

Benchmarking Performance in Public Works & Utilities

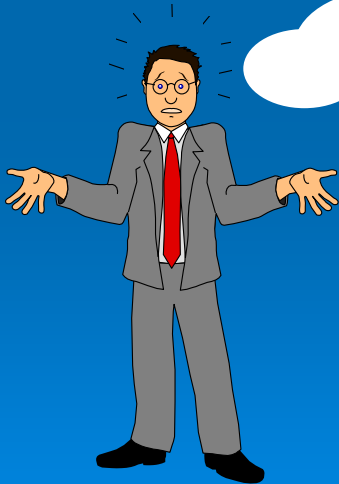
The experiences of 35 Canadian
municipal water and wastewater
utilities over 5 years of effective
performance benchmarking.

Definition of Benchmarking

- “Benchmarking is the systematic process of searching for best practices, innovative ideas, and highly effective operating procedures that lead to superior performance and then adapting those practices, ideas, and procedures to improve the performance of an organization” (AWWA 1996)

Context for Municipalities

- *How well are we doing?*
- *How well do we compare with similar organizations?*
- *Are we getting value for money?*
- *How can we improve?*



Is Benchmarking a Fad?

- Benchmarking was pioneered at Xerox in the 1970s as a means to improve overall corporate performance.
- Boston-based Bain Consulting's annual "Management Tools & Trends" survey of more than 700 global companies, confirmed that for the past 10 years, Strategic Planning (used by 89% of firms), was followed by Benchmarking (used by 84% of firms), as the most effective of all management tools. (Globe & Mail, June 2, 2003)
- Conducted correctly, benchmarking is vital to a complete performance management system: "You cannot improve what you don't measure".

Metric vs. Process Benchmarking

Metric
Benchmarking



Identify Performance Gap:

- How much
- Where
- When

Process
Benchmarking



How to Close the Gap

- Improved Knowledge
- Improved Practices
- Improved Processes



Management Commitment



Employee Participation



SUPERIOR PERFORMANCE

Metric and Process Benchmarking

- Metric Benchmarking should measure and compare the attainment of clearly articulated organizational goals.
- Process benchmarking should illustrate the differences between like processes that are designed to achieve the same goal.
- Must use both to achieve improved performance.

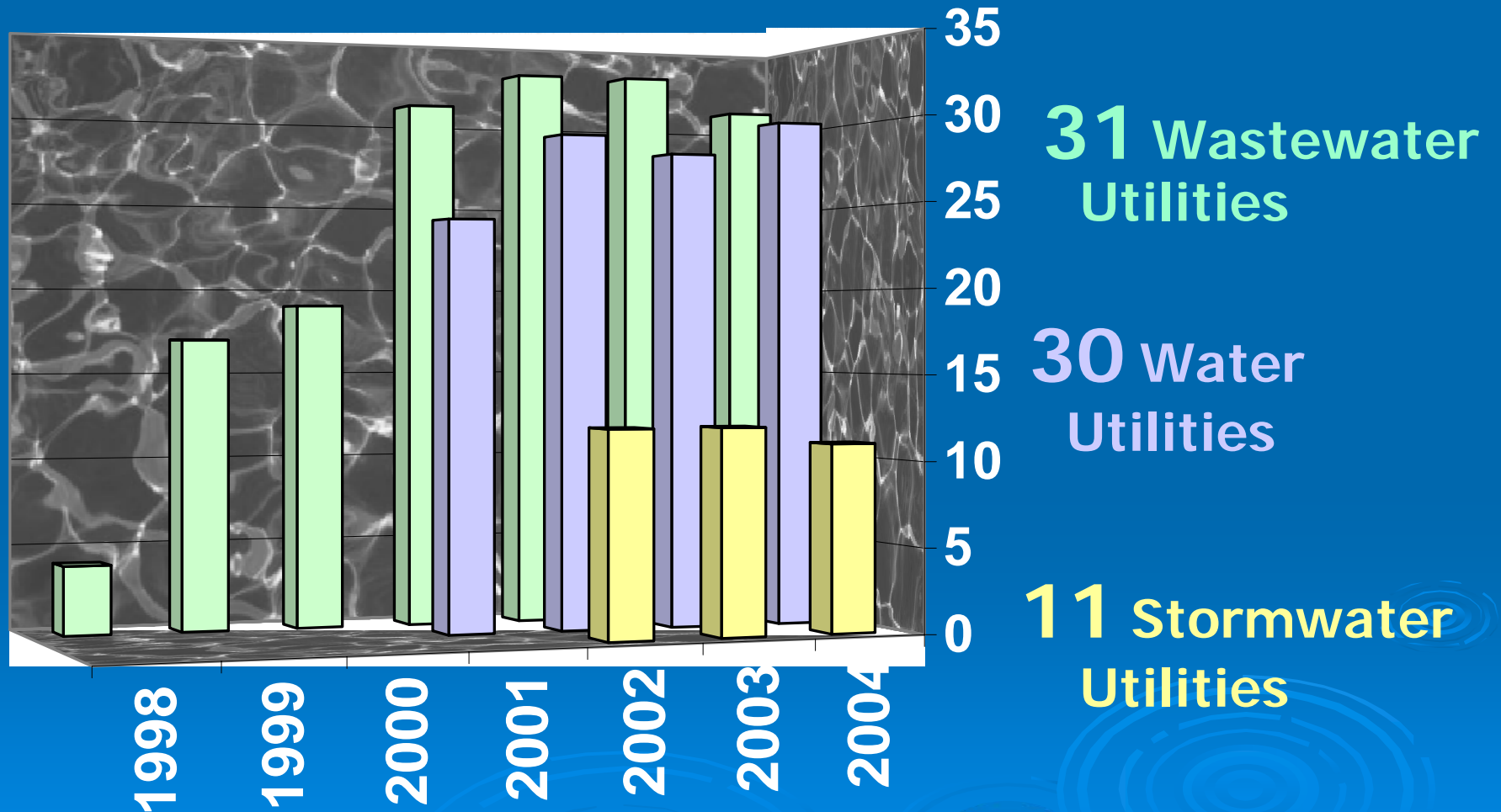
Define a Methodology

1. Identify the partners that you wish to benchmark against.
2. Affirm the goals that your organization's aspire to.
3. Select and define the required performance measures for each goal you wish to attain
4. Gather and normalize the data that make up the performance measures.
5. Analyze and compare results to make performance-based observations.
6. Formulate Action Plans based on the results.

1: Select Benchmarking Partners

- For metric benchmarking, it is important that all partners have similar goals (or a basis to make meaningful comparisons).
- Must be committed to success: benchmarking is hard work and the results can sometimes be intimidating at first. (½ of you will be “below average”).
- But, weak performers have the most to gain.

National Benchmarking



2: Document and Affirm Your Goals

- Good “goals” have the following attributes:
 - Complete: Capturing everything important to the Program.
 - Concise :Manageable in number (no more than 7 or 8).
 - Controllable: Within the authority of the city to administer.
 - Measurable: A tangible means of measuring the attainment of the goal is required.
 - Non-Duplicative: Should not simply be a different way of stating an earlier goal, or be a “symptom” or “outcome” of another goal.

Example Water/Wastewater Utility Goals

1. Reliable and sustainable
2. Accessible and sufficient
3. Minimum sustainable cost
4. Protect public health and safety
5. Safe and productive work environment
6. Satisfied and informed customers
7. Protect the environment



3: Define Performance Measures

- Measures must be relevant
- Must be practical: Is it even possible to gather meaningful data?
- Accurate
- Understandable
- Scalable to organizations of different size
- Resistant to intentional tampering

Important to note:

There are always tradeoffs between accuracy and practicality of performance measures



A Tyco International Ltd. Company

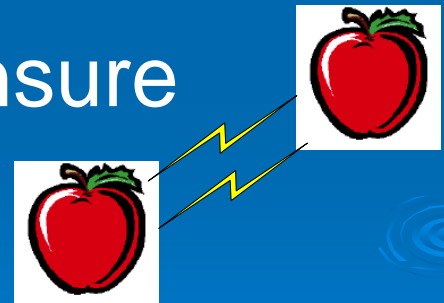
A BETTER TOMORROW made possible

Example Performance Measures

- Capital maintenance cost / replacement cost
- Energy consumed / ML treated
- Chemical cost / ML treated
- FTE's / ML treated
- Total cost / ML treated
- Number of main breaks / 100km of main
- Cubic meter unaccounted for water / km / day
- % of system tested for leakage
- Total cost / 100km main

4: Gather Data

- Data collection is the most difficult part of benchmarking
- Public sector organizations often have differing definitions of cost categories, tasks, and activities.
- Data collection function must ensure “apples to apples” comparisons
- Poor data collection will make benchmarking results meaningless



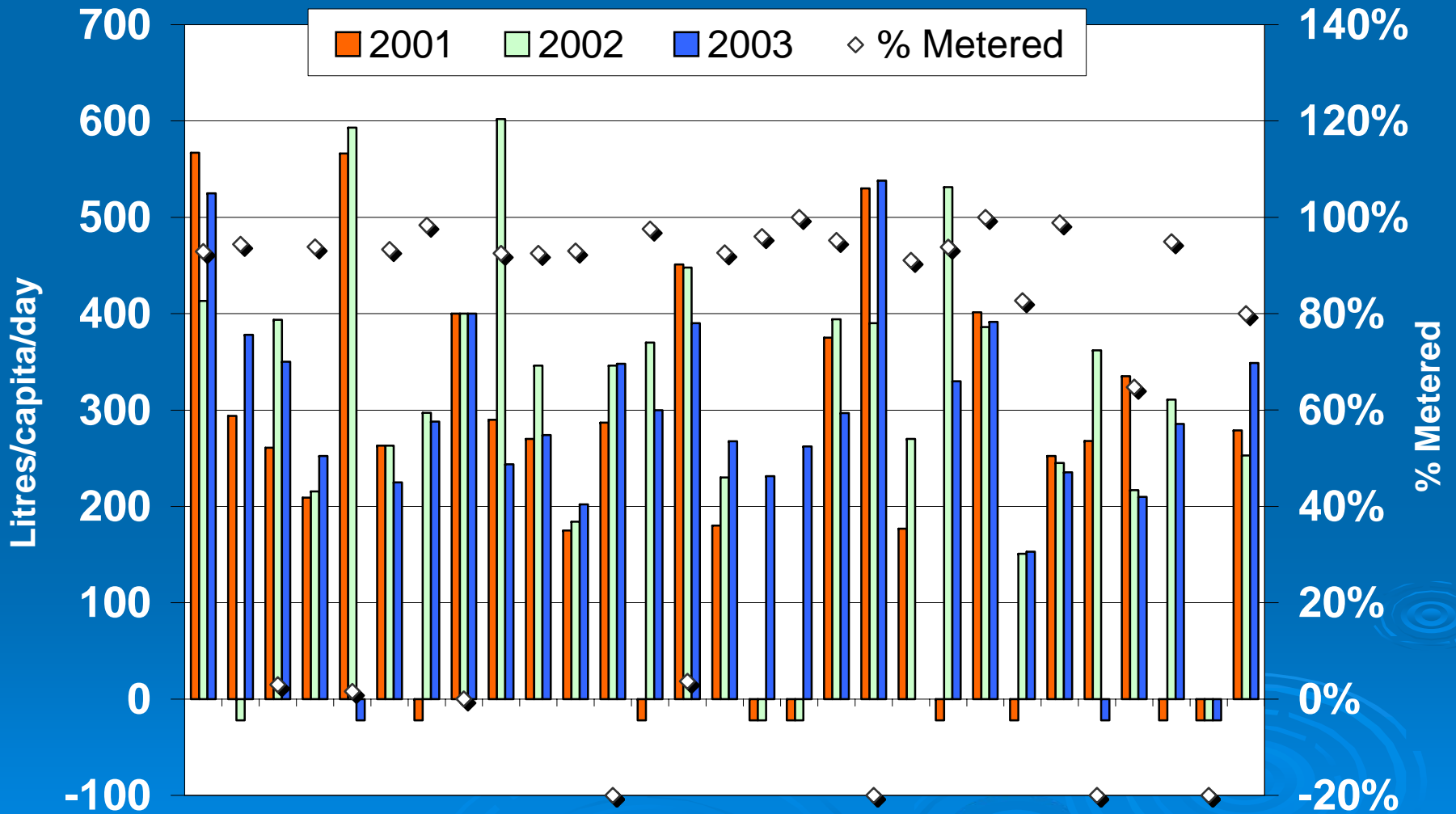
5: Analyze and Compare Results

- Normalize results where required (eg: cost/unit)
- Identify errors through statistical analysis and correctly treat outlying results
- Identify the materiality of local factors:
 - Climate
 - Geography
 - Economy
- Document performance trends

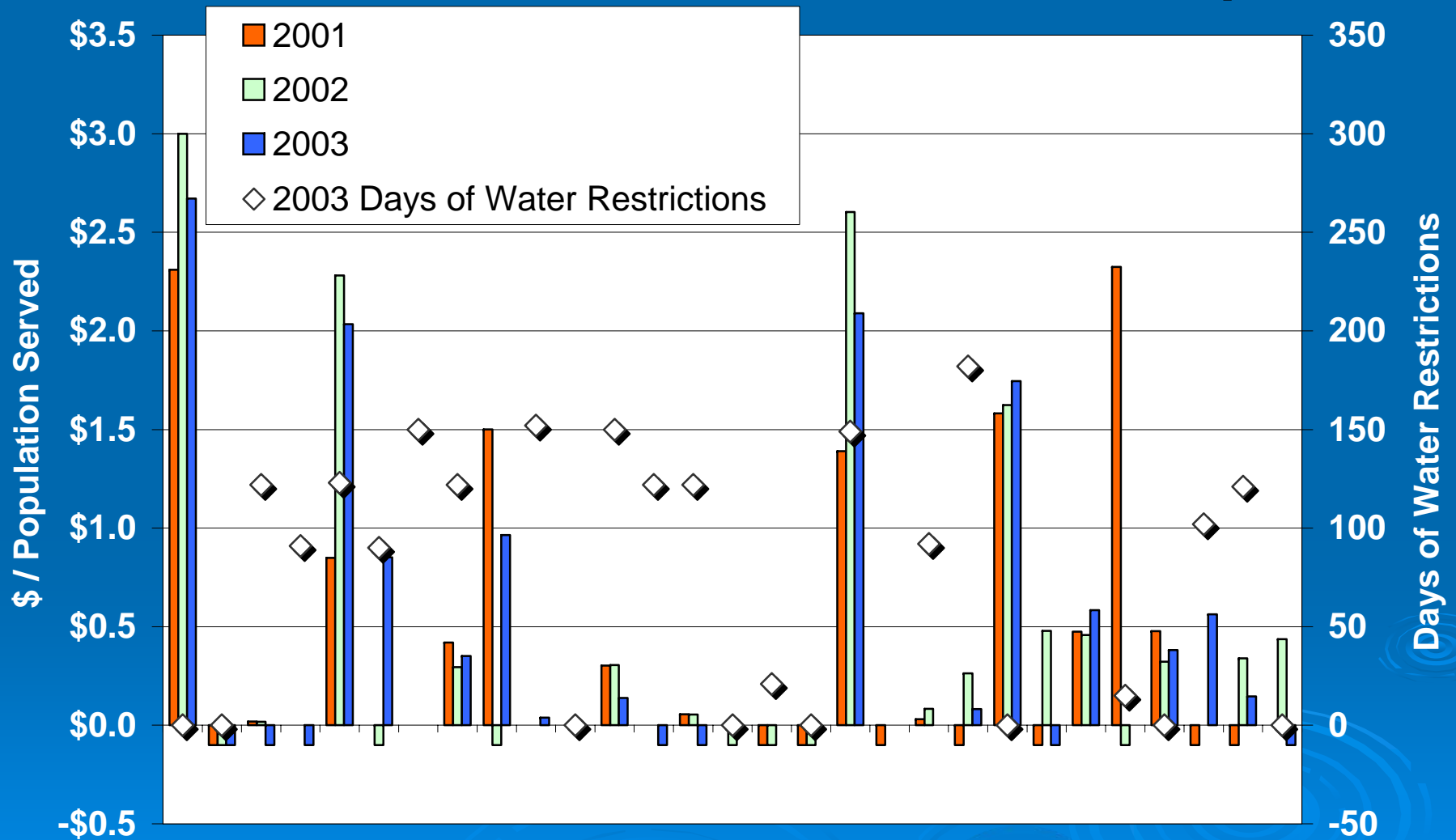
Water Conservation Measures

- Annual data focused on residential measures & system performance
 1. Residential consumption
 2. Cost of water conservation programs
 3. Level of metering
 4. Water restrictions
 5. Non-revenue water (i.e. water loss)

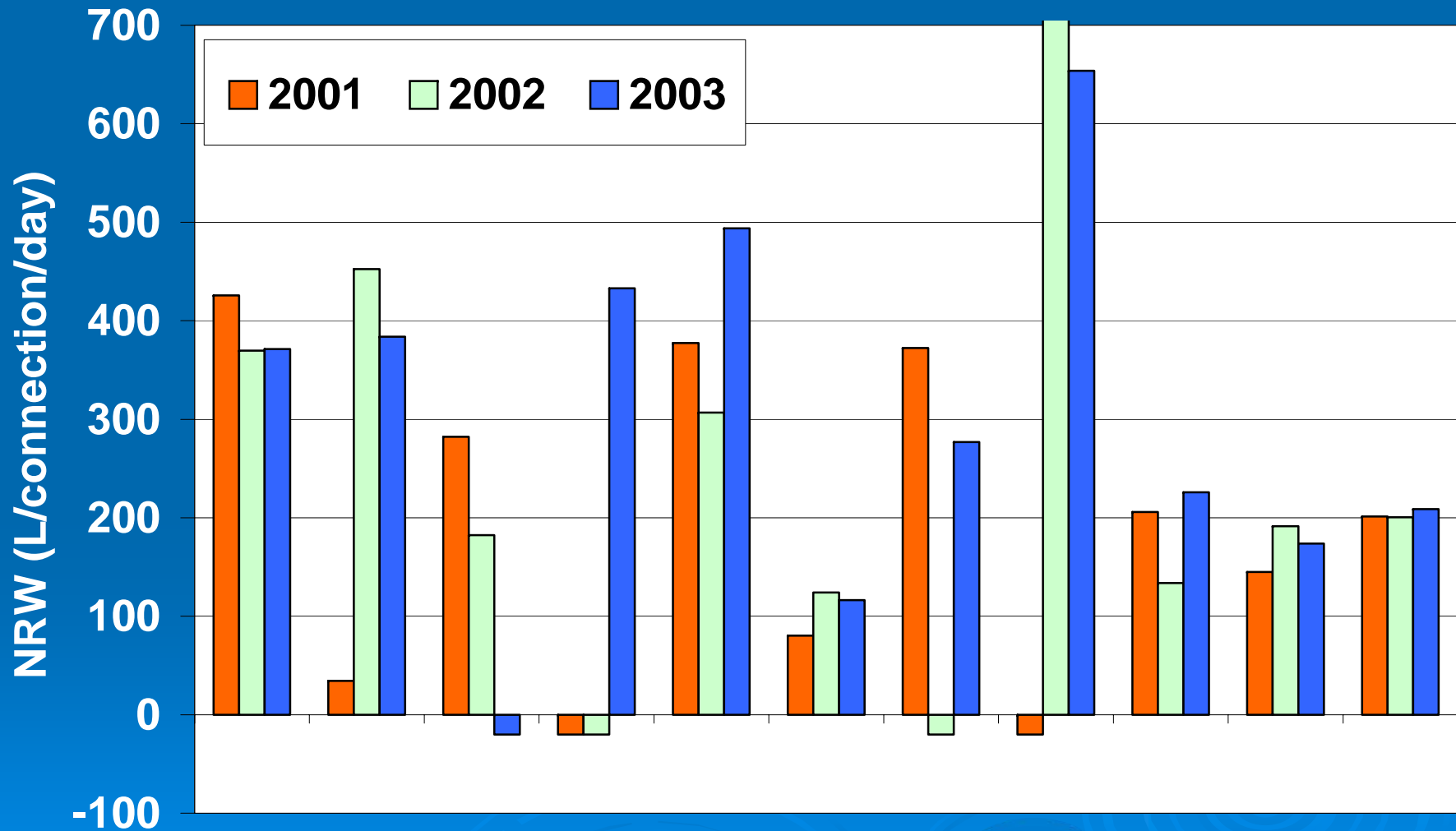
Residential Consumption Icd



Water Conservation \$ / Capita



NRW for Systems > 700km/day



New measures for 2004

- Polis Presentation in Montreal
- Need to develop a business case for water conservation, it usually needs to be driven by more than environmental reasons.
- % reduction in water consumption could be tracked as a performance measure.
- Track demand management measures implemented & try to correlate implementation against changes in demand.
Eg Calgary toilet replacement

6: Prepare Action Plans

- Benchmarking on its own is pointless
- Absolutely Critical: Define specific Action Plans based on the results of benchmarking
- Assign specific deliverables, due dates and accountability.
- Action Plans might include Process Benchmarking in selected areas

Example: City of Calgary

- Demand side management strategy
- Meet future water needs by reducing per capita water demand through a range of initiatives (metering, leak reduction, periodic watering restrictions, etc).
- Overall goal 1.5 million in 2032 with no increase in total water consumed, requiring an average per capita reduction of more than 30%.

Tips

- Benchmarking takes effort and time. You can expect that it will take about two iterations before the performance measure results are meaningful.
- Involve the right people in your organization, including senior management and operational staff
- Best results are obtained when you work with other organizations as true “partners”. This means sharing results, expertise and eventually, Best Practices.

Benefits

➤ According to the InfraGuide Best Practice for Developing Indicators and Benchmarks:

“Properly implemented, benchmarking give decision makers the ability to see more clearly the consequences of their decisions over time. Indicators also help avoid the pitfalls that result when funding decisions are made with an incomplete understanding of infrastructure assets and needs.”



Final Word?

- Benchmarking is the practice of being humble enough to admit that someone else may be better at something , and wise enough to learn how to match and even surpass them at it.
- It's not as easy as it looks! 5 years and still learning.
- Take the first step today.

Want More Information?

- Canadian National Water and Wastewater Benchmarking Initiative: www.nationalbenchmarking.ca
- InfraGuide: Developing Indicators and Benchmarks <http://www.infraguide.ca/lib/db2file.asp?fileid=4472>
- WEF/AWWA QualServe Program: <http://www.awwa.org/science/qualserve/>
- World Bank International Benchmarking Network (Water and Sanitation) <http://www.ib-net.org/index.asp>