

Resourcing the world

Veolia Capabilities

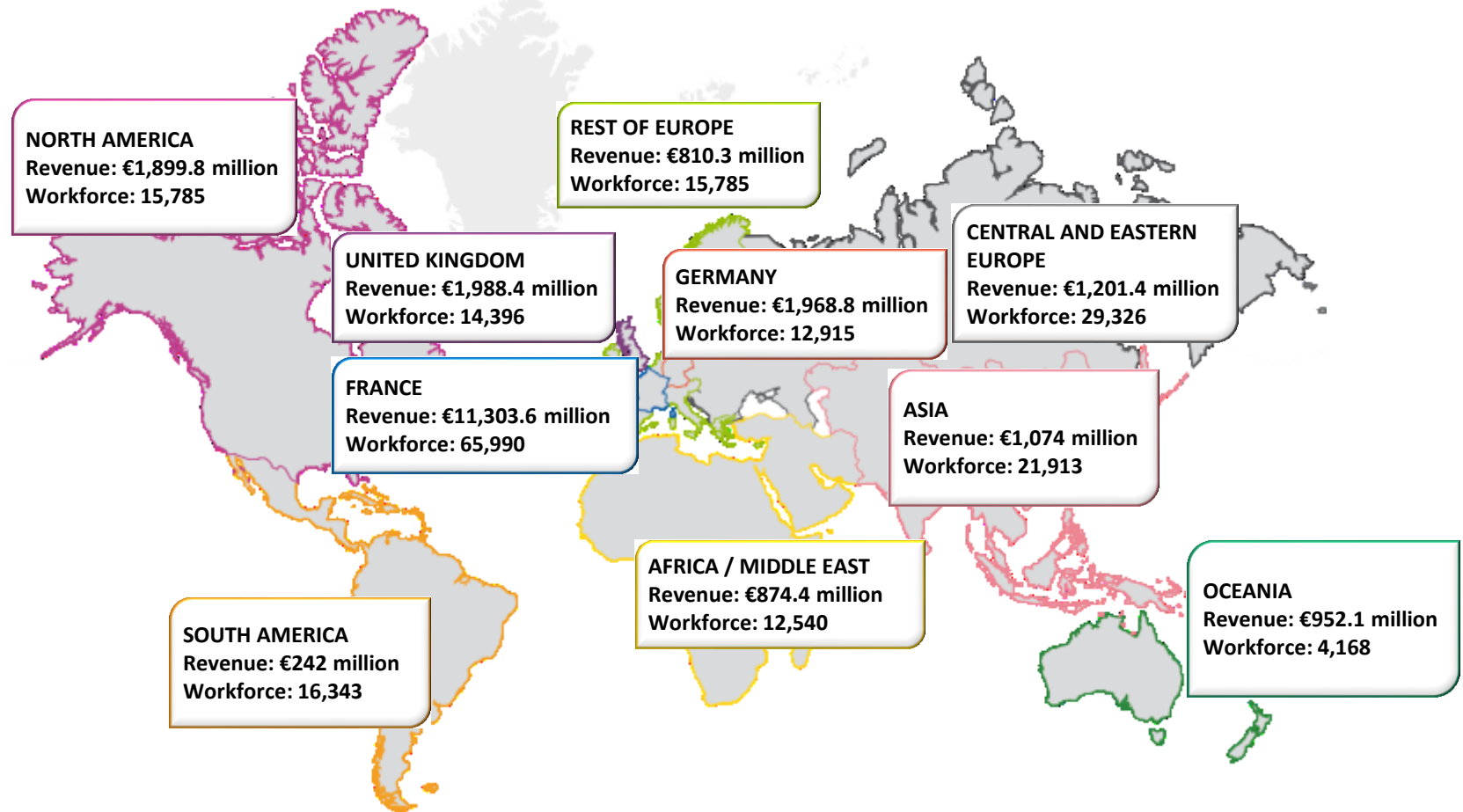
Mark Rupke

Municipal Water and Wastewater

◦ March 2016

Our field of activity: resourcing the world on a global scale

- o **€22.3 billion** in revenue, **202,800** employees



Our experience: 160 years of history

1853

Les Eaux

2003

onnement

2014

the world

1853 – 1900

Drinking water is delivered to cities to meet the challenge of urbanization.



1900 – 1939

Wastewater services, waste treatment and access to energy expand on a large scale.



1945 – 1992

Environmental services provide support for reconstruction and the growth of industry.



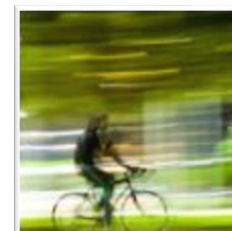
1992 – 2013

A concern for sustainable development gradually emerges as a global priority.



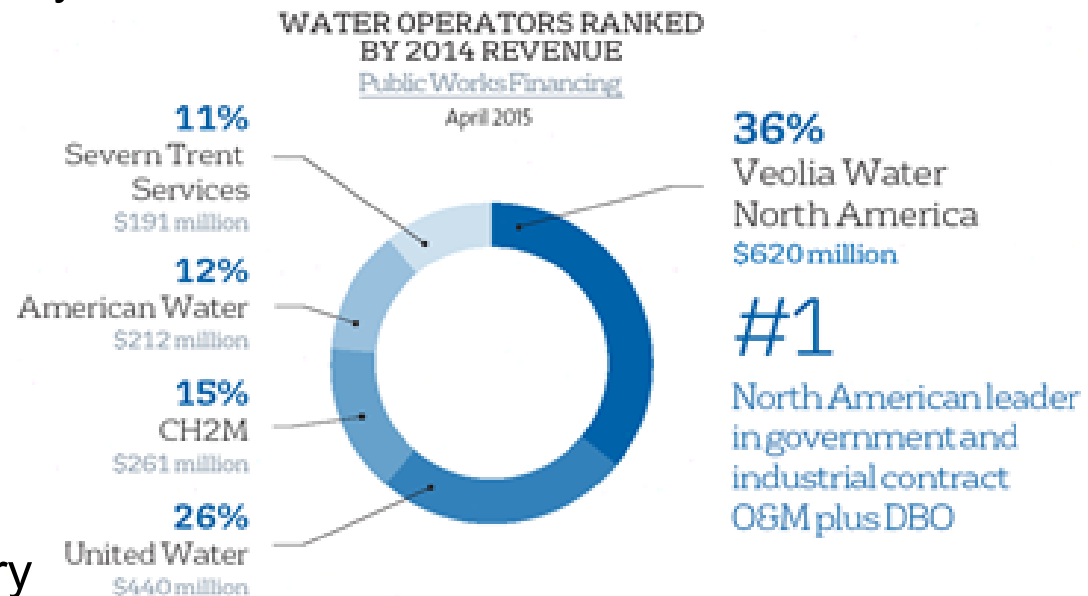
2014 - ...

In the face of growing scarcity, resource management must be reinvented to create a new economic and social dynamic.



Operations Statistics

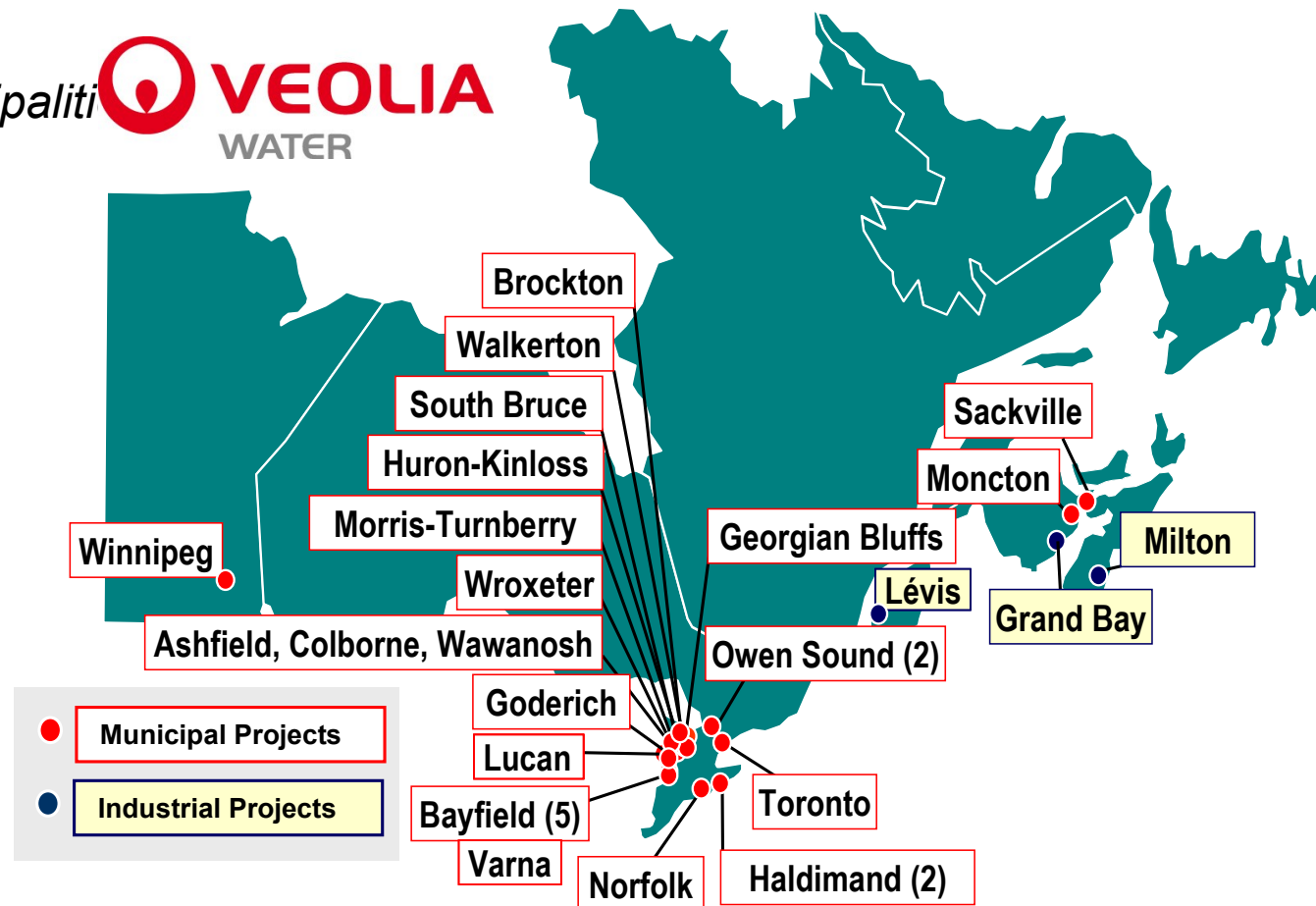
- #1 Water/Wastewater Company in North America
- 36% Market Share
- 94% Renewal Rate
- \$620 Million in Revenues
- 40+ DBO Projects
- Operate 380+ Treatment Facilities
- Treat ~ 12,000,000 m³ every day (Water and Wastewater)
- 19 Million+ Population Served



Existing Projects – Municipal Water O&M

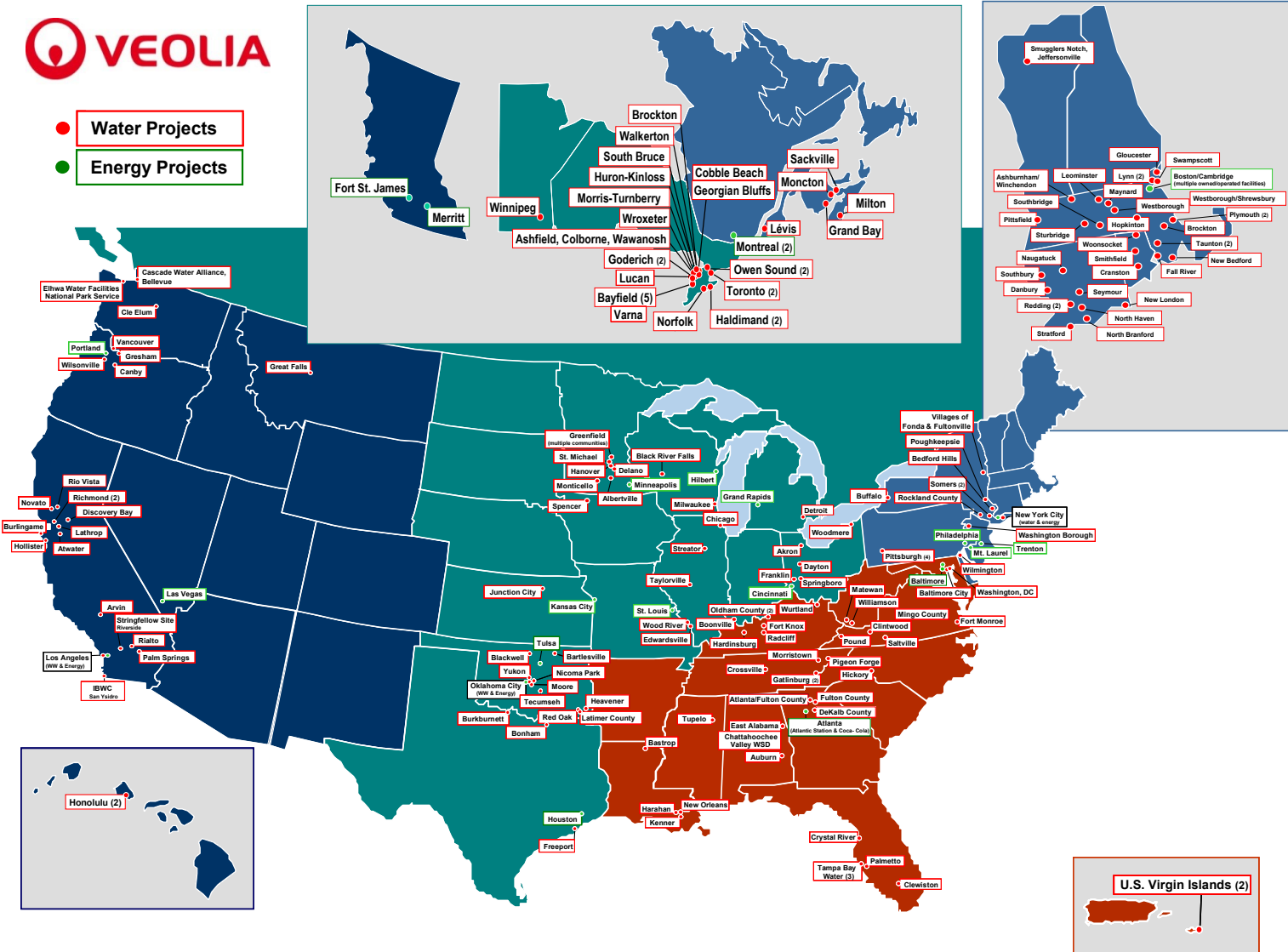
Veolia in Canada

- >\$240M in revenue
- >1400 employees
- O&M for 14 municipalities
- >50 facilities





- **Water Projects**
- **Energy Projects**



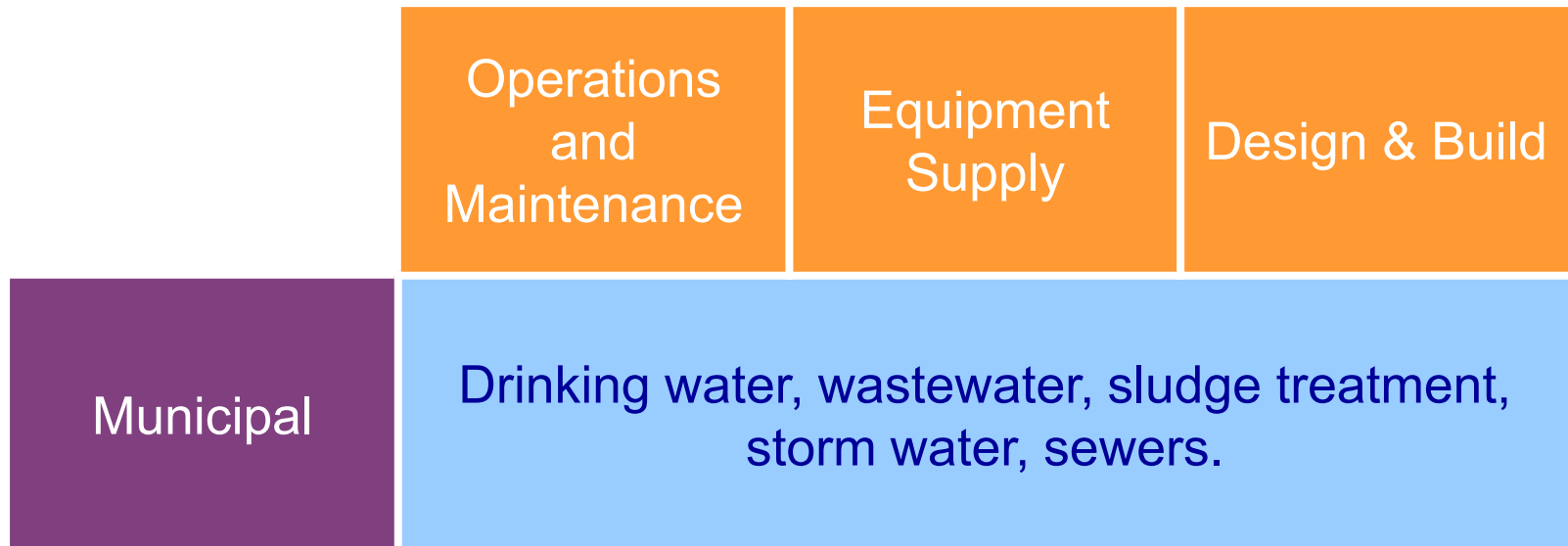
From the Largest $>800,000 \text{ m}^3/\text{d}$



To the Smallest <5 m³/d

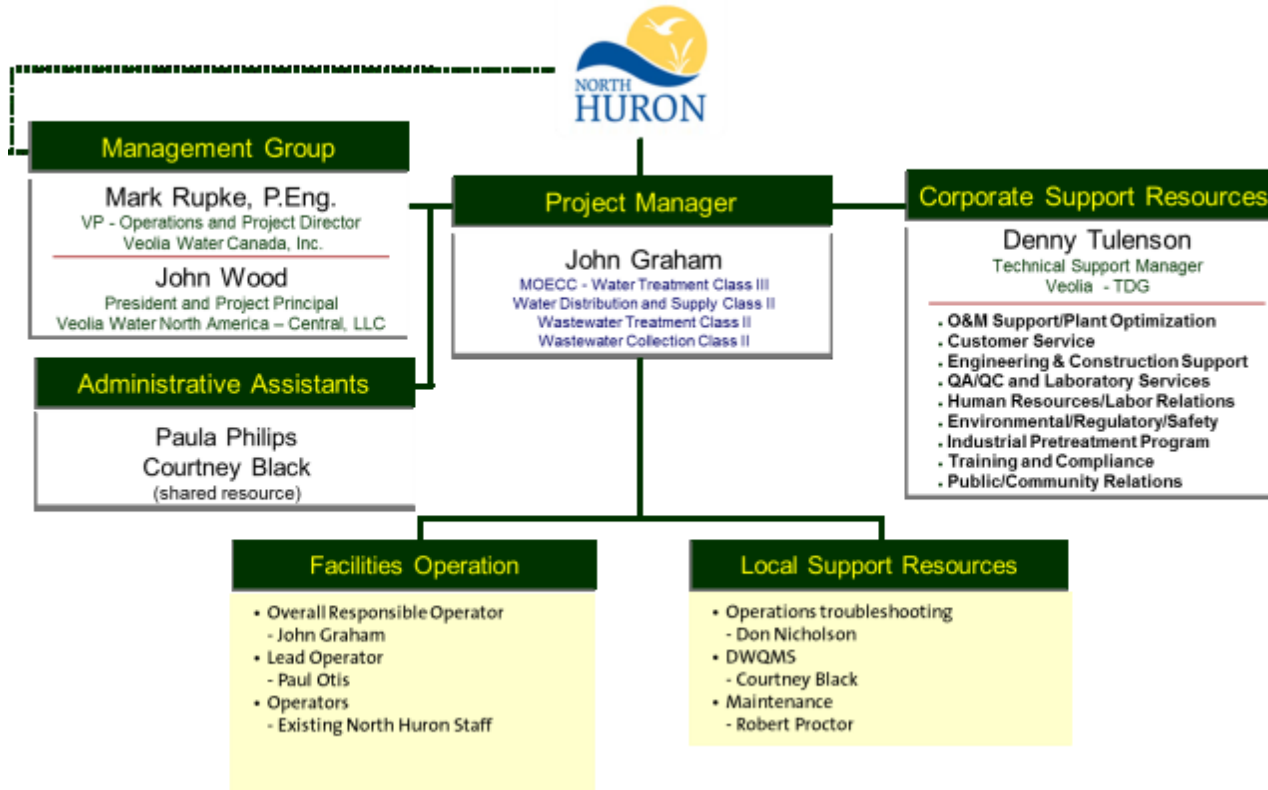


Overview of our Activities



- Management and Practices
- Staffing and Training
- Process Expertise
- Environmental Compliance
- Economical Treatment
- Protection of Assets
- Technology Agnostic
- Lifecycle costing
- Financing
- Operability Maintainability review
- Customer Focus
- Cost Savings

Staffing Plan: The Veolia Water Team



- Transitioned staff on >200 projects
- Develop local staffing
- Regional staff pool

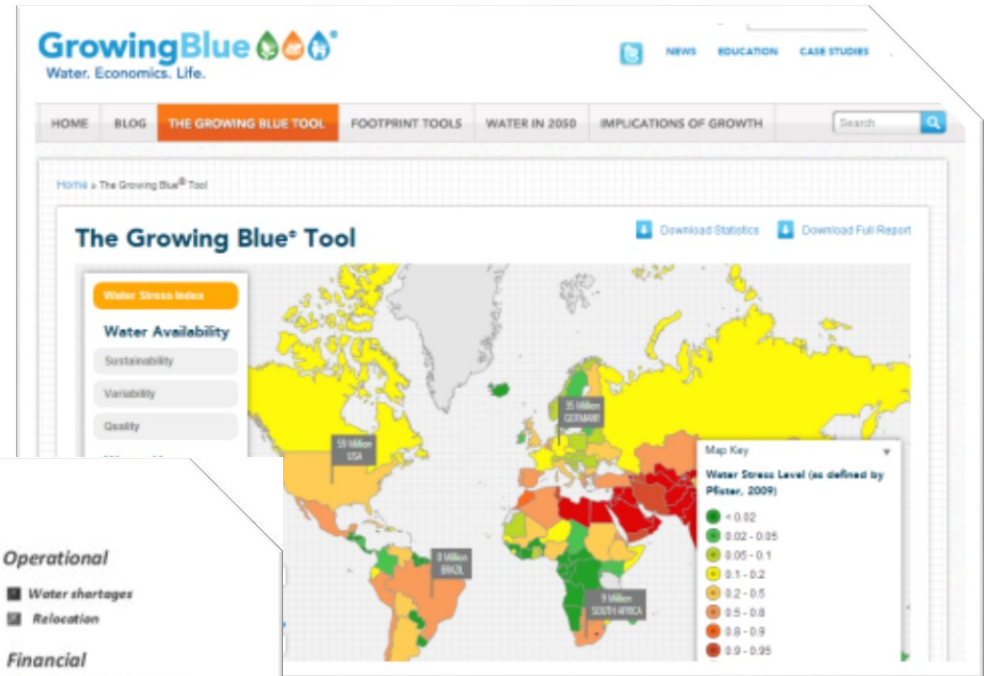
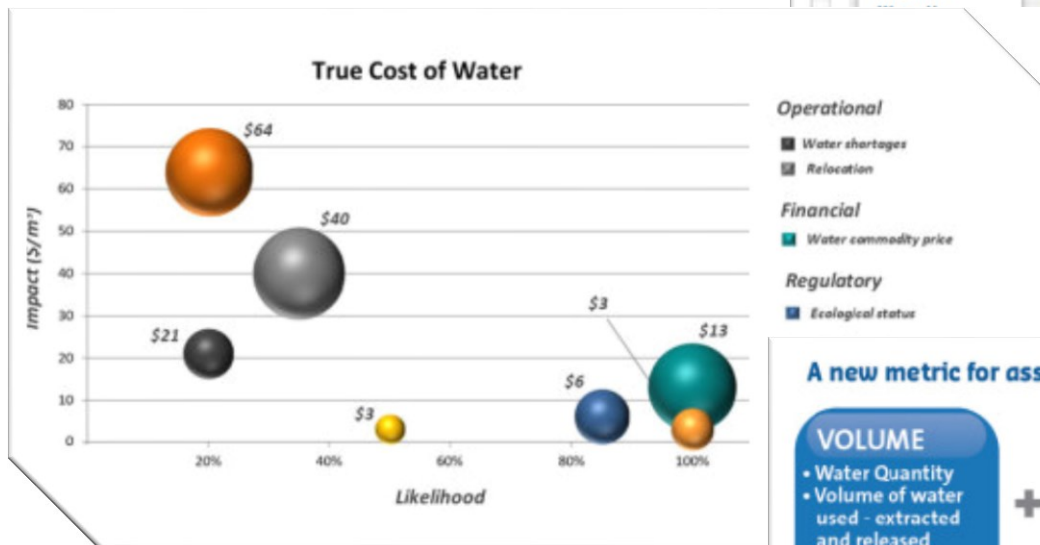
Corporate Support

- Daily Support Services
 - Accounting
 - HR
 - Legal
 - IT
 - Purchasing
- Set Policy / monitor operation
 - PCMP
 - Asset Management
 - Compliance
 - Safety
- Technical Resources



Resourcing the World

- Water Impact Index
- Growing Blue
- True Cost of Water



A new metric for assessing water impacts.

VOLUME

- Water Quantity
- Volume of water used - extracted and released

+

STRESS

- The Water Stress Index
- Local hydrological context, freshwater scarcity

+

QUALITY

- Water quality - extracted and released

=



Employer of Choice

Attract and Retain Skilled Staff

- Treat staff fairly
 - *Comparable Salaries and Benefits*
 - *Pension Plans*
 - *Career Growth Opportunities*
 - *Group and Individual Incentives*
 - *Training*



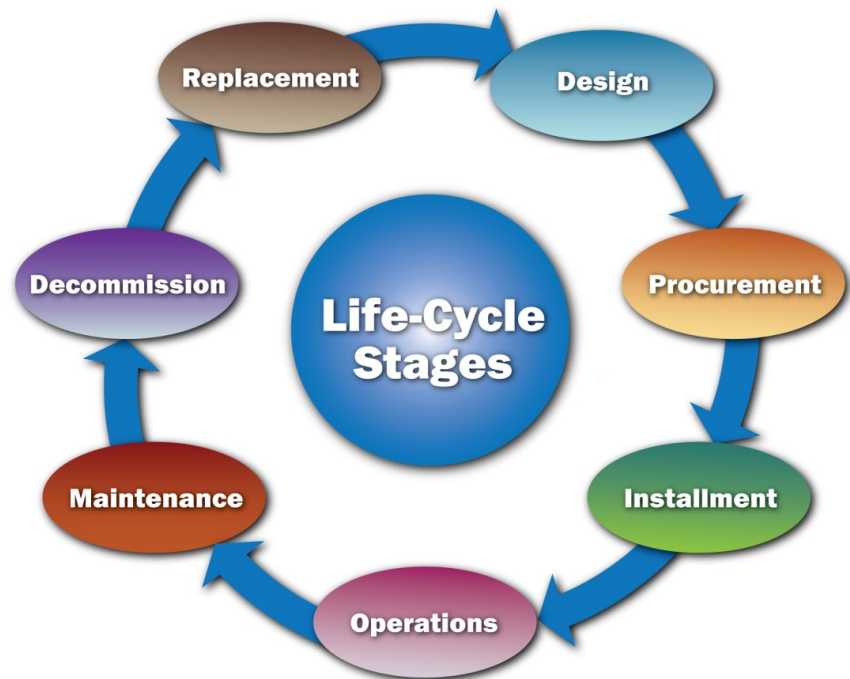
Management Systems

- Process Control Management
 - *Hach WIMS – PCMP plans*
- Asset Management and Capital Planning
 - *Job Plus*
 - *Reliability Centered Maintenance*
- Environmental and Safety Tracking
 - *Triple I, E3*
- Laboratory QA/QC
- Purchasing and Financial Management



Asset Management / Capital Planning

- Scaled to match needs of facility
- Computer Maintenance Management System
 - *Asset Hierarchy*
 - *Categories of Maintenance*
 - Conditioned Based
 - Preventative
 - Run to Failure
- Reliability Centered Maintenance Approach
- Capital Planning
 - *Condition Assessment*
 - *Life Cycle*
 - *Criticality Analysis*



Operational Functions

- Daily Operational Checks

- *Operational parameters*
- *Chemical feed equipment*
- *Control systems*
- *Trends*
- *Instrument function and calibration*

- Record Keeping

- *Plant log books*
- *Operational log sheets*
- *Chemical inventories*
- *Work orders*
- *Chain of custody*
- *Pump station checks*

- Sampling and Analysis

- *Shipping to laboratory*
- *On-site testing*

- Safety Inspections and Tailgate Meetings

- Routine Equipment, Property and Building Maintenance Activities

- Housekeeping

- Communicating

- Learning

We do everything required for O&M, this list is just highlights



Moncton, NB

The Moncton water treatment plant is one of Canada's best water facilities, producing some of Canada's highest quality drinking water

Key Facts

In Service Since	2000
Current Contract	C\$ 85.0 million (2000 – 2019)
Population Served	125,000
Scope of Services	<ul style="list-style-type: none"> ▪ Financing ▪ Lease / Ownership / Transfer ▪ Design / Build / Operate ▪ Capital Program Management
Facilities	<ul style="list-style-type: none"> ▪ Surface WTP (113,670 m³d; 25 MGD) ▪ Water Pump Station

