

Project and Change Management Challenges Faced and Overcome

ATCO Pipelines Maximo project

Maximo WCMUG

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Asset Management at the North Pole

Santa's Bank Manager



"Frankly, Mr Clause, we don't understand - two days ago you had assets worth billions - today, nothing..."

Project and Change Management Challenges Faced and Overcome

- Company Overview
- The Problem
- Approach ★
 - Assets Tracked
 - In Scope
- Project Team
- Requirements Definition
- Challenges & Solutions
- Benefits
- Lessons Learned
- Next Steps
- Questions



Company Overview

ATCO Pipelines provides reliable and efficient delivery of natural gas and is committed to operational excellence and superior customer service while ensuring the safety of our employees and the public.

- Owns and operates approximately 8,500 kilometres of pipeline
- Peak delivery of 3.8 billion cubic feet of natural gas per day
- Nearly 4,000 receipt and delivery points
- 31 compressors operating in 19 separate locations
- Approximately 375 employees
- Offices in Calgary and Edmonton and facilities throughout the province



The Problem

23 Disparate applications housed in Excel, Access, Visual Basic and proprietary applications.

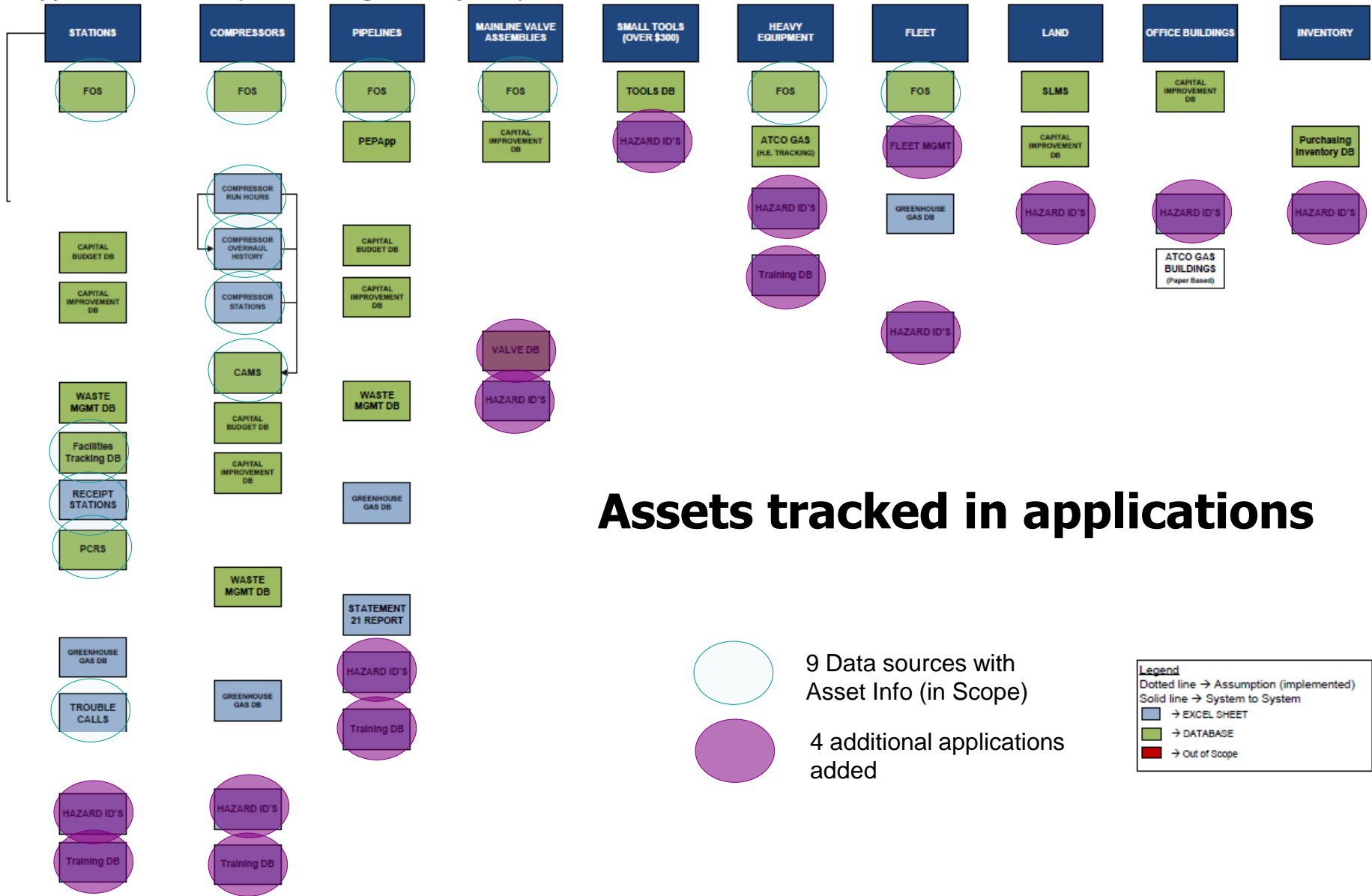
- Many were 'homegrown' by people or groups requiring the information
- Little to no integration between applications meant data was manually maintained and updated

Issues included:

- Data not being captured
- Data duplication
- Inconsistent data with high risk of error
- Duplication of effort
- Data security
- Inaccurate reporting & tracking

Where is the single source of the truth and who owns it?

Application to Asset (Asset Management System)



Assets tracked in applications

○ 9 Data sources with Asset Info (in Scope)
 ● 4 additional applications added

Legend

- Dotted line → Assumption (implemented)
- Solid line → System to System
- ☐ → EXCEL SHEET
- ▭ → DATABASE
- → Out of Scope

The Approach – Wish List

- Update historical / current data
 - accurate asset history & benchmarking
- Manage regulatory requirements
 - ensure maintenance is completed & recorded
- Identify processes
 - define them and capture the data
- Accommodate a mobile workforce
- CMMS needs to be easy to maintain, manage and upgrade
 - Configured not customized



The Approach

ATCO Pipelines chose IBM Maximo

- ✓ Enterprise grade asset management
- ✓ Industry leading CMMS
- ✓ Mobile capable – work management & calibration
- ✓ Easy to maintain, manage and upgrade

ATCO Pipelines chose ATCO I-Tek

- ✓ IBM Maximo experts
- ✓ Holistic approach to asset management
- ✓ Hosted solution

The Approach – Assets Tracked

Pipelines' specific definition of Asset Management:

- Asset Management will apply to Above Ground facilities.
- Below Ground facilities (i.e. pipelines) will be managed via the GIS (Graphical Information System)

Asset – Individual Components which perform a specific function. Some examples are:

- Valve
- Rectifier
- Meter
- Regulator
- Filter/Separator
- Flange

Facility – Combination of assets that function as a unit. Some examples are:

- Compressor Stations
- Receipt Stations
- FTU
- Buildings

There can be one facility with many assets associated to the facility.

Building a House Analogy

Someone asks you to build a house – they know they want a house, but they don't know exactly what they want until after it is done.

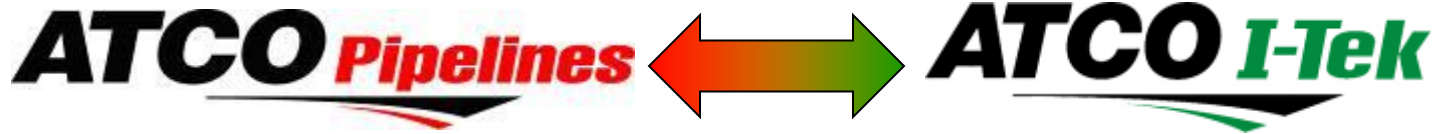
A house needs:

- A set of blueprints
- A solid foundation

If you wait until the bathroom is built to change its location, it is going to cost more. You compromise the project and the budget.

An IT Project needs the same thing in order to stick to timelines, budget and ultimately to meet expectations.

Project Team



- Management ★
- Project Manager
- 20 Subject Matter Experts
 - Managers
 - Team Leaders
 - Foremen
 - Field people

- Project Manager
- Maximo Experts
- Maximo BA
- Team Support
 - DBA's
 - Security architects
 - Client relationship manager
 - Infrastructure
 - Desktop
 - IBM Licensing

Requirements Definition

ATCO I-Tek worked with ATCO Pipelines to:

- Estimate
- Solution Design – Detailed Design
 - Workshops
 - SME engagement
 - Scope definition
 - Licensing
- Revise estimate – deeper scoping



This is not what happened

How Projects Really Work (version 1.5)

Create your own cartoon at www.projectcartoon.com



1 How the customer explained it



2 How the project leader understood it



3 How the analyst designed it



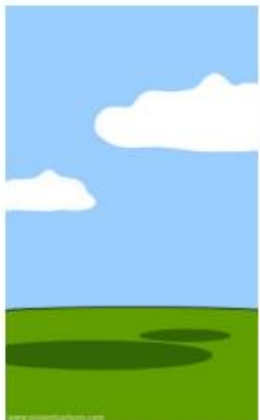
4 How the programmer wrote it



5 What the beta testers received



6 How the business consultant described it



7 How the project was documented



8 What operations installed



9 How the customer was billed



10 How it was supported



11 What marketing advertised



12 What the customer really needed

Challenges

- Verification of solution design
 - Workshops
 - Conference Room Pilot
- Scope Creep - additional capabilities within budget
- SME availability
- Field Change process FOS vs Maximo
- Scheduling - field
- Testing

Challenges – Solution Design

Challenge:

Identify accurate solution design

Mitigation:

- Workshops to verify solution design
 - Engage SME and Operators
- Engagement of all levels of organization
 - Engage all levels of management to get buy in
 - Ability to bring in areas of the company
- Conference Room Pilot
 - Pilot repeated with business processes
 - Ability to look at data early
 - Having Data in Maximo up and running - prototyping

Challenges – Scope Creep

Challenge:

- Add additional capability within Budget
 - Fleet
 - Training database
 - Hazards and precautions
 - Valve database
 - Calibration module – added for process control

Mitigation:

- Added when made sense
- Easier and cheaper to add now than later
- Not much extra work involved
- A good thing when managed properly

Challenges – SME Availability

Challenge:

- Floods
- Busy work load
- Non-dedicated resources

Mitigation:

- Extend schedule
- Add outside department resources
- Run more sessions outside of project



Challenges – Field Change

Challenges:

- PCRS – ready to go
- FOS – challenging ★
- Mobile different way of work
- Timing with new Panasonic Toughbooks, Win 7, Maximo, GIS refresh
- Training field – train the trainer
- Connectivity ★

Mitigation:

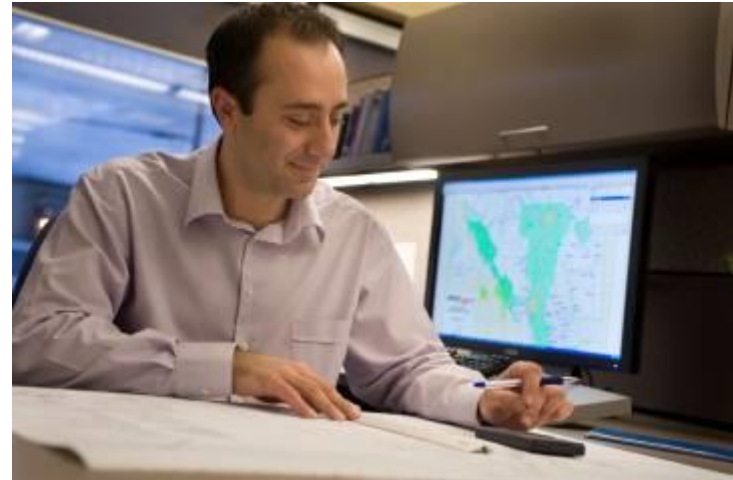
- Workshops to show different way of work
 - Logistics with other areas to coordinate timing of hardware
 - More field training sooner on Maximo product
 - Test connectivity in real life using test environment



Challenges – Scheduling

Mitigation:

- Flexibility of ATCO I-Tek Project Team
- Adaptability of ATCO I-Tek Project Team
- Both Project areas not letting things “Slide”
- Ability for Maximo change to the business – easy configuration changes
- Parallel processes when possible



Challenges – Testing

Mitigation:

- I-Tek testing documentation
 - Used in CRP
 - Used again in training
 - Used again in go-live
- Very thorough testing material
- Used for audit verification of testing processes
- Scripts to convert data were documented



Benefits

- Better understanding of maintenance – completion rates throughout the year
 - One consolidated system
 - Ability to report by area and see completions
- Management of assets – more rigor around maintenance
 - Escalations for maintenance, not completed or missed
 - Ability to do better failure analysis
- Better workforce management
 - Improved tracking of assets
 - Improved work processes and instructions – push work instead of pull
 - Use work groups instead of individuals – improved scheduling
 - Route optimization & work optimization = greater efficiency

Lessons Learned

- Have a good plan
 - Deeper scoping of the project at the start will save time & money later
- Have a dedicated team
 - Not too many people
 - Ensure everyone follows the plan and is on the same page
 - Maintain same group if possible
- Start small
 - Phased approach
 - Start with small group of work processes and grow
- Change Management
 - Engage SME's for their buy in and input
 - Good quality & frequent communication
 - Have a good integrator that can help

Next Steps

- Working towards asset management – not just maintenance management
- Single source of the truth in progress:
 - Phase 1- Assets that need to be maintained (nearing completion)
 - Phase 2 – Scope all assets, GIS Integration & reporting
 - Phase 3 – Leverage investment in Maximo



Questions?

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