A system is only one part of the solution:
Selecting an Asset Registry / Work Management System for
The City of Calgary’s Waste & Recycling Services

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Background on Waste & Recycling Services (W&RS)

- The City of Calgary population 1,120,225 (2012 census), generated 622,881 tonnes of waste in 2012
- Population growth of approx. 2% each year
- W&RS has over 500 staff, own and operate majority of its assets
- Asset base consists of primarily linear assets and vertical structures
  - 3 active landfills, covering 12 sq.km
  - 5 inactive landfills, with closure dates between 1940 to 1994
  - Landfill infrastructure (LFG, leachate collection systems, buildings, storm ponds)
- Collections infrastructure
  - Approx. 300,000 blue recycling carts
  - Approx. 300,000 black garbage carts
  - Approx. 5,000 commercial collection bins
  - 385 Trucks (not owned but operated by W&RS)
  - Approx. 50 community recycling depots
Future direction of W&RS

• 80/20 by 2020 strategy
  – Commitment by The City to divert/reduce 80% of waste generated away from landfills by 2020
  – Includes waste from all sectors to landfill sites

• Environmental Regulations
  – Landfills require approval to Operate from Alberta Environment (AENV)
  – Alberta Landfill Standards and the Water Act dictate processes for managing stormwater, leachate, and groundwater
  – Greenhouse Gas Emissions are reported to both Alberta Environment and Environment Canada (reporting notification of 50k tonnes CO₂, and a compliance limit of 100k tonnes CO₂ equivalent per site per year)

These drivers require big investments over the coming years
New assets coming online

Leachate treatment – Pilot plant

Landfill Scale House
New assets coming online

Gas Plant at Shepard Landfill, Calgary
Increasing Maintenance Costs

Annual Operational Maintenance Costs

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
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<tbody>
<tr>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
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<tr>
<td>2014</td>
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<td>2015</td>
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<tr>
<td>2016</td>
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<tr>
<td>2017</td>
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</tbody>
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SVE = Soil Vapor Extraction
LTPP = Leachate Treatment Pilot Plant
LTP = Leachate Treatment Plant
Asset Management

- City Policy and drive from Business Units to adopt Asset Management
  - **Goal to improve investment planning and management of assets**
  - W&RS already making progress on Customer Levels of Service

- Asset Registry and Work Management components are important for Asset Management and the overall W&RS Business Plan.

- Plus Corporate reporting requirements
  - Tangible Capital Asset (TCA) Reporting
  - Infrastructure Status Report / Condition Assessments

- Could an Asset Registry / Work / Maintenance Mngt System provide the fundamental building blocks we need?
Project Goal

Agreeing the way forward to improve our Asset Registry and Work Management capability in a way that is appropriate to the nature and scale of our business and it’s changing asset base.

Comments from W&RS Management Team

We want staff to be setup for success

The way forward needs to work for us

An Asset Registry is a fundamental building block for Asset Mngt and making investment decisions
How did we achieve the goal?

<table>
<thead>
<tr>
<th>Q2 2012</th>
<th>Q3 2012</th>
<th>Q4 2012</th>
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</thead>
<tbody>
<tr>
<td>Project Initiation</td>
<td>Industry Scan (with other municipalities)</td>
<td>Business Process Review (of relevant core functions)</td>
</tr>
<tr>
<td>Needs Assessment</td>
<td>Systems Investigation</td>
<td>Systems Evaluation</td>
</tr>
</tbody>
</table>

Developed and Agreed with the Management Team
Learning from others

• W&RS business units/departments in other municipalities – through an Industry Scan

• Other Work Mngt System users in The City of Calgary

• CH2M HILL’s Operations experiences
## Example Process Map: Purchase Orders

<table>
<thead>
<tr>
<th>Team Involved</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations</strong></td>
<td>Obtain 3 Quotes → Complete Requisition Form → Approve Requisition (Dept ID Owner) → Check delivery → Stamp and sign Invoice</td>
</tr>
<tr>
<td><strong>Project Engineering</strong></td>
<td>Review Req. and add to Peoplesoft → Remind Ops to approve cc Internal Buyer → Check delivery → Stamp and sign Invoice</td>
</tr>
<tr>
<td><strong>WRS Admin Support – Agnes</strong></td>
<td>Review Req. and add to Peoplesoft → Check against Purchase Policy → Approve and issue PO → Notify Vendor → Invoice Dept ID Owner</td>
</tr>
<tr>
<td><strong>Accounts Payable</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Supply Team</strong></td>
<td></td>
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<tr>
<td><strong>Vendor</strong></td>
<td></td>
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</tbody>
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Remembering Goals & Business Drivers

• To address the true Business Need (investment planning and managing assets) we identified gaps.

• Waste & Recycling Services still need to;
  – Further develop an Asset Planning function
  – Establish formal short and long term capital renewal processes
  – Review all planned maintenance and inspections
  – Clearly defining the Asset Registry, splitting with GIS
  – Improve capital project lifecycle / handover process
  – Improve inter-departmental processes

Buying an IT system won’t directly solve all of the challenges – we need to address these other items as well
System Evaluation

- Workshop held with cross section of staff to review Business Needs and System Investigation
  - W&RS Management Team
  - W&RS Key Staff
  - Corporate and Utility IT Teams

- Vote then held and line drawn under top 2-3 systems
Next Steps

• 3 systems selected that could support the Business Need and help W&RS towards meeting their goals

• Systems need further investigation
  – Corporate IT Integration, Support and Internal Costs
  – Formal quote/cost from vendor
  – Consider stability of product / vendor strategy
What’s happening now?

• Agreeing on Roles and Responsibilities between W&RS, Corporate and Department IT to move forward

• Planning detailed investigation on the three (3) short listed systems in terms of IT integration and cost

• Projects being established to move forward with our identified gaps – our Business Needs
Recommendations to others in a similar situation

• Remember the system is only one part of the solution.

• It’s hard to fit your business around a chosen system – select a system that supports your business needs.

• Engage stakeholders and front line staff throughout – start change management early
Thank you!

Any questions?