Managing Data From POMS/ CMIS

Rolls-Royce - Nuclear Engineering Services

Presented by:

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Key Topics

- What is POMS & CMIS
- Types of Data
- Uses of the Data
- Integration POMS to RAPID
- Integration CMIS to OIRD
- Opportunities for Improvement

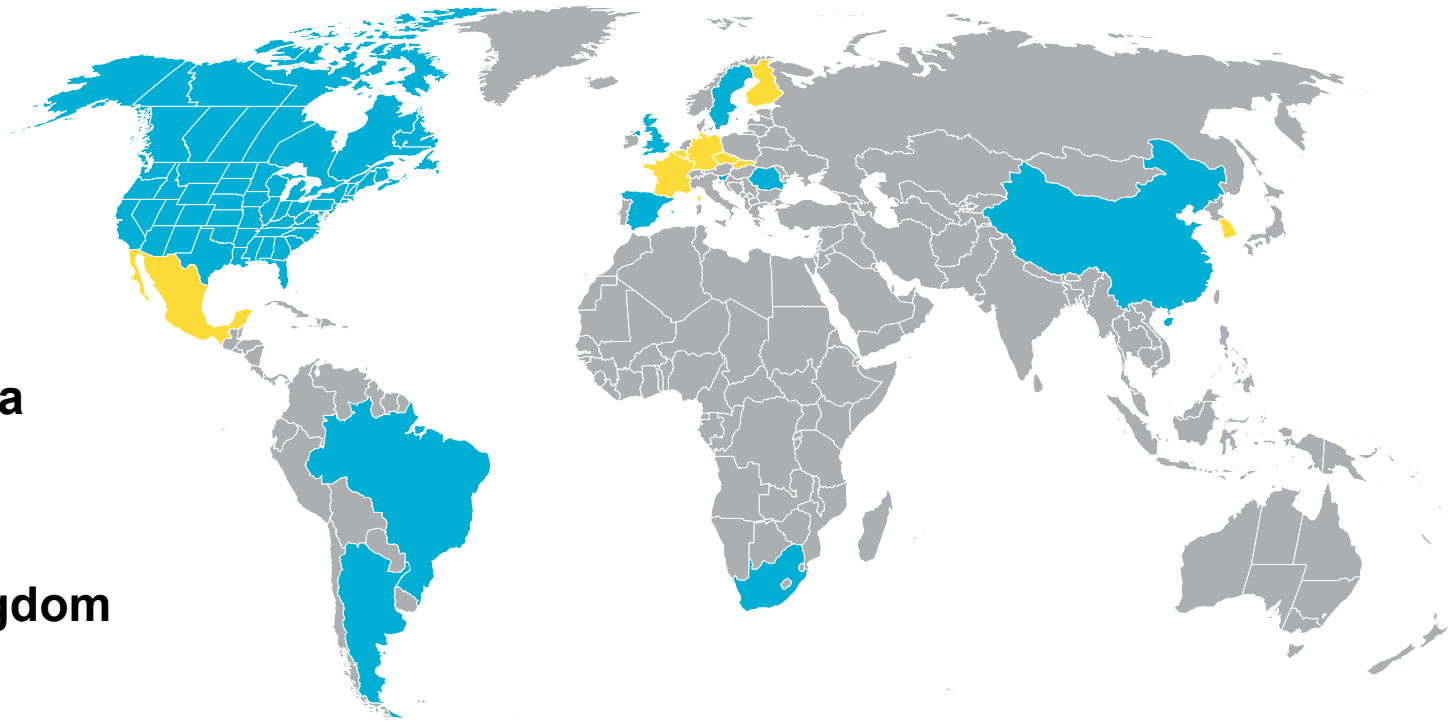
What is POMS?

- **Developed in 2005, the Proactive Obsolescence Management System (POMS) is a database and search tool designed to provide quick and easy retrieval of equipment and vendor obsolescence information.**
  - **POMS is a "One-Stop Shop" for identifying station obsolescence issues.**
  - **Delivers early notice of obsolescence issues.**
  - **Provides a more complete analysis of Equipment BOM.**
  - **Presents opportunity for Industry Collaboration.**
  - **Improves decision-making capability.**
- **POMS collects equipment, parts, BOM's, and Work Order information from 160 Nuclear Units worldwide.**
- **POMS leverages the POMS Vendor Contacting Team to contact over 20,000 manufacturers each year to determine obsolescence challenges and potential solutions.**

Where is POMS Being Used?

POMS is currently being used at roughly 160 units around the world. Locations of sites signed up for POMS include:

- **Argentina**
- **Brazil**
- **Canada**
- **China**
- **Romania**
- **Slovenia**
- **South Africa**
- **Spain**
- **Sweden**
- **United Kingdom**
- **USA**



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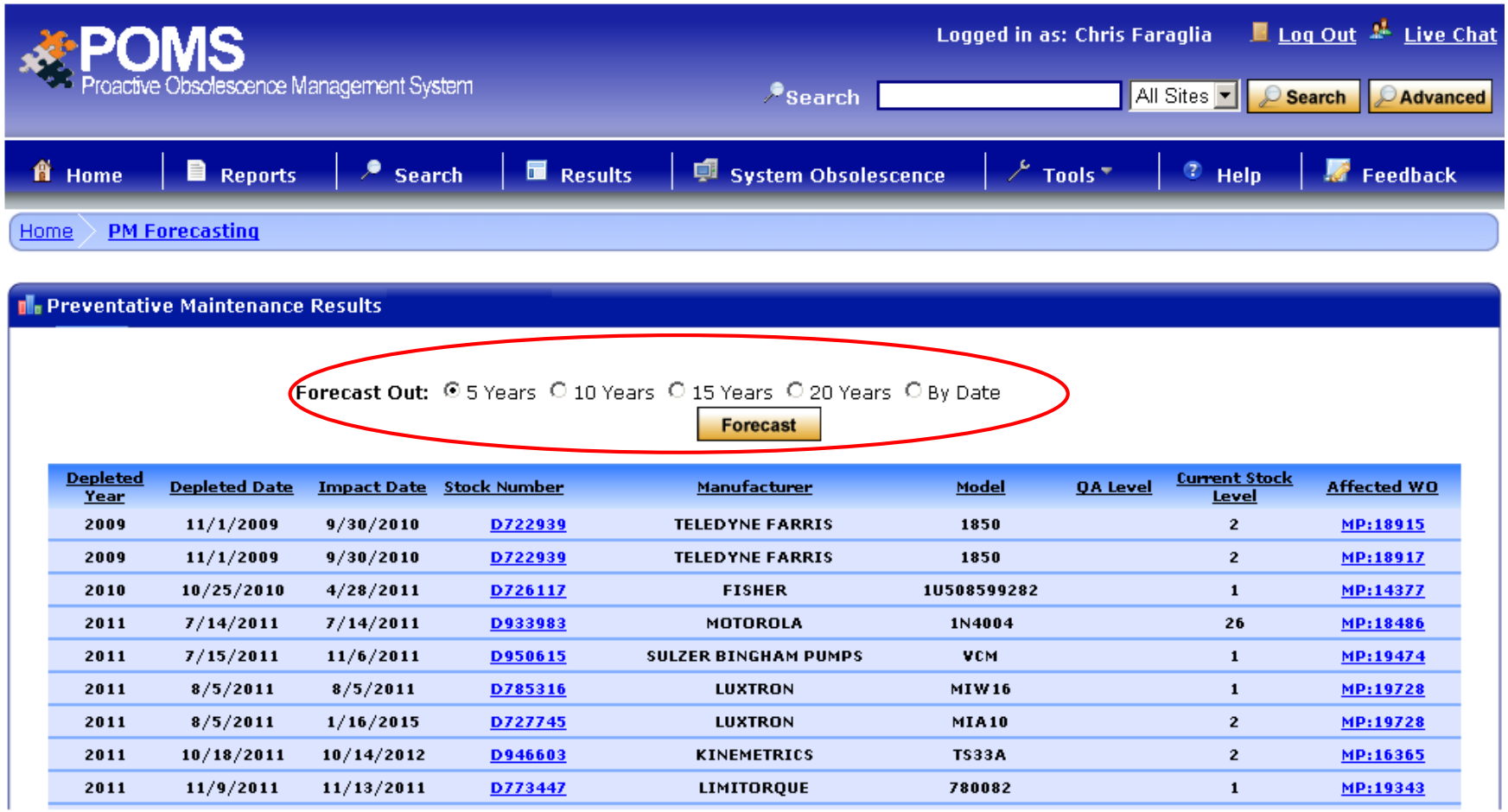
Proactive Obsolescence Management System (POMS)

- **The Rolls-Royce POMS Suite of Tools have been designed to proactively resolve obsolescence issues for the nuclear industry.**
  - **POMS (Identify)**
    - **Identification of obsolete equipment**
  - **PM Forecaster (Prioritize – Schedule Impact)**
    - **Date driven obsolescence impact**
  - **Obsolescence Manager (Prioritize – Vulnerability Impact)**
    - **Vulnerability driven obsolescence impact**

What is Preventive Maintenance (PM) Forecaster?

- PM Forecaster leverages POMS data to help avoid preventive maintenance plan deferrals due to obsolescence issues.
- Determines depletion of obsolete items.
- Aids in prioritizing obsolescence issues.

Proactive Obsolescence



Depleted Year	Depleted Date	Impact Date	Stock Number	Manufacturer	Model	QA Level	Current Stock Level	Affected WO
2009	11/1/2009	9/30/2010	D722939	TELEDYNE FARRIS	1850		2	MP:18915
2009	11/1/2009	9/30/2010	D722939	TELEDYNE FARRIS	1850		2	MP:18917
2010	10/25/2010	4/28/2011	D726117	FISHER	1U508599282		1	MP:14377
2011	7/14/2011	7/14/2011	D933983	MOTOROLA	1N4004		26	MP:18486
2011	7/15/2011	11/6/2011	D950615	SULZER BINGHAM PUMPS	VCM		1	MP:19474
2011	8/5/2011	8/5/2011	D785316	LUXTRON	MIW16		1	MP:19728
2011	8/5/2011	1/16/2015	D727745	LUXTRON	MIA10		2	MP:19728
2011	10/18/2011	10/14/2012	D946603	KINEMETRICS	TS33A		2	MP:16365
2011	11/9/2011	11/13/2011	D773447	LIMITORQUE	780082		1	MP:19343

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What is Obsolescence Manager?

- **Obsolescence Manager (OM) facilitates the prioritization of obsolescence issues through the assignment of component Obsolescence Value Ranking (OVR) scores.**
- **The OVR Algorithm is customizable to meet site specific needs.**
- **Creates a prioritized listing of all obsolete equipment.**
- **Identifies which obsolete item is the largest vulnerability to a plant or fleet.**
- **Working on an Industry-OVR with a focus on Single Point Vulnerability(SPV) with below reorder/zero inventory.**

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OVR Score Breakdown Screen

Equipment Information

Component:	E234-R-B (3701)
System:	23-HIGH PRESSURE COOLANT INJECTION (HPCI)
Manufacturer:	EATON ELECTRICAL (FORMERLY CUTLER-HAMMER)
Model:	HFB3190ML
Description:	ALTERNATE POWER SUPPLY TO HPCI STEAM LINE ISOLATION VALVE
Average OVR:	1.18
Deviation:	2.04
Att 5 Score:	12

Ranges

	Green Range	Yellow Range	Red Range	Score
Component	0 - .5	.51 - 1	1+	2.87
Work Management	0 - .1	.11 - .33	.34+	0.35
Stock	0 - .32	.33 - .66	.67+	0.25
Overall	0 - .92	.93 - 1.99	2+	3.22

Override Score ** [ ] Submit

** This value overrides the actual OVR score.

Score Breakdown

Parameter	10 Pts	5 Pts	3 Pts	1 Pts	Weight	Component Actual	Component Points	Component Score
Component Cat		E, I	F, M, P		10%	E	5	0.50
Tech Spec			Y		20%	Y	3	0.60
Quality Class		Q	P	A	8%	Q	5	0.40
RG 1.97			1, 2		3%	N	0	0
MRULE		R	Y		6%	R	5	0.30
EQ				Y	7%	Y	1	0.07
PRA Class	R	O	Y		6%		0	0
Seismic Category		1, 3			5%	1	5	0.25
RCM		1, 2, 3, 4, A, B, C, D	5, 6, 7, 8		15%	4	5	0.75
AR Priority		1, A	2, B, R	3, C	5%	3(1), 5(1)	1	0.05
Historical Usage		11+	6-10	1-5	5%	1	1	0.05
Future Demand (Mo)		.01-6	6.01-11.99	12+	5%	2.38	5	0.25
Quantity in Stock		0		1	5%	5	5	0.25

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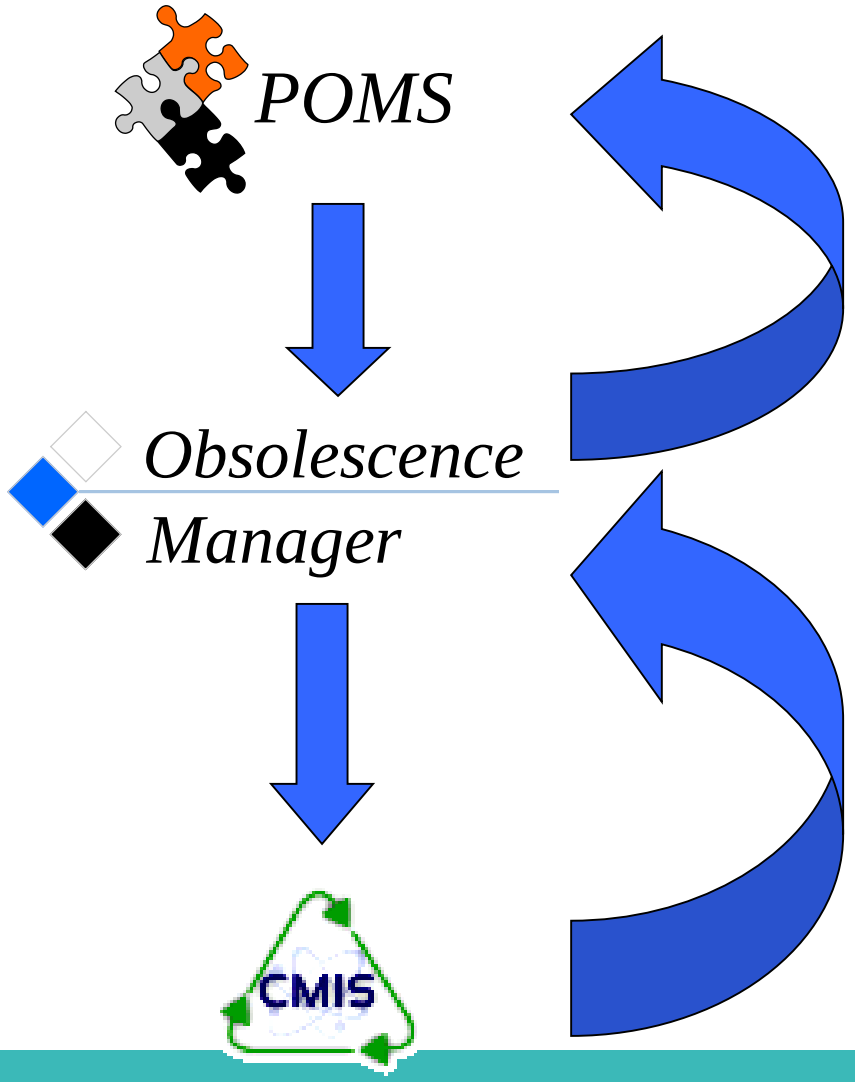
What is CMIS/ CMISL

*Configuration Management Interface System (CMIS) and CMIS Lite are software tools for creating and managing Engineering Changes and **Equivalencies***

- *Customized to match existing fleet/site process*
- *Enforces procedural requirements*
- *Utilizes a secure, centralized web server to store documents*
- *Reduces human performance errors*

Integration with POMS and OM



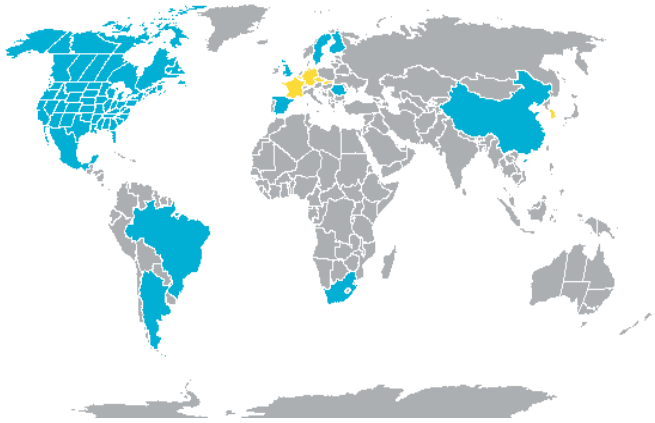
- POMS identifies obsolescence issues in the industry
- Obsolescence Manager (OM) prioritizes obsolescence issues through the Obsolescence Value Ranking (OVR)
- High priority obsolescence issues can then be resolved through change package development in CMIS Lite, which communicates solution back to OM
- All solutions identified and created in CMISL are automatically imported into POMS

What types of data do we maintain?

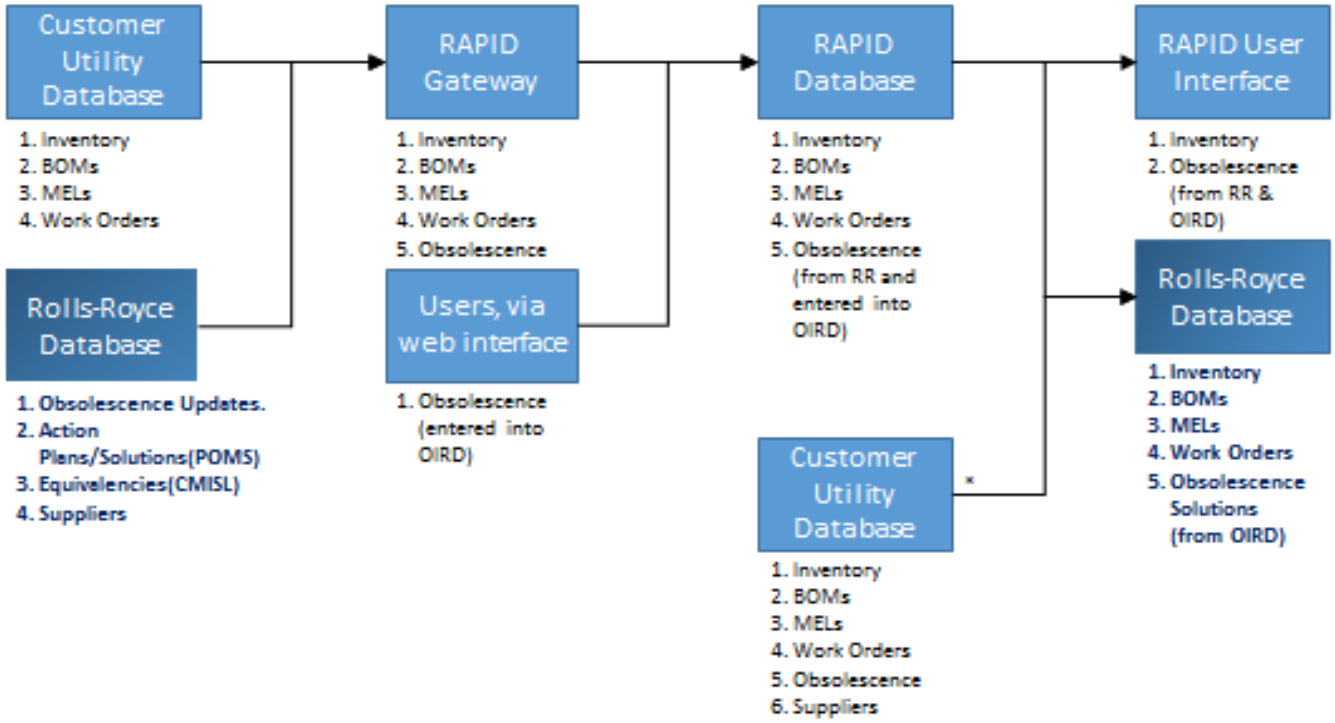
- Component Data
  - Installed Locations
  - Criticality
  - System
  - Description
  - OE
- Stock Data
  - Manufacturer/Model
  - Bill of Material
  - Min/Max, Quantity
- Usage Data
  - Preventive Maintenance
  - Work Order History (issue/return)

Where do we receive data from?

- Utilities
  - 160 Units internationally
- Vendors
  - ~20,000 OEMs
- INPO
  - Operational Experience (OE)
- RAPID/OIRD
  - Solutions
- EPRI
  - PM Templates
- Rolls-Royce
  - Equivalencies
  - Vendor Contacting



POMS/CMISL Push/Pull of Data from OIRD



Rolls-Royce Push/Pull of Data to OIRD – 2015 - 2016

1. **Obsolescence Updates as of 2016**
    - **Equipment that is Obsolete in Industry. (1,593,299)**
2. **Action Plans/Solutions(POMS) 2015 to 2016**
    - **Completed Action Plans (9714, Impacting 7784 Manufacture/ Models)**
3. **Equivalencies (CMISL) in 2016**
    - **Completed Evaluations (472 completed, impacting 454 Manufactures/Models)**
4. **Suppliers (POMS V) in 2016**
    - **Provide updates via POMS V (28,387 Updates received; 5287 Solutions received)**
5. **OIRD Updates to POMS in 2015 to 2016**
    - **Completed Solutions Entered by Utility (610 Solutions Received)**

RR /CW Opportunities for Enhancements to Data Alignment:

1. **Obsolescence Updates.**
   - **Model / Component/ Part is set to Obsolete, then back to 'Not Obsolete'.**
2. **Action Plans/Solutions(POMS)**
   - **Completed Action Plans. Need further support from Utilities to share their bridging strategies. Push Action Plans to OIRD Solutions.**
3. **Equivalencies (CMISL)**
   - **Completed Evaluations. Ongoing support needed to maintain integration.**
4. **Suppliers (POMS V)**
   - **Provide updates via POMS V. Need continuous support from Suppliers to provide updates.**
5. **OIRD Updates to POMS**
   - **Completed Solutions Entered by Utility. Only records initially pushed to OIRD from POMS, receives solution updates from OIRD.**

Thank You☺

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Any Questions?