...	May 01, 2020	Boilers	845 - Labadie U4 Reheater Tube Leaks	6 - 10 Years						
6	3036R	No	RI U2 LOWER SLOPE REPLACE	Dec 01, 2016	Boilers	848 - Rush Island U2 Waterwall Lower Front and ...	1 - 5 Years						
7	11561	No	SX U1 FURNACE WALL REPL_EL 516 TO M	Dec 01, 2016	Boilers	847 - Sioux U1 Waterwall Tube Leaks	1 - 5 Years						
8	28428	No	LBD-U2 PARTIAL PHX SUPERHEATER RPL	Nov 01, 2022	Boilers	848 - Labadie U2 Final Superheater Tube Leaks	6 - 10 Years						
9	14691	No	LBD-U3 FINAL SUPERHEATER REPL	Oct 01, 2021	Boilers	849 - Labadie U3 Final Superheater Tube Leaks	6 - 10 Years						
10	13747	No	LBD-U4 FINAL SUPERHEATER REPL	May 01, 2020	Boilers	850 - Labadie U4 Final Superheater Tube Leaks	6 - 10 Years						
11	3068K	No	KEOKUK GSU 1	May 01, 2016	Transformers	851 - Keokuk Bank 1 GSU Failure	1 - 5 Years						
12	3068S	No	KEOKUK GSU 2	Dec 01, 2018	Transformers	852 - Keokuk Bank 2 GSU Failure	1 - 5 Years						
13	3068X	No	KEOKUK GSU 3	Dec 01, 2019	Transformers	853 - Keokuk Bank 3 GSU Failure	1 - 5 Years						
14	3038H	No	7S U1 Replace GSU Transformer	Dec 01, 2021	Transformers	854 - Taum Sauk U1 GSU Failure	1 - 5 Years						
15	3040K	No	RI U1 Aux Transformer Replacement	May 01, 2018	Transformers	858 - Rush Island U1 AUX Transformer Failure	1 - 5 Years						
16	300WS	No	RI U1 STARTING TRANSFRM FIRE PROT...	May 01, 2018	Transformers	859 - Rush Island U1 Starting Transformer Failure	1 - 5 Years						
17	300WH	No	SX U1 TRANSFRM FIRE PROTECTION U...	Dec 01, 2016	Transformers	860 - Sioux U1 AUX Transformer Failure	1 - 5 Years						
18	300WP	No	SX U2 TRANSFRM FIRE PROTECTION U...	Dec 01, 2017	Transformers	861 - Sioux U2 AUX Transformer Failure	1 - 5 Years						
19	3079F	No	LBD-U3 ID Fan Rotor Repl	Jul 01, 2019	OPS Other	865 - Labadie U3 AMB ID Fans Failure per Houde...	1 - 5 Years						
20	22958	Yes	LABADIE FLYASH LANDFILL CELL	Dec 01, 2016	CCR	BRM-548: Coal Combustion Residuals	1 - 5 Years						
21	23651	Yes	RI U1 BOTTOM ASH MDS-5C	May 01, 2018	CCR	BRM-548: Coal Combustion Residuals	1 - 5 Years						
22	23652	Yes	RI U2 BOTTOM ASH MDS-5C	Dec 01, 2016	CCR	BRM-548: Coal Combustion Residuals	1 - 5 Years						
23	23659	Yes	LBD DRY BOTTOM ASH CONVERSION	May 01, 2018	CCR	BRM-548: Coal Combustion Residuals	1 - 5 Years						

Implementation Timeline: IT'S A JOURNEY!



Next Steps

- Complete data automation, expand user set
- Continue to identify use and need cases
 - Innovation Action Teams
 - New users' requests
- Ongoing due diligence and implementation across Ameren
 - Ameren Missouri: Energy Delivery, Nuclear
 - Ameren IT

Best Practices

- Thoroughly understand and document needs before purchasing
 - Processes and calculations
 - User groups and needs
- Make the most of Oracle training
- Start small, get some early wins
 - Minimize automation and workflow
 - Minimize initial connection to other systems

Best Practices

- Deep-dive inter-application data transfer
- Maintain dialogue with Oracle resources
 - Be a part of continual OPPM improvements
 - Tap into network of users, consultants, and developers

Q & A