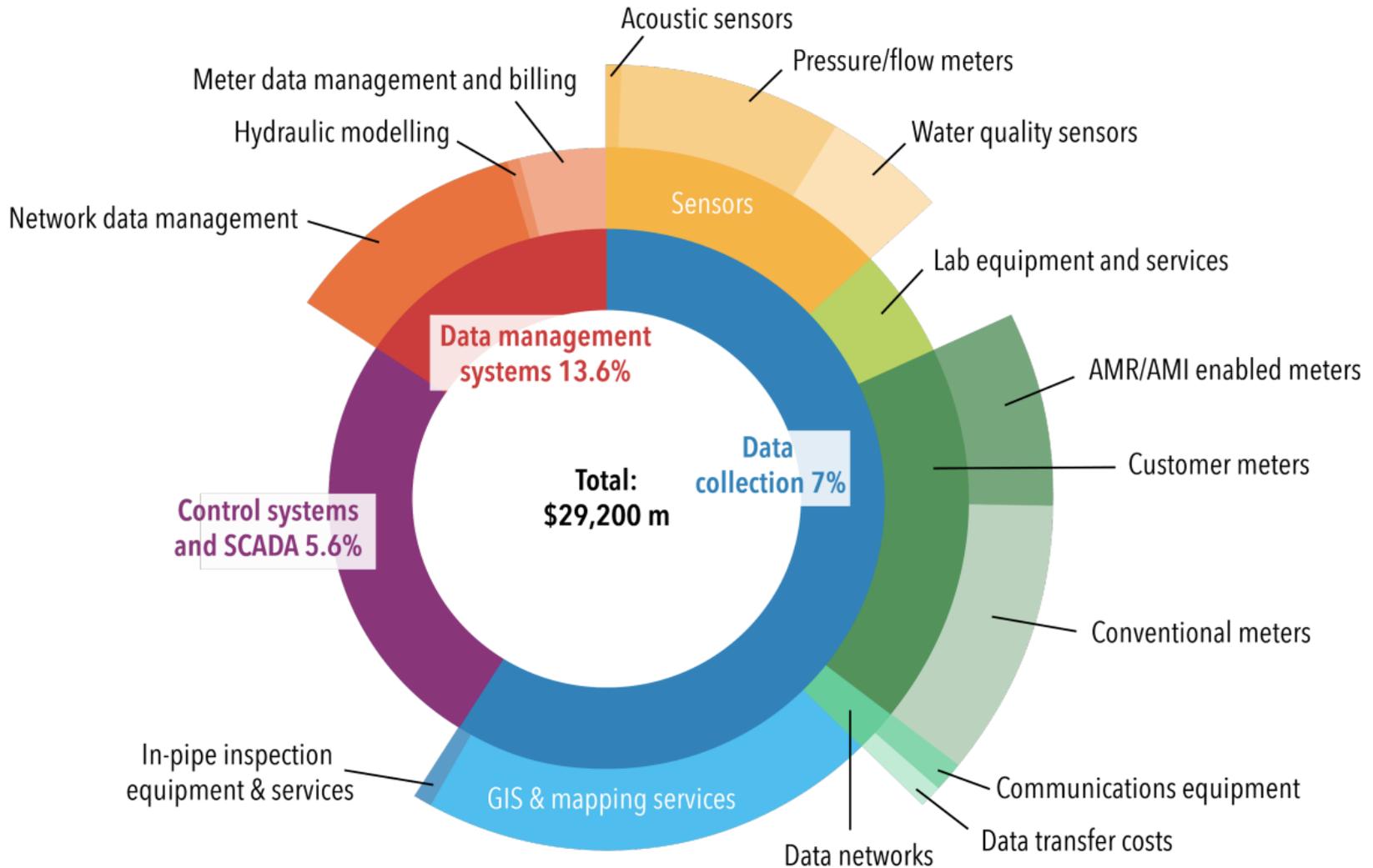


Prospects of Digitalization in the International Water Industry

Christopher Gasson, Publisher, Global Water Intelligence
4th June 2019

Digital

Digital solutions market 2019



Digital

Data management

Trends

Starting to see greater interoperability between different solution providers, which is helping to unlock the digital market

Optimisation of hardware with enabling software, allowing performance-based and service-based contracts to be able to work much better

Software companies looking to **operate at the back-end** to power other hardware and software and enhance data analytics with machine learning

Partnerships continue to proliferate, though some M&A continues, e.g. Suez and Optimatics, Kurita and Fracta

Cyber security concerns may be more positive than negative

Company examples:



Three interesting utilities

1) Nairobi Water, Kenya

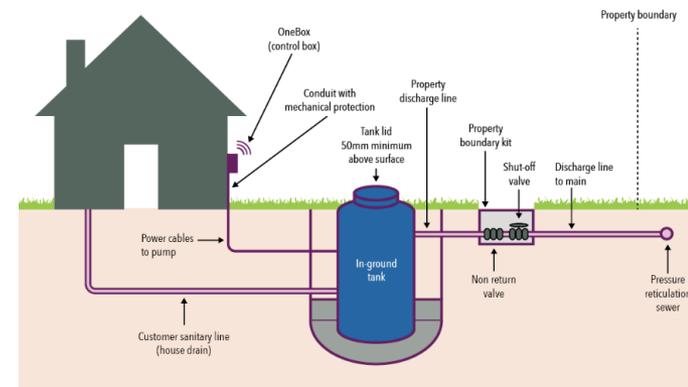
- Photograph meter with smart phone for reading
- Pay bill by phone (Mpesa)
- Set billing period from 24 hours to quarterly
- Phone company paid for infrastructure

2) SouthEast Water, Australia

- Smart wastewater control tank with directionally drilled sewer
- “Airbnb for wastewater”
- Similar system for stormwater tanks

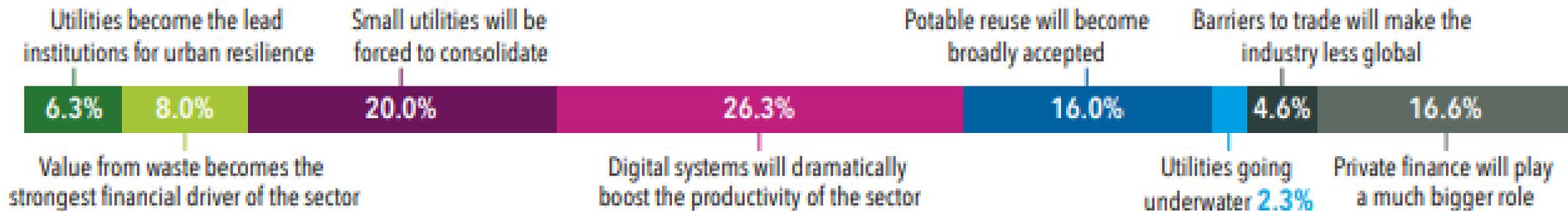
3) Hofors, Copenhagen

- Guarantee no more than 10cm of water in 100 year flood
 - Black = deep tunnel sewers
 - Blue = rebuild cloudburst streets become drains
 - Green = designed to transport and retain water
 - Light blue = parks and squares also used for temporary storage
- “We are going overground”



How do we make this happen?

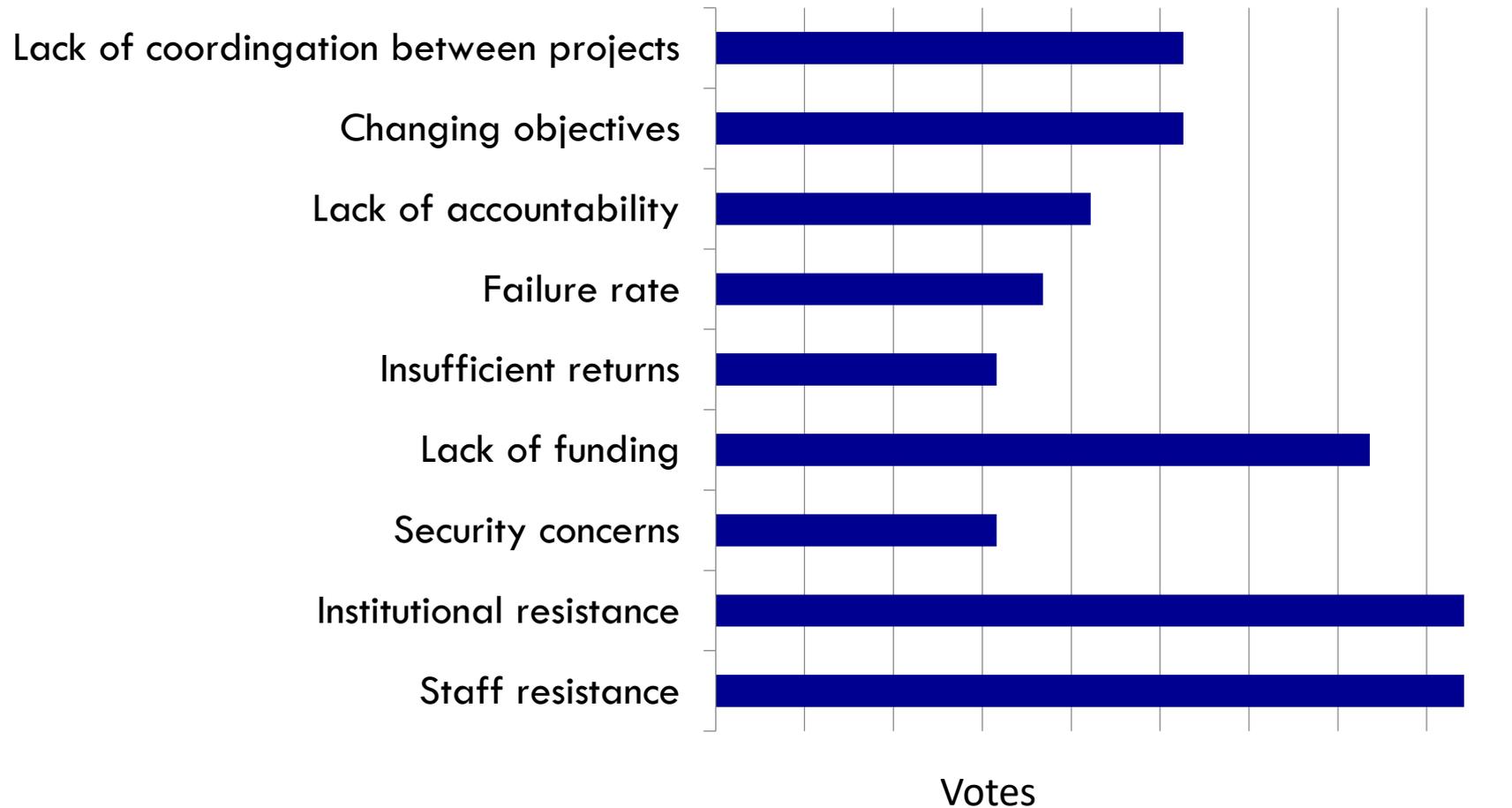
What will be the biggest trend in the global water industry over the next five years?



The Hottest Technologies at the Global Water Summit

- 1 Artificial Intelligence
- 2 Bioplastics from wastewater/sludge/biogas
- 3 Data Management
- 4 Internet of Things
- 5 Real time monitoring
- 6 UF/MF membranes
- 7 Thermal hydrolysis
- 8 MABR
- 9 Ceramic Membranes
- 10 Media for removal / recovery of emerging contaminants
- 11 Aerobic granular sludge
- 12 Autonomous operation
- 13 Acoustic leak detection
- 14 Mainstream anammox
- 15 Phosphorus recovery and reuse

What are the obstacles?



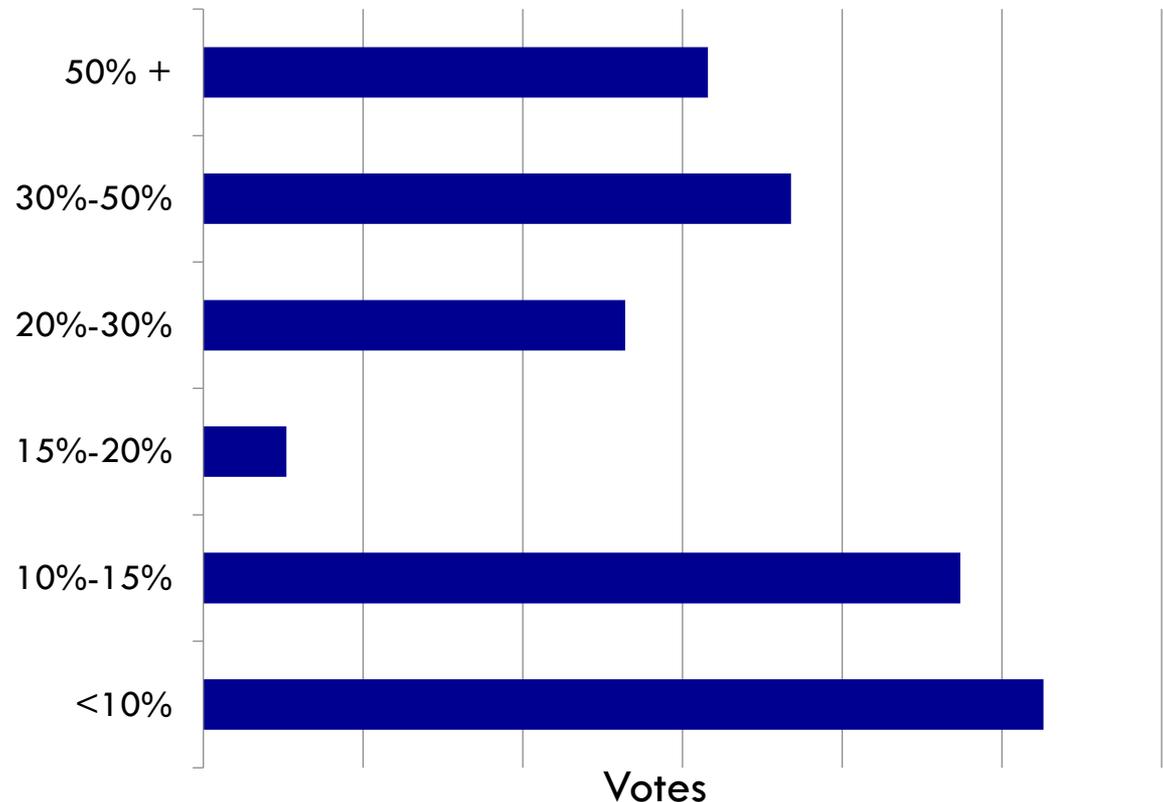
Do people get the big picture?

What is your view of the value of combining all utility data streams in a single intelligence platform for utility management?

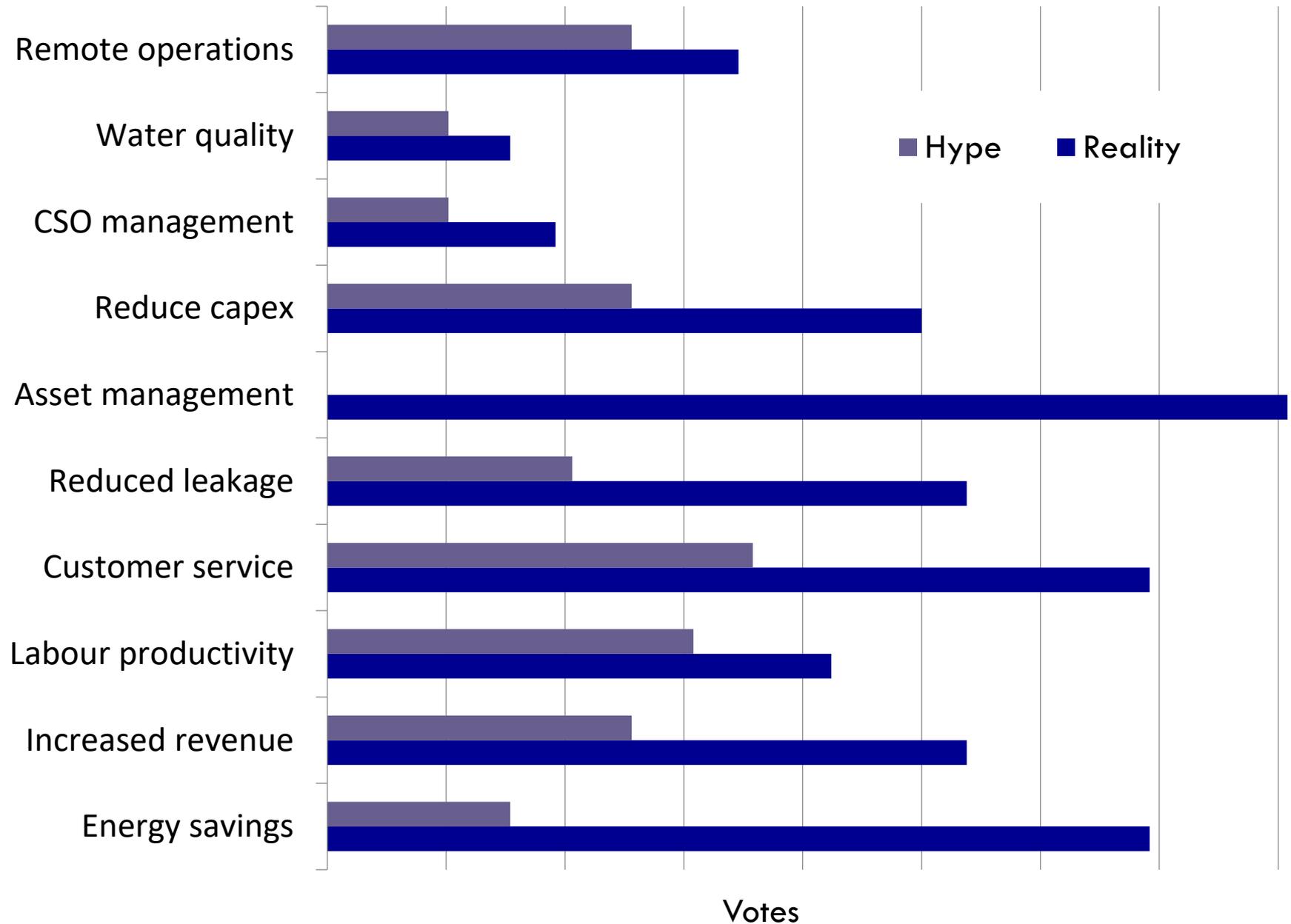
27% It is so overwhelmingly strong that it should determine every aspect of a utility's digital strategy.

63% It is essentially a nice additional benefit that might or might not grow out of other digital investments which each individually pay their way.

How much value is the act of combining data from several utility information systems into a single platform likely to add to the total investment in each separate system?



Where are the benefits?



Barriers to procurement

- The returns are difficult to calculate: cost benefit analysis relies more on sales promises.
- The solutions on offer are difficult to compare: Vendors have very different offerings, but sole source procurement is often difficult.
- The benefits are often multidimensional: they may fall across different utility departments, budgets and accounting methodologies.
- There is never a blank piece of paper: Every utility has a unique digital inheritance which defines its future options.
- It is early days: We simply don't have enough data to justify investing in data?
- The supply chain is immature: who is the best partner in digital transformation?