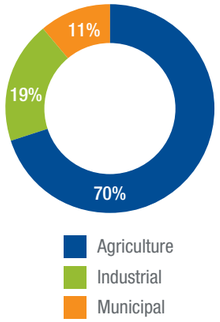
JACOBS' WATER PROFILE - DELIVERING SOLUTIONS FOR A MORE CONNECTED, SUSTAINABLE WORLD – May 2019

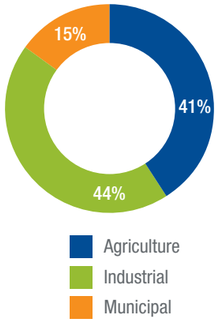
JACOBS

THE WATER MARKET – USERS AND UTILITY SPEND

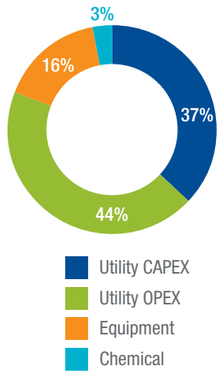
World
Water Consumption by Use



Developed Countries
Water Consumption by Use



Utility Spend



Source: FAQ, Aquastat, GWI

THE ADDRESSABLE WATER MARKET

Global Market
$600-700B/year
Capital: $250-300B/year
O&M: $350-400B/year

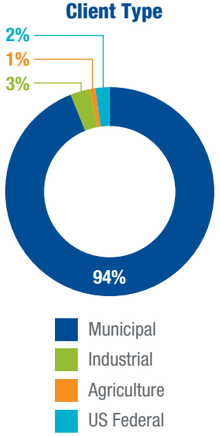
Addressable Market
Target Countries: $80-90B/ year (capital)
Target Services: by country

Target Country	Target Service	Addressable Market Revenue ($, B)
U.S.	Consulting/Design	8
	Design/Build	5
	Operations (non regulated)	2
	Total	**15**
Outside U.S.	Consulting/Design	8
	Total	**8**
GLOBAL	**ALL**	**23**

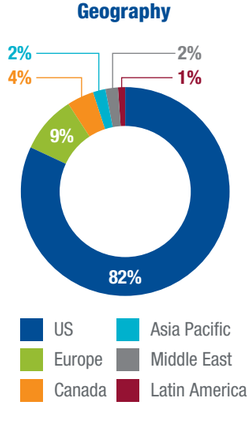
Sources: Engineering News Record, Global Water Intelligence, Water Design Build Council (2018)

JACOBS' WATER BUSINESS PROFILE

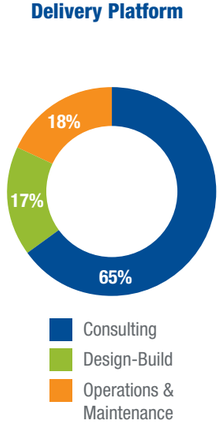
Client Type



Geography

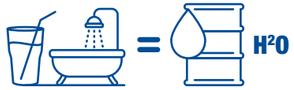


Delivery Platform



THE 'VALUE' OF WATER CHALLENGE

150 litre/day
Typical water usage per day per person





For **$1 per barrel** fresh drinking water to every house of the country at the turn of the tap

COST COMPARISON



Oil

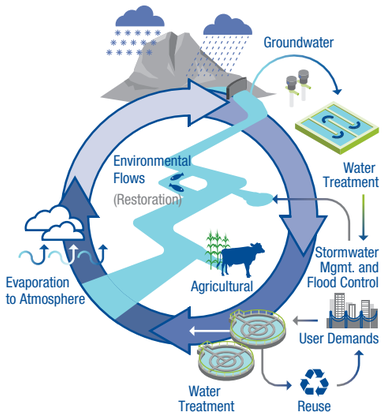


Petrol



Bottled water from your local supermarket

JACOBS END-TO-END SOLUTIONS



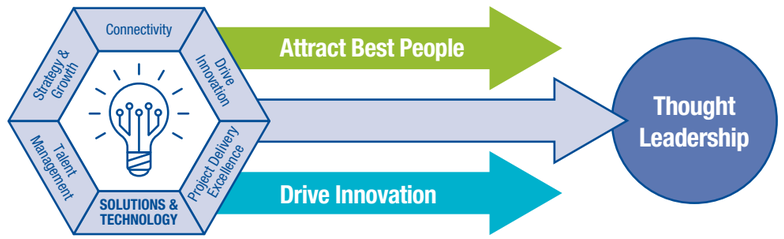


- ✓ **All water users**
- ✓ **Services across the entire water cycle**
- ✓ **Full service delivery platform**

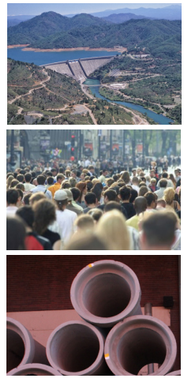
INDUSTRY | AGRICULTURE | POWER | ENERGY | ECOSYSTEMS | URBAN

JACOBS' GLOBAL LEADERSHIP - TECHNOLOGY

- Long-term investment in technology organization
- Senior technology subject matter experts and icons
- Technology career path
- Portfolio of technology 'firsts'
- Investment in proprietary processes and modeling tools



MARKET DRIVERS



Traditional Drivers

- Water scarcity
- Population growth
- Urbanization
- Aging infrastructure
- Aging workforce
- Recent and emerging regulations
- Water/energy/food nexus

Accelerator

Climate change - induced extreme weather events



JACOBS' LEADERSHIP POSITION

Top 500 Design Firms 2018 Engineering News Record (ENR)



#1 ✓ Design Firm

#1 ✓ Wastewater Treatment
✓ Sanitary and Storm Sewers

#2 ✓ Water Treatment, Desal Plants
✓ Water Supply

SIWI STOCKHOLM INDUSTRY WATER AWARD

GLOBAL WATER AWARDS

JACOBS' GLOBAL LEADERSHIP - INNOVATION


Lakeview, Ontario, Canada


Central Pasco County, Florida


Thames Estuary Asset Management 2100, UK


STEP Program, Abu Dhabi, UAE

Market	Water			
Solutions	Drinking Water and Reuse	Wastewater	Water Resources	Conveyance and Storage
Technologies	Groundwater Treatment	Odor Control and Air Quality	Ecosystem Restoration Engineering	Condition Assessment and Rehabilitation
	Desalination	Wastewater Treatment	Irrigation Services	Dams
	Drinking Water Master Planning	**Natural Treatment Systems**	Integrated Water Resource Management	Wet Weather Planning/ Wastewater Collection
	Water Reuse	Wet Weather Treatment	Coastal Planning and Engineering	Water Distribution
	Membrane Technologies	Residuals Resource Recovery	**Resilience and Climate Change**	**Conveyance Engineering (Tunneling)**
	Surface Water Treatment			Advanced Hydraulics
			Stormwater and Watershed Management	
			Flood Protection Design	

JACOBS' WATER PROFILE - DELIVERING SOLUTIONS FOR A MORE CONNECTED, SUSTAINABLE WORLD – May 2019

JACOBS

SUMMARY



- Large, global and fragmented market
- No one has dominant market share
- Market drivers lead to continued and sustained growth
- Opportunities to grow
  - Leverage Jacobs' industrial client relations
  - Leverage Jacobs' global footprint
  - Diversify delivery platforms outside U.S.
  - Room for market share growth in U.S.

EXAMPLE ACTIVE PROJECTS

Thames Tideway Tunnel
Thames Water/Bazalgette Ltd, London, UK

- Program management of the design and construction
  - Two 24-foot diameter tunnels totaling approximately 20 miles in length
  - 11 connection tunnels
  - 350-feet deep, 413 mgd pump station to store and transfer storm flows to a wastewater treatment plant
- 300 work packages and over 60 construction contracts
- Liaised with over 30 local communities to meet stringent environmental requirements
- Delivery converted to a P3 with our program management team, a valued part of the deal

Program Management



Northeast WaterPurification Plant
City of Houston, Texas

- Largest progressive design-build of its kind in North America – 320 mgd
- Treatment challenges include variable raw water quality and a small facility footprint to minimize cost and construction time
- Procurement and subcontracting approach to achieve lower construction costs - informed bid packages and transparent and competitive bid processes
- Phased design-build approach allows the project to be implemented in phases to meet funding/budget requirements

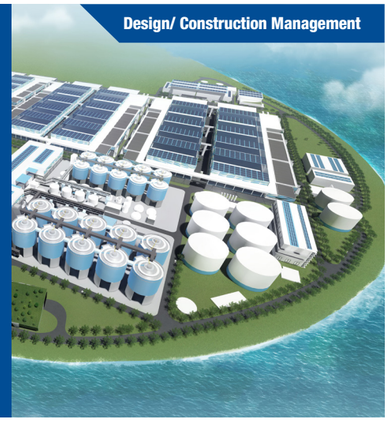
Progressive Design-Build



Tuas Water Reclamation Plant
PUB, Singapore

- Largest MBR facility in the world - total average treatment capacity of 800,000 m3/d and a footprint 30% smaller than conventional plants
- Separate industrial and domestic used water streams arrive and are lifted 300 feet to the treatment plants.
- Manufacture Industrial Water and NEWater - elements of PUB's holistic approach to managing the water cycle.
- Treatment processes to minimize energy consumption and sludge production, and maximize biogas production to generate electricity.
- Co-located with the Integrated Waste Management Facility to form the Tuas Nexus, one of the world's first large scale examples of industrial ecology, where the waste product of one industry become the fuel for the other.

Design/ Construction Management



Non-Revenue Water Pilot Program
Gwinnett County, GA (with funding from AT&T, Qualcomm, U.S. EPA)

- Water for which the utility receives no revenue (leaks, inaccurate meters, theft)
- Worldwide utilities lose $14B
- In US utilities l ose $8.76B
  - $1.6M/yr for small utility
  - $62M/yr for large utility



Pilot Program
Over k500 IoT devices deployed with real-time streaming analytics and geospatial dashboard to identify and characterize NRW related issues

Reduced NRW within pilot area by 20%

Consulting - Digital



Agua Nueva Water Reclamation Facility
Pima County Regional Wastewater Reclamation Department, Arizona

- Design, build and operate a nutrient removal facility to meet Arizona Class A+ reclaimed water standards and the surface discharge requirements for discharge to the Santa Cruz River
- Full contract operations for 15 years with a possible 5 year extension - responsible to maintain the asset and permit compliance
- Delivered 8 months early and 1 year ahead of regulatory deadlines - saved $77M, reduced annual operating costs by $2M and reduced the facility's footprint by over 75 percent.
- Since startup, the facility has consistently met the standards for reclaimed water and discharge



DBIA Award

Design-Build Operate



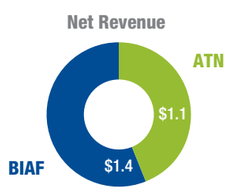
JACOBS: INDUSTRY LEADER POISED FOR GROWTH

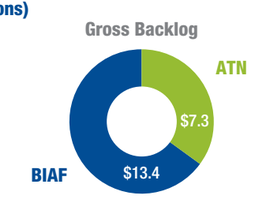
New Jacobs (post ECR sale)

U.S./Int'l Mix 70%/30%	**Talent Base** ~50,000
Reimbursable and Low Risk Fixed Price Services ~95%	**Public/Private Sector** 64%/36%

- **Reimbursable and Low Risk Fixed Price Services**
- **Aligning around national government priorities**
- **Solving sustainable infrastructure challenges**
- **Focusing on technology-enabled delivery**

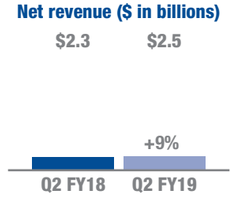
Q2 FY19 ($ in billions)



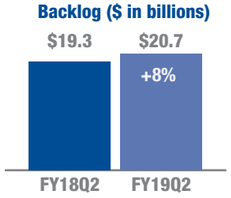


Double-Digit Q2 EBITDA Growth

Net revenue ($ in billions)



Backlog ($ in billions)



BUILDINGS, INFRASTRUCTURE AND ADVANCED FACILITIES (BIAF)

Reimbursable and Low Risk Fixed Price Services

- Sustainability and resiliency – multi-decade opportunity
- Favorable Electronics and Life Sciences CAPEX environment
- Urbanization driving infrastructure – mobility strong worldwide

Strategy Showing Early Results

- Industry leadership at scale across key sectors
- Digitally-enabled solutions continue to be a differentiator
- Jacobs and CH2M revenue synergies accelerating in backlog
- Global delivery model resonating in win rates and efficiency

Recent Customer Wins

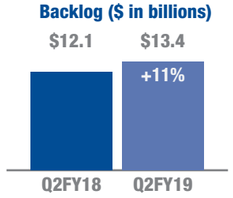
- U.S. Dept of State, Bureau of Overseas Buildings Operations
- City of Tampa Water Treatment Facility
- Dubai 2040 Digital Master Plan
- Confidential Client: Vaccines Manufacturing Facility – U.S.
- Confidential Client: Micro-processor Manufacturing – U.S.

Buildings, Infrastructure and Advanced Facilities (BIAF)

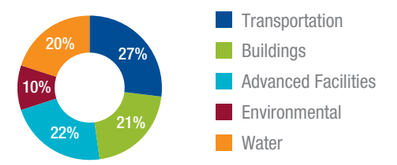
BIAF Snapshot

U.S./International	61% / 39%
Public / Private Sector	53% / 47%
Reimbursable and Lower Risk Fixed Price Services	~92%
Talent Force	~34k

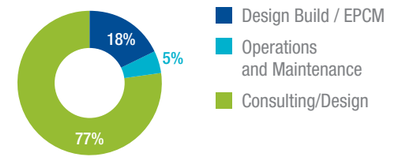
Backlog ($ in billions)



BIAF Snapshot



BIAF Snapshot



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