A decorative banner with a red wavy top edge. Below the red edge, there is a blue and white flame-like pattern on the left, transitioning into a green field with a tree and a blue sky with clouds in the middle, and a row of white wind turbines on the right.

**Enbridge Gas Distribution/Storage
Maximo 7.5 Upgrade
“Maximo can do that”**

Date: November 6, 2012

Introductions

- Carol Beattie - Technical Systems Supervisor
- Art Herbert – Senior Analyst IT Application support
- Chad Sutherland – Plant Reliability Supervisor
- Frank Vanderham – Ontracks, Principal Consultant

Agenda

1. Why Upgrade to Maximo 7.5 (Background Business Case)
2. Cultural shift of how projects are run at Enbridge Gas
3. Trial Upgrade and desired outcomes
4. Replacing 4 MS Access Databases
 - Engine Meters
 - PMs
 - Inventory
 - Bar Code
5. Uncovering another MS Access Database? Maximo can do that
6. Testing
7. Go Live, Communications
8. Lessons Learned

Background/Business Context

- The previous version Maximo 6.2.6 :
 - ✓ Was hosted on one physical server located at Tecumseh Gas Storage. The warranty on that server was about to expire and was due to be replaced.
 - ✓ EGD was upgrading their operating systems to Windows 7 with Internet Explorer v8 (IE8) rollout . Version 6.2.6 does not work well with Internet Explorer v8 (IE8)
 - ✓ IBM will soon no longer offer application Support for this version potentially leaving EGD without adequate support for its core operational application. End of Service Sept 2013
 - ✓ Reports were being generated using MS Access databases
 - ✓ There were four MS Access databases that interacted directly with Maximo database, i.e. Loading of Engine Meter PM Generation, Work Order Engine Hours, Spare Parts Physical Inventory Count, Bar Code Label Creator/Reader
 - ✓ 19 Crystal Reports were developed but not yet promoted into Production and had not been integrated in Maximo
- The new version 7.5 of Maximo :
 - ✓ Works with Internet Explorer v8 (IE8) and will be packaged as part of upgrade on all desktops and laptops to Windows 7 in Q4/2012.
 - ✓ There were four MS Access databases that were replaced by a more robust, secure and auditable data interface (Enbridge is a regulated utility).
 - ✓ Crystal Reports were integrated in Maximo

Project Scope & Deliverables

- **The Project Scope included**
 - Purchase and install two new servers for Production Environment
 - Upgrade the existing Maximo v6.26 SQL Server 2005 database to Maximo v7.5 SQL Server 2008 database
 - Replace four MS Access databases with data interfaces using native Maximo tool
 - Migrate 19 Crystal reports that have been approved by the Business Users to work with Maximo v7.5 and integrate within Maximo v7.5
 - Decommission Maximo Production Server
- **Out of Scope**
 - Develop new Crystal Reports
 - Develop new data interfaces
- **Project Deliverables**
 - Business Requirements Document
 - Process Maps
 - Test Cases and Test Scripts
 - Delivery of Training
 - Maximo Training Manuals

Project Roles, Responsibilities, & Expectations

Project Manager – Noel Siao

- Manage the timelines, budget and scope of the project
- Liaise with Vendor, Ontracks Consulting, EGD-IT

Core Project Team

IT Team Members

- Sanjay Mehta (IT Solution Architect/Technical Lead) - Technical Requirements, Coordinate infrastructure setup
- Art Herbert (Systems Analyst) – Report Technical Design, Reporting migration, Maximo IT Support
- Tester – Develop test scripts, coordinate and execute testing

Business Team Members

- Carol Beattie – Business Lead, Subject Matter Expert, Requirements Workshops, Testing
- Ryan Bowery - Maximo Server Support

Vendor – Ontracks Consulting

- Erin Johnson (Project Manager)
- Michael Marsonet (Maximo Consultant)

EGD-IT Enterprise Services, Technical Services

- Adrian Tung (Technical Specialist) – Acquire, configure and setup servers
- Tahmina Akrami (SQL Server DBA) – Install database, restore and backup data, migrate data to production

Business Subject Matter Expert

- Lucy Scott (SME, Purchasing)
- Zeke Marshall (SME, Warehouse)
- Kelly Sullivan (SME, Engineering)
- Chad Sutherland (SME, Maintenance Supervision)
- Ed Ysebaert (SME, Operations Support)
- Mark McLaughlin (SME, Instrumentation)
- Jennifer Crawford (SME, Records)
- Yvonne Bansey (SME, Time Tracker)
- Bonnie Sitzes (SME, Financials)

Business Stakeholders

Sponsors

- Rick Wintjes – Business Sponsor
- Jim Sanders – Executive Sponsor

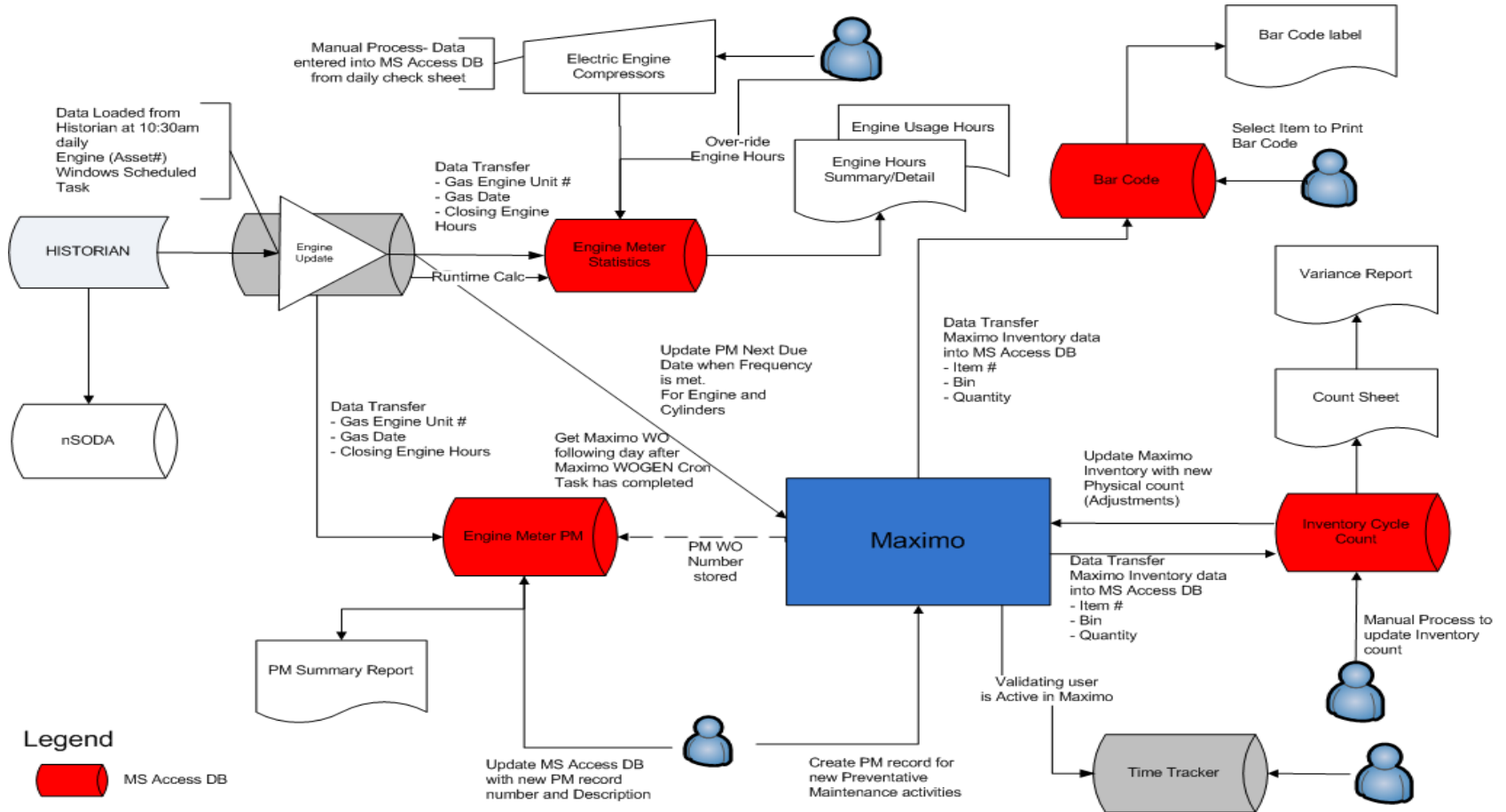
Cultural shift of how projects are run at Enbridge Gas

- In the past Art was doing the job of what four people do now
- In the past we went parallel with old version and new version for a while which was a mistake as users would just update one system or the other making the data inconsistent.
- Was introduced to IT Project Management where IT assigned a Project Manager as well Ontracks
- Followed Project Management Disciplines Initiate, Design, Build, Test,
- Partner had to adapt and learn the Enbridge IT way. Use Enbridge documentation format and tools
- With the size of the team, and geographical locations, the Business feared that tasks would not get completed on time

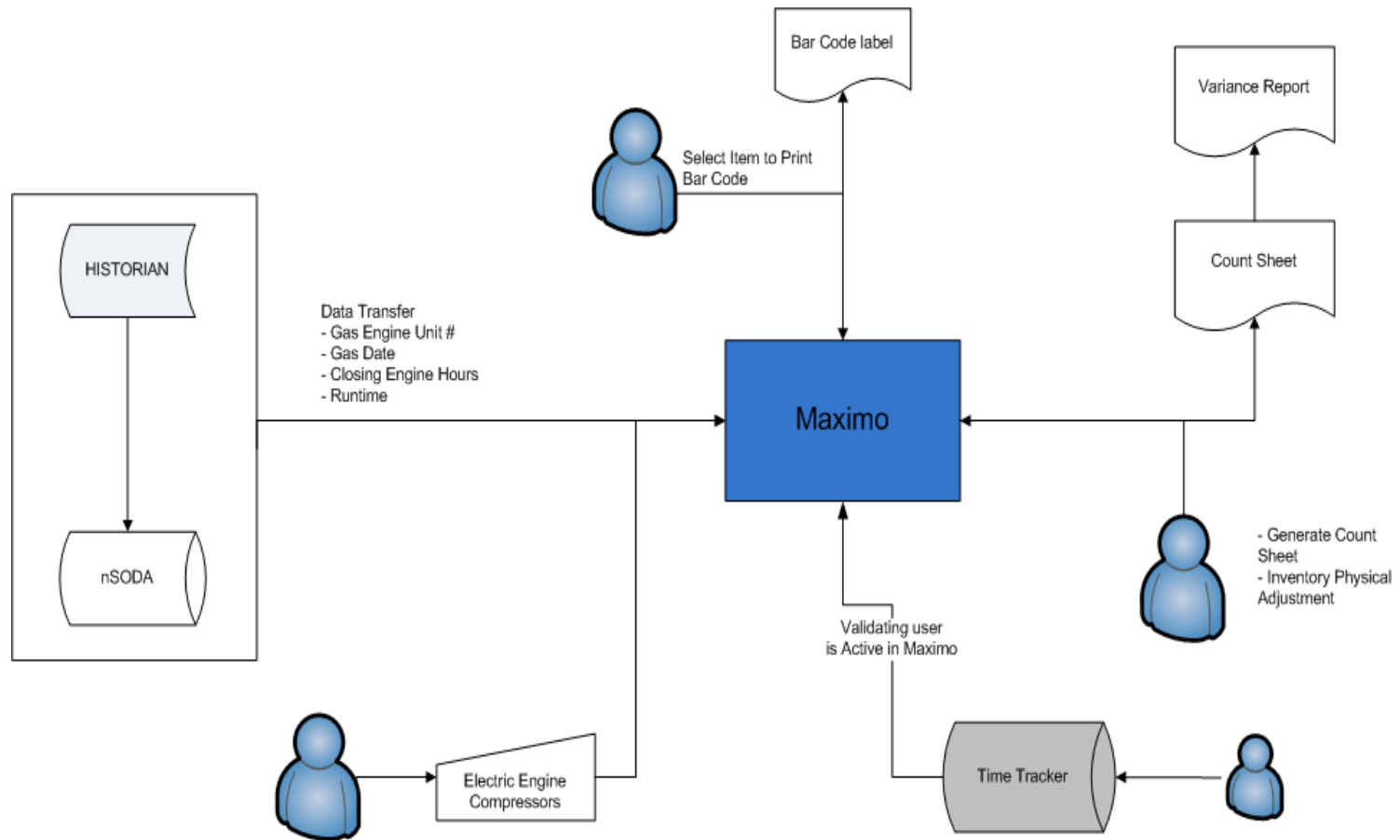
Trial Upgrade

- Identifies deficiencies with the Maximo database
- Leverage Maximo upgrade tools
- Ontracks has performed many Upgrades. Let the experts who perform upgrades routinely versus trying to go through the mountains of documentation provided by IBM
- Allows Enbridge to focus on core business and not worry about a one time upgrade effort
- Ontracks provided documentation detailing the errors encountered and the necessary steps to remediate

Various MS Access Databases connected to Maximo via Back End



Current State – Replacing MS Access DBs



Uncovering another MS Access Database?

Maximo can do that

- Requirement

”The ability to capture a Project # on the Locations application”

- Design/Build Phase

Script

Mike: (Thinking out loud in his home office) Hmmmm there is a table called PROJLIST already referenced by Work Order. Looks to be a custom table with Project numbers that date back 5+ years

Mike: (Picks up Phone to call to Carol) Hi Carol, I’m looking at the requirement for Project #s and it seems you already have Project #s in Maximo. Where is it coming from?

Carol; (Covers phone and yells) ART do we have another Access Database?

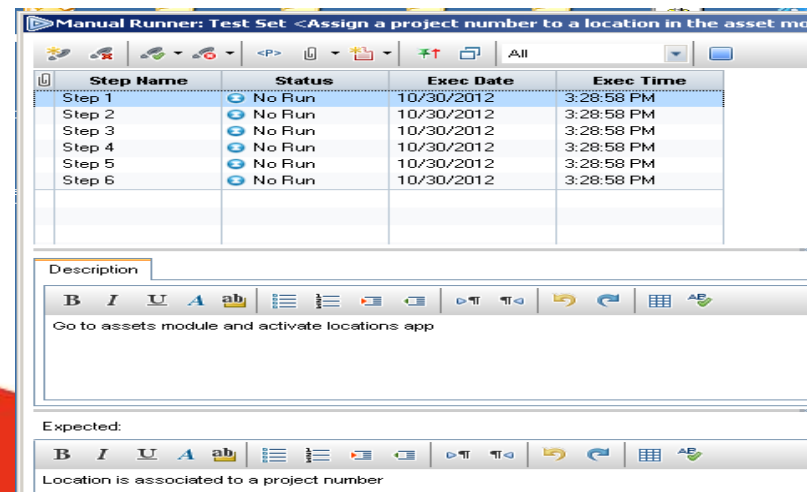
Uncovering another MS Access Database?

Maximo can do that

- Sometimes new things creep up in Projects.
- Identify and review new issues weekly as a team during Project Status calls
- Identify what needs to change and the effort required to perform the change
- Submit and get approval for Change Order
 - In the past we just would have gone ahead and configured it with little or no concern to project timelines and budgets

Testing – “Controlled”

- Testing took place with key power users from each group in different phases.
 - 2 Conference Room Pilot with remediation in between
 - User Acceptance Testing
- HP Quality Center was used to record Test scripts and results.
 - Over 100 tests performed for various functions (Start Center, Work Order, PM, Inventory, Purchase Order, etc)
 - Users would pass or fail steps and test cases providing detailed explanations and print screens.
 - Users identified issues and defects during testing



The screenshot shows the 'Manual Runner: Test Set' interface in HP Quality Center. The window title is 'Manual Runner: Test Set <Assign a project number to a location in the asset m...'. The main area contains a table with the following data:

Step Name	Status	Exec Date	Exec Time
Step 1	<input type="radio"/> No Run	10/30/2012	3:28:58 PM
Step 2	<input type="radio"/> No Run	10/30/2012	3:28:58 PM
Step 3	<input type="radio"/> No Run	10/30/2012	3:28:58 PM
Step 4	<input type="radio"/> No Run	10/30/2012	3:28:58 PM
Step 5	<input type="radio"/> No Run	10/30/2012	3:28:58 PM
Step 6	<input type="radio"/> No Run	10/30/2012	3:28:58 PM

Below the table, there are two sections for descriptions:

Description
Go to assets module and activate locations app

Expected:
Location is associated to a project number

Go Live, Communication

3.5.2 IMPLEMENTATION CHECKLIST

**The following tasks highlighted in teal do not affect the progress of the maximo 7.5 upgrade project.

#	Task Description	Start Date	TZ	Start Time	End Time	TZ	Start Time	End Time	Company	Individual
1	Deploy Maximo 6.2 shutdown communication	Tue June - 12	EST			MST			Enbridge	Carol
2	Deploy Maximo 6.2 shutdown communication	Thu June - 14	EST	12:00 PM		MST	10: 00 AM		Enbridge	Carol
3	Pre-deployment tasks	Thu June - 14	EST	4:00 PM	4: 05 PM	MST	2: 00 PM	2: 05 PM		
3a	Record Last WO generated in 6.2 (Screen Shot)								Enbridge	Carol
3b	Record Last PO Number and status (Screen Shot)								Enbridge	Carol
3c	Record last PO Received (Screen Shot)								Enbridge	Carol
3d	Run Inventory valuation reports								Enbridge	Lucy, Bonny
3e	Copy the doclinks folder from the d:\ drive on TEC-AP-001 to TEC-AP-005's d:\drive.								Enbridge	Art
4	Stop all Maximo 6.2.5 Application Services	Thu June - 14	EST	4:05 PM	4: 15 PM	MST	2: 10 PM	2: 15 PM	Ontracks	Mike
4a	Stop MXServer application in websphere.									
4b	Stop Websphere on TEC-AP-001									
5	Database Backup & Snapshot of Maximo 6.2.5 Server Name: TEC-AP-001 Database Name: MAXPRD	Thu June - 14	EST	4:15: PM	4:30 PM	MST	2:15 PM	2:30 PM	Enbridge	Tahmina
6	FTP Maximo 6.2.5 Database (MAXPRD) to Ontracks (See FTP Connection Details)	Thu June - 14	EST	4:30 PM	5: 00 PM	MST	2:30 PM	3: 00 PM	Enbridge	Tahmina
7	Upgrade Maximo 6.2.5 to Maximo 7.5									
7a	Upgrade Maximo 6.2.5 to 7.1.1.8	Thu June - 14								
7b	Switch Virtual Snapshot	Fri June - 15								
7c	Upgrade Maximo to 7.5	Fri June - 15								
8	FTP Upgraded database to Enbridge (See FTP Connection Details)	Fri June - 15								

From: Tahmina [mailto: Tahmina@enbridge.com] Sent: June-15-12 3:30 PM To: Adrian Huang [mailto: Adrian.Huang@enbridge.com]; Brijesh Mishra [mailto: Brijesh.Mishra@enbridge.com]; Cc: Brijesh Mishra [mailto: Brijesh.Mishra@enbridge.com]; Subject: RE: EGS Upgrade Checklist - Step 8 is done

Hello everyone,

All items under task 9 have been completed. Please note that I have taken the following databases on TEC-AP-001 offline: (MAXPRD, HREmployeesData, Operations, DRAS_EGS_Integrity). All the users have the required permissions on TEC-DB-001.

Task Description	Start Date	TZ	Start Time	End Time	TZ	Start Time	End Time	Company	Individual
1 Deploy Maximo 6.2 shutdown communication	Tue June 12	EST			MST			Enbridge	Carol
2 Deploy Maximo 6.2 shutdown communication	Thu June 14	EST	12:00 PM		MST	10: 00 AM		Enbridge	Carol
3 Pre-deployment tasks	Thu June 14	EST	4:00 PM	4: 05 PM	MST	2: 00 PM	2: 05 PM		
3a Record Last WO generated in 6.2 (Screen Shot)								Enbridge	Carol
3b Record Last PO Number and status (Screen Shot)								Enbridge	Carol
3c Record last PO Received (Screen Shot)								Enbridge	Carol
3d Run Inventory valuation reports								Enbridge	Lucy, Bonny
3e Copy the doclinks folder from the d:\ drive on TEC-AP-001 to TEC-AP-005's d:\drive.								Enbridge	Art



Lessons Learned

Positive

- Maximo “CAN DO THAT”. Learning that Maximo is a robust software solution with a lot. I mean a lot of functionality
- Communications and smooth transition for Go-Live
- Resources working in 3 separate locations (Sarnia, Toronto, Edmonton)
- Having a Plan and following it.
- Realizing how change can affect a plan and how constant communications is important

Negative

- Crystal report integration should have been researched further.
 - IBM has removed the out of the box integration in Maximo 7.5
 - Crystal reports have to be written in a certain way using “Add Command” which means rewriting/redesigning the reports

Questions?

