



# IAMA Workshop Slides

# Topics discussed

- Asset Management Overview
- Town of Carstairs Asset Management Journey
- Governance Structure – Supporting Asset Management
- Questions & Maybe Answers



# Asset Management

## WHAT IS IT:

- “The coordinated activity of an organization to realise value from assets”.
- **Coordination** means organizing the activities of two or more groups so that they work together efficiently and know what the others are doing.



# Asset Management Key Principles

It involves:

- Processes, procedures and practices to assist and define the management of infrastructure
- Achieving total lowest cost of ownership
- Established measures for performance, risk and cost



# The Benefits

| Benefits of Asset Management |  |
|------------------------------|--|
|                              | Good governance and increased accountability                             |
|                              | Data-driven decision-making  |
|                              | Enhanced sustainability of infrastructure                                |
|                              | Improved level of service and quality of life                            |
|                              | Accurate forecasting of infrastructure replacement and enhancement needs |
|                              | Compliance with federal and provincial regulations                       |



# Asset Management Competencies

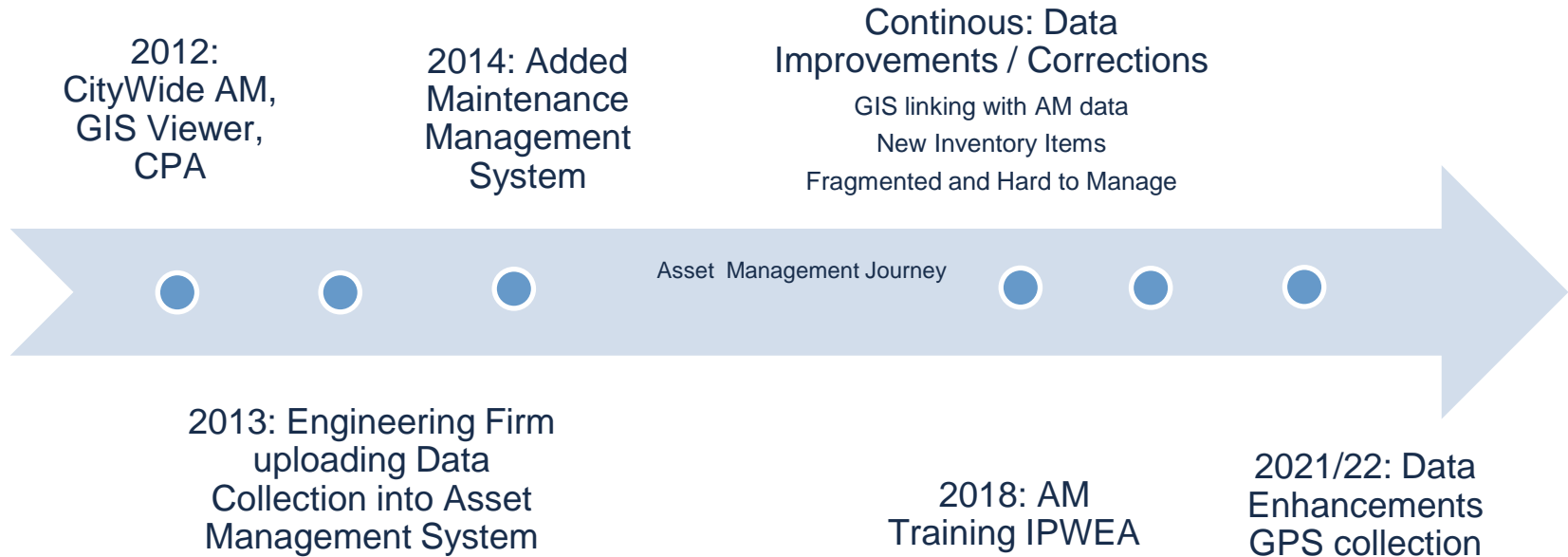




- We are a community with population of 4,895 that is located 45 minutes north of Calgary Alberta. Carstairs offers all the necessities of everyday living while enjoying the slower pace, familiar faces and serenity of country life. Our location, and proximity to many large economic centers such as Calgary and Red Deer, make Carstairs an ideal place to live, work, and visit.
- Come and explore our beautiful town, our 18-hole golf course, a Memorial Complex with abundant parks, playgrounds, skate park and walking paths.
- Services – Water, waste water, storm, roadways, parks & recreation, library, protective services, campground and golf course.
- Staffing 46 full-time staff



# The Town of Carstairs Asset Management Journey



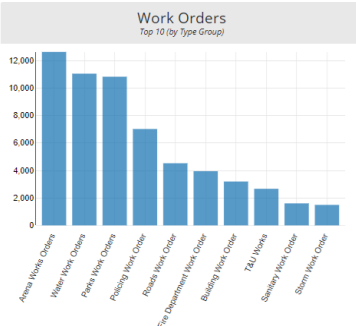
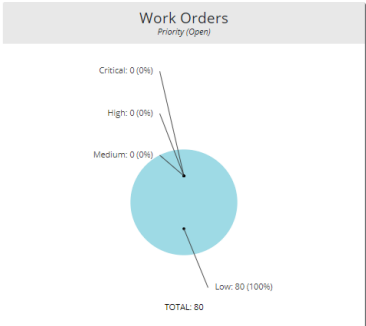
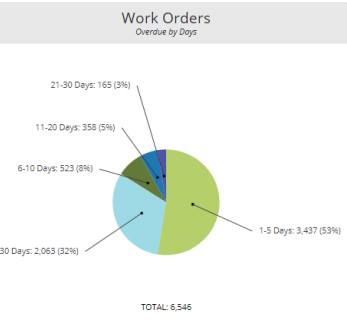
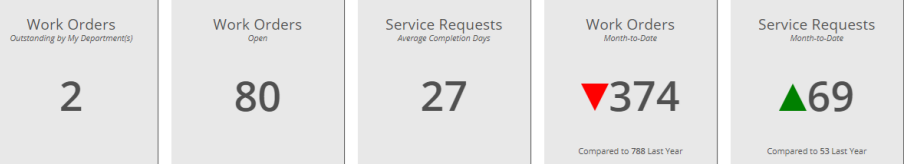


# Maintenance Management

psdcitywide Home > MM > Work Orders

Filter Advanced Filter 1 Selections Showing 447 records (73,616 total) + Add

| Select                              | ID       | Origin ID | Address/Location            | Department                  | Work Order Type Group | Work Order Type             | Work Order Subtype          | Inspection | Priority  | Status            |
|-------------------------------------|----------|-----------|-----------------------------|-----------------------------|-----------------------|-----------------------------|-----------------------------|------------|-----------|-------------------|
| <input type="checkbox"/>            | WO-73617 | SR-6024   | 901 HIGHWAY 2A              | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73616 | SR-6023   | 616 WEST HIGHLAND CR...     | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input checked="" type="checkbox"/> | WO-73615 | SR-6022   | 307 9 AVENUE S              | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73614 | SR-6021   | 1 WEST HIGHLAND BAY         | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73613 | SR-6020   | 176 MEADOWLARK LANE         | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73612 | SR-6019   | 105 MEADOWPARK DRIVE        | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73611 | SR-6018   | 820 CENTRE STREET           | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73610 | SR-6017   | 53 McDONALD CLOSE           | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73609 | SR-6016   | 14 HAVENFIELD DRIVE         | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73608 | SR-6015   | 606 600 CARRIAGE LANE ...   | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73607 | SR-6014   | 744 STONEHAVEN DRIVE        | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73606 | SR-6011   | 21 MEADOWPARK PLACE         | Water System                | Water Work Orders     | Water Meter W/O             | Final Meter Read            | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73605 | SR-6012   | 320 10 AVENUE SOUTH         | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73604 | SR-6013   | 1429 IDAHO STREET           | Water System                | Water Work Orders     | Water Meter W/O             | Re-Read                     | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73603 |           |                             | Policing                    | Policing Work Order   | Animals or Poultry-Policing | Dog Control-Dogs Run at ... | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73602 |           | 223 & 229 9 AVENUE N        | Operational Services Wor... | T&U Works             | Shop Work-W/O               | Yard Maintenance/Repair     | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73601 |           | Hammond Street, Town ...    | Sanitary                    | Sanitary Work Order   | Flushing                    | No                          | Low        | Completed |                   |
| <input type="checkbox"/>            | WO-73600 |           |                             | Policing                    | Policing Work Order   | Animals or Poultry-Policing | Dog Control-Dogs Run at ... | No         | Low       | Director Approval |
| <input type="checkbox"/>            | WO-73599 | SR-6010   | 1500 GOUGH ROAD             | Cemetery                    | Cemetery Work Orders  | Cemetery W/O-T&U            | Open & Close Plot           | No         | Low       | In Progress       |
| <input type="checkbox"/>            | WO-73598 | SR-6009   | 1135 DOWNIE STREET          | Storm System                | Storm Work Order      | Storm Catch Basins/Man...   | Inspections                 | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73597 |           | 10 Avenue, Town of Carst... | Roadway System              | Roads Work Order      | Roads-Sweeping/T&U          | Sweeping                    | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73596 |           | 223 & 229 9 AVENUE N        | Operational Services Wor... | T&U Works             | Shop Work-W/O               | Equipment Maintenance/...   | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73595 |           | Highway 581, Town of Ca...  | Roadway System              | Roads Work Order      | Fencing-W/O T&U             | Snow Fence Removal          | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73594 |           | 10 Avenue, Town of Carst... | Parks                       | Parks Work Orders     | Pathways-Parks              | Pathways/Maintenance        | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73593 |           | 223 & 229 9 AVENUE N        | Operational Services Wor... | T&U Works             | Shop Work-W/O               | Shop Maintenance/Repair     | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73592 |           | 223 & 229 9 AVENUE N        | Operational Services Wor... | T&U Works             | Shop Work-W/O               | Yard Maintenance/Repair     | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73591 |           | Gough Road, Town of Ca...   | Storm System                | Storm Work Order      | Storm                       | Flush                       | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73590 |           | 10 Avenue, Town of Carst... | Parks                       | Parks Work Orders     | Staff Duties-Parks          | Staff Duties-Rounds         | No         | Low       | Completed         |
| <input type="checkbox"/>            | WO-73589 |           |                             | Arena                       | Arena Works Orders    | Ice Maintenance Duties...   | Nightly Compressor Check    | No         | Low       | Completed         |



# Service Management



4 Selections Segment Search... Year 2022 Run Report

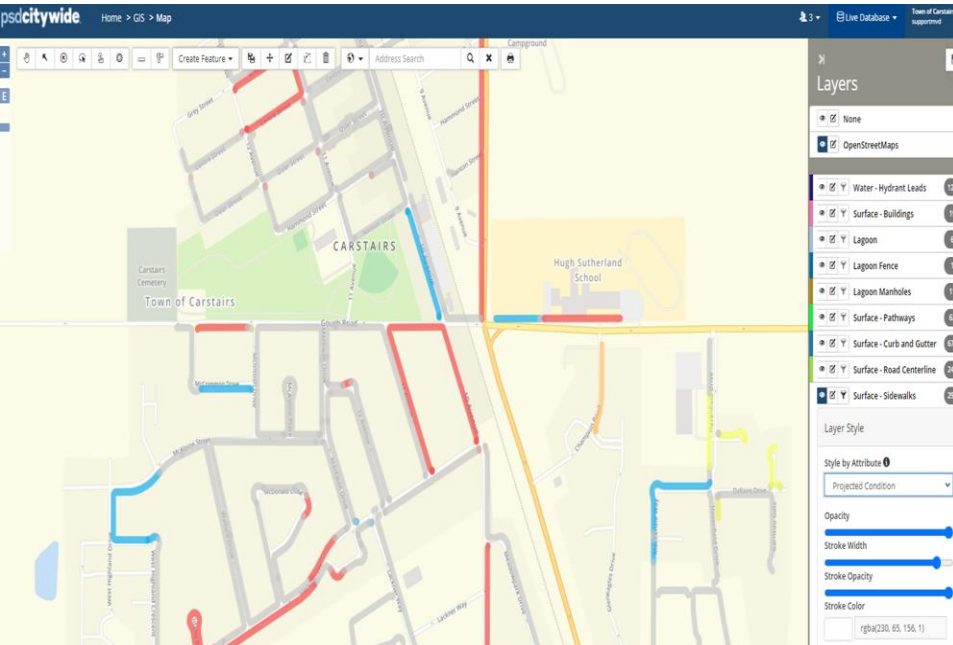
|                         |                          |                                  |                          |                           |                          |
|-------------------------|--------------------------|----------------------------------|--------------------------|---------------------------|--------------------------|
| Grit & Oil Separator    | 0 Assets                 | 0 Assets                         | 0 Assets                 | 5 Assets                  | 1 Asset                  |
| Lagoon                  | -                        | -                                | -                        | 5,984.40 m2               | 1.00 m                   |
| Laneways                | \$0.00                   | \$0.00                           | \$0.00                   | \$8,255,902.32            | \$8,991,634.62           |
| Lighting                |                          |                                  |                          |                           |                          |
| No Segment              |                          |                                  |                          |                           |                          |
| Para Ramps              |                          |                                  |                          |                           |                          |
| Parks Service Lines     | 0 Assets                 | 0 Assets                         | 1 Asset                  | 1 Asset                   | 0 Assets                 |
| Parks Service Valves    | -                        | -                                | 66,578.24 m2             | 808.20 m2                 | -                        |
| Pathway System          | \$0.00                   | \$0.00                           | \$628,060.73             | \$1,114,969.00            | \$0.00                   |
| Pressure Main           |                          |                                  |                          |                           |                          |
| Pumphouse               | 0 Assets                 | 4 Assets                         | 1 Asset                  | 1 Asset                   | 0 Assets                 |
| Reservoir               | -                        | 15,406.76 m2                     | 372.48 m2                | 17,763.20 m2              | -                        |
| Roadway Swale           | \$0.00                   | \$1,473,323.96                   | \$365,907.60             | \$1,262,667.75            | \$0.00                   |
| Sanitary Lift Station 1 |                          |                                  |                          |                           |                          |
| Sanitary Mains          | 24 Assets                | 25 Assets                        | 5 Assets                 | 0 Assets                  | 0 Assets                 |
|                         | 35,310.31 m, unit(s), m2 | 41,204.05 m, unit(s), m2         | 1,870.79 m, unit(s)      | -                         | -                        |
|                         | \$4,258,865.67           | \$4,154,337.34                   | \$1,442,544.95           | \$0.00                    | \$0.00                   |
|                         |                          |                                  |                          |                           |                          |
|                         | 625 Assets               | 508 Assets                       | 340 Assets               | 167 Assets                | 141 Assets               |
|                         | 88,491.64 m, m2, unit(s) | 113,653.06 m, unit(s), m2, sq ft | 95,349.58 unit(s), m, m2 | 145,415.14 m, m2, unit(s) | 93,716.40 m, m2, unit(s) |
|                         | \$13,511,793.98          | \$16,999,973.40                  | \$13,897,193.70          | \$9,760,007.54            | \$4,386,088.81           |

# Risk Management & Planning

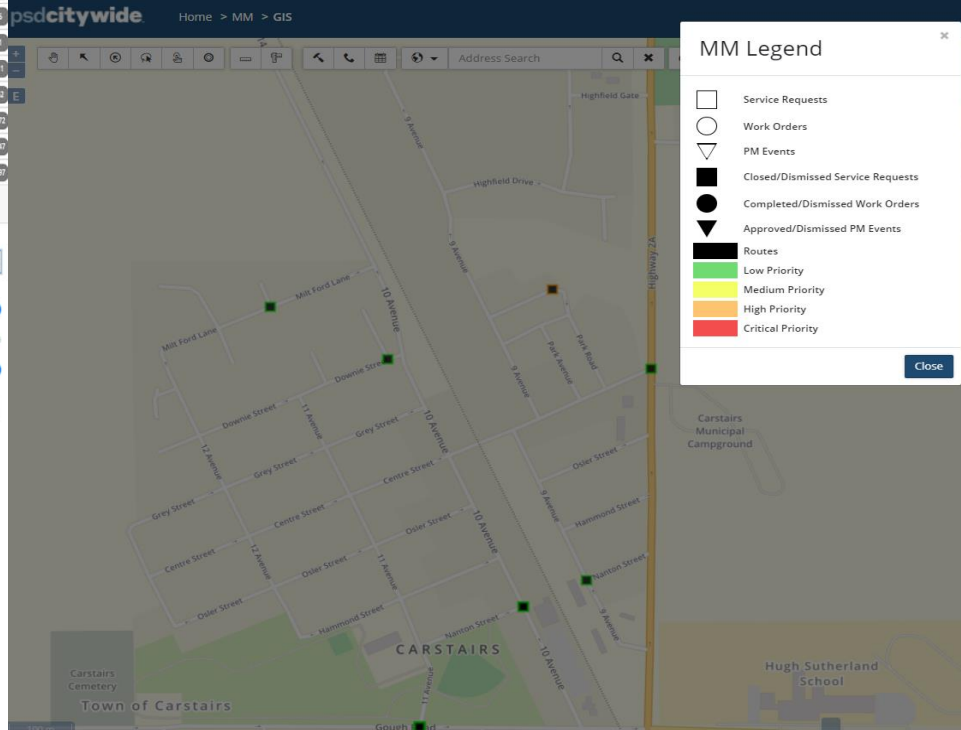
## Condition Projections



# Condition Mapping



# Service Request Mapping



# Asset Details Improved

- Save
- Insurance/Warranty/Lease
- Valuation
- Amortization
- Adjustment Summary
- Additions
- Full Disposals
- Partial Disposals
- Writedowns
- Transfers
- Overrides
- Profile
- Replacement Cost
- Condition
- Risk
- Strategy
- Lifecycle Quantities
- Decision Tree
- Properties
- MM
- Work Orders
- Inspections
- Events
- Out Of Service / Downtime
- Usage
- Fuel Costs
- Route Patrols

**Overview**

**Name** Wellness Clinic

**In-Service Date** 2005-08-01

**Historical Cost** \$208,341.68

**Replacement Cost**

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**Condition/Risk**

**Overall Projected Condition** 67.17 - Good

**Risk Rating** 4 - Very Low

**Asset Age** 16 Year(s) 5 Month(s)

**Age-Based Condition** 67.17 - Good

**Fully Amortized Date (EOL)** 2055-08-01

**Service Life Remaining** 33 Year(s) 7 Month(s)

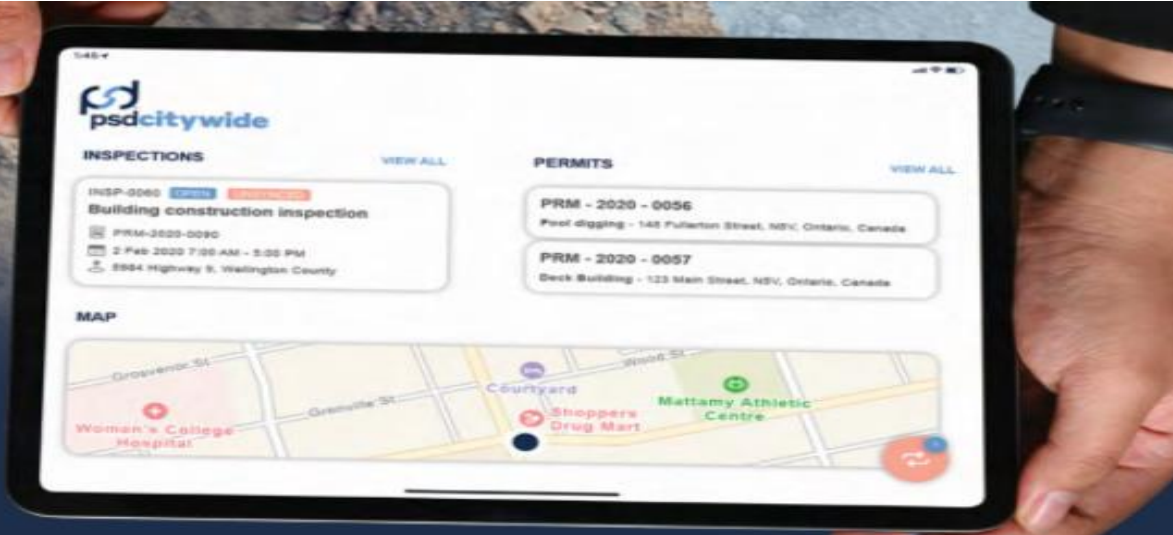
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**Properties**

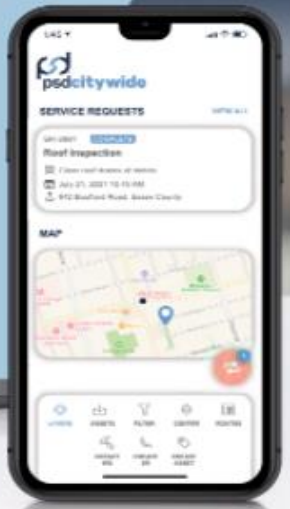
- Additions
- Full Disposals
- Partial Disposals
- Writedowns
- Transfers
- Overrides
- Profile
- Replacement Cost
- Condition
- Risk
- Lifecycle Quantities
- Decision Tree
- Properties
- MM
- Work Orders

| Asset ID | Description         | Operational Services Building | Inspection Type      | Operational Services Buildings | Condition | Status    | Effective Date      | Value |
|----------|---------------------|-------------------------------|----------------------|--------------------------------|-----------|-----------|---------------------|-------|
| WO-33763 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-02-26 02:00:00 | \$68. |
| WO-35519 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-03-20 02:00:00 | \$34. |
| WO-36253 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-04-10 20:00:00 | \$10. |
| WO-39728 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-05-05 20:00:00 | \$17. |
| WO-39786 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-06-09 20:00:00 | \$17. |
| WO-39793 | Building Work Order | Operational Services Building | Bi Annual Inspection | Operational Services Buildings | Low       | Completed | 2019-07-14 20:00:00 | \$17. |
| WO-42632 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-08-11 20:00:00 | \$17. |
| WO-42633 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Completed | 2019-09-13 15:38:00 | \$17. |
| WO-44428 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-45334 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-45442 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-45722 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-45888 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-46078 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |
| WO-46173 | Building Work Order | Operational Services Building | Monthly Inspection   | Operational Services Buildings | Low       | Dismissed |                     | \$0.0 |





# Actioning AM out in the field



# Future Focus on Asset Management Activities



# Starting Asset Management

- Councils Understanding (One and Done)
- Little oversight
- Knowledge of Asset Management
- Data Collection – What, Where, When, Why & How
- Data Correction / Cleanup / Improvements
- Departmental Buy-In at the Beginning



# What we have created - Gains

- The Director of Finance now reviews all new, disposed and department transfers. At the end of the year, our audit is a very smooth transition.
- Improved Departmental and Corporate dialogue
  - The manager of Ops Services attends all planning and development meetings with F.A.C. and yearly municipal improvements and reports back on all activities
  - We have created a team of four and we meet monthly to ensure we are not missing anything.
  - Departments have learned to join forces and collaborate for the betterment of the organization.
  - We have developed a **Central Repository** with GIS, AM, TCA & Operational Data
- Heightened AM awakening and awareness
- Supports smarter budgeting – Process starts much earlier
- Better communication between Council, CAO, Senior Staff, Departments





# Supporting Asset Management



<https://www.assetmanagementbc.ca/wp-content/uploads/Asset-Management-101-The-What-Why-and-How-for-Your-Community-CNAM.pdf>



# Organizational Governance

- Instilling a Governance structure to develop, implement and manage an organizational asset management program ensures all stakeholders are represented, heard, and considered in the process.
- This ensures an integrated program with accountable stakeholders.



# Governance Structure

- A Governance Structure is required to:
  - Develop & Implement the AM program
  - Manage an ongoing AM Program
  - Prioritize AM initiatives
- The Strategic Asset Management Policy provides a basis to discuss an effective governance structure for the municipality.



# Program Development

- Asset Management is multidisciplinary:
  - Engineering
  - Finance
  - Operations
  - Planning
  - Purchasing
  - IT
- Scale & scope of infrastructure services provided by municipality informs Governance Structure

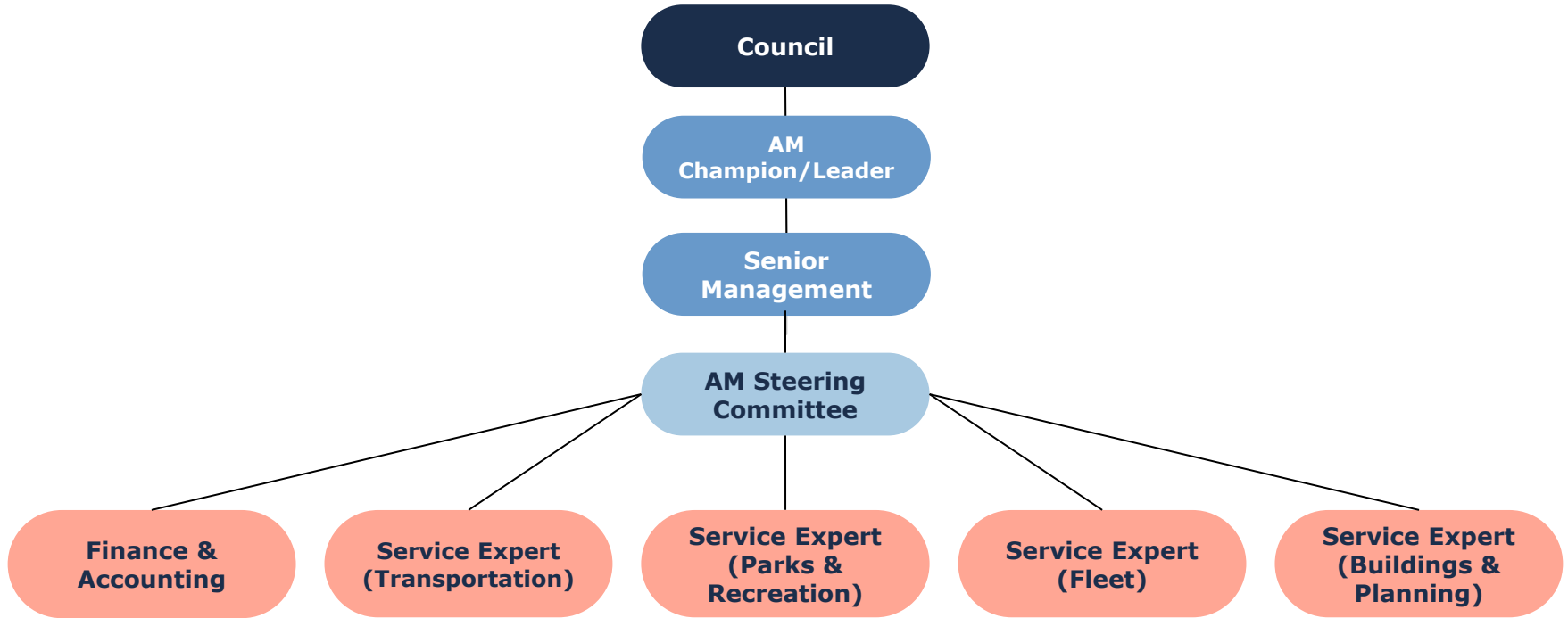


# Governance Structure

- AM Champion
  - Influential Leader
- AM Steering Committee
  - Decision Makers
    - Finance, Engineering, GIS, Facilities, Public Works, Fleet, Planning, etc...
- AM Coordinator
  - Monitors and governs all aspects of the program
- AM Team
  - Dedicated staff meet and discuss the AM program regularly



# Example Asset Management Governance Structure



# AM Governance Structures

- Many options for managing an ongoing AM program within a municipality
- Choice of Governance structure within the municipality will be affected by factors unique to each municipality:
  - Size & diversity of asset base;
  - Level & type of internal expertise;
  - Available technology and integration between asset registers;
  - Current municipal governance structure & operations (e.g. capacity across departments)



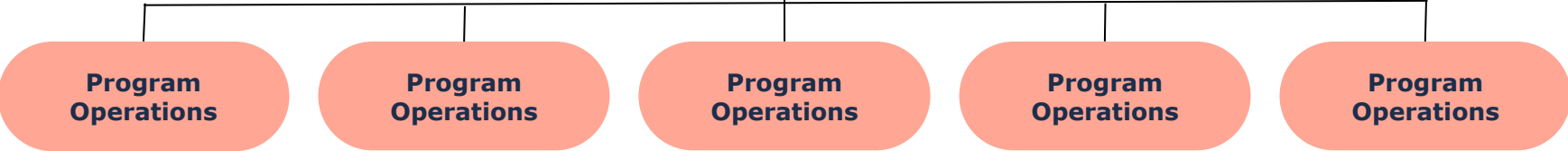
# Centralized AM Governance

- Centralized Corporate AM Team carries out AM Planning functions for organization on behalf of all program areas.

**Leadership Team**

**Steering Committee**

**AM Lead**



- Viable for smaller or less diversified organizations
- Difficult to implement in municipalities with diverse services and large asset profiles



# Partially Centralized Strategic AM Governance

- 'Strategic' Corporate AM group evaluates overall state of infrastructure & ensures consistency of organizational AM practices & reporting

**Leadership Team**

**Steering Committee**

**AM Lead**

**Program Operations**

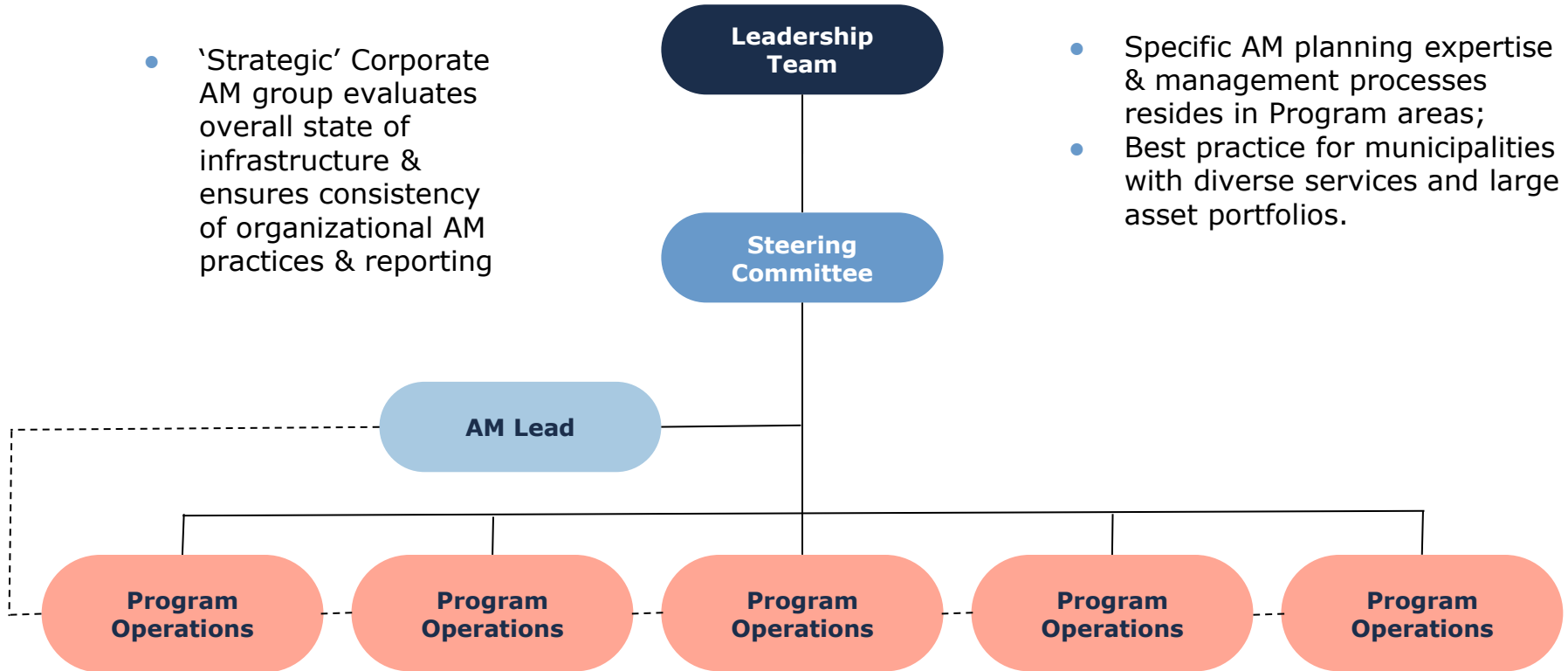
**Program Operations**

**Program Operations**

**Program Operations**

**Program Operations**

- Specific AM planning expertise & management processes resides in Program areas;
- Best practice for municipalities with diverse services and large asset portfolios.



# Decentralized AM Governance

- Each Program/Service area develops separate AM practices & reporting;
- Recommendations for assets & budget are reported separately.

**Leadership Team**

**Steering Committee**

- May work for small municipalities with close leadership teams;
- Difficult to maintain consistent organizational AM practices & promote balanced decision-making.



# Hybrid AM Governance

- Specific Program area or Department carries out all AM functions on behalf of the other Program/Service areas. E.g. Finance or Public Works department

**Leadership Team**

**Steering Committee**

**Specific Department**

**Program Operations**

**Program Operations**

**Program Operations**

**Program Operations**

**Program Operations**

- Workable for small municipalities with relatively few assets in the other Program/Service areas
- Must maintain planning contact within each of the other Programs

# Role: Asset Management Champion/Leader

- A senior official (elected or non-elected) who establishes the culture of asset management (AM) across the municipal organization
  - Champions AM vision;
  - Articulates corporate goals and stakeholder requirements that AM policy must help achieve across organization;
  - Ensures that AM Program aligns with corporate strategy and targets
- Provides motivation & leverage to ensure successful implementation of AM program



# Role of the CAO

- Understanding and embracing the changes Asset Management brings.
  - Municipal administrators can use asset management outputs to help run the municipality more effectively. This can be applied to managing service fees, developing service plans and compiling the municipal budget, to name a few.
- Ensuring Senior Leadership is doing their part
  - Policy
  - Processes and Procedures



# The Importance of Asset Management to the CAO

- Existing Infrastructure is the largest investment that every community has ever made (nothing else comes close)
- Existing Infrastructure is the delivery mechanism that touches regular citizens lives every day (couldn't imagine a world without it)



# Role: AM Steering Committee

- Includes senior representatives from across the organization:
  - Develops the AM vision;
  - Proactive in shaping the Asset Management culture;
  - Supports AM Champion/Leader in promoting asset management principle and best practices;
  - Ensures AM program will meet requirements;
  - Supports AM Program & possible changes to areas of the organization;
  - Provides guidance to the Program Experts or Project Manager



# Role: AM Lead

- Manages development of Program to achieve corporate AM vision;
- Works with/seeks guidance from:
  - Steering Committee;
  - Leadership & expert staff in the service areas;
- Develops/maintains communications plans;
- Manages consulting services (if applicable);
- AM lead can come from any area of the organization;
  - Should have a broad knowledge of the organizational operations, people & assets;
  - A team builder & motivator.





# Example of Many Organizations with an "Asset Lead"



Council

CAO

I'M SORRY  
I CAN'T,  
I JUST DON'T  
WANT TO

Public Works /  
Operations

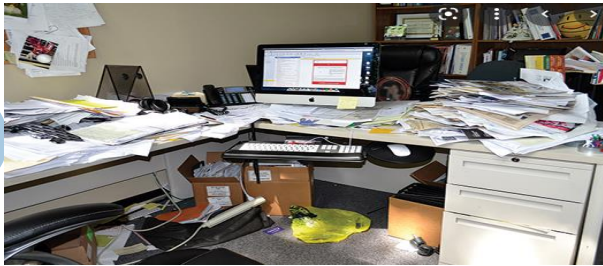
Engineering

Finance

Planning

Parks & Rec.  
Facilities

AM Lead GIS  
Tech



# Role: Program/Service Area Experts

- Provides expertise & input to AM program from respective service areas;
- Ensures services or infrastructure they are accountable for are properly represented and accommodated in AM program.



# AM Governance Structures

- Choice of Governance structure within the municipality will be affected by factors unique to each municipality:
  - Size & diversity of asset base;
  - Level & type of internal expertise;
  - Available technology and integration between asset registers;
  - Current municipal governance structure & operations (e.g. capacity across departments)



Questions?

