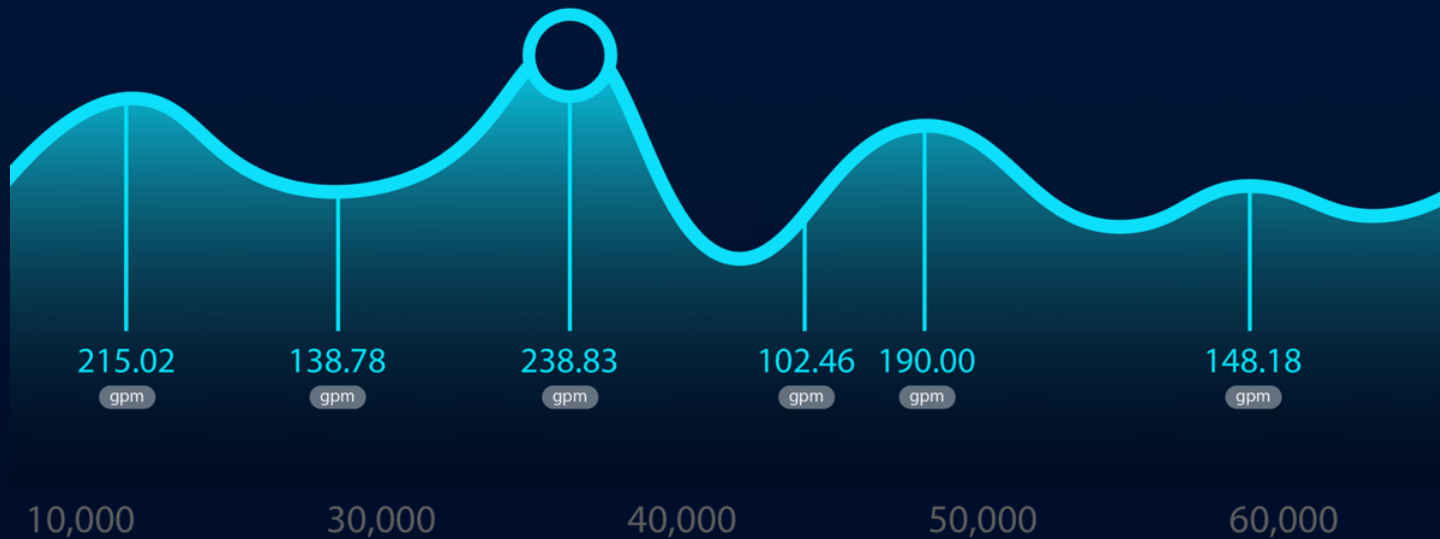


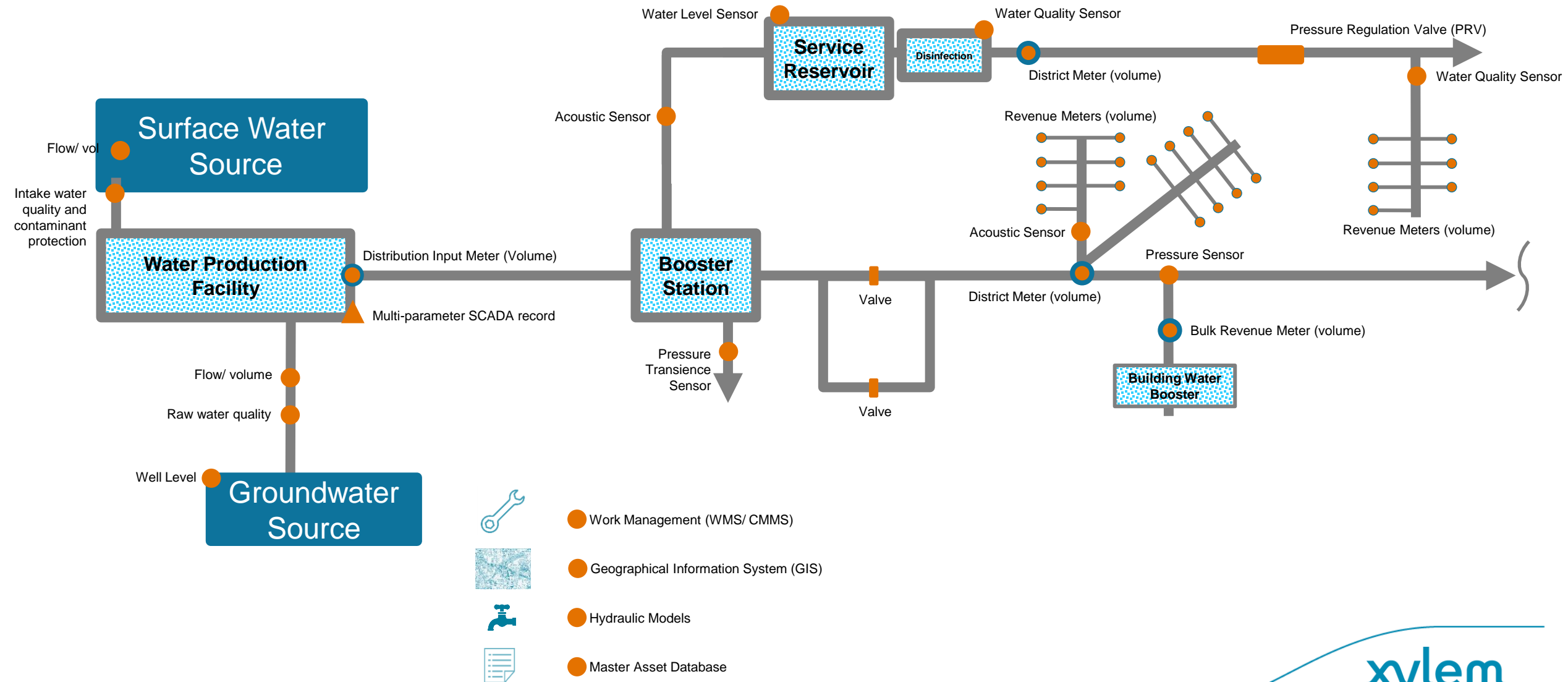
The Dreaded Data Deluge



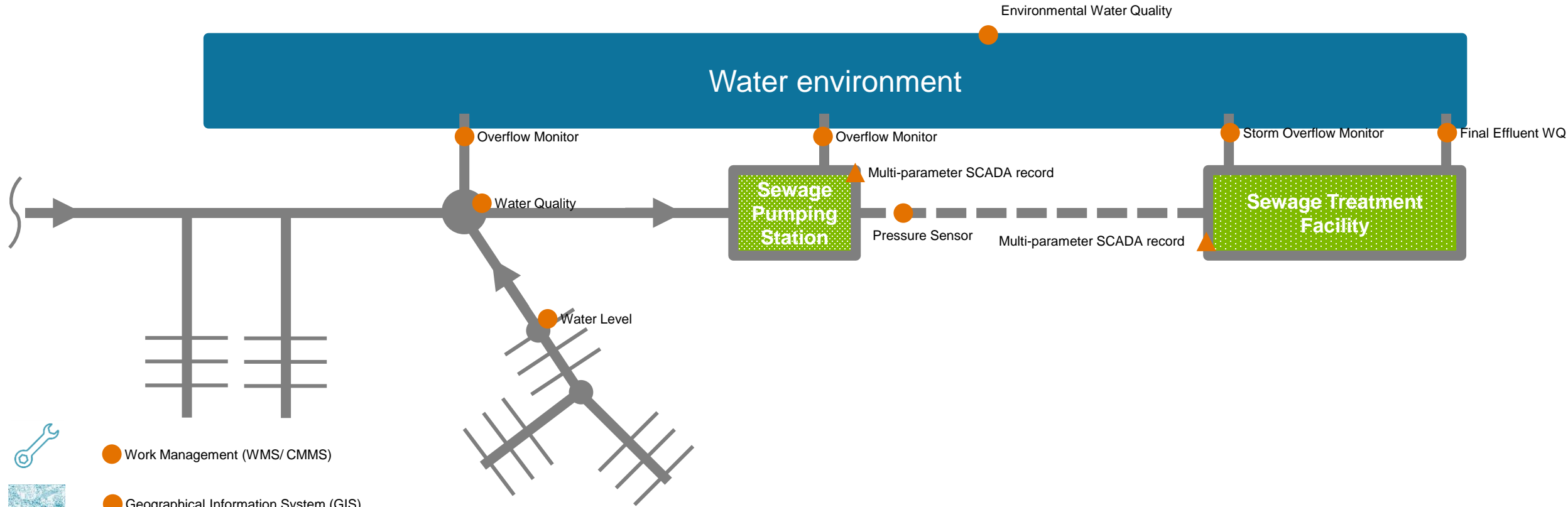


“Ahhhh, this data set is just right”

Drinking Water - asset and operational data



Wastewater - asset and operational data



● Work Management (WMS/ CMMS)



● Geographical Information System (GIS)



● Hydraulic Models

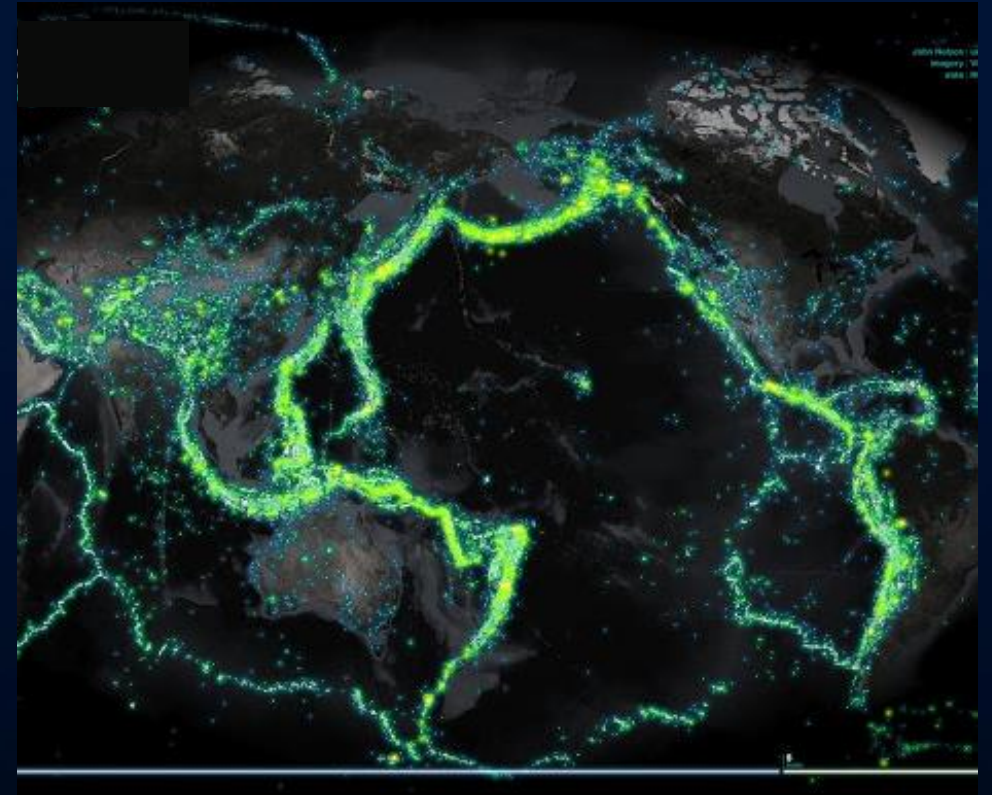


● Master Asset Database

Audience Poll

What is the biggest source of data volume within your local utility and/ or employer?

- Work management system (CMMS etc)
- Supervision and Control (SCADA)
- Customer Record Management (CRM)



How much data?

Absolutely loads of **Data**, not enough insight

above ground

2,000,000
SCADA Transactions
from 16500 individual assets

2,500 work orders

10 serious malfunctions

below ground

5,500 customer calls

140 serious malfunctions

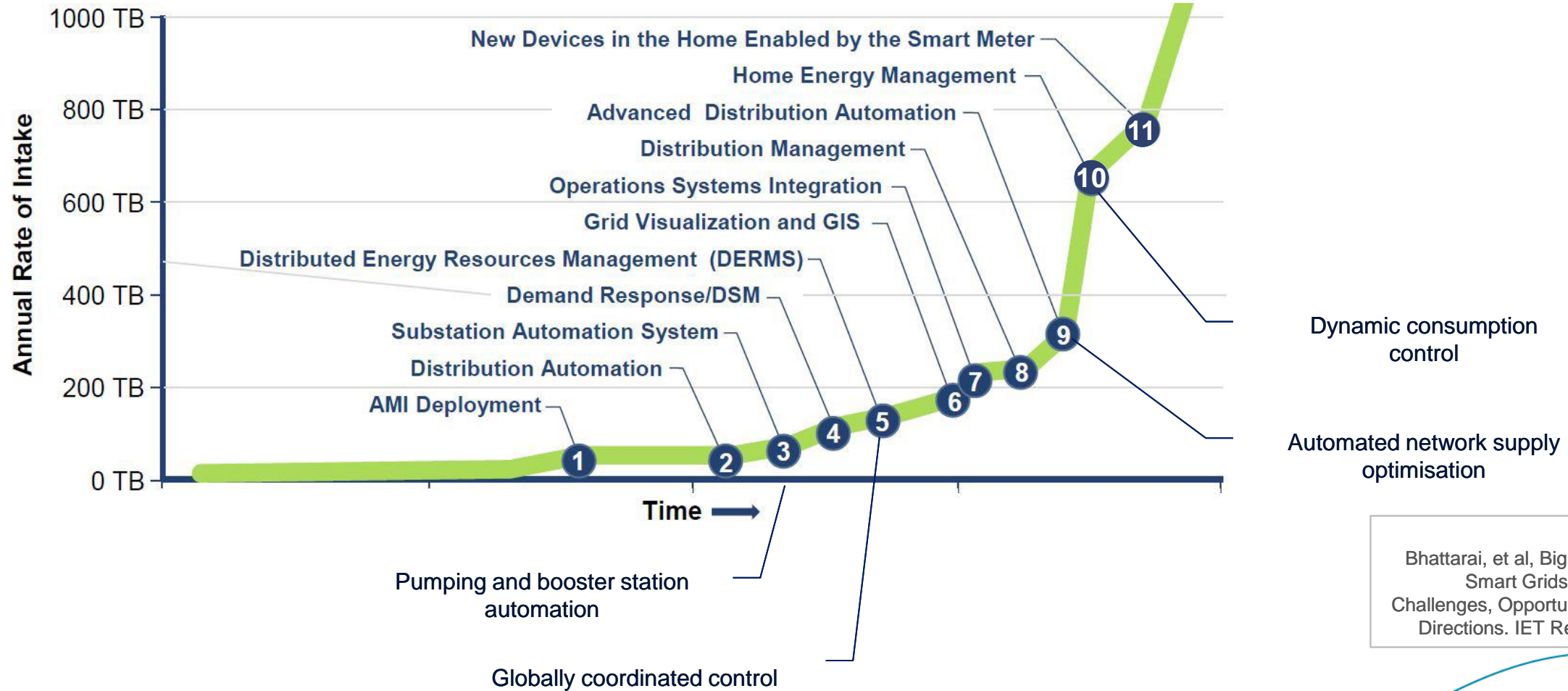
3,500 work orders

806,400
Sewer level readings



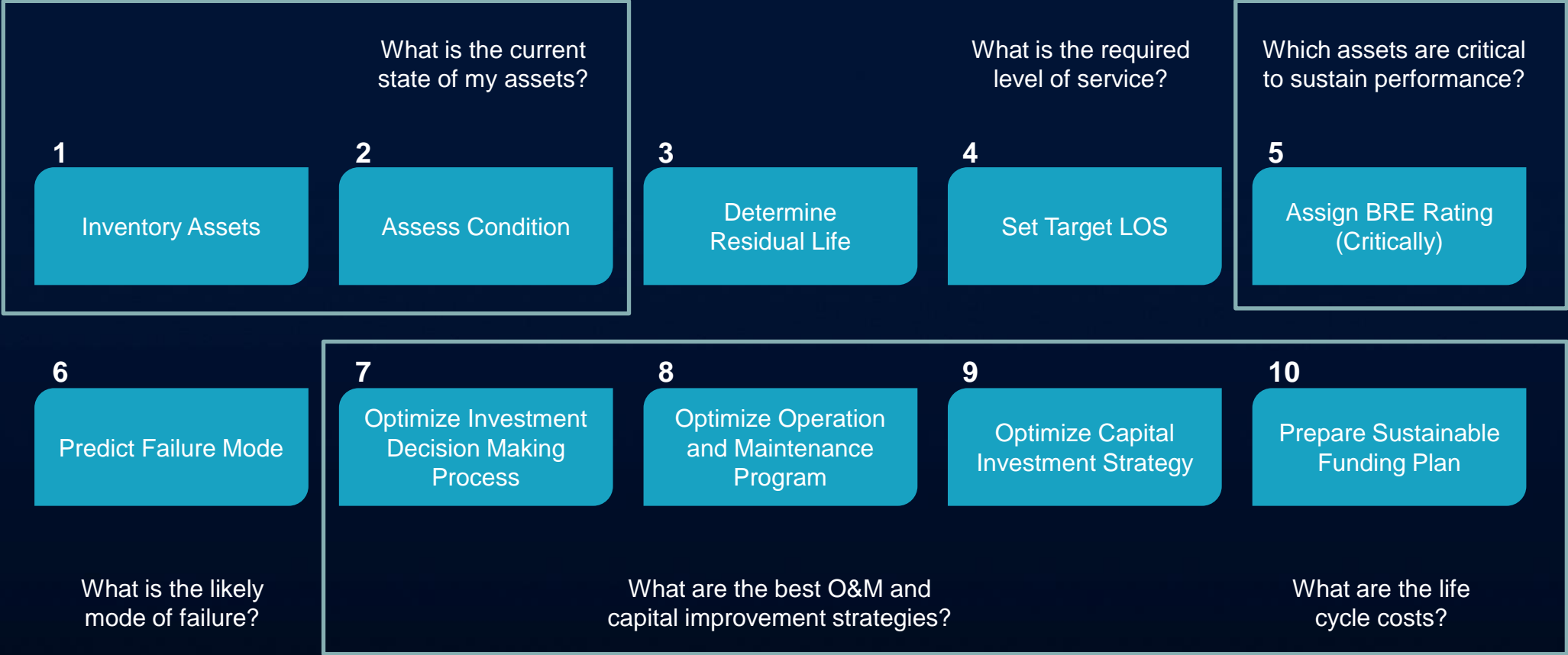
Per week figures, for a large European utility's wastewater network unit

Exponential growth, exponential benefits



Adapted from:
Bhattarai, et al, Big Data Analytics in
Smart Grids: State-of-the-Art,
Challenges, Opportunities, and Future
Directions. IET Research Journals.

Data Uses: Asset Management Planning



DATA IS FIRST PRINCIPLES for efficient and effective asset management planning

Data Integration Maturity

Data Passive

Your business decisions are rarely, if ever, driven by data

Data Aware

You're collecting data, but currently only using it for measuring and reporting KPIs

Data Critical

You're beginning to develop a sophisticated approach for using data as an asset—but only for mission critical areas.

Data Driven

Your organization is thinking data first. Your systems, processes, and people are working together to use data efficiently and effectively.

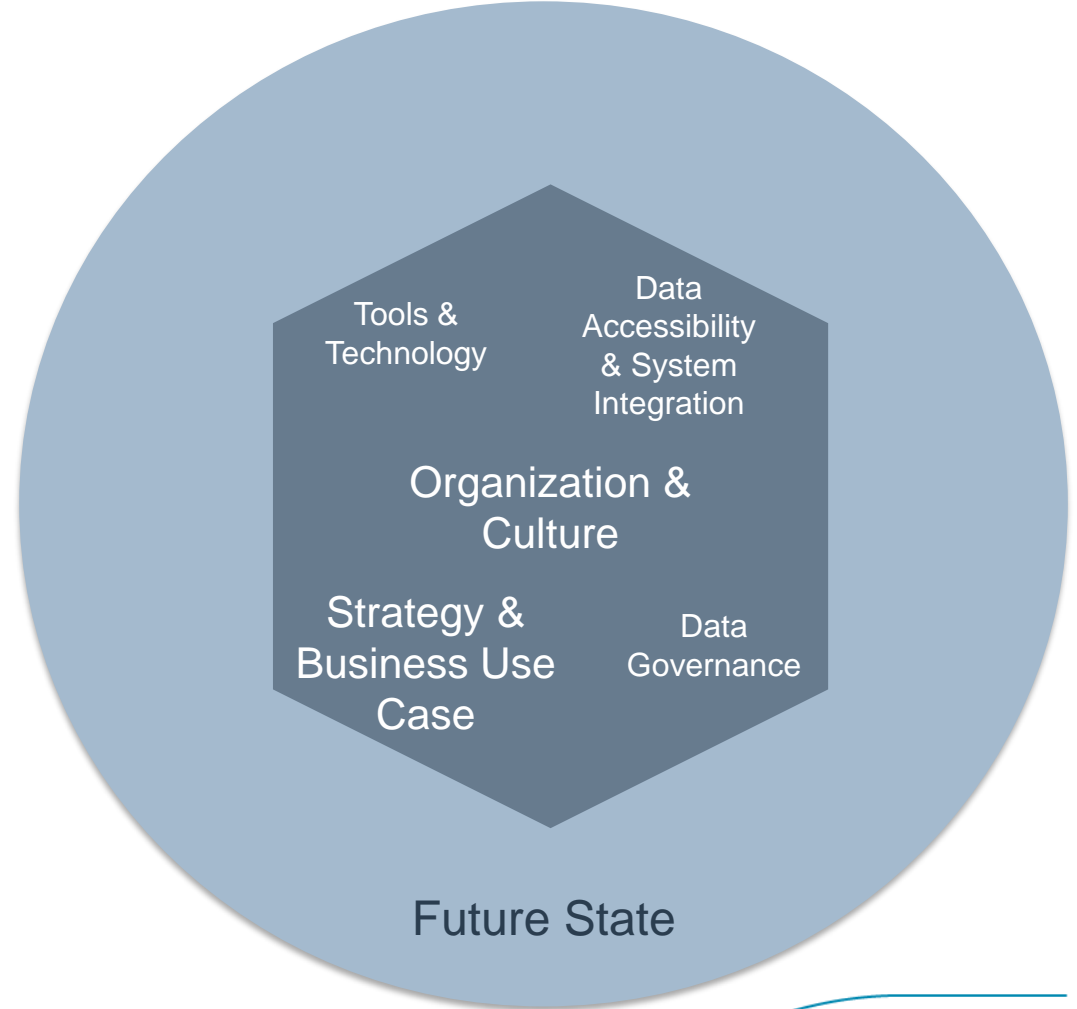
Audience Poll

Where do you think your organization fits on the data integration maturity scale?

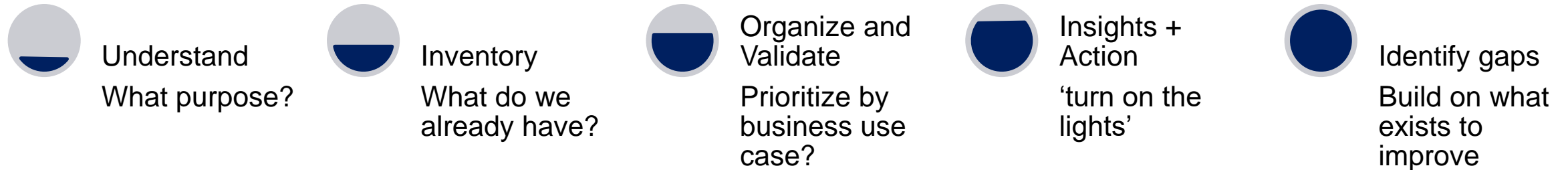
- Don't know
- Data Passive
- Data Aware
- Data Critical
- Data Driven



Barriers to Investing in Better Data



How do we Overcome these hurdles?

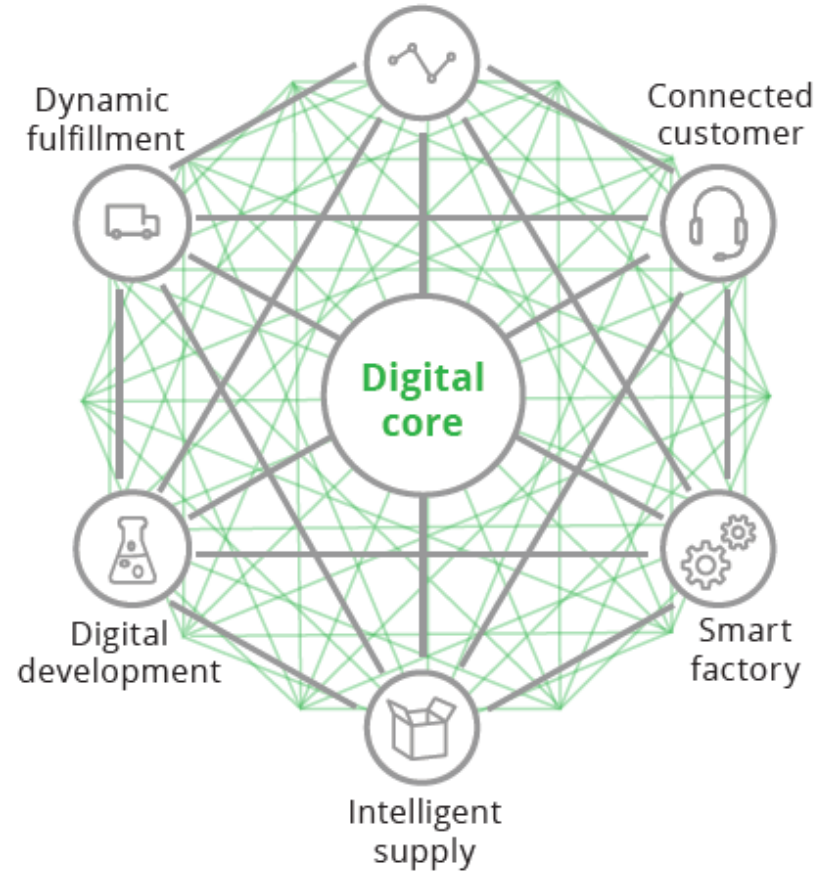


- Start where you are...not necessary to steer the ship in the opposite direction
- Huge initial investment not required...smarter to improve as you go

The Benefits of Interconnected Data

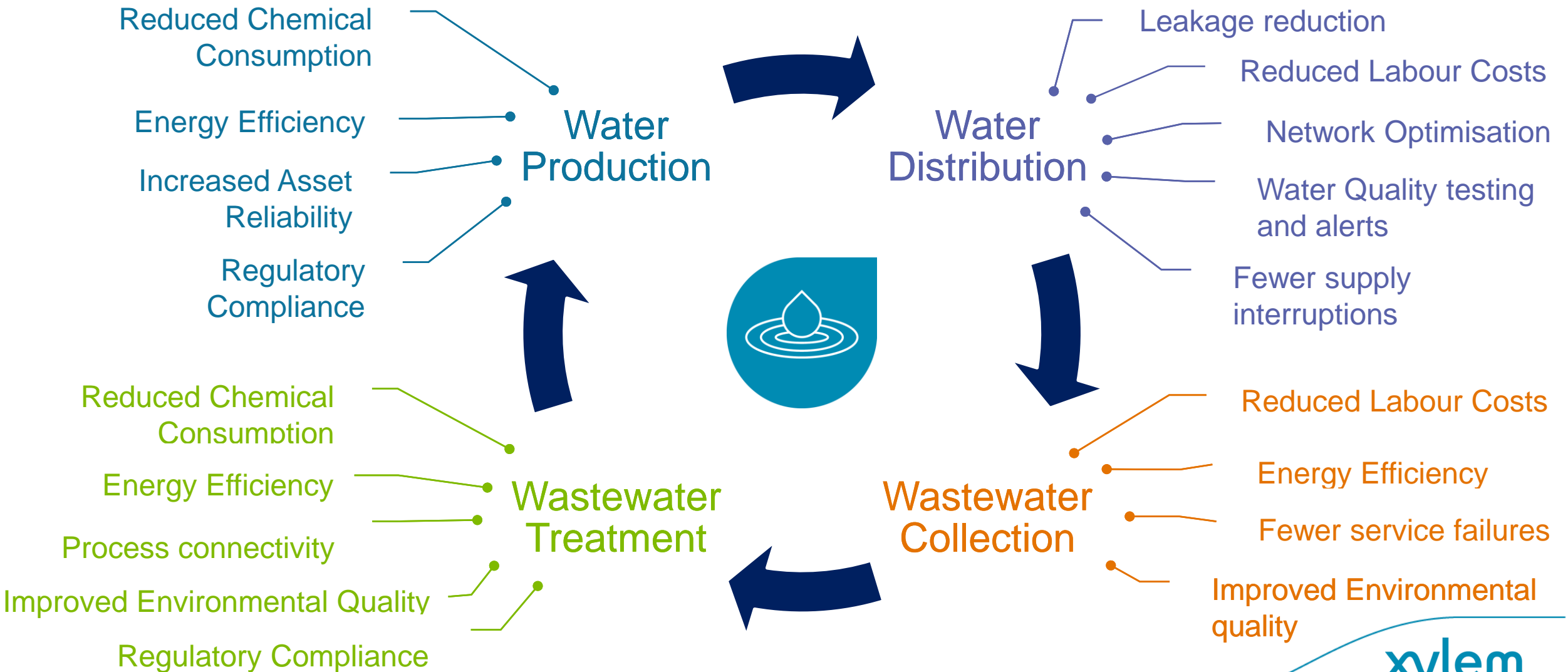
Digital supply networks

Synchronized planning



Deloitte Insights | deloitte.com/insights

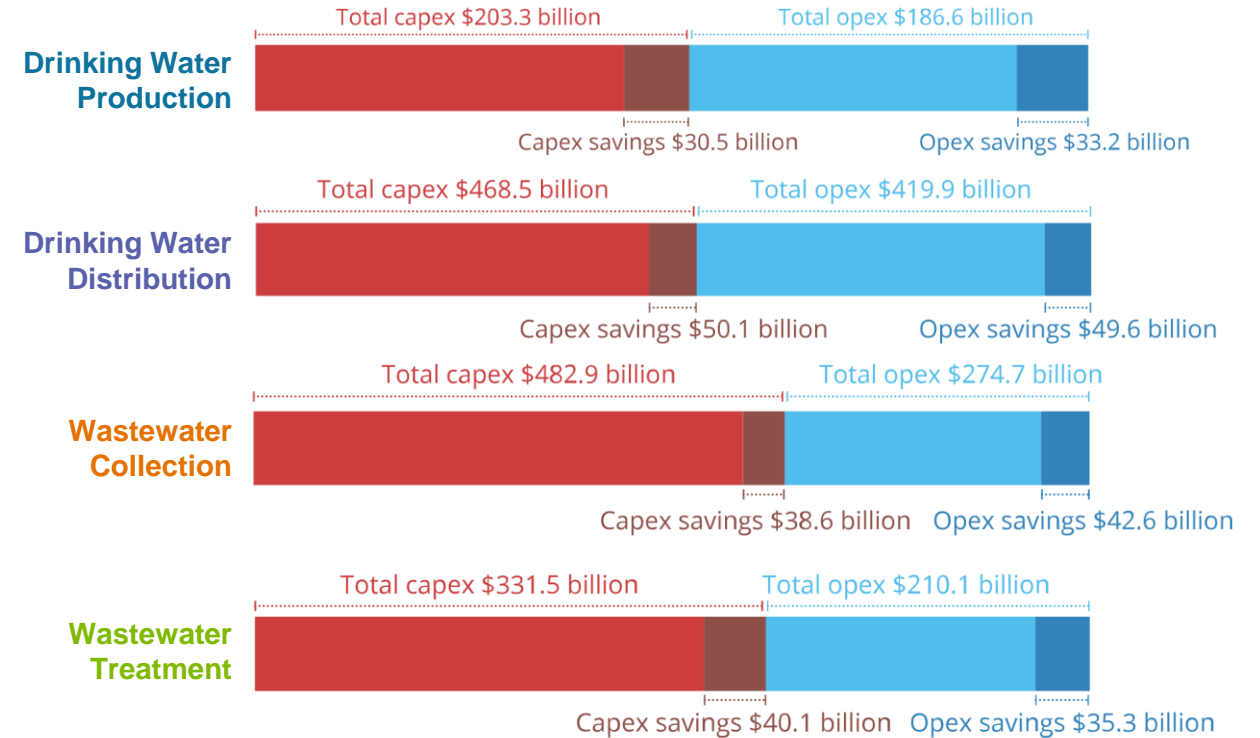
Valuing



Value of data in Water Utilities

Significant capital and operational savings can be made:

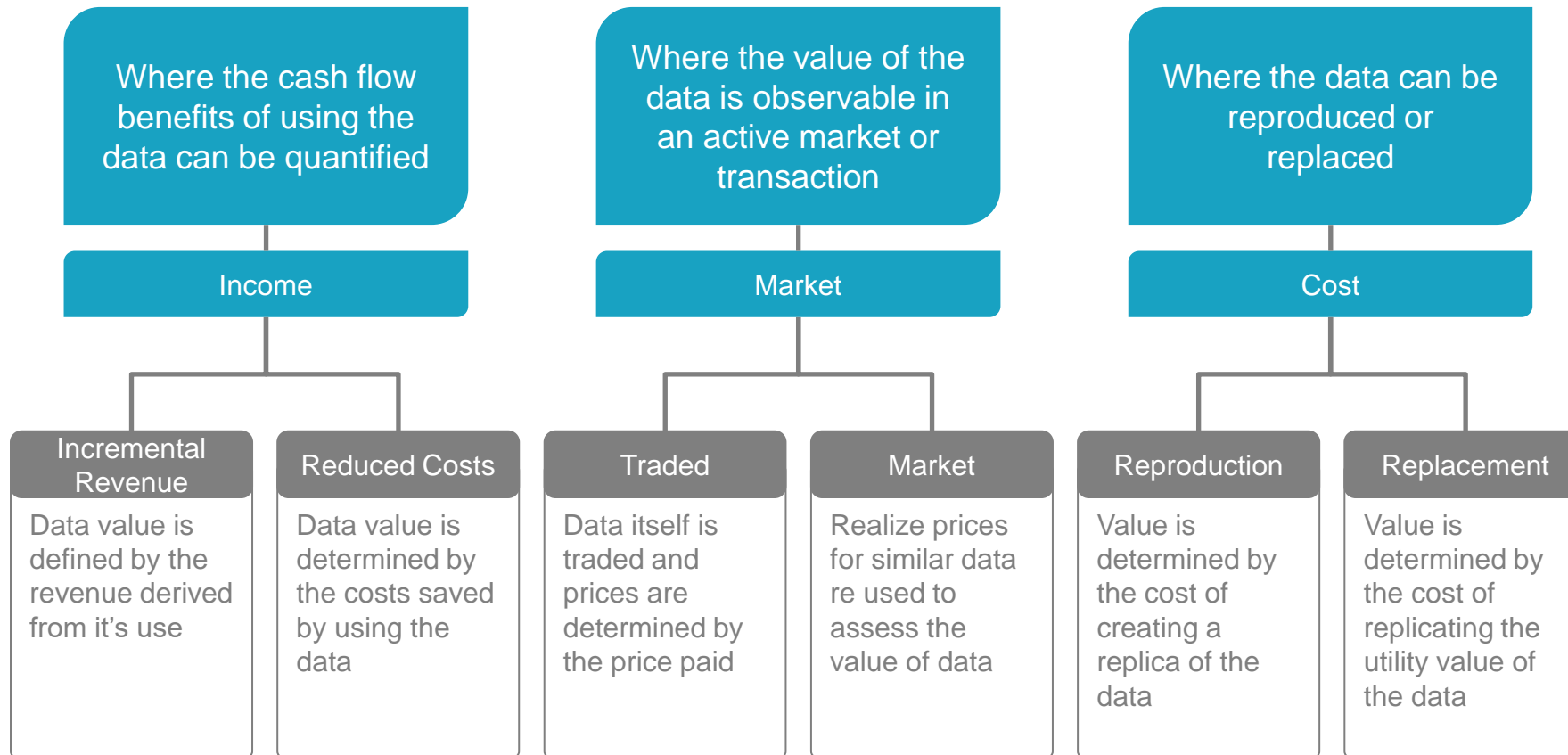
- 10 – 20% efficiency results from data led decision making
- High quality, consistent data sets can involve significant cost and effort
- Holistic value of integrating and exploiting data resources is often uncertain.
- We need to go beyond ROI of specific projects!



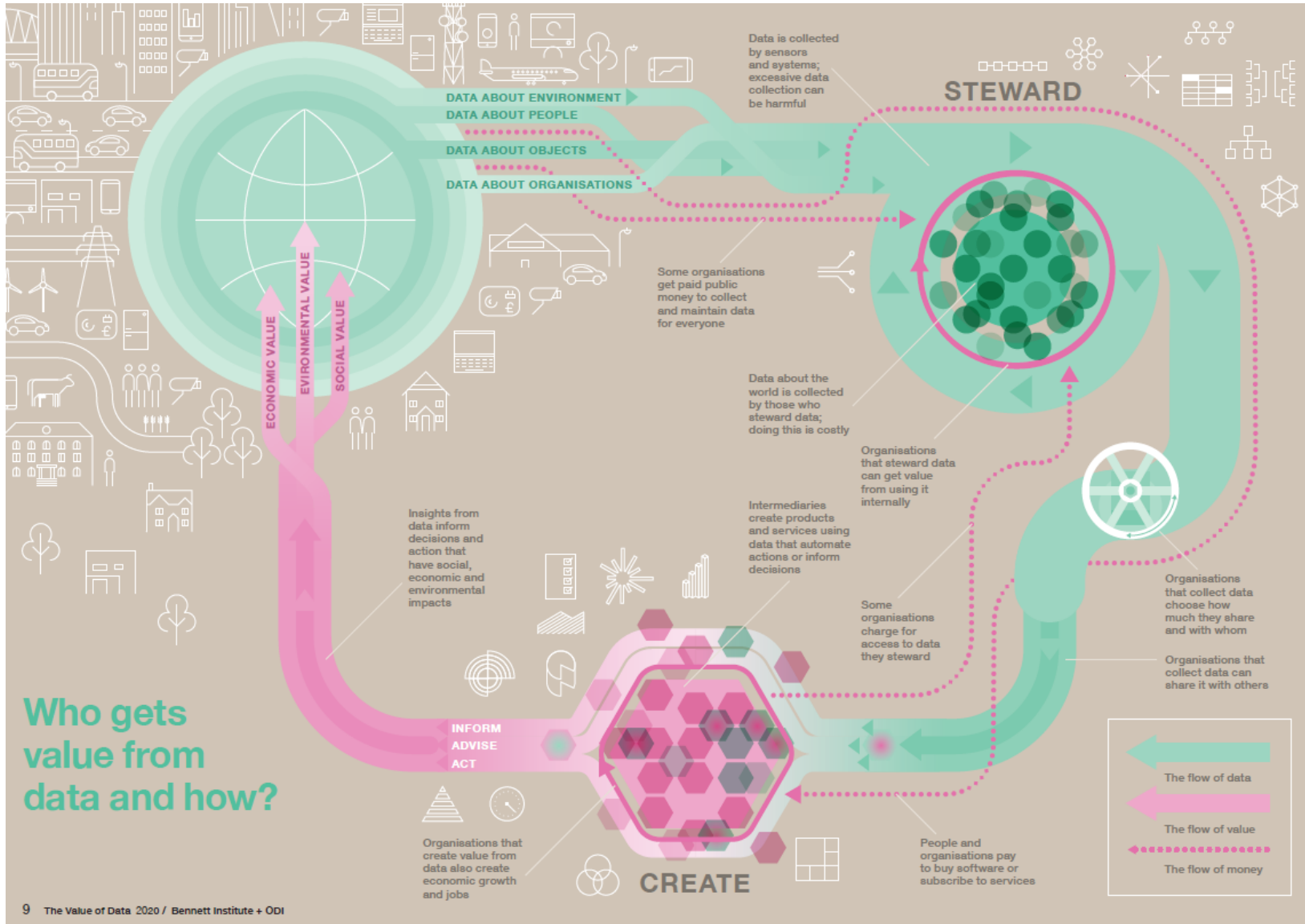
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GW | WATER DATA

Data valuation methods



Adapted from: Putting a Value On Data, 2019. PWC.



Adding value with open data

From: Coyle, D, et al, The Value of Data summary report / 2020. Bennet Institute/ ODI/ Nuffield Foundation.

Audience Poll

How do you feel utilities can more readily generate value from their existing data

- Improve Quality (accuracy, completeness or consistency)
- Improve interoperability
- Improve accessibility and transparency



A DAY IN THE LIFE OF TOMORROW

THE FUTURE OF OPEN UTILITY DATA

xylem
Let's Solve Water

• **Simplicity** of work planning

• **Automation** of asset performance, alerts and incidents

• **Reduced bottlenecks** and bureaucracy

• **Insight** via multiple possible scenarios

• **Communication** across teams

• **Ease** of decision making

• **Planning** for budget, business case & risk

• **Autonomy** so operators maintain control

• **Transparency** of real-time information

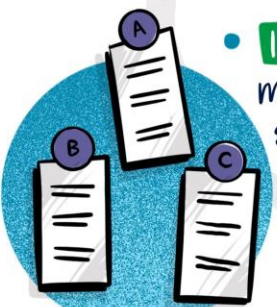
• **Optimization** of Cap Ex and Op Ex

• **Flexibility** & ability to modify recommendations

• **Efficiency** so work products are instantly uploaded to the cloud

• **Awareness** across the system

• **Informed** stakeholder communications



Thank you.

Speakers:

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