

IMAC 2014

Maximo HSE Manager

A History Lesson – and More

You Host : [Darren Kwasnycia](#)





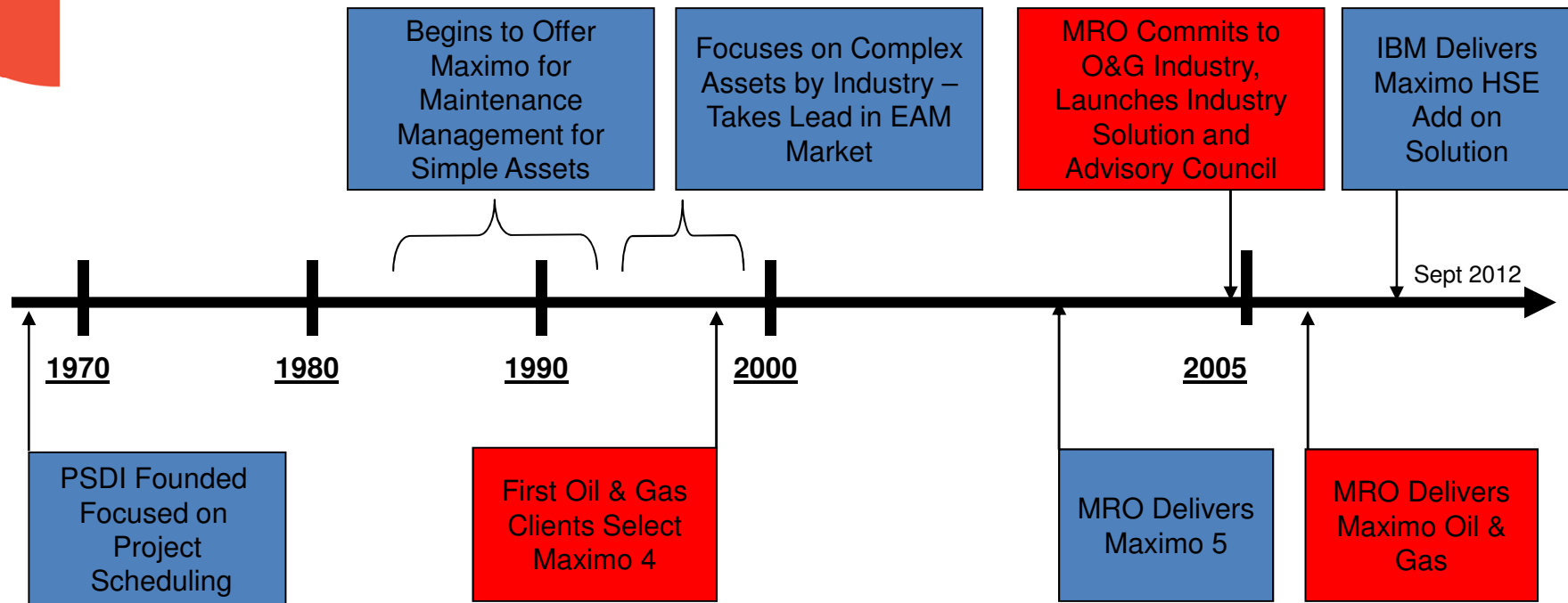
Let's get in the Time Machine





Maximo's History in the Oil & Gas Industry ???

Uhhhhhmm.. Darren aren't we talking HSE???





HSE - What I Hear When I Speak with Customers

1. We are driven by compliance. We need to know about all the compliance requirements we have and then be reminded when they need to be completed. We also need a complete auditable history that we can reference at any time.
2. We just need an event recording tool. If something happens we need to document it. Could be EPA, could be OSHA.
3. We need reports. Our corporate HSE is completely driven by reports. Does MAXIMO has incident reports, spill reports, environmental reporting reports, emission reports?
4. Can we manage hazardous materials?
5. How about process safety controls? Lock out tag out, permits, controls.



HSE - Can these be Accomplished in MAXIMO?

1. **YES** We are driven by compliance. We need to know about all the compliance requirements we have and then be reminded when they need to be completed. We also need a complete auditable history that we can reference at any time.
2. **YES** We just need an event recording tool. If something happens we need to document it. Could be EPA, could be OSHA.
3. **YES*** We need reports. Our corporate HSE is completely driven by reports. Does MAXIMO has incident reports, spill reports, environmental reporting reports, emission reports?
4. **YES** Can we manage hazardous materials?
5. **YES** How about process safety? Lock out tag out, permits, controls.



Let's Have a Closer Look at MAXIMO?

The screenshot displays the IBM Maximo Start Center interface. The main content area is divided into several sections:

- Permit Applications:** Includes sub-sections for 'Permit and Certificate Types (HSE)', 'Permit to Work (HSE)', and 'Permits by Status'. A bar chart shows the distribution of permits by status: REQUEST (11), APPR (6), SUSPEND (1), ACTIVE (1), and CLOSED (1).
- Permit Requests to Process:** A table listing various permit requests with columns for Asset, Description, Location, Owner, Permit and Certificate Type, Permitcenter, Requestor, Required Date, Status, and Permit ID.
- Open permits by Permit Center:** A bar chart showing the number of open permits for different permit centers: Permit Center A (13), Permit Center B (5), Permit Center C (3), and Undefined (2).

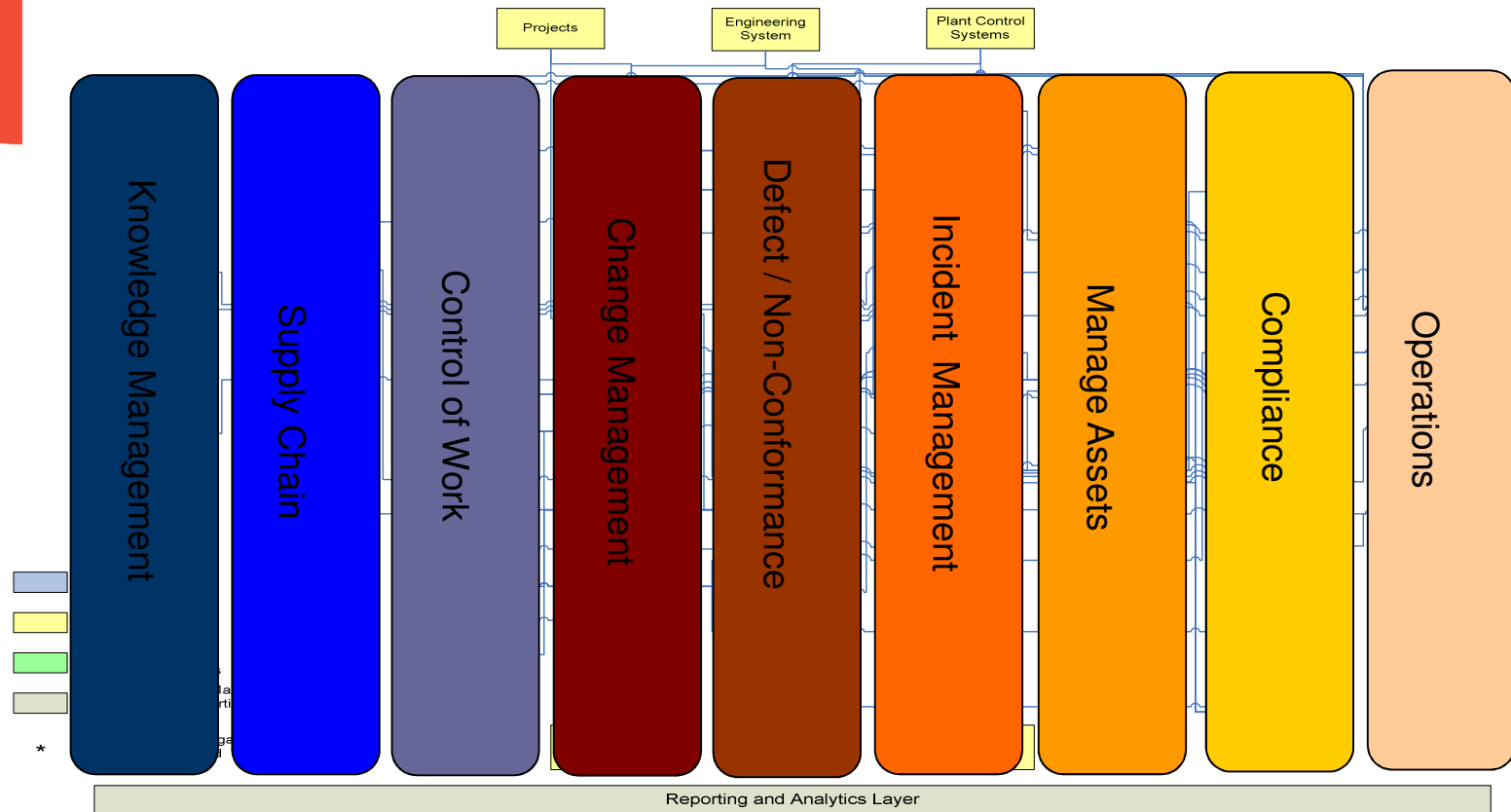
Asset	Description	Location	Owner	Permit and Certificate Type	Permitcenter	Requestor	Required Date	Status	Permit
11430	Pump Maintenance	BR430		HV2013	Permit Center A	WILSON	11/26/13 3:35 PM	REQUEST	1061
11430	Master Rounds - Isolation Permit Template	BR430		CONSPC13	Permit Center A	WILSON	12/12/13 6:59 PM	REQUEST	1046
	Confined Space Vessel Cleaning Template	BOILER		CONSPC13	Permit Center A	WILSON	12/2/13 7:00 PM	REQUEST	1047
	Isolation of Pump - Mechanical and Electrical	BOILER		CONSPC13	Permit Center A	WILSON		REQUEST	1184
	Lock Out Tag Out - Isolation Certificate	LOTO		CONSPC13	Permit Center A	WILSON	11/19/13 1:30 PM	REQUEST	1193
	Hot Work on Main Switch Room			LOT0	Permit Center A	WILSON		REQUEST	1159
11430	Pump Outage	4.P-101-A		HV2013	Permit Center B	WILSON	10/22/13 10:53 AM	REQUEST	1060
	Hot Work - Utility Supply			HV2013	Permit Center B	WILSON	11/11/13 4:54 PM	REQUEST	1069
	Medium Voltage Work - Motors and Controls			HV2013	Permit Center C	WILSON	11/30/13 6:54 PM	REQUEST	1156

Status	Value	Percent (%)
ACTIVE	1	4.35
APPR	6	26.09
CLOSED	1	4.35
ISSUED	3	13.04
REQUEST	11	47.83
SUSPEND	1	4.35

Permitcenter	Value	Percent (%)
Permit Center A	13	56.52
Permit Center B	5	21.74
Permit Center C	3	13.04
Undefined	2	8.7



MAXIMO Health Safety and Environment Manager

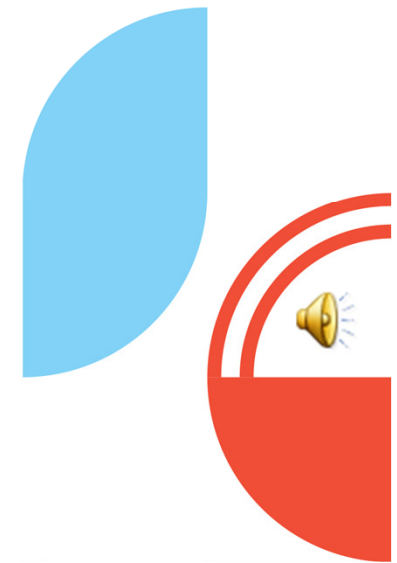




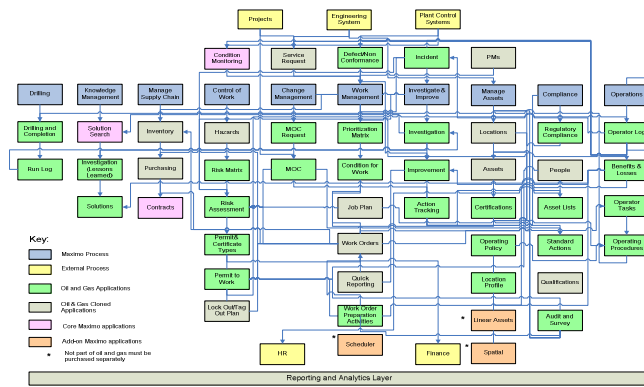
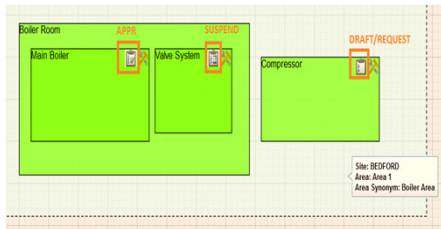
- Quick Product Demo

Let's get in the Time Machine... one more time

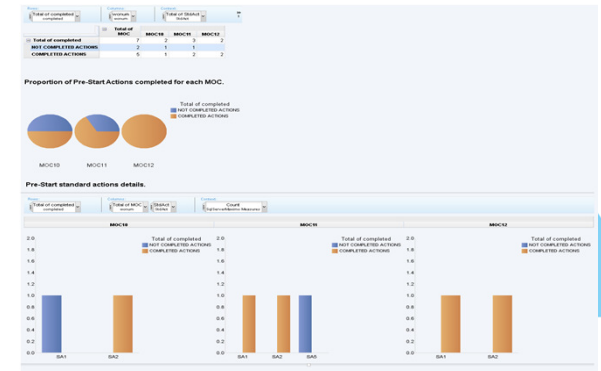
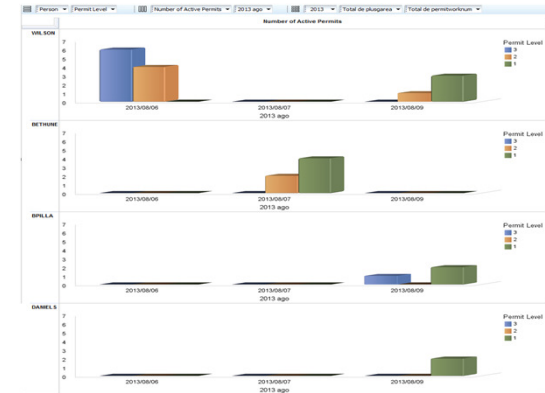
Where we are going we don't need roads!



HSE Manager/Oil and Gas Vision



IMAC 2014



Road map themes

- Enhancements to integrated operational and maintenance processes
- Focus on analytics
- Leverage next generation mobile
- Improved visualization and UX
- Support for Maximo 7.x, new Installer and Scheduler 7.5.2



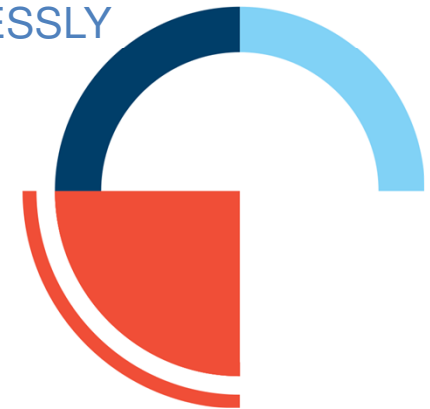
Assumptions

- Manifesting is to be addressed by core product enhancements
- Logistics and related expediting is to be addressed by core product enhancements
- Location visualisation of plant layouts is common to other Industry Solutions
- No further work on OpenO&M standards beyond current support of MIMOSA 3.2.1 unless customer feedback drives this
- Oil and Gas and HSE Manager will continue to retain same code base



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Mobile next generation

- Main use cases now identified
- Focus on simpler request type applications and toolbox talk
- Wait until 2nd Anywhere release
- Continue to define use cases and detailed requirements
- Mobile inspection to be a common development



Maximo Oil and Gas/HSE Manager – Proof of Concept Work

- Proof of concept work to investigate new technologies
- Collaboration with IBM Research
- BI Workpacks
- Not necessarily to be delivered through formal release



Cognos TM1 Analytics

- Shows how Cognos TM1 can be integrated with Maximo Oil and Gas/HSE
- Built example cubes
 - Defect elimination
 - Permit to Work
 - Management of Change
- Document and make available on ISM Library for customers to access
- Review future requirements with customers



Cognos BI HSE Workpack

- Review possibility of a BI Workpack for HSE focused on process safety KPIs
- Definite customer interest and more willingness to use Cognos if standard reports are available
- Possibility to link to a balanced scorecard
- Gathering customer input on KPIs



Plant Layout Visualisation

- View permits, risks, MOCs, high priority WOs on a schematic representation of a plant layout
- Permit to Work Simops a key use case
- Generic approach for use by multiple products
- Dojo GFX identified as technology platform
- POC started in December 2013
- Demonstrated POC February/March 2014
- Cumulative risk use case emerged from POC
- Overall positive user feedback and strong interest



Turnaround Analytics

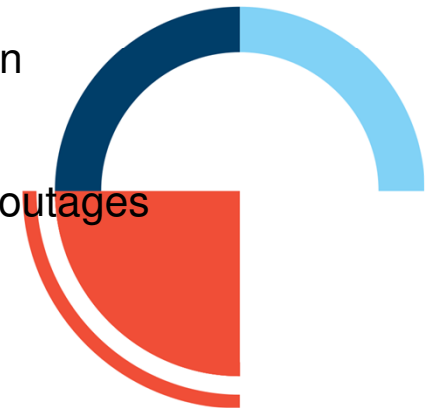
- First of a Kind (FOAK) project with IBM Research
- Would utilise IBM ILOG optimization product possibly SPSS
- Maximo Oil and Gas to provide data model
- Would utilise Maximo Scheduler ODME integration for ILOG
- Funding approved July 2014, 9 month project



Turnaround analytics use cases

Use cases

- 1. For activities associated with a turnaround support the optimum planning of a long term turnaround program for a major producing unit. The object is to minimise loss over multiple shutdowns taking into account equipment condition or predicted condition.
- 2. For activities associated with a specific turnaround support the preparation, prior to execution, of a plan that will minimise production loss. Deviations in scope prior to execution shall also be addressed.
- 3. Extend 1 and 2 above taking into account dependencies such as interconnected platforms, sub sea tie-ins, remote well sites, production pipelines. power and steam supply.
- 4. Extend 1 - 3 above to support planning associated with unplanned outages that result in short duration shutdown of producing units.



HSE Predictive Analytics

- Utilise IBM SPSS and IBM Research capability
- Based on Oil and Gas/HSE data model
- Could potentially deploy using same architecture as Inventory Insights hybrid cloud
- Use cases
 - Incidents/Investigations (text analytics and context)
 - Audits

