

# Create the Smart Water Grid

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# Computer Network Evolution

- **Computer networks of the 60's, 70's, 80's, early '90s**
  - Powerful mainframes at the core, but dumb terminals
  - Almost exclusively local networks (LANs)
- **Networks of today**
  - Incredible devices everywhere
  - Global internetworking (MANs, WANs) – any to any
- **Increase the value of a network by pushing intelligence to the edge**
  - Telephone, Cable TV, Radio, Internet, even the browser

# Water Network Evolution

- **The water network will evolve like the computer network**
- **We have not just smart, but brilliant treatment plants**
  - But what about our T&D networks?
  - And what are we doing at edge?
- **Pushing the intelligence into the network and to the edge will create the Smart Water Grid**

# The Smart Water Grid

## Must Integrate:

- **SCADA**

- the control systems

- **AMI**

- the metering systems

- **Hourly reads critical**

- **GIS**

- **Operational data warehouse & reporting**

## Nice to have (and integrate):

- **Power monitoring**

- **High resolution meters**

- **Hydraulic Modeling**

- **Asset and Maintenance management**

- **Billing / CIS / CRM**

- **2-way AMI**

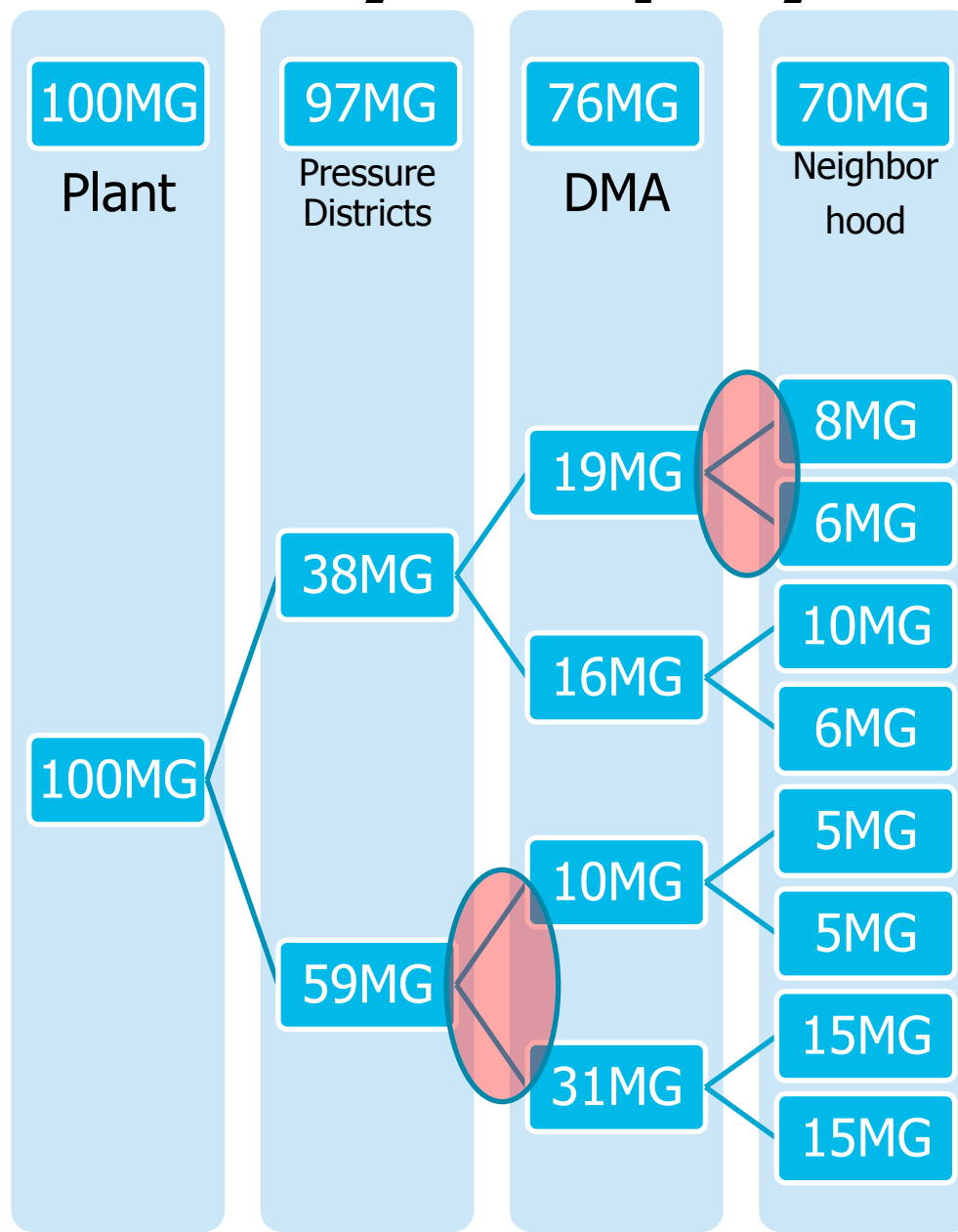
# Smart Grid Value Proposition

- **AMI probably won't lower your meter reading costs**
- **Smart Grid will enhance the customer experience**
- **Total situational awareness of your operations**
- **Minimize your energy and chemical costs**
- **Target your Non-Revenue Water Problem Areas**
- **Specialized billing, optimize revenue flow**
- **Influence customer behavior and demand**
- **Right-size the meters**
- **Find the leaks and backflow, and even theft**
- **Add in the other points for significant ROI**

# Too simple, "Yesterday" Display

## 100MGD System with 30% loss

- Focus your leak detection activities on the problem areas
- Go upstream – find the bad or inefficient pumps



# How to start?

- **Pilot AMI in a neighborhood or small DMA**
  - High resolution meters and hourly reads = great!
  
- **Put AMI or real-time SCADA in the field on the large meters heading to the DMA**
  
- **Get the SCADA data safely into the Business network**
  - Firewall between SCADA and Business networks
  
- **Install an operational data warehouse**
  - Get data from the AMI's meter data management (MDM) app
  - Get data from only the relevant points in SCADA
  
- **Built the “what we did yesterday” reports**

**○ Why are you still here?**

**○ Go on, get going!**

**○ Thank you for your attention!**

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# About United Water and SUEZ ENVIRONNEMENT



- United Water provides water and wastewater services to 7.3 million people in the United States. In addition to owning and operating 20 regulated utilities, United Water operates 240 municipal and industrial systems through public-private partnerships and contract agreements, including three of the nation's largest water and wastewater contracts. The company's affiliate, Utility Service Company, is the nation's leading provider of long-term water tank management contracts with municipal and industrial clients. Founded in 1869, United Water is a subsidiary of SUEZ ENVIRONNEMENT.
- Natural resources are not infinite. Each day, SUEZ ENVIRONNEMENT (Paris: SEV, Brussels: SEVB) and its subsidiaries deal with the challenge to protect resources by providing innovative solutions to industries and to millions of people. SUEZ ENVIRONNEMENT supplies drinking water to 90 million people, provides wastewater treatment services for 58 million people and collects the waste produced by 46 million people. SUEZ ENVIRONNEMENT has 65,900 employees and, with its presence on a global scale, is the world's leader exclusively dedicated to environmental services. SUEZ ENVIRONNEMENT, a 35.4% GDF SUEZ affiliate, reported sales turnover of 12.3 billion Euros (\$17.6 billion USD) at the end of financial year 2009.