2014 Software Global Customer Conference
Water & Wastewater Solutions from Schneider Electric

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Water & Wastewater Segment President
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WWW Segment Overview
WWW Segment ID Card
1,2 Bn € segment orders ambitioned in 2017

Unique Value Proposition
“We are a global technology player from shop floor to top floor across the full water cycle. We help you:
• #1: 30% savings in energy consumption
• #2: 25% increase in operational efficiency
• #3: 20% reduction in total cost of ownership”

9,4 € Bn market

2013 Results and 2017 Ambition

Order
Sales
Market Share

Key Water Segment Facts
• 300 experts worldwide across 30 countries
• Focused on 12 target countries
• Grouped in 8 Solution Centers for execution
• Smart Water Research Center in Denmark
• Contracts in all areas of our value proposition
• Founder Member of SWAN

Figures in € Mio
2013 actual 2013-’17 ▲ Industry 

0% 50% 100%
500 617 1170
5% 90% +100%
+114%
The Efficiency Opportunity
10 Challenges

1. Ageing infrastructure
2. Increased regulation
3. Business factors (CAPEX/OPEX)
4. Conservation and efficiency
5. Energy costs
6. Ageing workforce
7. Environmental impact
8. Climate change
9. New water sources, recycle and reuse
10. Infrastructure and cyber security

$1 Trillion
Amount needed to improve US water infrastructure alone in the next 25 years

6.5 Gm3
Yearly water losses in US through mains leakages

200M
Population that could be supplied with water lost daily

>50%
Amount of EU surface water below good ecological status

x4
Flooding events increase in the past 20 years

30%
Energy in utilities' OPEX

56
TWh annually consumed in US Water Utilities ($4B/yr)

5 - 10
TW of power generated is spent in water that is either leaked or not paid in USA
Schneider’s route to Efficiency
We are a global technology player from shop floor to top floor across the full water cycle.

Products, solutions & services from field to enterprise:

- **Resources conservation**
  - Storm Water management, weather forecast, energy & sustainability services

- **Plant & Network optimization**
  - Advanced process control, pressure and energy optimization, field services

- **Plant & Network management**
  - Water loss, SCADA, hydraulic modelling, GIS, water quality, asset management

- **Automation & control**
  - Process monitoring & control, drives, telemetry, PLC, telecoms, sensors

- **Electrical distribution**
  - Energy monitoring and control
  - MV, LV, MCC

- **Critical Power and Cooling**
  - UPS, cooling

- **Security & visualization**
  - Access control, security video
  - Cyber security, CCTV

- **Business management**
  - Energy procurement. Integration with ERP, CRM and Asset Mgt.

You deserve smart water.

Business management offers:
- Energy procurement. Integration with ERP, CRM and Asset Mgt.

With EcoStruxure Water®, integrated software suite for water.

Method and integrated systems + Right information, right user, right time = Up to 20% savings on OpEx & CapEx.
Control, manage and optimize your water & wastewater infrastructure

"I conserve our enterprise resources"

"I optimize our operations and assets"

"I control our facilities processes"
Our offer will provide you with

- **30%** savings in energy consumption
- **25%** increase in operational efficiency
- **20%** reduction in total cost of ownership

Making the most of your assets and water resources from the smallest installation to the largest regional area.
Total Water Reserves
Total Potable Water Reserves

Smart Water
What is Smart Water?

Smart Water Networks solutions improve the efficiency, longevity, and reliability of the underlying physical water network by better measuring, collecting, analyzing, and acting upon a wide range of network events.

Source: SWAN – Smart Water Networks Forum
www.swan-forum.com

Source: SWAN

SWAN Founding Members
Where does Schneider play in Smart Water?

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You deserve smart water

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Method and integrated systems + Right information, right user, right time = Up to 20% savings on OpEx & CapEx
Our approach to Smart Water is Integrated HW/SW to optimize your WWW infrastructure

"I conserve our enterprise resources"
"I optimize our operations and assets"
"I control our facilities processes"
Powered by StruxureWare, our operational intelligence platform supporting open industry standards.
Smart Water
Success Stories
Smart Water Reference in USA

- City of Denison, TX (1 hour drive from Dallas)
- Environmentally friendly
- 25,000 residents
- WTP rated 13 MGD
- WWTP rated 6 MGD
- Both running ½ capacity

Project Scope

- Lighting, HVAC
- Aeration Basin & Aerobic Digester optimization including new diffusion grids
- Replacement of 750 hp of blowers and 400 hp of pumps
- Replacement of 3 old switchgear/MCCs with Square D switchgear/MCCs

Project Cost

$7,943,747
Guaranteed Annual Savings
$217,727
City subsidized by $4M
Utility Name: Anglian Water Services
4,3 million people served
37500 km of water supply pipelines
8000 outstations. 1700 DMAs
Telemetry Replacement Project (TRP):
- ClearSCADA managing 8000 outstations and +100K I/O
- ClearSCADA connected to ERP (SAP) and GIS (Intergraph)
- 20% reduced TCO
Integrated Leakage and Pressure Management System (ILPM):
- WMS for managing NRW: £14 million investment every year on driving down leakage, about 300 staff finding and fixing leaks and around 27,000 leaks fixed every year
- WMS integrated with ERP and CIS/CRM (SAP), SCADA (ClearSCADA), GIS (Intergraph), and other data sources
Sydney Water: Desalination Plant – Australia

Off-setting 100% of its power consumption

100% Green Power

100% of plant’s energy consumption is offset by wind power

Real-time visibility

- Optimize performance
- Reduce waste

1500 MWh/month Energy saved

3.4 kWh/m³ actual compared with anticipated 3.6 kWh/m³ over 250 thousand m³/day

New plant:
250M l/day capacity
18km pipeline
67 wind turbines

Drinking water to 1.5M people p.a.

- Ambitious deadline
- Interoperability of 8,500 devices
- High energy efficiency & water standards

Reliably meeting drinking water standards

15% of Sydney’s water supply

Below budget,
Delivered on time

$90m

Electrical, automation & energy management solution
Smart Water reference in Qatar

- Utility Name: Qatar General Electric and Water Corporation - Kahramaa (KM)
- 1.4 million people served
- Over 2500 km of water supply pipes
- Produces 360 Mm3/year

- Water SCADA project
  - 170 Stations
  - Master SCADA in National Water Control Centre

- Water Loss and Network Management project
  - Non Revenue Water (NRW) using data coming from CRM/Billing, Metering, GIS, SCADA, Leak Detection systems
  - Schneider Electric has helped KM to reduce KM’s NRW to more than half in 4 years, resulting in water savings up to 60Mm3 (or 14M€/year)

- ROI of 6 months
- KM as most efficient water utility in GCC area
- KM is 2pp ahead of USA average in NRW
Smart Water reference in Brazil

- Utility Name: COPASA
- 12.1 million people served (5.6 Belo Horizonte)
- Over 40000 km of distribution pipes
- 2006-2012

- Improved response on outage events
  - (↓14% outage times)
- Improved maintenance policies
  - (↓33% repair times)
- Improved network control
- Improved planning
- Improved public image
- Increased ROI on all these investments

SCADA

Real time data
Simulated data
Predicted data

Hydraulic Model

Operational data

Maintenance

Operational data

Data

Maintenance

GIS

Geodata
- Smart Water reference in Malaysia

- 32% of the produced water disappears before reaching the consumers. 1.2 million m³ of drinking water. Enough to supply a small town for 1 year - is lost every day.

- Objective: To bring the NRW down below 15% by 2013.

- Models are being used to generate an overview of the hydraulics as well as the water quality of the entire distribution system. Having a total of 22,000 km pipelines and about 1,000 reservoirs it is only possible to gain the full overview by using Aquis.

- The models will help SYABAS to plan for future developments and pipe replacement projects in the rapidly growing urban and rural areas of Kuala Lumpur, Putrajaya and Selangor.
Smart Water reference in Spain

- Utility Name: Guadalquivir Hydrographic Confederation. Ministry of Environment, Spain
- 5 million people served
- Hydrology basin surface 57000 km²
- 6 control centers, 200 telemetry points, early flood warning alert system and geographical information system (GIS)
- Effective water resources management through real time monitoring of hydraulic resources for irrigation, electricity production, and other water demands
- A Schneider Electric customer since 1993.
- Last contract amount: 2010-2014. 4,5M€
- Recurring service for maintenance and systems upgrade since its implementation
- Accumulated sales of 18M€ up to date, of which 8M€ are recurring services
Schneider Electric
Water & Wastewater
Segment Organization
WWW Segment Workforce

90p
Front Office

100p
Central Segment Team

100p
Back Office

1
StruxureLab (DK)

12 Targeted Countries for Focused Growth:
USA, BR, UKI, FR, IT, KSA, Gulf, IN, RU, CN, EA and AU

15 2nd Tier countries:
CA, MX, SP, BG, NL, DK, DACH, CZ, HU, IR, MO, AL, TK, EG, RSA,

Country Segment Teams:
Segment Director
Marketing Manager
Key Account Managers
Local Solution Architects

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Thank you!