



Water Environment Association
Preserving & Enhancing Ohio's Water Environment

Session 1: Management

Take Time to Gauge Your Performance

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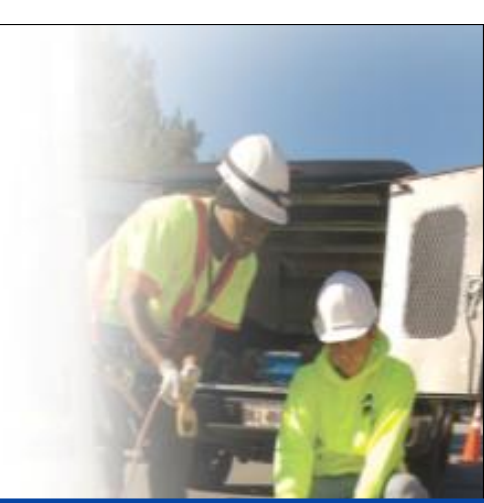


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Agenda

- 1 What is benchmarking?
- 2 How do you get started?
- 3 How do you grow and sustain an improvement program?
- 4 Case study
- 5 Moving forward





1

What is Benchmarking?



What is benchmarking?

- A benchmark is a measurement of excellent performance that becomes a goal with which to strive to attain
- Involves gathering information about best practices used by world-class organizations
- Interest gained during first utility privatization wave in the 1990's
- More recently been used by many organizations as part of an overall performance improvement process
- Both metric and process benchmarking used to gauge how well an organization is working



The Concept Of Measurement Is a Hallmark Of Best Practice Organizations

“If you can't measure it, you can't improve it.”

Andy Grove, Co-Founder and Former Chairman of the Board, Intel Corporation

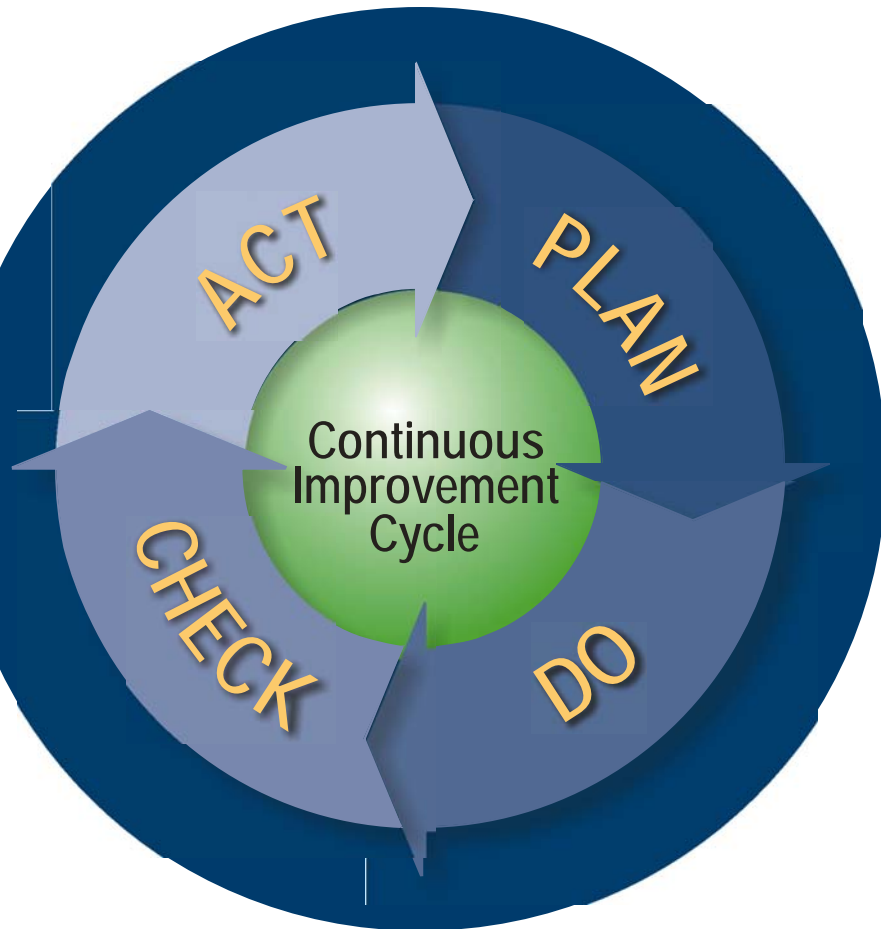


Benchmarking is Part of Continuous Improvement!



The Deming Cycle

- PLAN: Design or revise business process components to improve results
- DO: Implement the plan and measure its performance
- CHECK: Assess the measurements and report the results to decision makers
- ACT: Decide on changes needed to improve the process

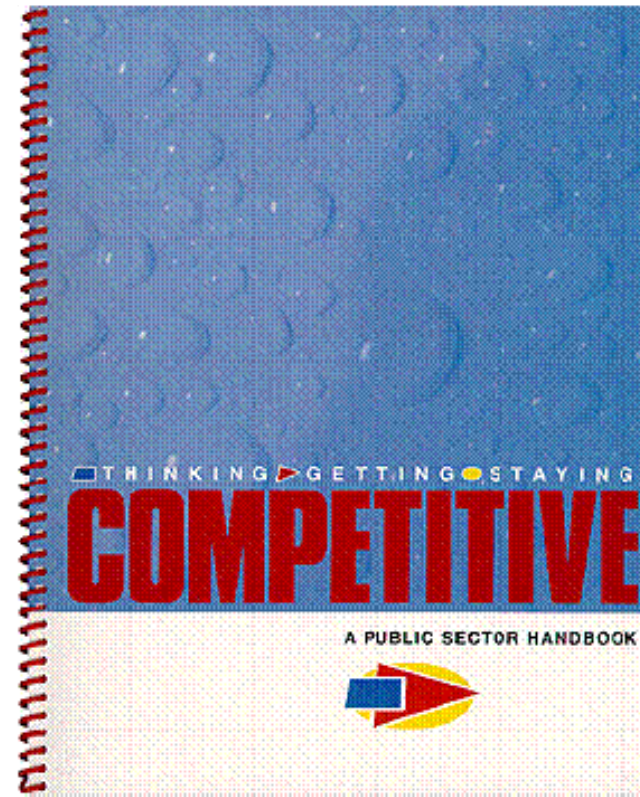
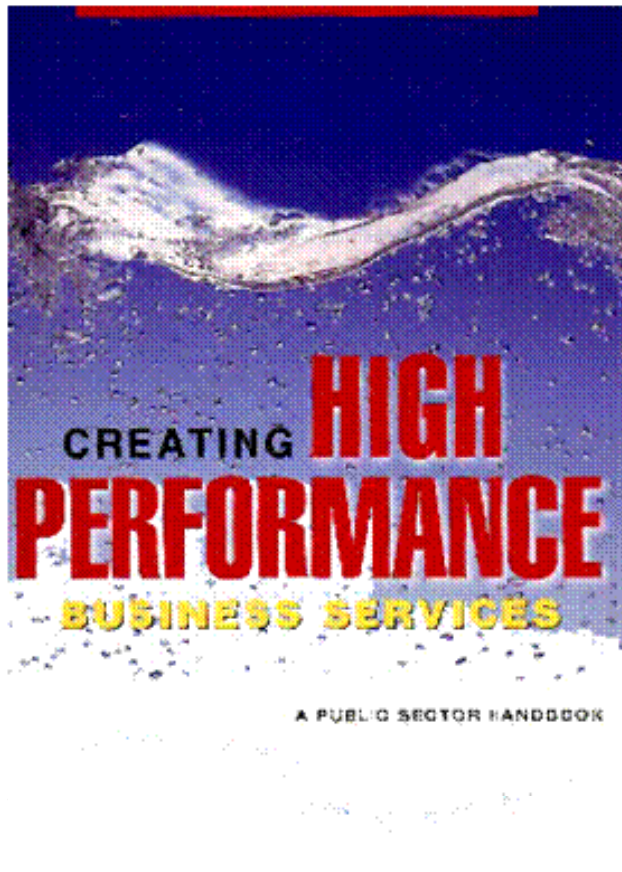


There Are Three Common Types of Measures

- **Efficiency** – Ratio of inputs to outputs
 - Examples - \$/MGD, \$/customer account, \$/mile
- **Effectiveness** – Include other types of inputs and measures
 - Examples - FTEs/mile, Number of blockages/mile, Complaint calls per 1,000 customers
- **Outcomes** – Outputs related to strategic objectives of the organization and its stakeholders
 - Examples - Number of complaints, Number of exceedances, Total lost hours due to injury



Guidance Was Developed in the 1990's

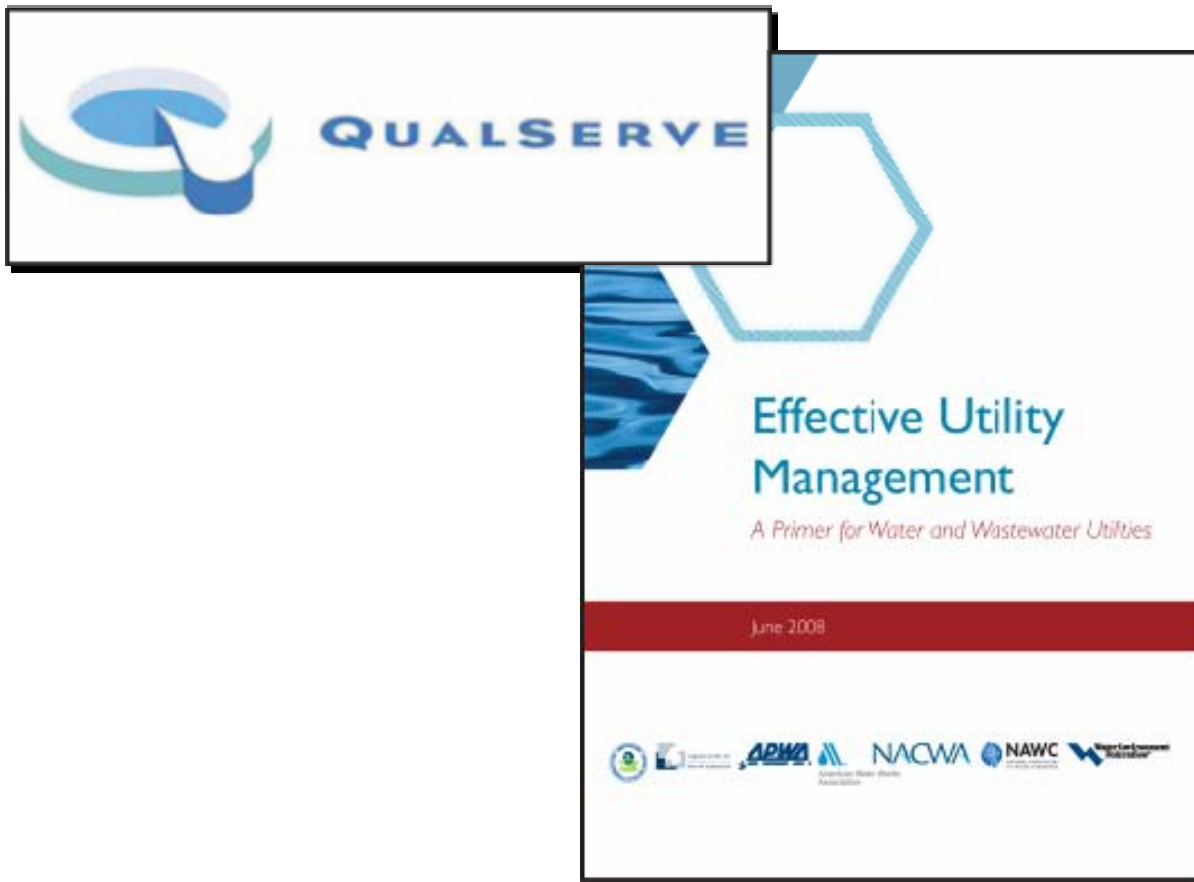


Still Others...

- American Productivity and Quality Center (Process Classification Framework on Best Practices, What Is Benchmarking?, What is Best Practice?). <http://www.apqc.org>
- Department of Energy Best Practices Clearinghouse
<http://www.pr.doe.gov/ocmacler.html> and
<http://www.pr.doe.gov/dg61-3.html>
- Malcolm Baldrige National Quality Award -
<http://nist.gov>
- Presidential Award for Quality.
<http://www.pica.army.mil/ardec/tqm/award.html>



... In the 2000's



A Definition of Effective Utility Management has Been Adopted by APWA, AWWA, AMWA, NACWA, NAWC, USEPA, WEF

10 Attributes of Effectively Managed Utilities

1

Product Quality

2

Customer Satisfaction

3

Employee and Leadership Development

4

Operational Optimization

5

Financial Viability

6

Infrastructure Stability

7

Operational Resiliency

8

Community Sustainability

9

Water Resource Adequacy

10

Stakeholder Understanding and Support

Links to QualServe Performance



Selected QualServe Performance Indicators

- 1 Sewer overflow rate
- 2 Collection system integrity
- 3 Water distribution system integrity
- 4 Distribution system water loss
- 5 Planned Water/Wastewater Maintenance (hrs & cost)
- 6 Cost per customer account
- 7 Drinking water compliance
- 8 Wastewater treatment effectiveness rate
- 9 O&M cost per MG processed
- 10 water/wastewater



Challenges

- It is easy to get “wrapped around the axle” when interpreting numerical results
- Numbers result from an inexact science
- “Apples to oranges” comparisons
 - Size, location, complexity, definition differences
- “Tail wagging the dog”
 - Efficiency vs. effectiveness



Rationale for Benchmarking

- Self-comparison can be an effective work around; reveal known and unknown organizational factors
- Mid and Long term - likely not able to provide the necessary information or reveal the priorities needed for focusing needed continuous improvement efforts.
- Data Collection and Analysis is a Must!
- Required for achieving consistent process and organizational performance.



Benchmarking is Complete and Accurate Only If a Holistic Approach is Applied



Business in Action



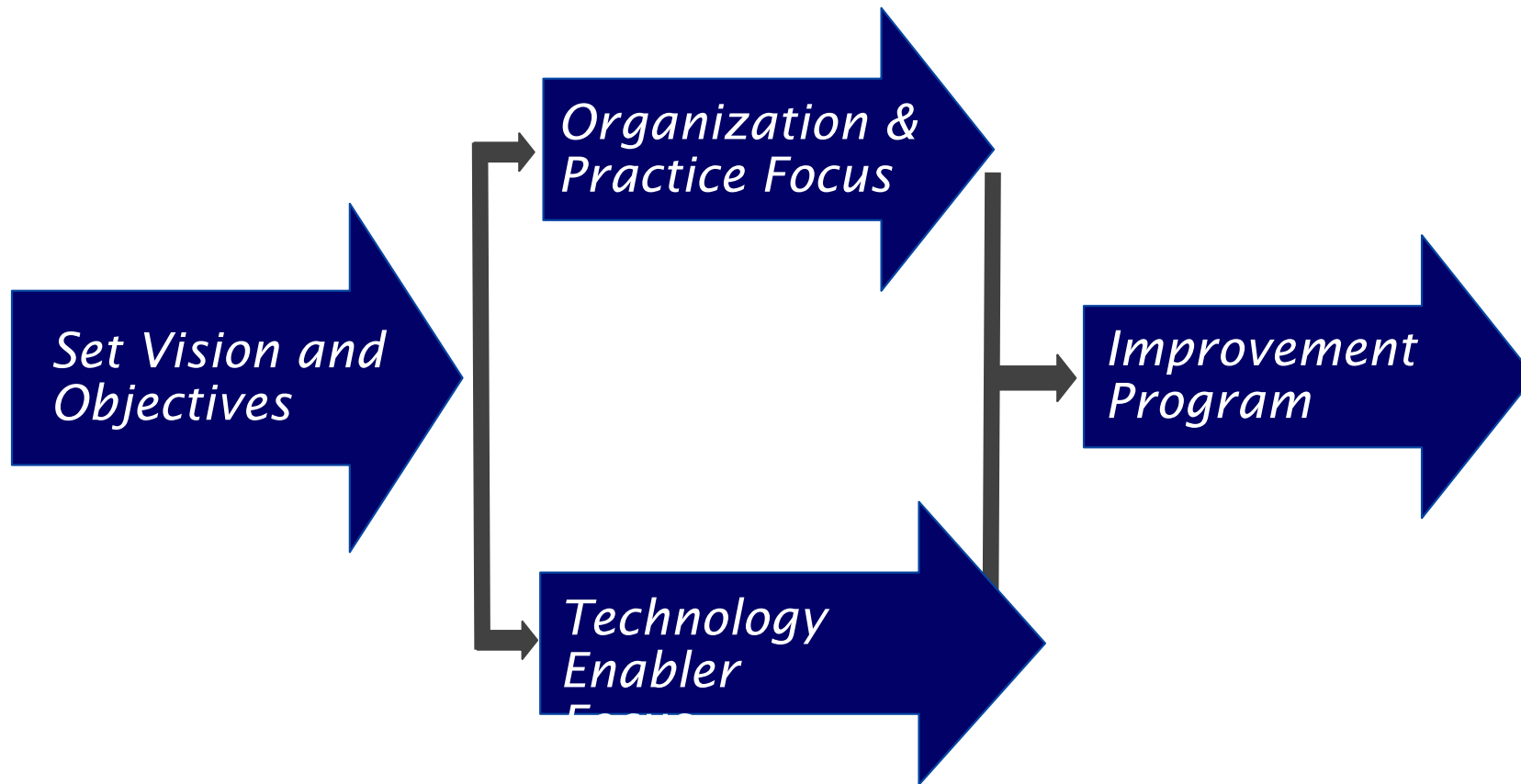


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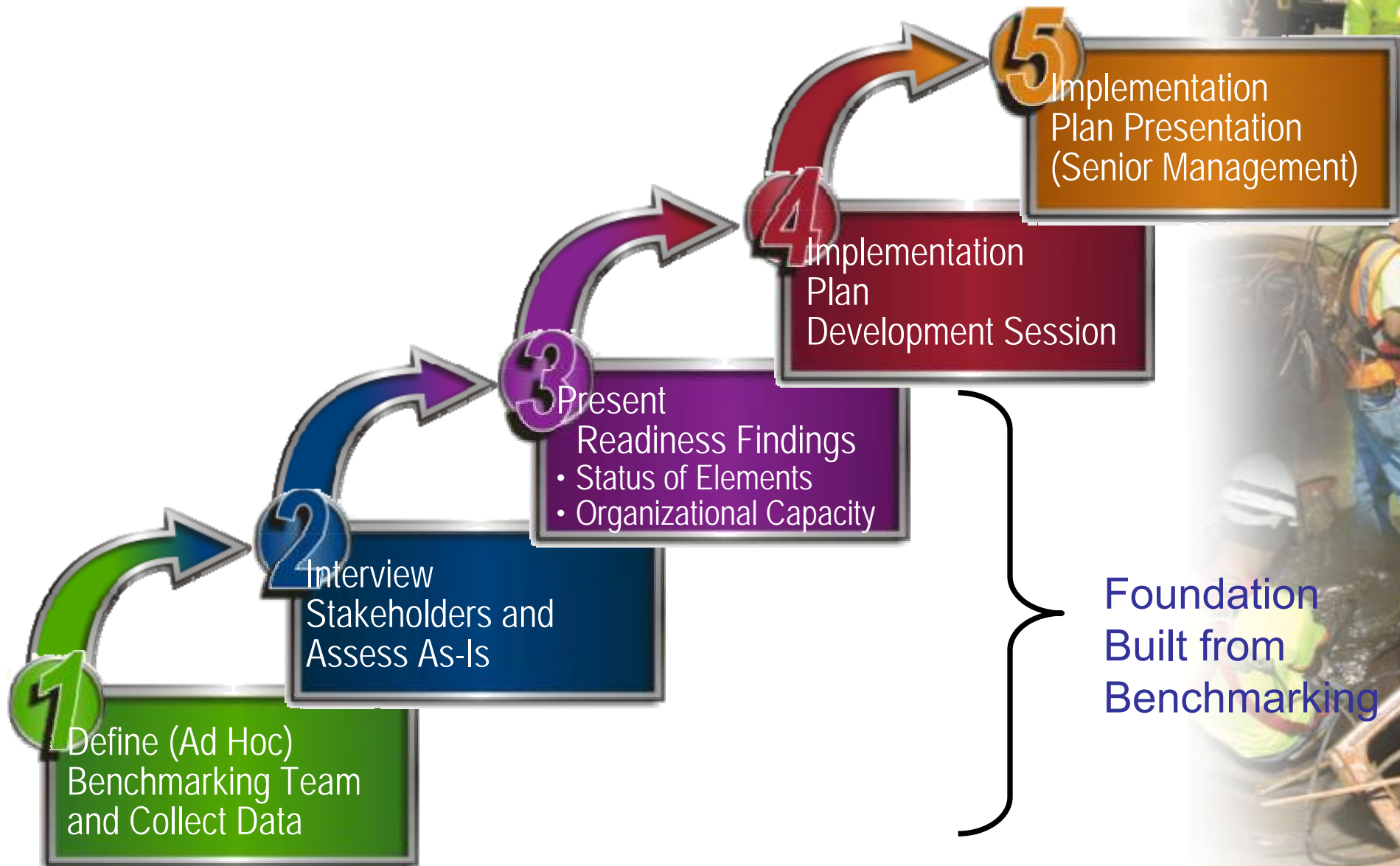
How Do You Get Started?



...Leading Improvement Requires a Directed Assessment Approach Using Benchmarks



Benchmarking Is Essential to Developing an Improvement Process



Example Best Practices Categories

1. Customer Service
2. Planned Maintenance
3. Operations and Maintenance United
4. Less or Unstaffed Facilities
5. Work Force Interdependency
6. Technology and Information Access
7. Organization Alignment and Span of Control
8. Investment Portfolio = Assets Cost, Risk and Forecasts



Opportunity Model for Industry Best Practices for Business Services

1. Eliminate Inefficient Serial Work Processes
2. Use Cross-Functional Teams
3. Eliminate Duplication of Effort
4. Use Technology Strategically
5. Eliminate “Top-Down” Culture
6. Eliminate Specialty Silos
7. Adopt Formal Cross-Training
8. Use Flexible Technical Standards

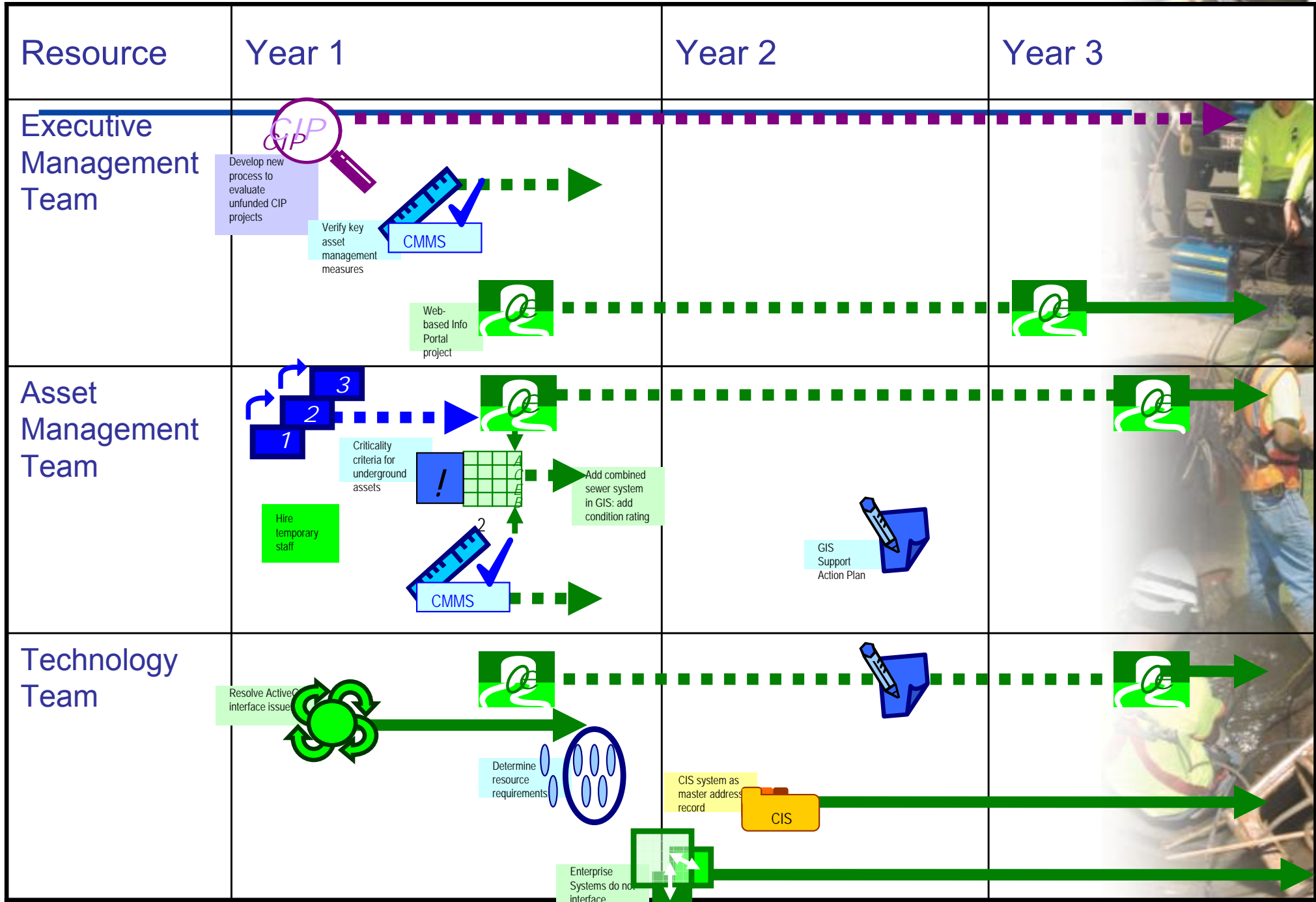


Opportunity Model for Industry Business Services (cont'd)

9. Eliminate Old, Outdated Policy and Procedures
10. Reduce Cultural Impediments
11. Improve Quality of Work Products
12. Manage Load Through Service Level Agreements
13. Outsource Strategically
14. Routinely Acquire Customer Feedback



Example Roadmap



All Performance Measures Should Link to Your Vision and Strategies

	Strategic Goal	Measure(s)	Target	Function(s)
Service Level	Provide best in class customer service	Avg. days to install new meter / service	95% within 30 days	Engineering, distribution, customer service
		Average call hold time	95% of calls answered < 2 minutes	Customer service / call center
Service Level	Ensure quality, safe, and reliable supply to the public	Days to repair out of service fire hydrants	99% within 10 Days	Distribution maintenance
		Total low pressure incidents	Provide 40 PSI at customer property	Distribution operations and maintenance
Business Performance	Provide cost effective and efficient service	Total cost per MG water treated	\$250 / MG	Plant operations
		Avg. cost to install new meter / service	\$210 Avg.	Distribution



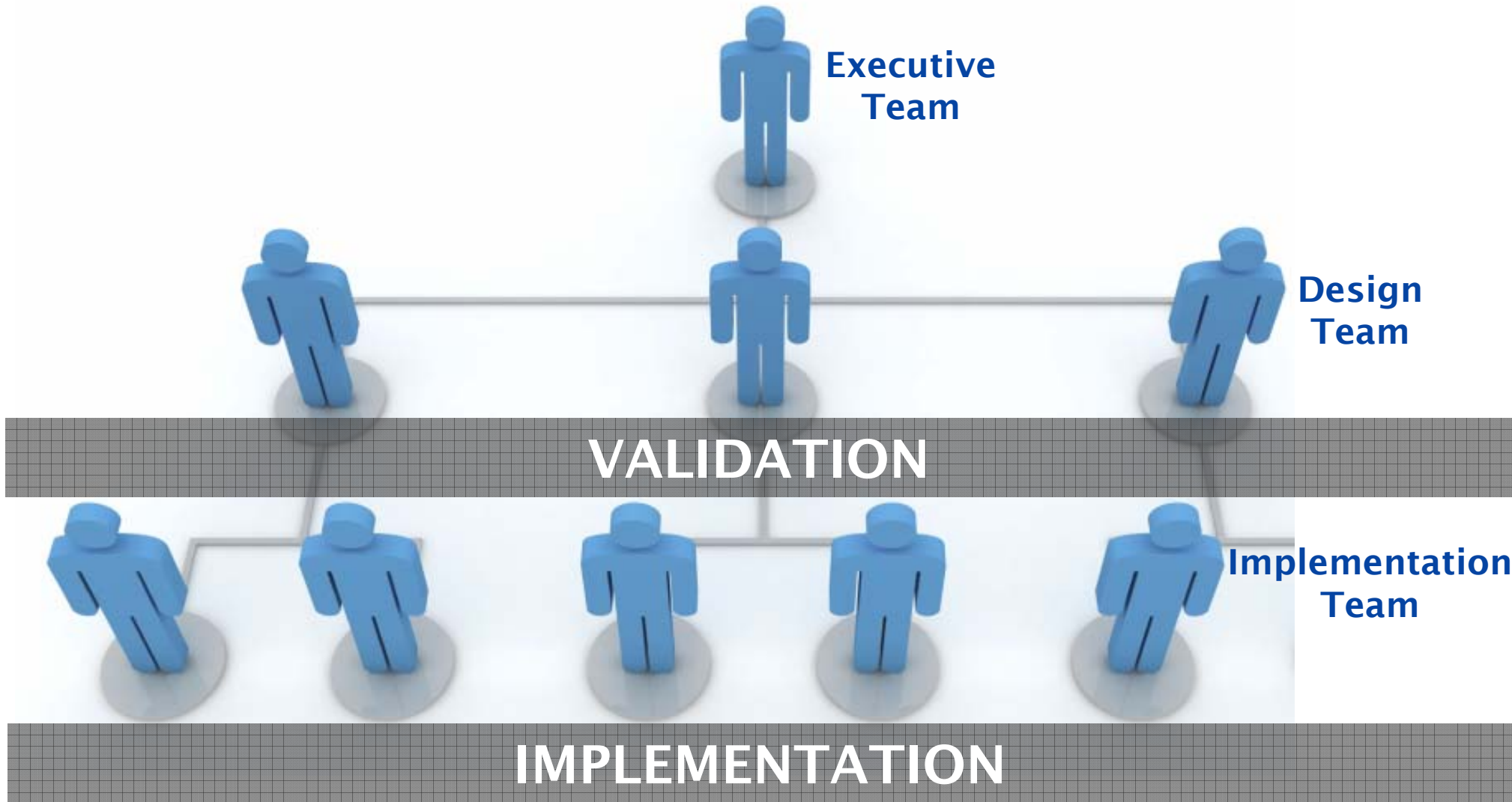


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Growing and Sustaining an Asset Management Program.



Staff Ownership Increases from the Beginning



When You Know Your Improvement Program is Sustainable...

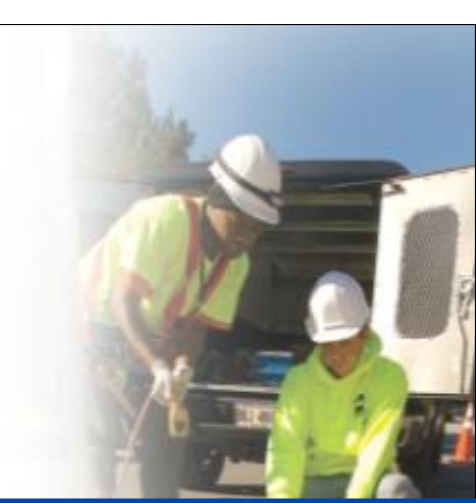
FROM:

- Culture of Individual Interests
- Externally driven short-term gains
- Cost administration based on historical costs
- Utility staff disconnected and under informed
- Technology as barrier

TO:

- Customer Service Improvement Culture
- Long term vision achievement
- Financial management based on benefits gained
- O&M staff indispensable collaborators
- Technology as enabler





4

Case Study



Citrus County (FL) Water Resources

BACKGROUND:

- Small full service Water/Wastewater/Stormwater utility
- O&M staff – approximately 55 employees
- \$9.3 M operating budget



Citrus County (FL) Water Resources, cont'd

PROBLEM:

- Analyzed current operations and asset management program for effectiveness and efficiency
- Best practices comparison needed
- Reorganization recommended to improve span of control



Citrus County (FL) Water Resources , cont'd

SOLUTION:

- High-level action plan with short, mid, long term recommendations
- Bridging a performance gap of \$353,000 within 5 years
- Provide a road map to manage improvements

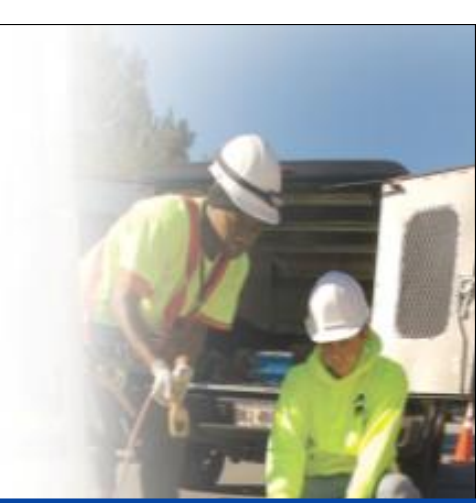


Citrus County (FL) Water Resources , cont'd

A TWIST OF FATE:

- Political temperature heated up
- BOCC decided to issue an RFP for operations services of 3 acquired facilities
- Improvement action plan and benchmarks were incorporated into proposal response
- Water Resources prevailed with a savings of \$810,000 per year compared to private contractor





5

Moving Forward



Benchmarking is Really Worth The Effort and is an Essential Tool

- Today you need every viable tool and approach to succeed
- The challenges faced today are far more complex than anything our predecessors faced
- Benchmarking serves as your compass and altimeter to meaningfully measure which way and how high you're flying
- Advantages overcome the disadvantages



Final Thoughts and Questions

- Do you currently have defined performance measures and targets in place?
- How are they used to monitor trends and support operations, maintenance, asset management and/or financial decisions?
- Are they tied to your strategic or operating plans?
- How is performance information shared with your external stakeholders?
- Are you ready for a “twist of fate”?





Thank You!

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