



APWA Congress

Atlanta, Ga

September 14th, 2004

National Water and Wastewater Benchmarking Initiative

Canadian Municipal Water and Wastewater Utilities Conduct Real Performance Benchmarking (Without Getting Soaked):



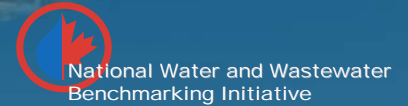
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Director of Asset Management
Burnaby, British Columbia
Canada



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Manager of Water and Sewers
Saskatoon, Saskatchewan
Canada

What is Benchmarking?



How do we compare?

How well are we doing?

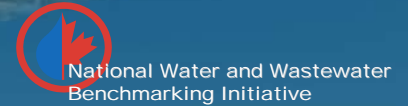
Are we providing value for money?

And then:

How can we improve?



Project History

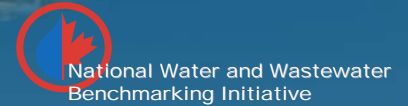


- Pilot for wastewater utilities in 1998 with four participating municipalities (Calgary, Edmonton, Victoria, GVRD) Earth Tech, and the National Research Council of Canada)
- Expanded to 17 municipalities the following year
- Expanded to include water utilities, and stormwater/drainage
- Winner of the APWA Management Innovation Award 2003
- Now includes:
 - **34 Municipal Utilities from Coast to Coast**
 - **Representing approximately 60% of Canada's population**





Target Audience



- Designed for larger municipalities (50,000 residents +)
- Focused at the utility management level
 - Start at the high level and drill down to specific processes
- Take local factors into account
 - Geography, climate, economy, etc.
- Understand the relationship between utility goals and service levels
 - Conclusions vs. observations

Methodology

Utility Management Model

Goals

Performance
Measures

Data Collection

Data Analysis and
Evaluation

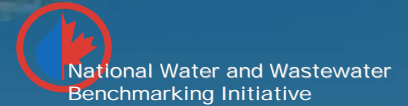
Closing Workshops

Annual Review

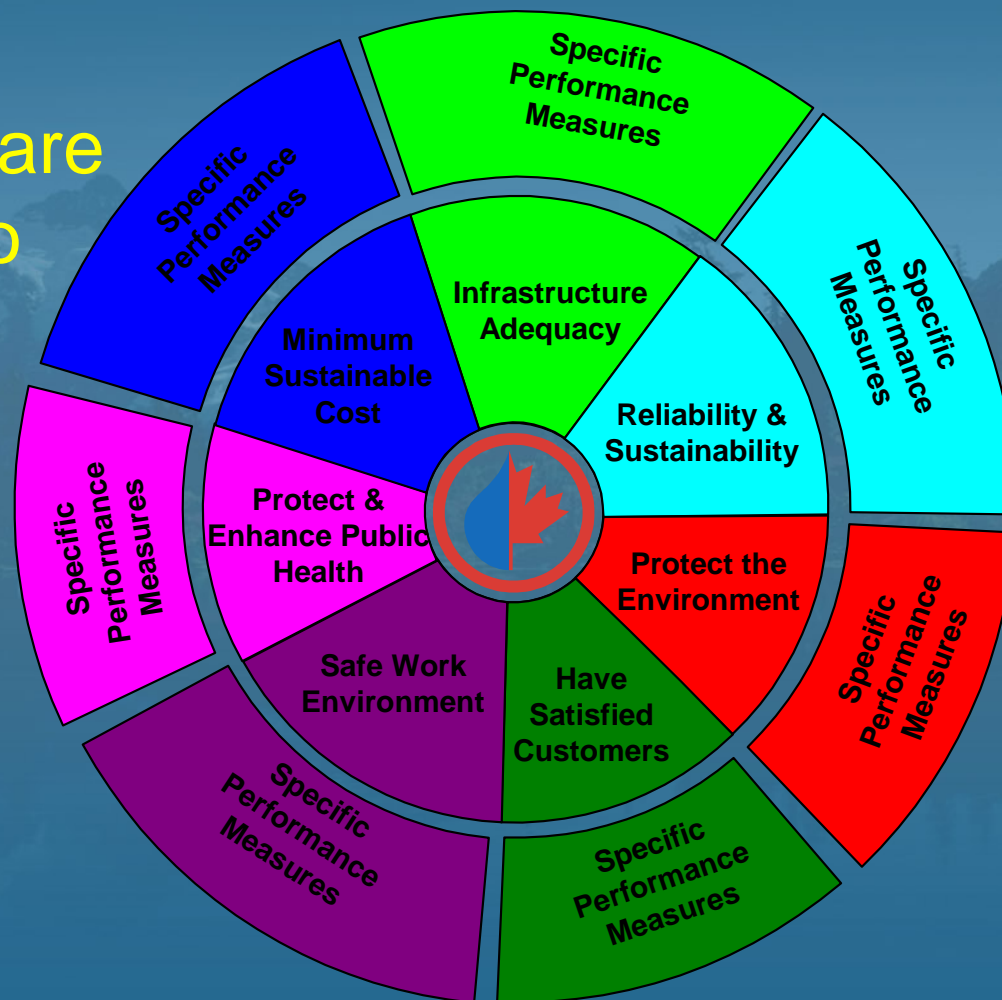
Report & Database
Action Plans



What Do We Benchmark?



7 generic goals that are common to all utilities;

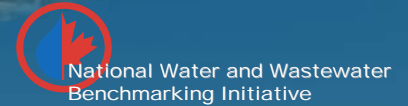


- Using performance indicators that measure attainment of each goal

- About 70 individual performance measures



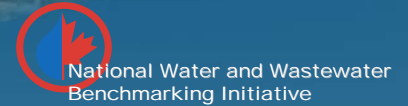
The Keys to Success



- Not Rocket Science: Follow basic steps
- It's in the details
 - Everything must be tangible
 - Very specific definitions to ensure comparability
- Data collection: Blood, sweat, tears
 - Hard work, site visits, quality assurance
 - Balance accuracy with practicality



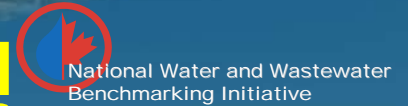
The Keys to Success



- Communication at all stages
 - Data collection: Site visits
 - Process Improvement: Task forces, conference calls, information exchanges
 - Annual workshop to debrief all results: Hard work, but fun as well
- Trust and teamwork essential
 - Participants have gotten to know each other very well



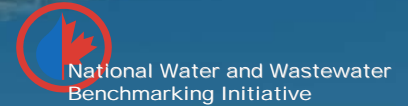
Benchmarking. So what!



- Most benchmarking exercises fail within a year or two because of unreal expectations
- Must learn to use the data as a tool to manage and guide the selection of “strategies”
- Strategies usually requires a utility to change, which is always hard
- Use benchmarking to monitor strategies

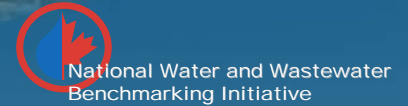


Our Approach



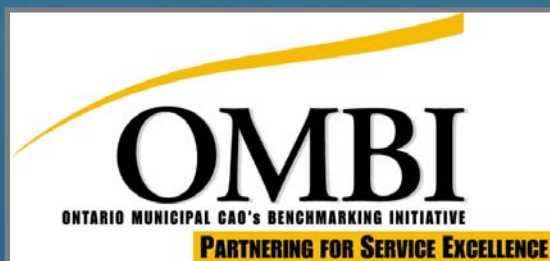
- Leverage the efforts of utilities
 - Requires the dedication of participants
 - Face to face discussion is valuable
 - Consultant is the facilitator
- Leverage the efforts of others
 - Many best practice strategies are published and well documented
 - Don't' re-invent the wheel
- We are still learning

Continuous Improvement Strategic Linkages



- National Research Council
- Ontario Municipal Benchmarking Initiative
- National Guide to Sustainable Municipal Infrastructure
- International: UK Office of Water Services

NRC · CNRC



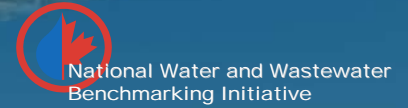
National Guide
to Sustainable
Municipal
Infrastructure



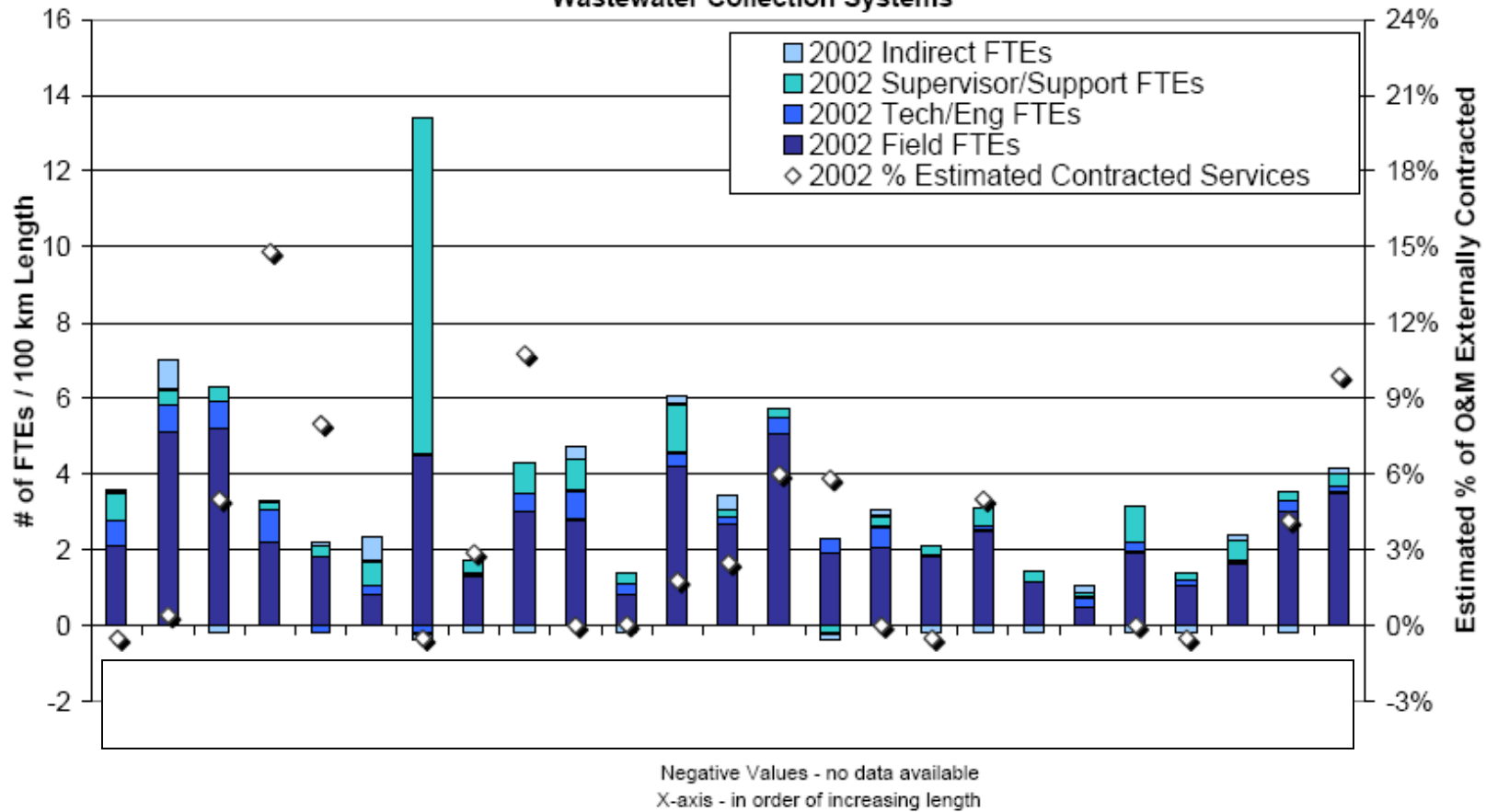
Guide national pour
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Examples

Goal: Minimum Sustainable Cost

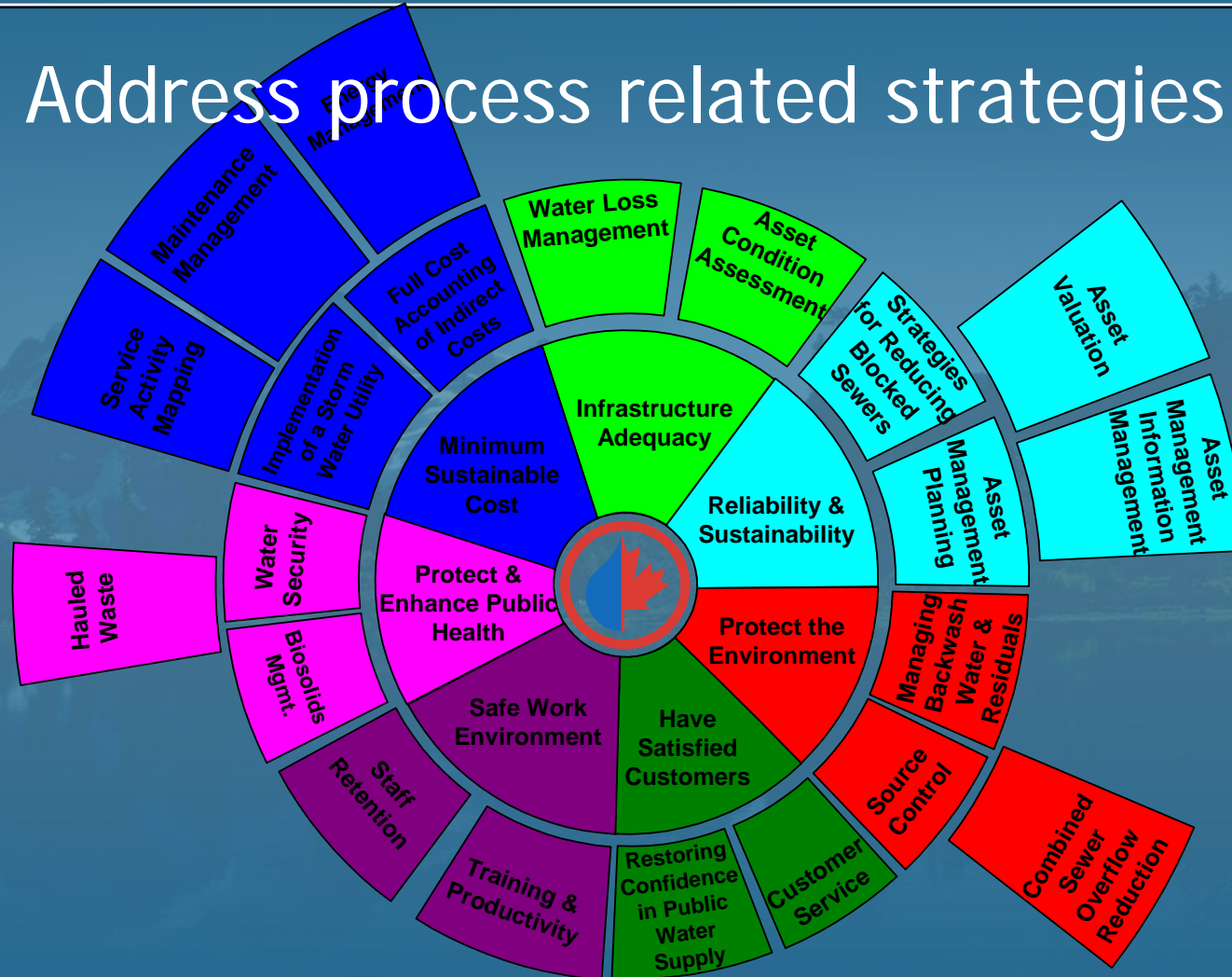


Breakdown of Total FTEs / 100 km Length 2002
Wastewater Collection Systems

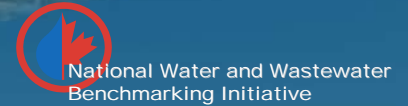


Continuous Improvement Process Task Forces

- Address process related strategies



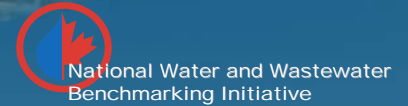
Continuous Improvement Process Task Forces



- Identify process related issues
- Refine performance measures
- Identify any related "Best Practice " sources
- Set a specific "Action Plan".
- Conference calls, Workshop discussions
- Network with experts



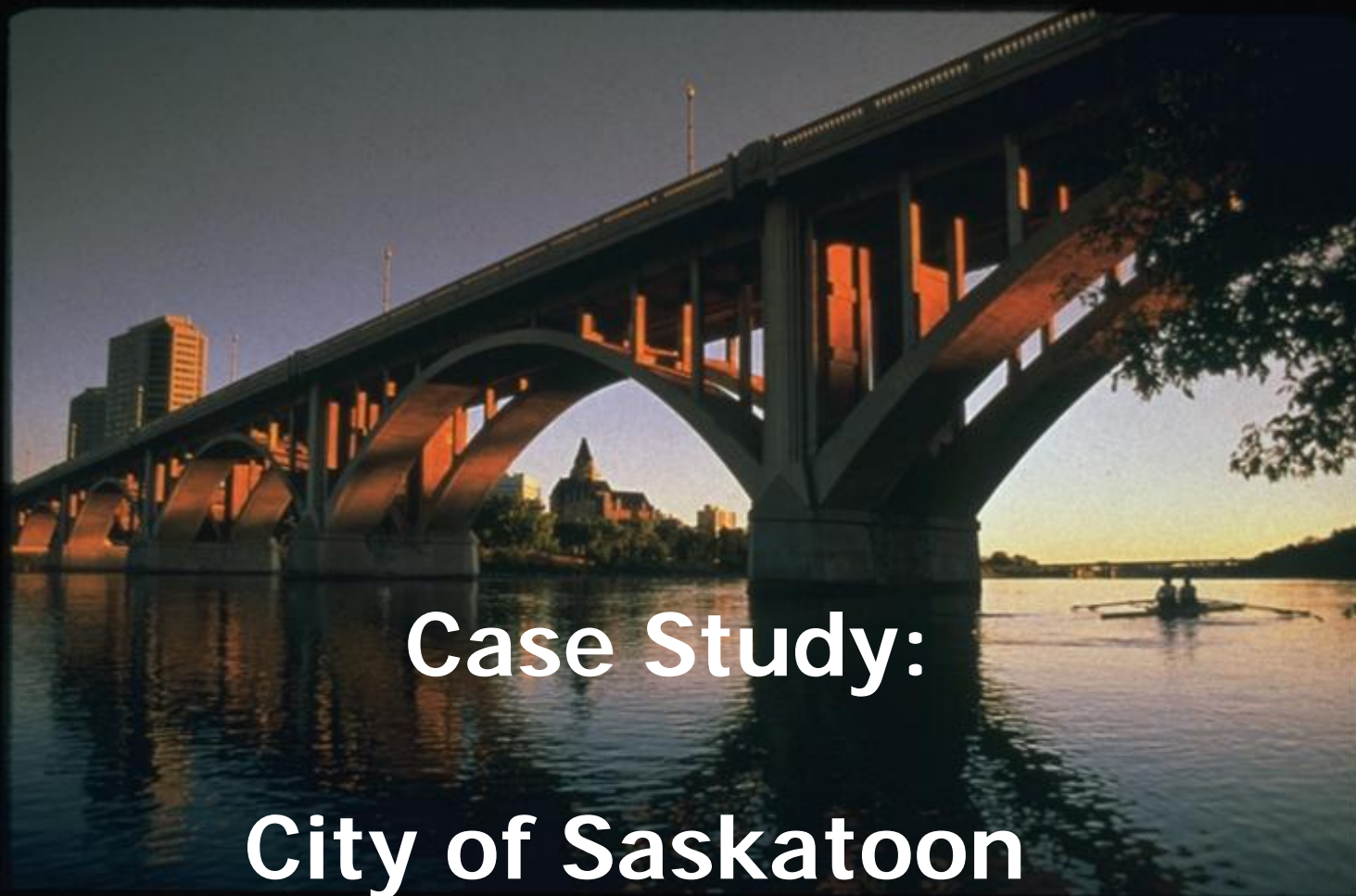
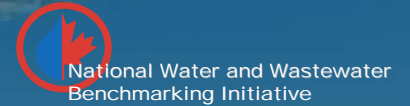
Some Examples



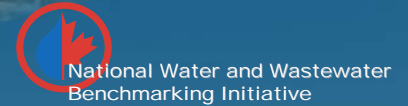
- Infrastructure reinvestment (Asset Management)
- Attendance management
- Effect of cleaning and inspection on blockages
- Safety and accidents
- Succession planning, skill-based training
- Water conservation
- Source Control



Benchmarking And Continuous Improvement



City of Saskatoon

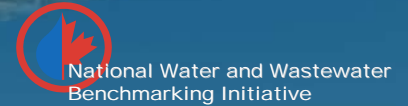


- Located in Saskatchewan, Canada
- 340 Km north of Montana
- Population 208,000





Presentation Objectives



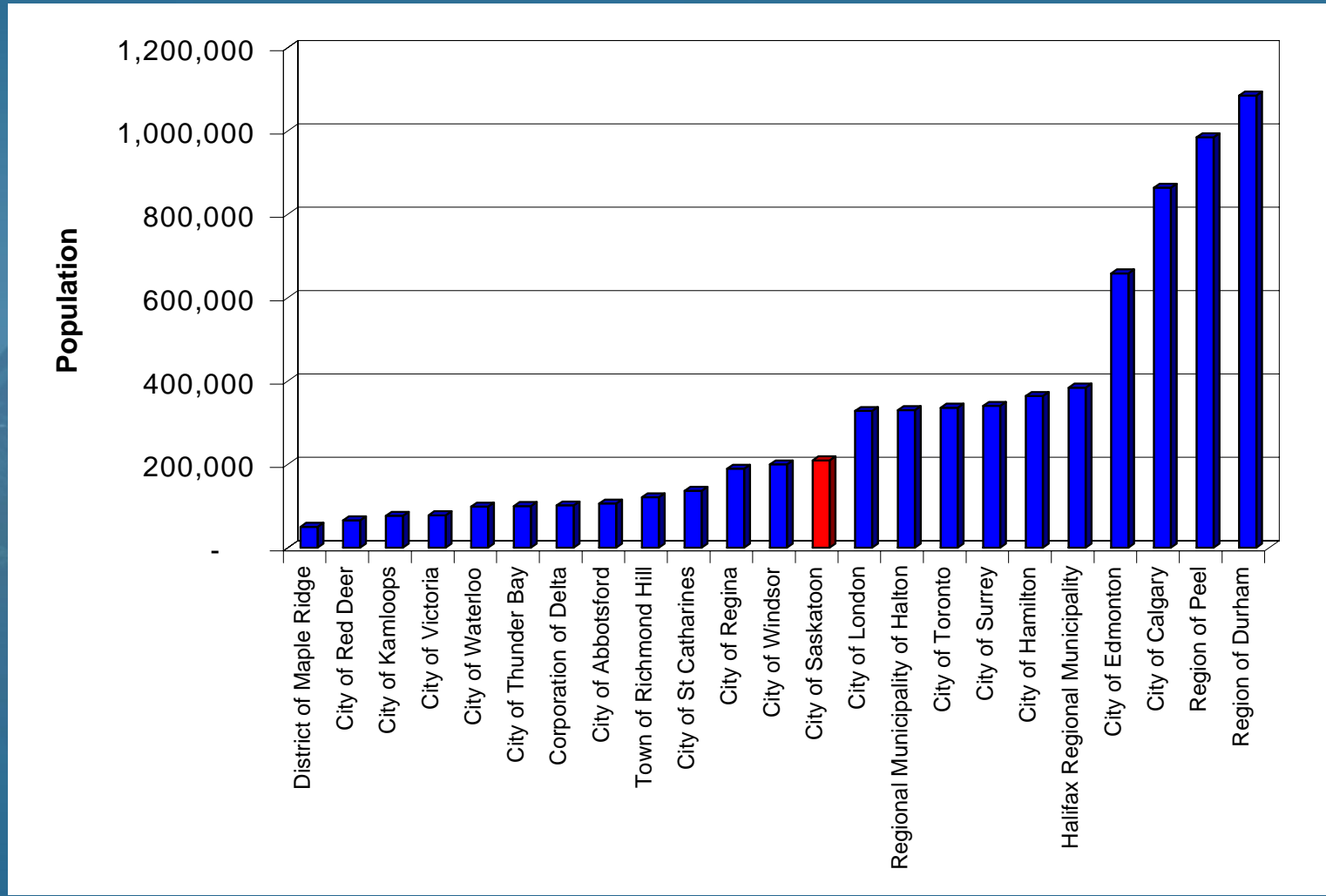
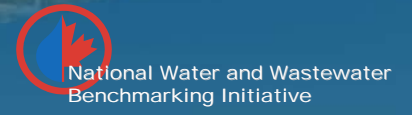
1. Provide a Utility Perspective

- Metric Benchmarking
- Process Benchmarking

2. Answer the Question:

Is benchmarking impacting the bottom line?

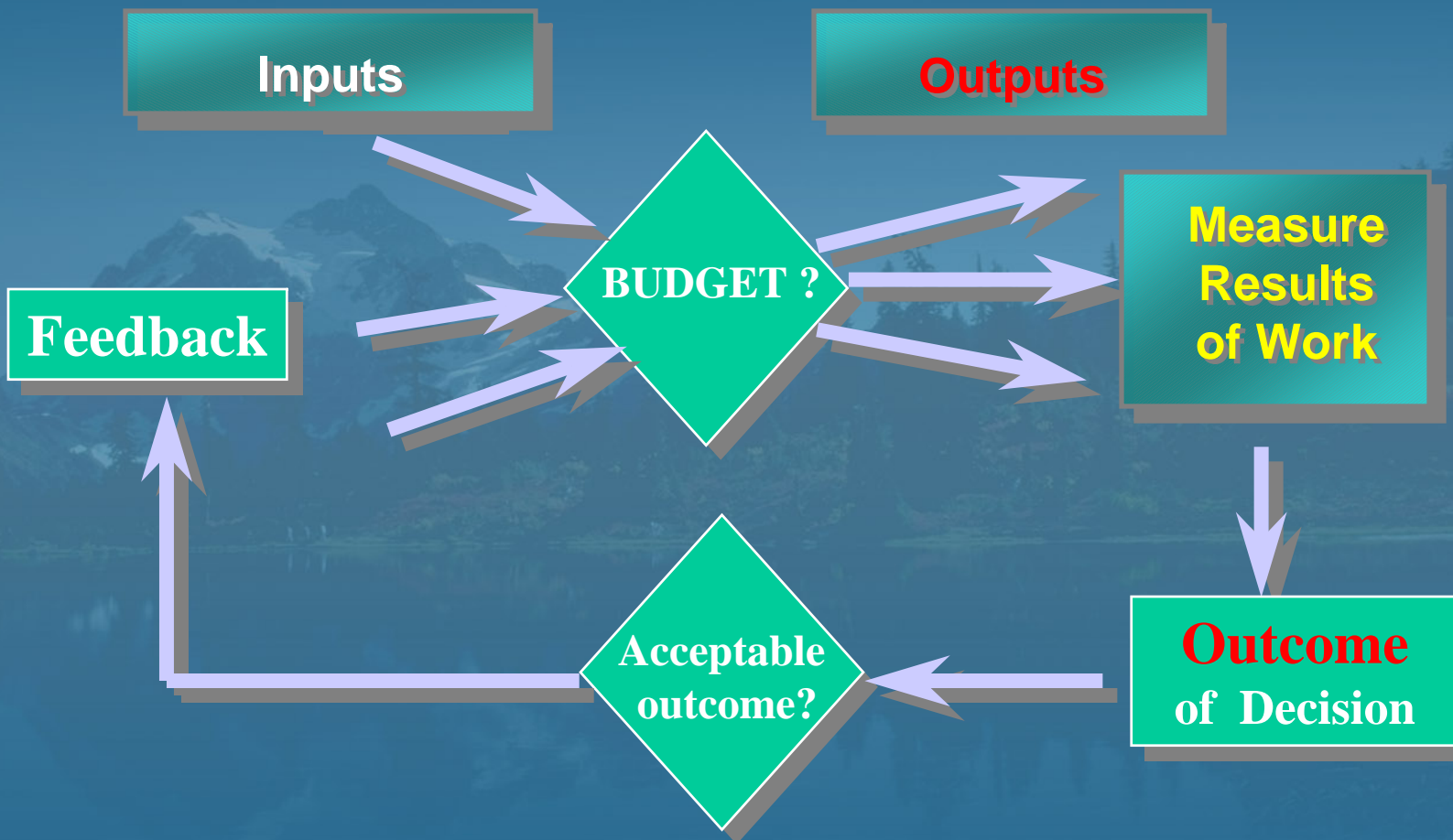
Where Saskatoon Fits In



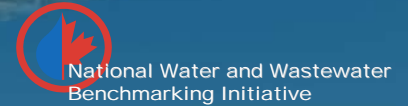
Why Benchmarking?

- ✓ Goal driven
- ✓ Fit our strategic plan and annual business planning process
- ✓ Focus on Performance
- ✓ Felt right

Monitoring Performance

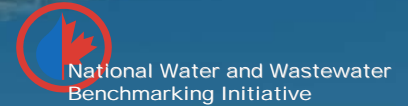


Outputs of the Metric Benchmarking



- Set of utility goals
- Standardized performance metrics
- Metric database and website
- The data collection methodology
 - Source data documentation
- First level data analysis
- An annually facilitated workshop

Bench Marking With A Needs Based Budget



Serviceability

Maintenance Policy

} Goals
(Outcomes)

Condition

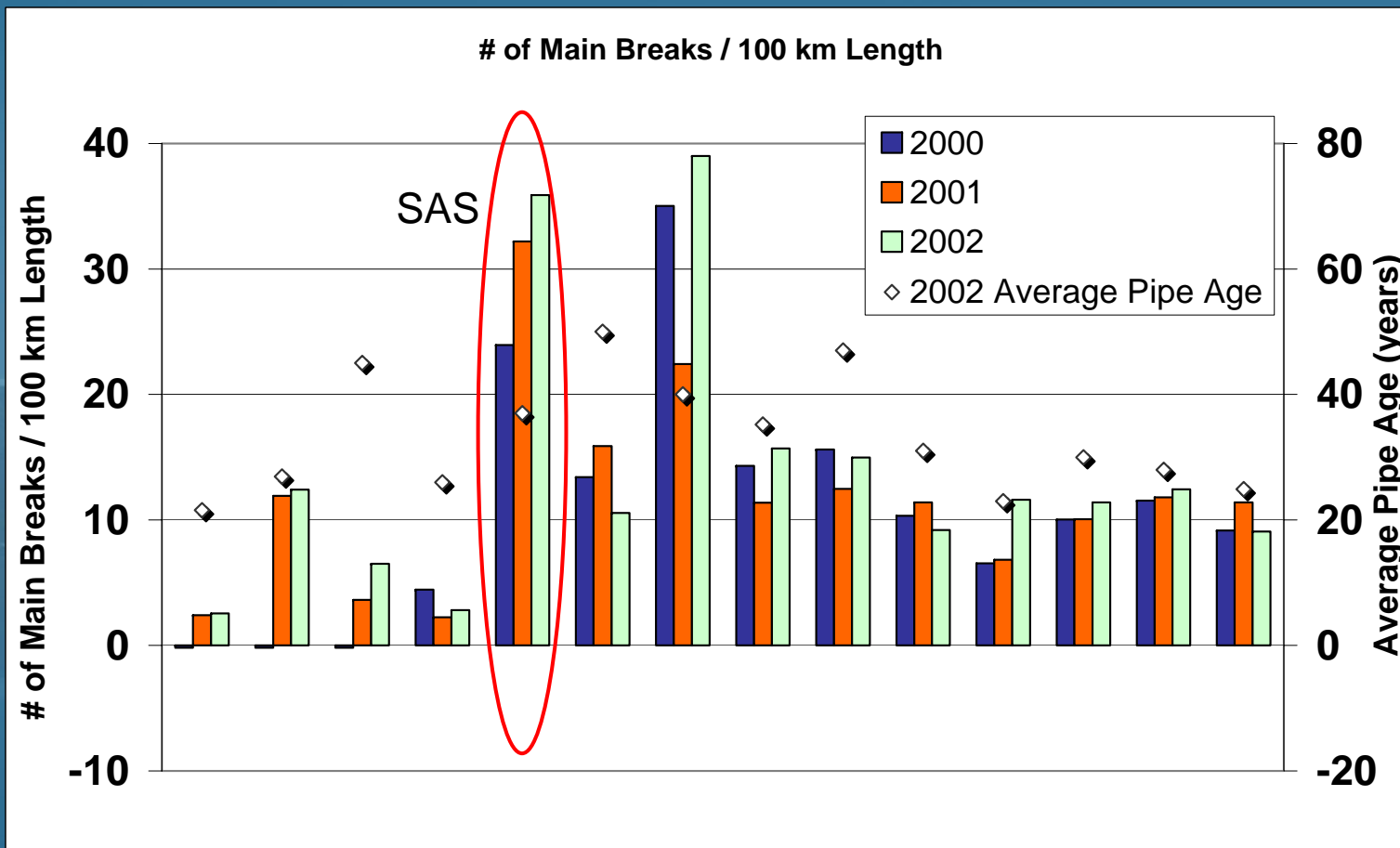
Treatment/strategy

} Metrics
(Outputs)

Budget



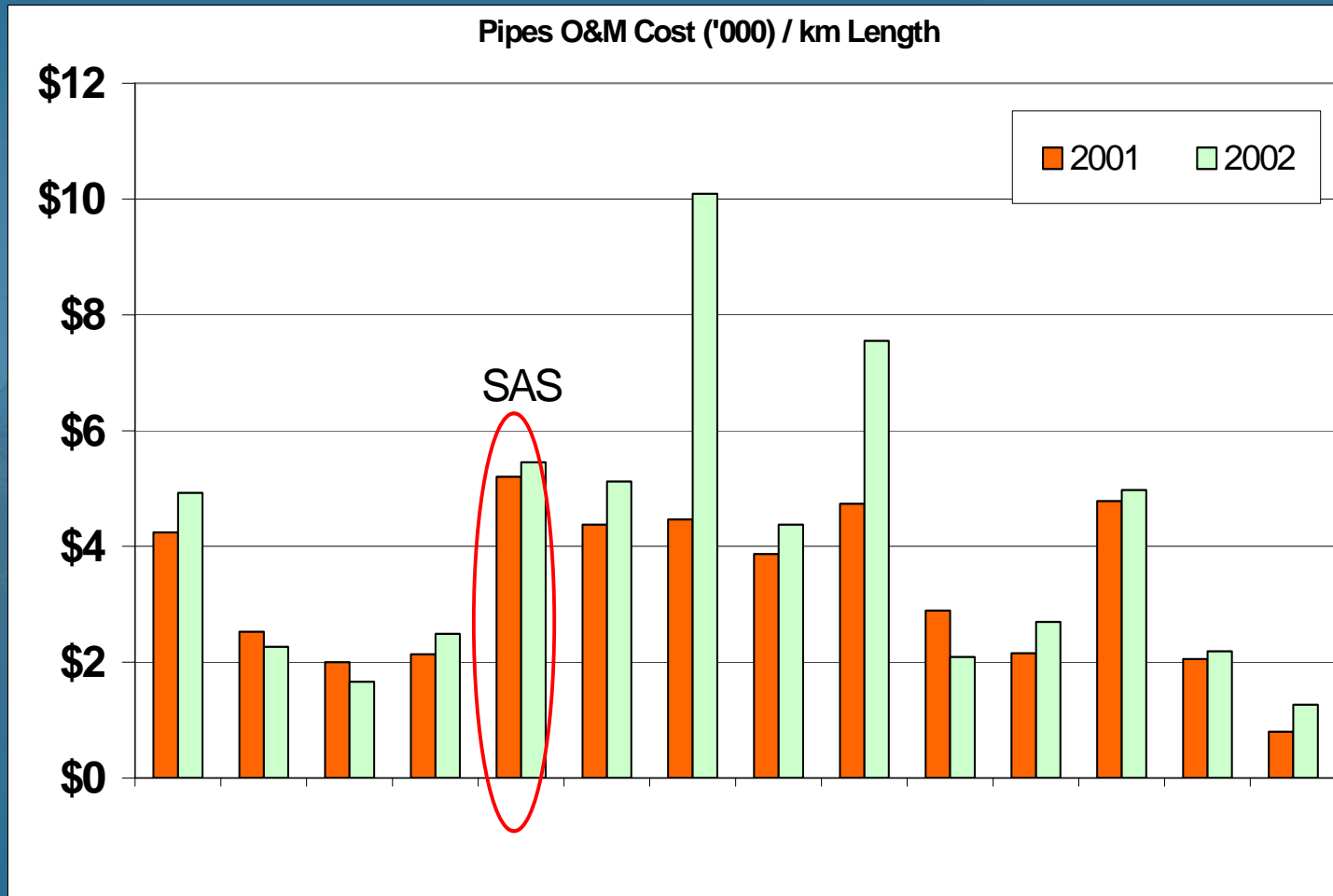
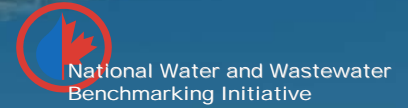
Water System Metric



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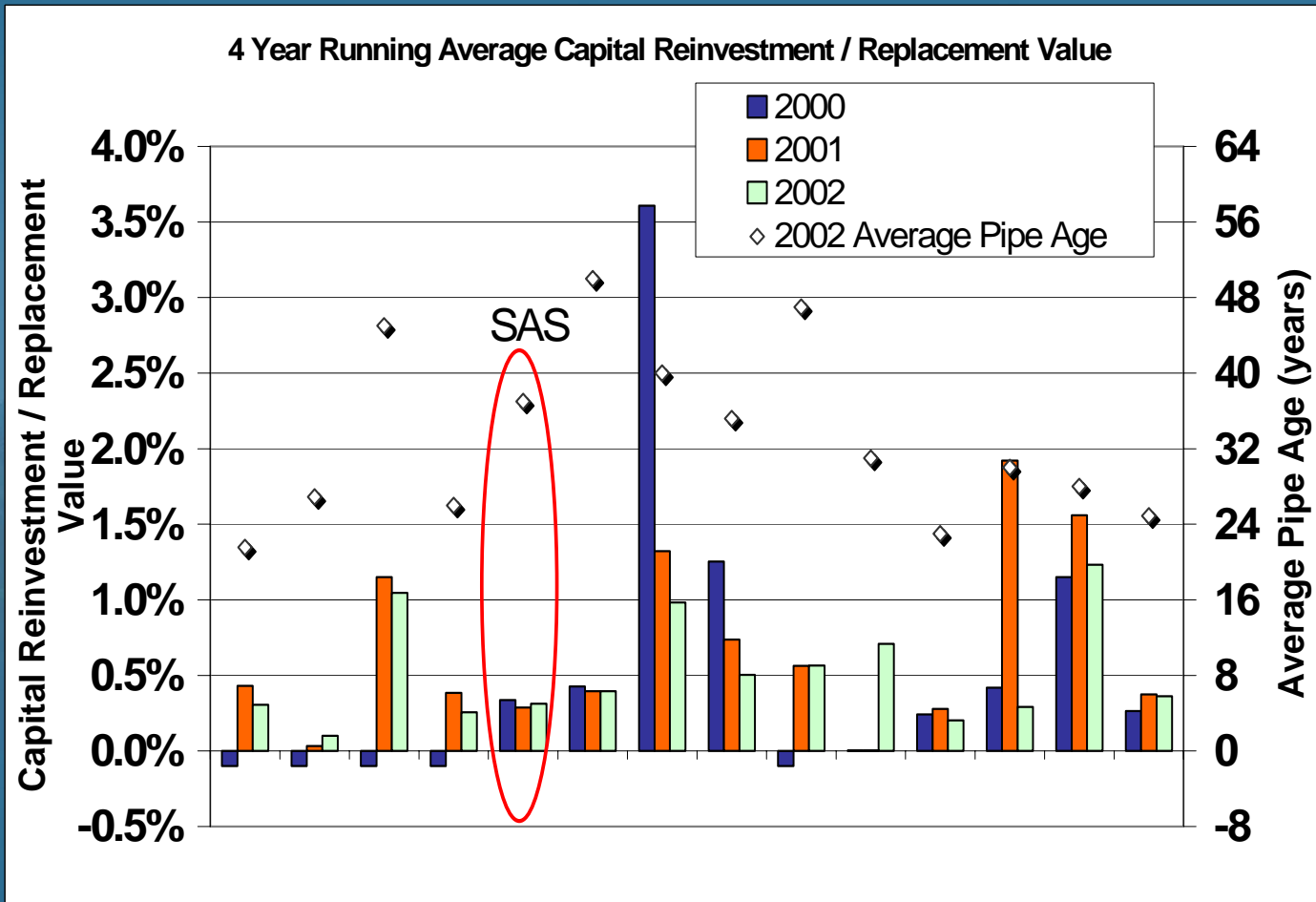
Operation and Maintenance Costs: A Budget Output



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Capital Reinvestment: A Budget Output



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So ?



How well are we doing?

How do we compare?

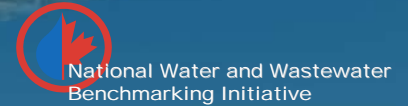
Are we providing value for money?

How can we improve?





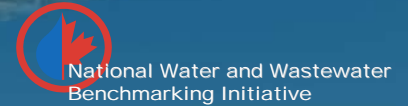
Metric Benchmarking



- ✓ Starting Point:
 - ✓ Standardize language
 - ✓ question the gaps
 - ✓ challenge the processes
- ✓ Measure impact of process changes

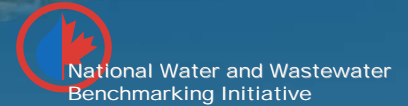


Metric Benchmarking



- ✓ Accountability – demonstrate your performance
- ✓ Respond to Audits
 - “To determine what extent the Corporation is monitoring and reporting on key aspects of program performance”
- ✓ Adopted water loss metric

Metric Benchmarking



- The Process - the Journey
- Improved internal communications
- The Network of peers

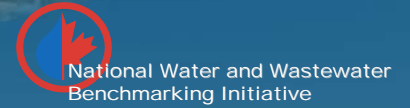


A Word of Caution

- ✓ Highly Influenced By:
 - ✓ Local service levels
 - ✓ Local factors
- ✓ Very good for Internal Trending
- ✓ Use with Caution for Direct External Comparisons



Moving Beyond Benchmarking Metrics



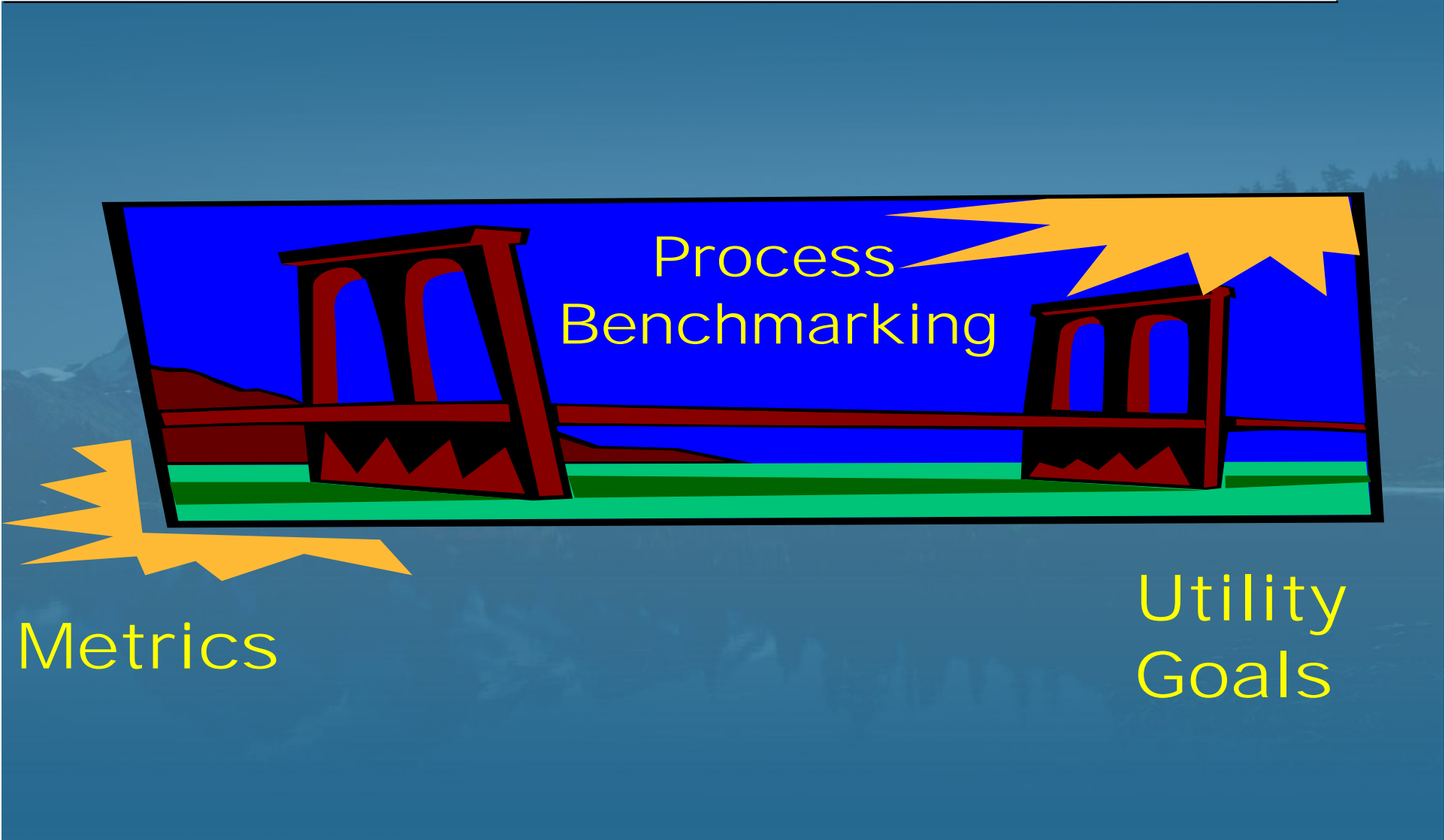
Continuous
Evaluation



Continuous
Improvement



Bridging the Gap



Process
Benchmarking

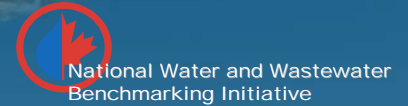
Metrics

Utility
Goals

Process Benchmarking

- Structured and Formal
 - Consortium Task Groups
 - Independent Task Groups
- Unstructured and Informal
 - Fact finding site visits
 - Interagency information exchange

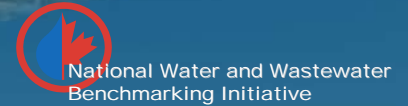
Back to the Bottom Line



- Source Control Best Practices Study (2002)
 - Formal review with six other Consortium Members
 - Provided strategic framework for source control – linked to the Utility Goals
 - Interim change to our discharge permit process
 - Major input into current "Sewer Use Policy Bylaw and Regulatory Controls Review"



The Bottom Line

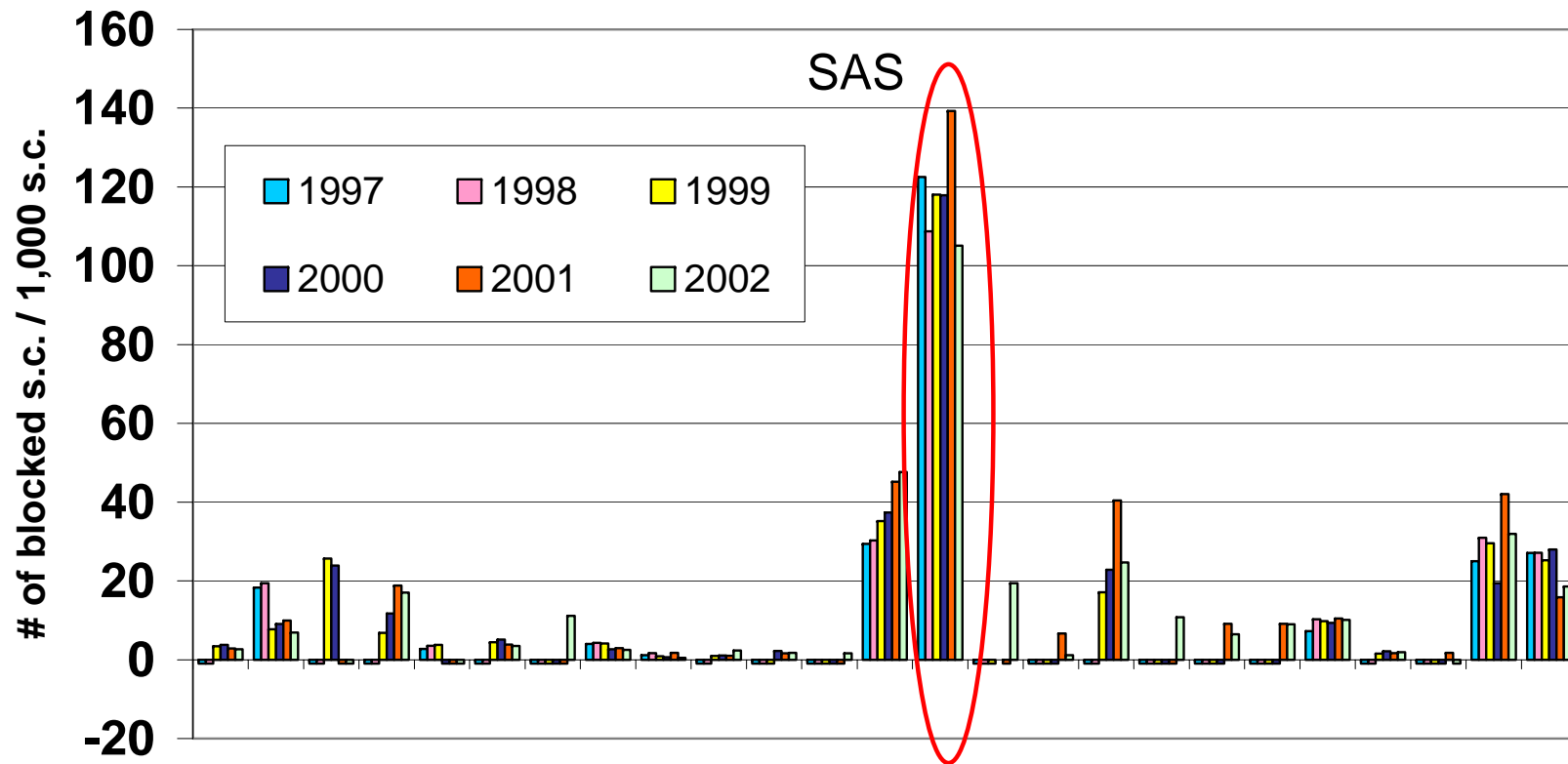


- Connection Operations and Preservation Programming
 - Site visit with two other participating Municipalities
 - Compared of service levels
 - Compared cleaning and rehabilitation strategies and their effectiveness
 - Comprehensive customer survey with direct external comparison

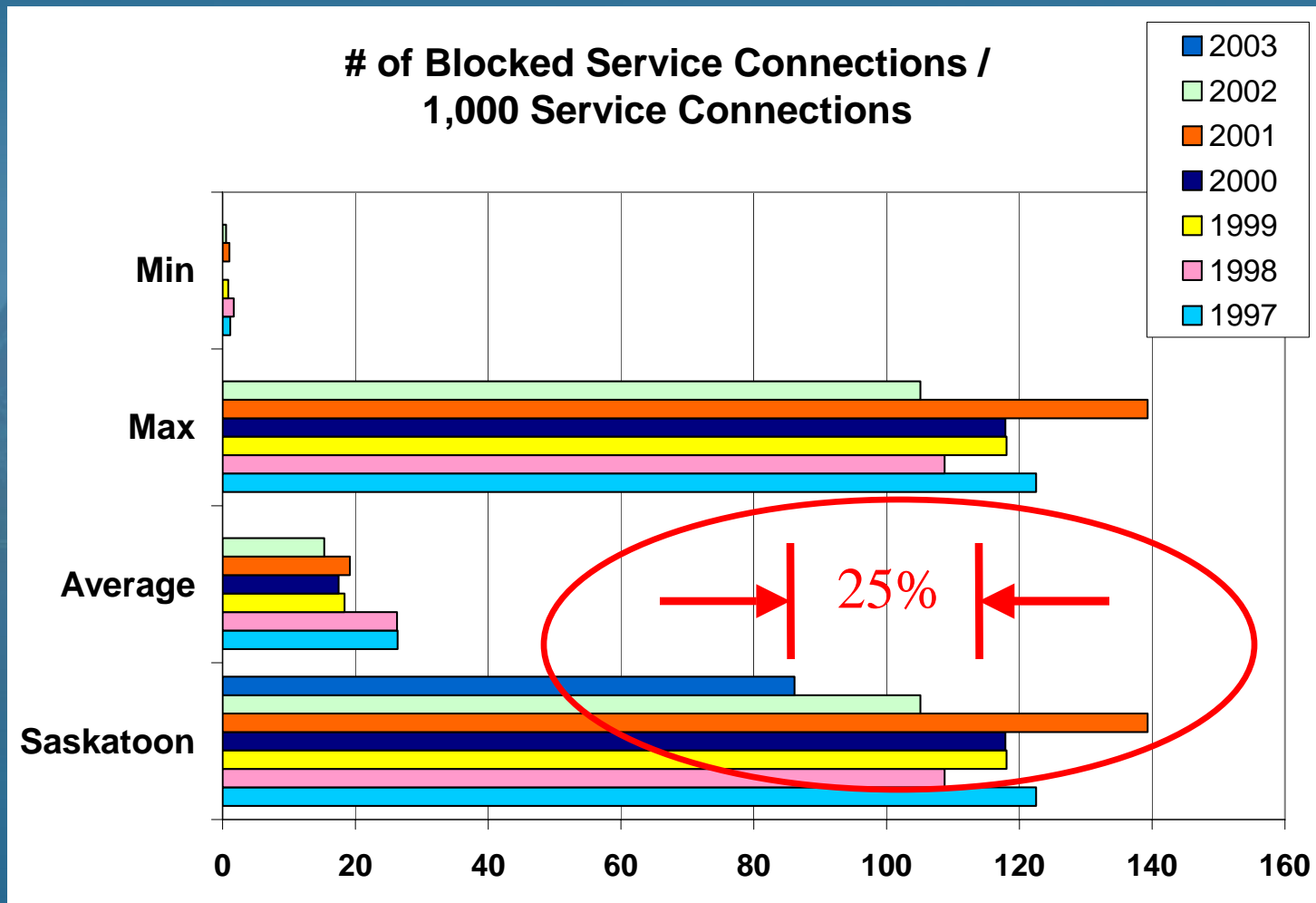


Service Laterals

of Blocked Service Connection / 1,000 Service Connections

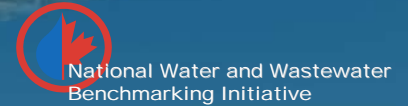


The Bottom Line



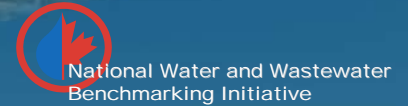


Parting Advice



- Benchmarking is strategic
- Incorporate it into your annual business planning and budgeting process
- Make the commitment

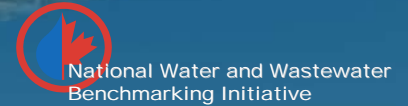
The Way Forward



- Benchmarking is becoming a part of standard practices (improved data management processes)
- Many participants still need a push to make process changes
- Need to document tangible savings through improvements (as opposed to hearsay)
- Communication is more important than ever



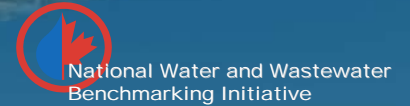
New Tools and Techniques



- Use of advanced project website as a virtual meeting place (www.nationalbenchmarking.ca)
- Strengthen the power of networking and teamwork: Redesign the Annual Workshop
- Shift emphasis of initiative to sharing the results of improvement initiatives (whether good or bad)
- Metrics (PMs) still need to be monitored and managed



Question?



Introducing...

A new Earth Tech *benchmark* in delivering the measurement of the performance of Canadian Water and Wastewater Utilities...

The National Water and Wastewater Benchmarking Initiative is now online!

www.nationalbenchmarking.ca



National Water and Wastewater
Benchmarking Initiative

*The World's Most Advanced
Public Sector Benchmarking Exercise*

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