



# “How” Based Approach to Asset Management (in Small and Medium Sized Municipalities)

Date: November 21<sup>st</sup>, 2018

Presenter: Jason Speers

# AGENDA

1. Ontario Clean Water Agency (OCWA) Introduction
2. Asset Stewardship Quality Management System (ASQMS) Framework
3. Integrated Work Management System (WMS) & Hosting Pilot Projects
4. AM Skills Development Program

1.

# Introduction to OCWA



# Ontario Clean Water Agency (OCWA)




- Serve a population over 4M
- Total Solutions Provider including, Operations and Maintenance (O&M), PM, and Financing
- 180 Municipalities and First Nations
- 500 treatment facilities
- Provincial Crown corporation with 850 staff

2.


## OCWA's Asset Stewardship Quality Management System (ASQMS)

# ASQMS Framework and Guidelines




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Request for Proposal for Professional Engineering Consultant  
Services Required for  
Water and Wastewater, Asset Stewardship Quality Management  
System (ASQMS) Framework & Guidelines, Asset Management  
Skills Development and Asset Management Decision Support  
Tool Requirements Definition




TECHNICAL



OCWA  
RFP No. OCWA0920ASQMS  
Monday, October 16, 2017  
12:00 pm

Contact Person:  
Chris Hamel - President  
chris.hamel@gmblueplan.ca

410 Lewis Road, Unit 1B, Stoney Creek, ON L8E 5Y7  
P: 905-643-6688 www.GMBluePlan.ca



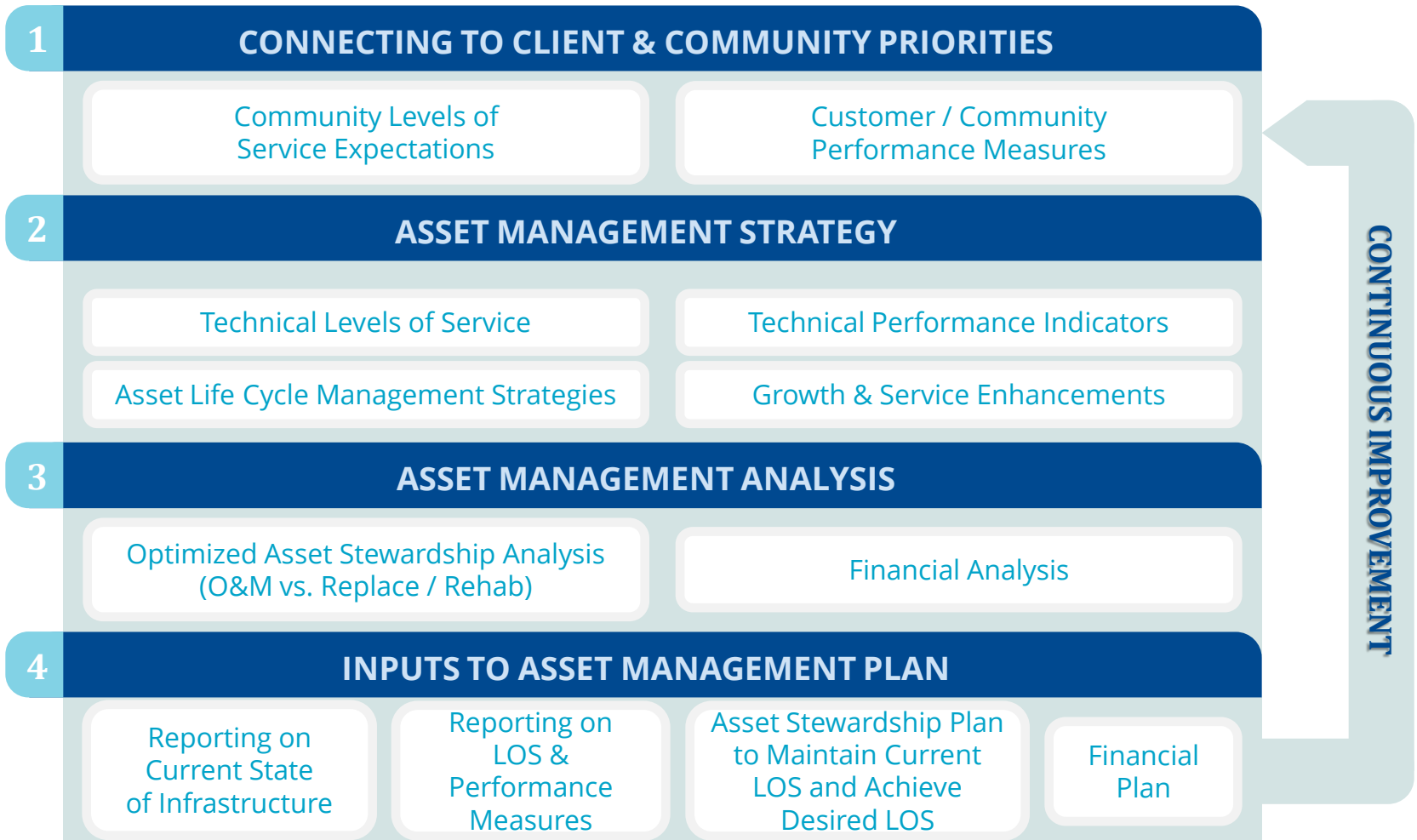
1000 KING STREET WEST • SUITE 100 • TORONTO, ONTARIO M5X 1C4  
www.gmblueplan.ca

**Phase 1 – ASQMS  
Framework Development &  
Application Guide**

**Phase 2 – AM & MM Skills  
Development Program**

**Phase 3 – Decision Support  
Tool Requirements Definition**

# ASQMS FRAMEWORK





# ASQMS Framework

## Developing Technical Levels of Service Table

- O. Reg 588/17 Compliance
- Performance-based Capital Plans

Service Category: Wastewater								
Service Statement: Efficiently providing reliable wastewater services that are environmentally conscious.								
Key Service Attribute	Level of Service Statement	Community Focused Performance Measures			Technical Focused Performance Measures			
		Performance Measure	Target	Current Performance	Asset Type	Performance Measure	Target	Current Performance
Reliable	Providing wastewater services with minimal interruptions	# of customers that experience a service interruption	TBD	TBD	Sewers	km of sewers below the target condition	TBD	TBD
					WWTP & SPS	% of wastewater facility assets below the target condition	TBD	TBD
					Sewers, WWTP, SPS	% of the system with adequate resiliency to accommodate the impacts of climate change	TBD	TBD
					WWTP & SPS	Current rated capacity of treatment plant	80 MLD	64 MLD
					WWTP & SPS	% of preventative maintenance activities completed on schedule	TBD	TBD

# Optimized Asset Stewardship Plans

Table 20: Example Capital Plan

Project #	Year	Project Description	Project Cost Sub-Total
1	2027	PLC Overhaul, VFD and Instrument Replacement	\$203,200
2	2032	Roofing Shingle Replacement, Minor Building and Grounds Maintenance, Replacement of Equipment in Suction Header Trench	\$ 55,500
3	2037	Major Process and HVAC Overhaul	\$261,000
4	2041	Repair/Replacement of Building Architectural Assets	\$83,000
5	2043	Replacement of Instruments, VFDs, Transformer, and Building Electrical Assets	\$ 211,200
<b>Total 25-Year</b>			<b>\$813,900</b>

Develop a capital plan

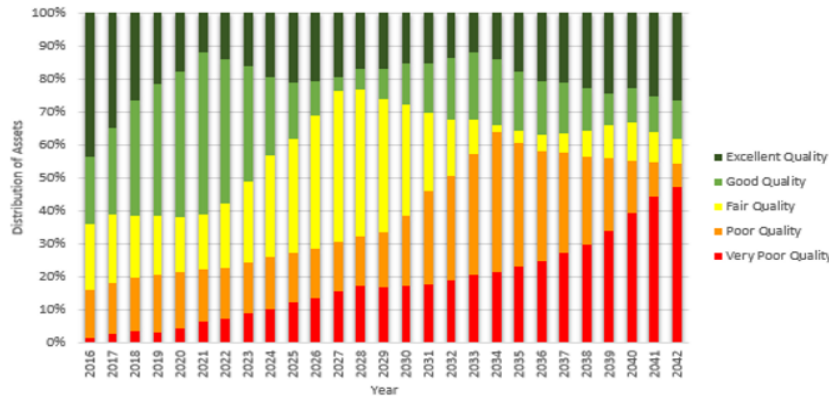


Figure 15: Annual Expenditure Needs for Budget Scenario

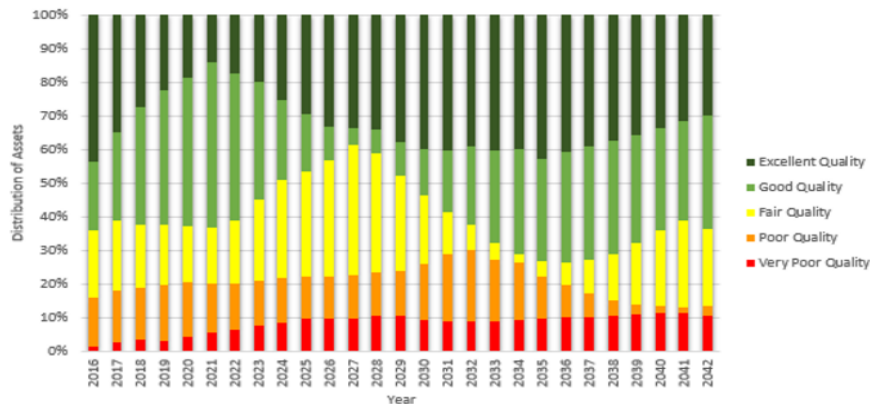
# AMPs/DSS that will Drive Decisions

## Optimized Asset Stewardship Plans

- Scenario 1: total cost of \$4M over 25 years & high risk



- Scenario 2: total cost of \$1.5M over 25 years & low risk



3.

# Integrated Work Management System (WMS) & Hosting Pilot Projects

# “Data-Driven Decisions” ...Starts with the word “Data”



**Approx. 100K  
assets  
maintained  
worth \$10B**



**250k Streaming  
SCADA Tags**



**1.3M data  
points from  
accredited labs  
annually**

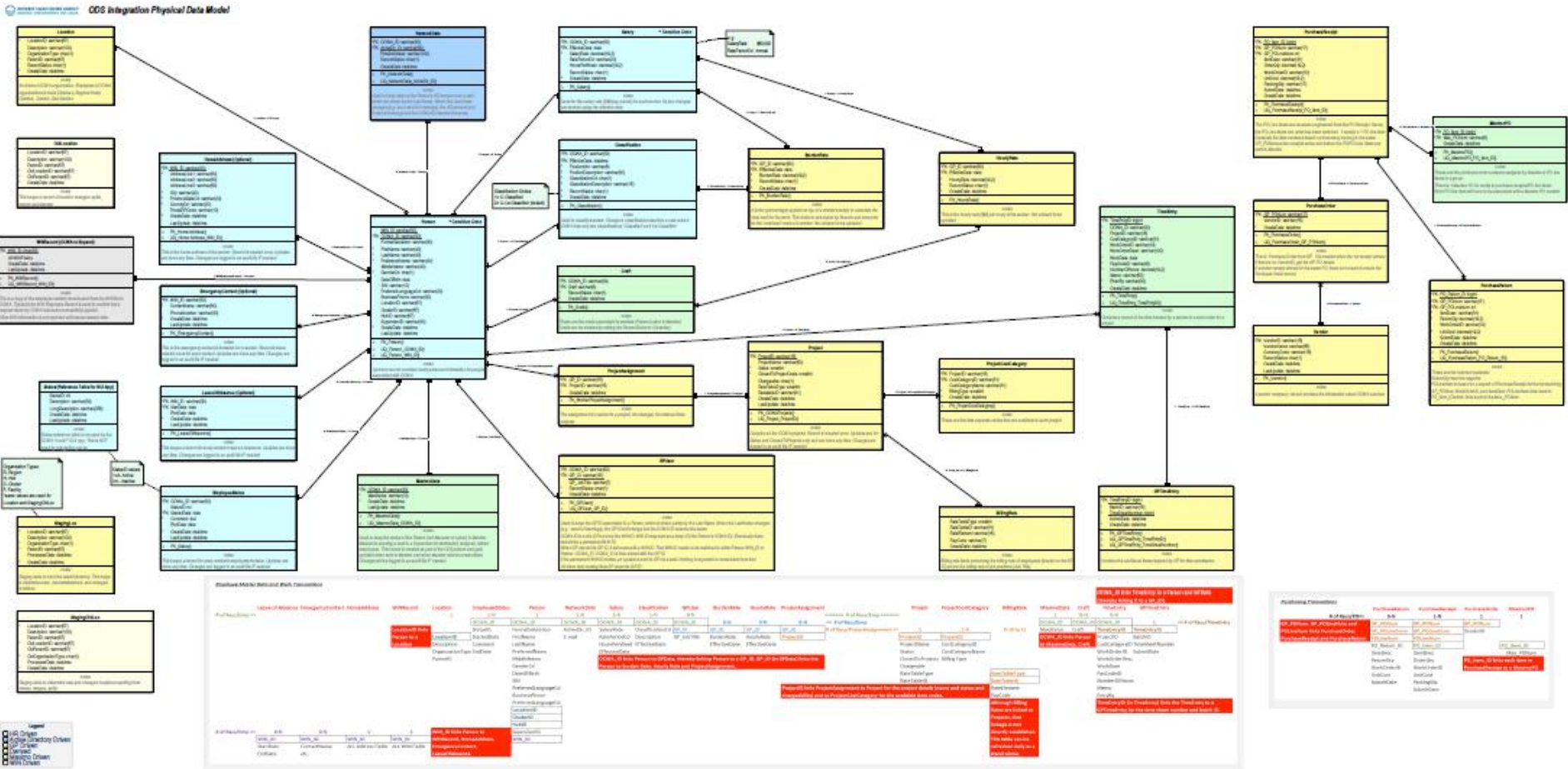


**3M data points  
from operator  
rounds annually**

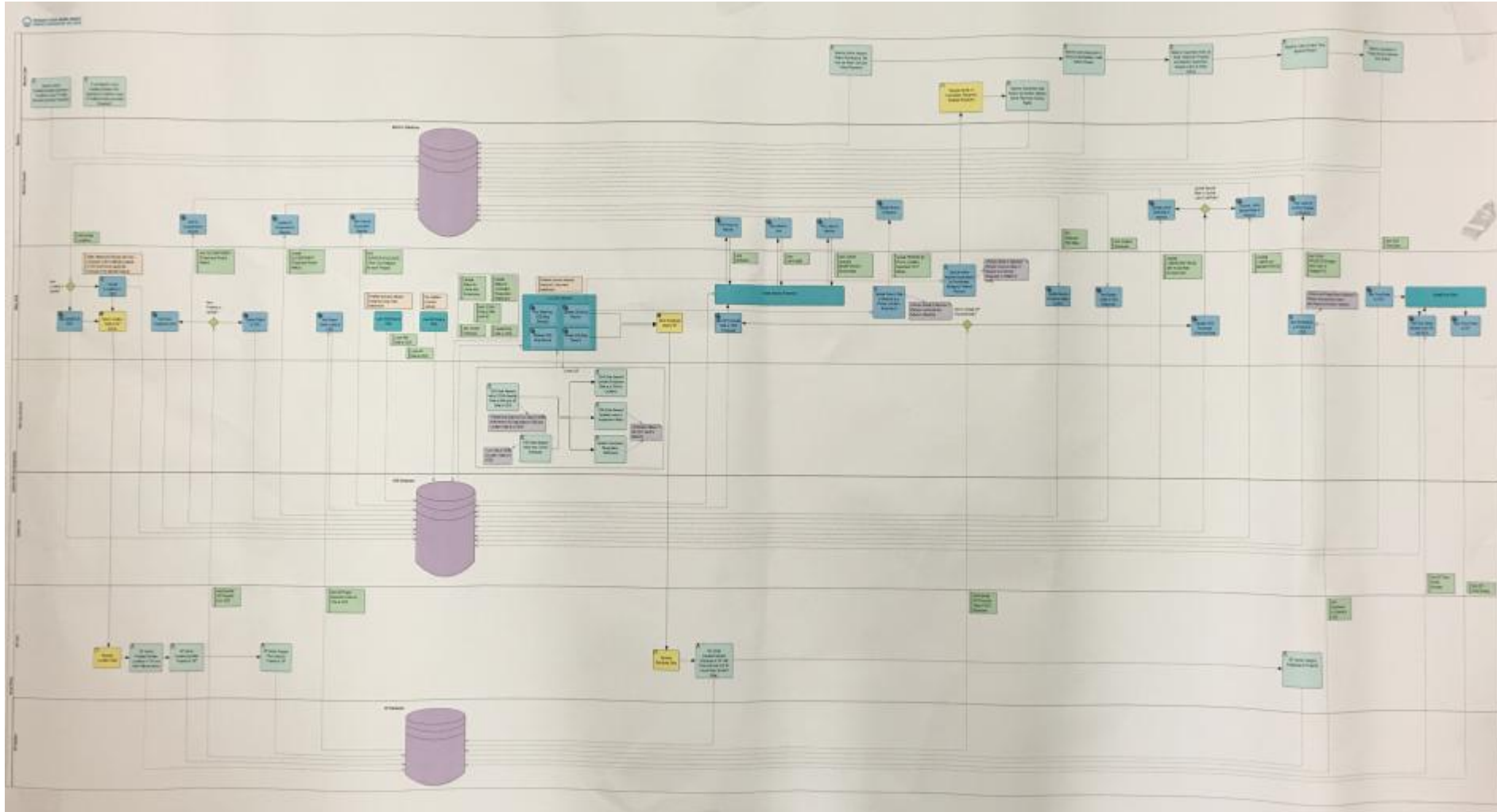


**1.7M timesheet  
transactions  
annually in FIS**

# Physical Data Model



# Functional Integration Design





# Change Management Approach

- Establish Governance for information and systems
  - Organizational Governance – What is the role of “IT” in asset management; what is my role in information management?
- Phased approach
  - Align data integrations and process changes with projects
- Identify information sources and consumers, including all desired reports (known and unknown)



# Hosting Pilots

- Hosting pilot project Waabnoong Bemjiwang Association of First Nations (WBAFN) underway at Wasauksing and Nipissing First Nations
- Opportunity in providing Asset Management services and technology, particularly for medium to smaller sized Municipalities and First Nations (increasing need and demand)
  - Shared service model brings greater returns to scale
  - Potential to suit the needs of all “clients”

## OCWA Shared Services Model

Funding Agents /  
Regulators

IBM (and Other Firms)

Municipalities and  
First Nations

- Standards
- Enhanced Services
- Best return on investment

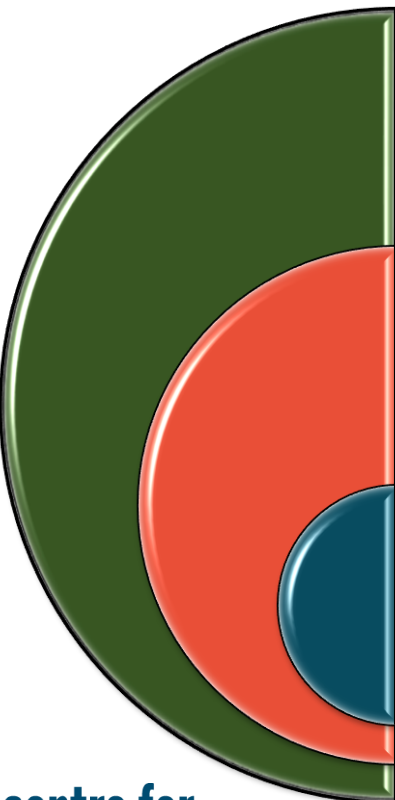
- Profit
- Access to non-forecasted revenue

- Enhanced services
- Access to services, resources, technology

4.

# Asset Management Skills Development Program

# ASQMS Skills Development Program



		E-learning Hours*	Workshop Hours
Advanced	<ul style="list-style-type: none"> <li>Advanced decision support system analysis competencies</li> </ul>	5	35
Applied Service	<ul style="list-style-type: none"> <li>Life cycle, decision making, risk mgt. competencies</li> <li>Maintenance mgt. systems</li> </ul>	7	14
Foundational	<ul style="list-style-type: none"> <li>GFMAM Asset Management Landscape (39 subject areas)</li> </ul>	10	-

\* includes self directed learning and live webinars

Fleming College

# Summary & Questions



**Thank You !!**