

African Utility Week

Clean Power Africa

The largest global meeting place from African Utilities

17 - 19 May 2016
Cape Town, South Africa



Smart Metering Value Realisation through Data Analytics

- Ashley Maistry
- Smart Grid Delivery Lead
- Accenture
- South Africa

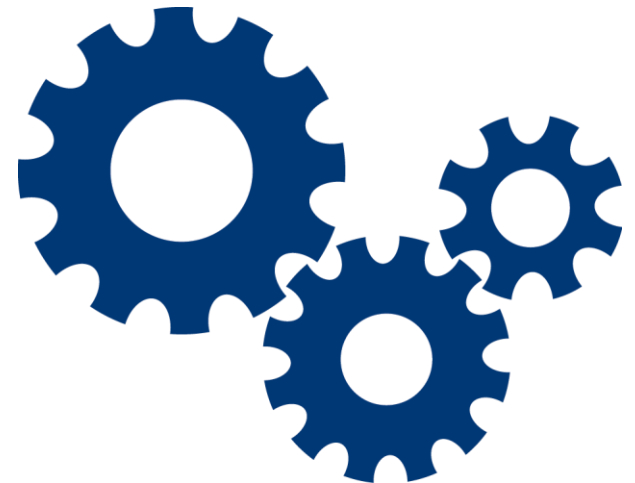

High performance. Delivered.

What is Data Analytics?

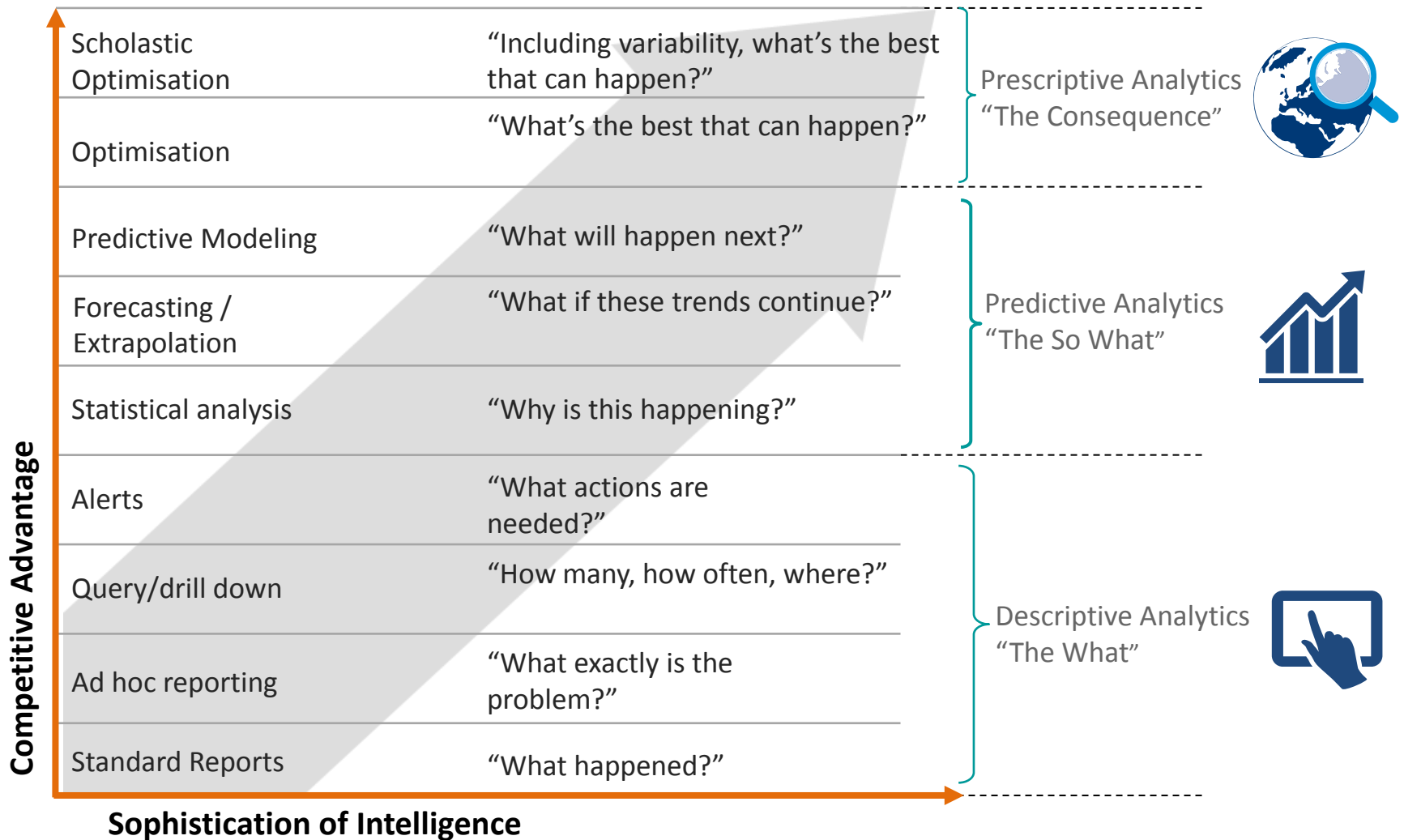
Data Analytics is a shift in the mindset of how we think about analytics as an internal component to the organisation. It is a way to foster a culture around your organisation that focuses on letting data be productionalised in such a way that not only drives meaningful insights in a rapid fashion, but drives innovation to exploit **missed opportunities** in areas previously unlooked.

“The sexy job in the next 10 years will be statisticians”

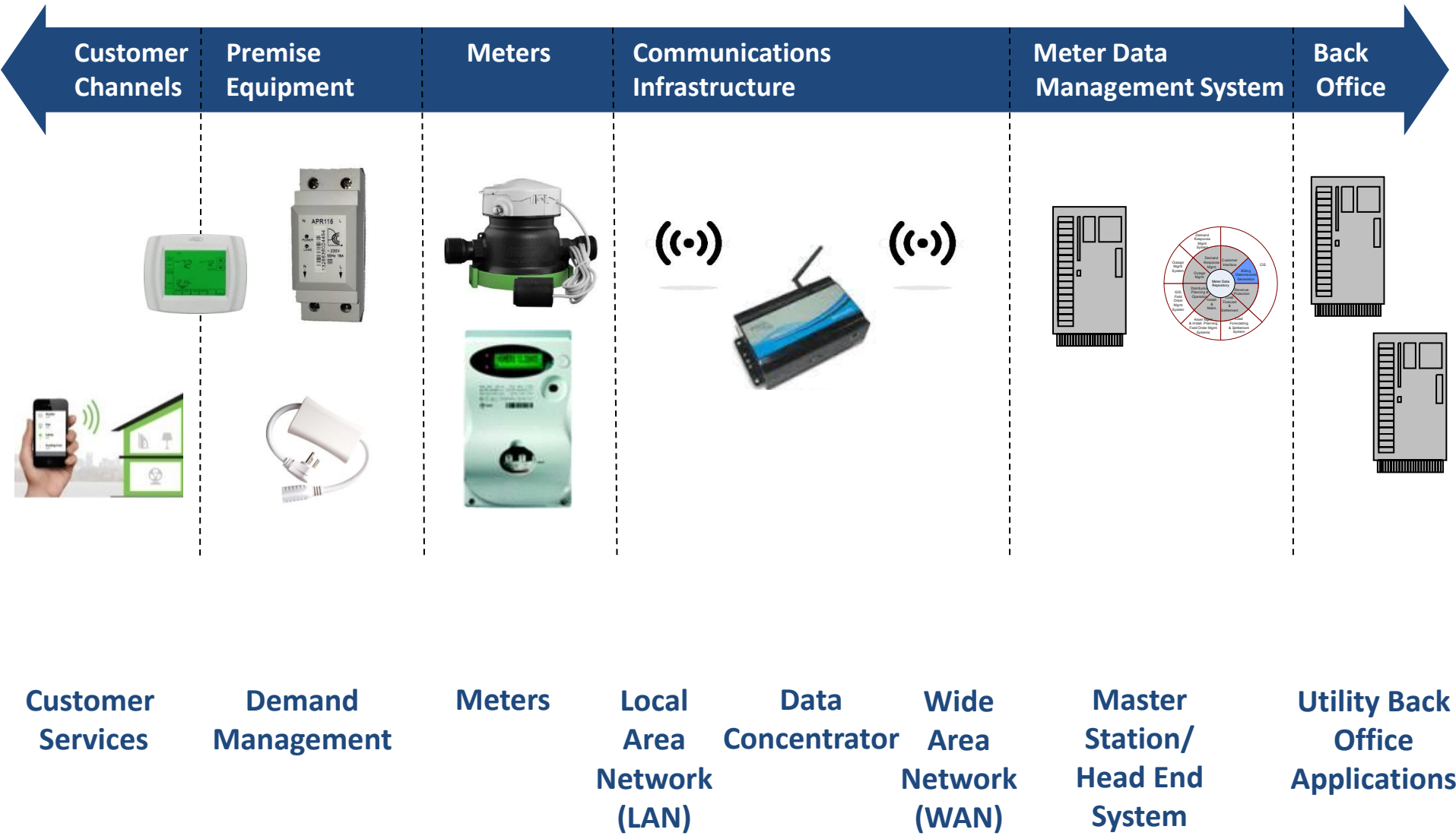
-- Hal Varian, Chief Economist at Google



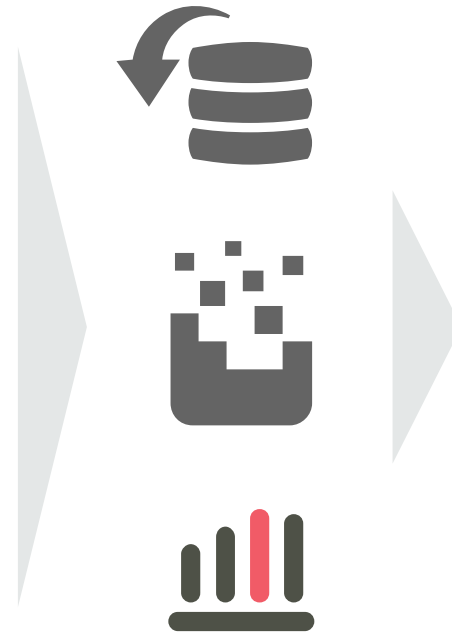
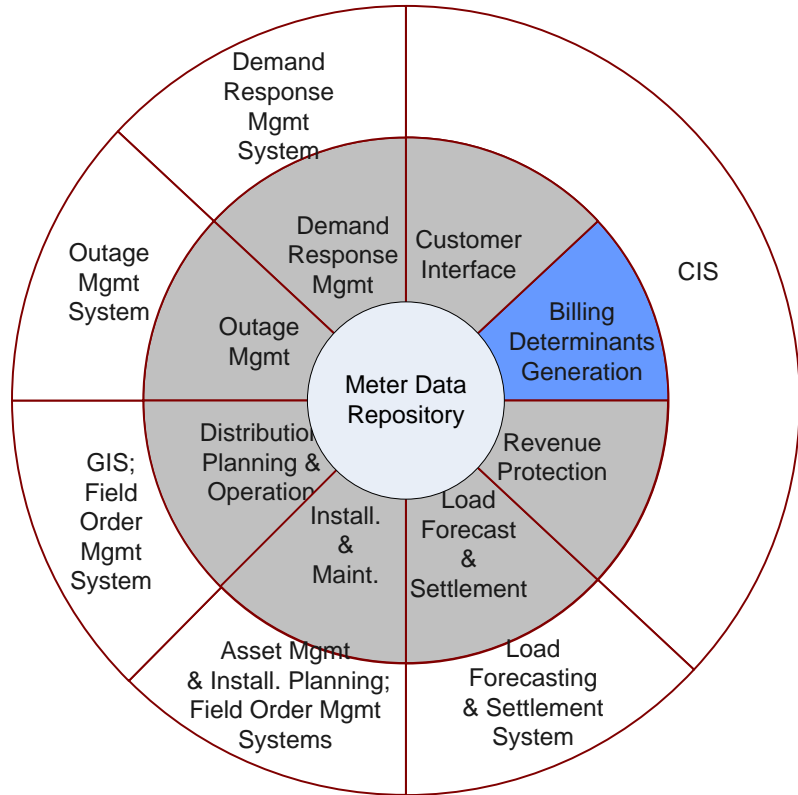
What are the different types of Data Analytics?



Typical AMI Solution Landscape



Are you realising value from your Smart Metering Investment?

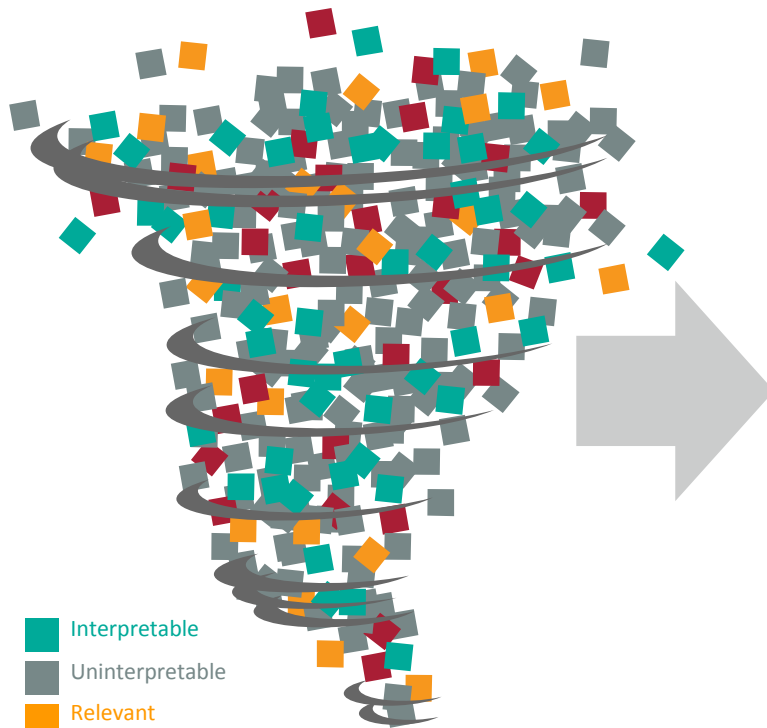


However, the approach should be...

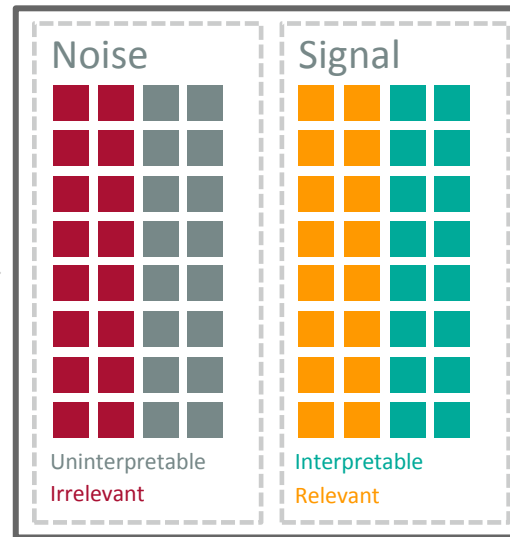
1. DATA

2. INFORMATION

3. INSIGHTS



- Interpretable
- Uninterpretable
- Relevant
- Irrelevant



- What is the hidden value?
- What can I know now what I couldn't before?
- How do I do all this in a constrained environment?

Value Pools for Smart Meter Data

Smart meter information can assist to pursue three primary opportunities:



Typical Smart Metering Use Cases

● *Top Use Cases*



Customer Profiling

- Customer consumption trends
- Customer segmentation
- Standard load profiles vs actual load patterns
- Seasonal changes
- Consumption benchmark per segment
- Usage views & comparison with neighbourhoods



Event Analysis

- Device status
- Tampering alarms
- Outage management
- Event trends
- Event details
- Event analysis
- Correlation of event trend and VEE exceptions



Grid Optimisation

- Technical losses
- Enhanced outage management
- Transformer monitoring
- Service restoration
- Consumption forecasts based on weather events
- PQ analytics, Volt/VAR optimisation
- Fault location
- Load control for DR

Building A Smart Metering Analytics Capability begins with a proven Analytics Operating Model



Legend

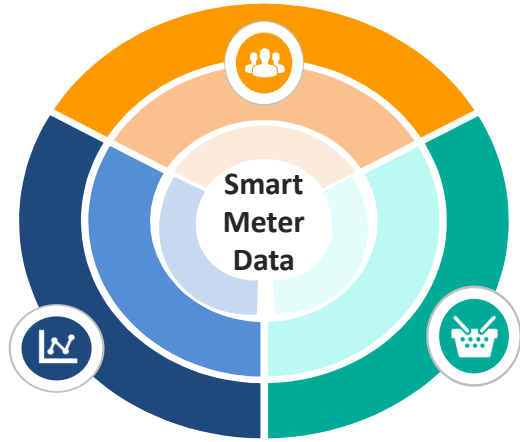
 Business

 Technology

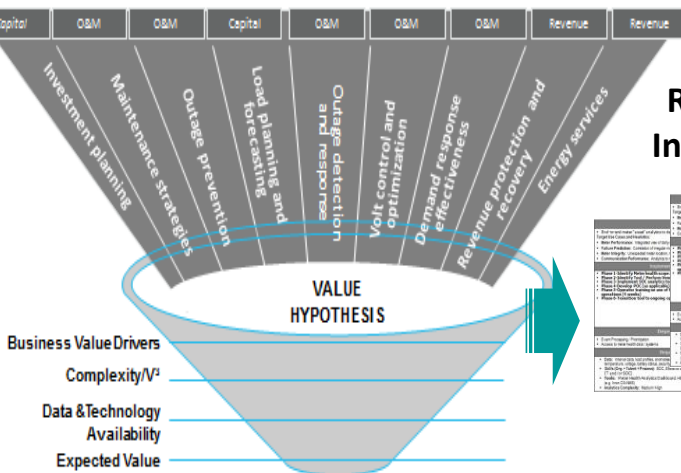
 Jointly Owned

Smart Meter Data Value Management Strategy

“Opportunity Queue”



Logical Grouping



The Future State creates a set of recommended initiatives, which will be sequenced in the roadmap and feed an iterative “Value Management” process to prioritise, define, execute, and realise the value of analytics opportunities.

Value Outcomes

- Measure value realisation vs. plan
- Define learnings
- Define recommended actions
- Identify new opportunities



PoC / Pilot / Production Project Charter

- Approach to Proceed – PoC, Pilot, Production
- Value Measurement Approach
- Responsibility/Resource Plan
- Business Case

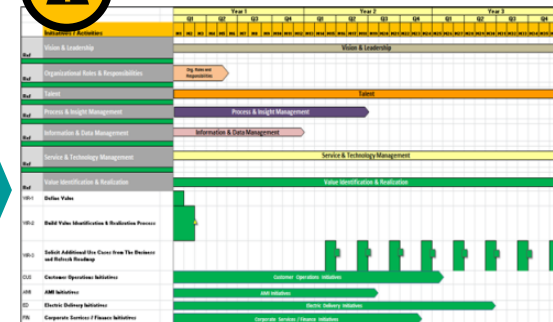
Recommended Initiative Profiles

Initiative Name	Strategic Alignment	Business Case	Dependencies	Timeline	Resources	Risks
Investment planning	High	High	Low	Q1-Q2	10	Low
Maintenance strategies	Medium	Medium	Medium	Q3-Q4	5	Medium
Outage prevention	High	High	Low	Q1-Q2	8	Low
Load planning and forecasting	Medium	Medium	Medium	Q3-Q4	6	Medium
Outage detection and response	High	High	Low	Q1-Q2	7	Low
Volt control and optimization	Medium	Medium	Medium	Q3-Q4	4	Medium
Demand response effectiveness	Medium	Medium	Medium	Q3-Q4	5	Medium
Revenue protection and recovery	High	High	Low	Q1-Q2	6	Low
Energy services	Medium	Medium	Medium	Q3-Q4	7	Medium

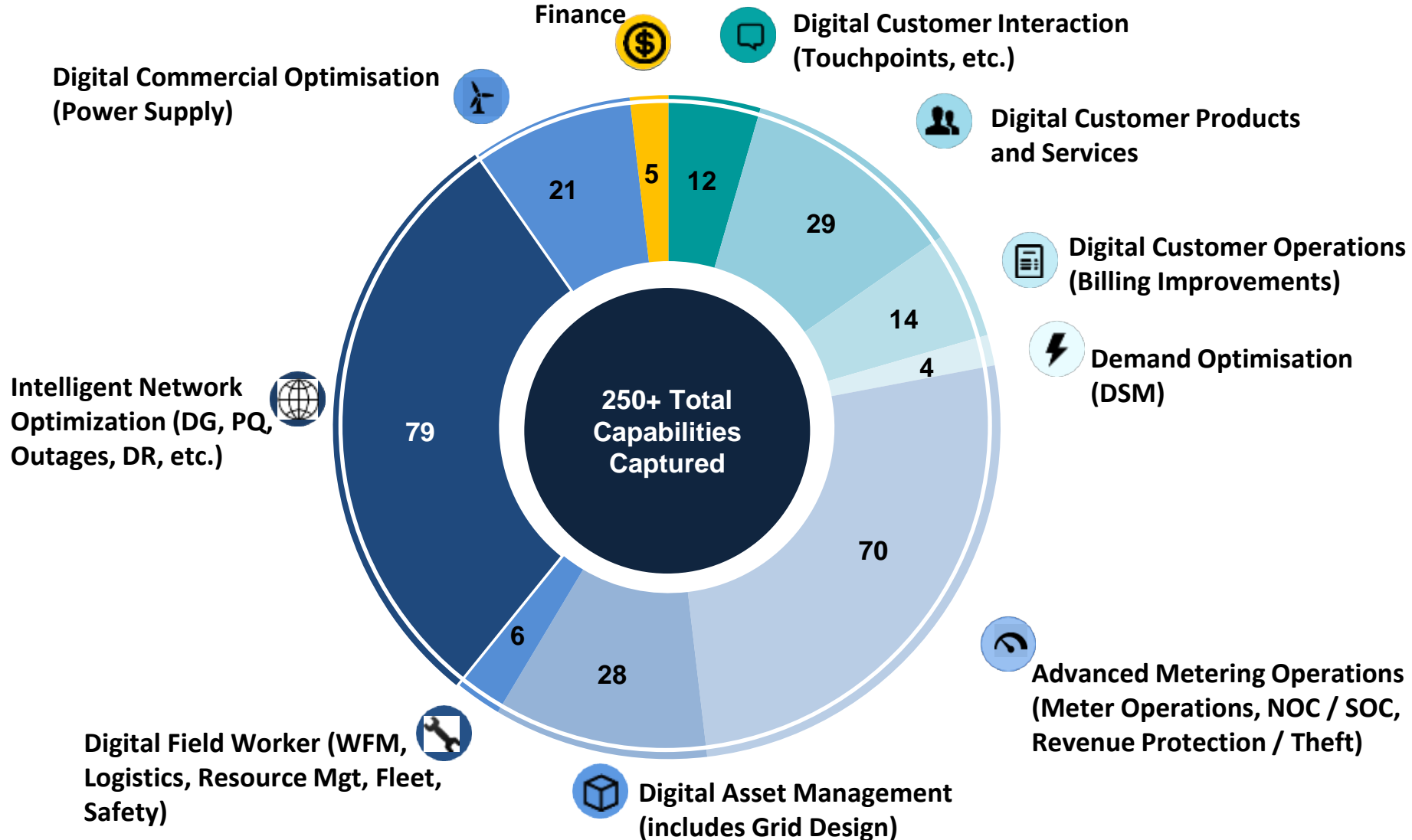
Prioritised Initiatives



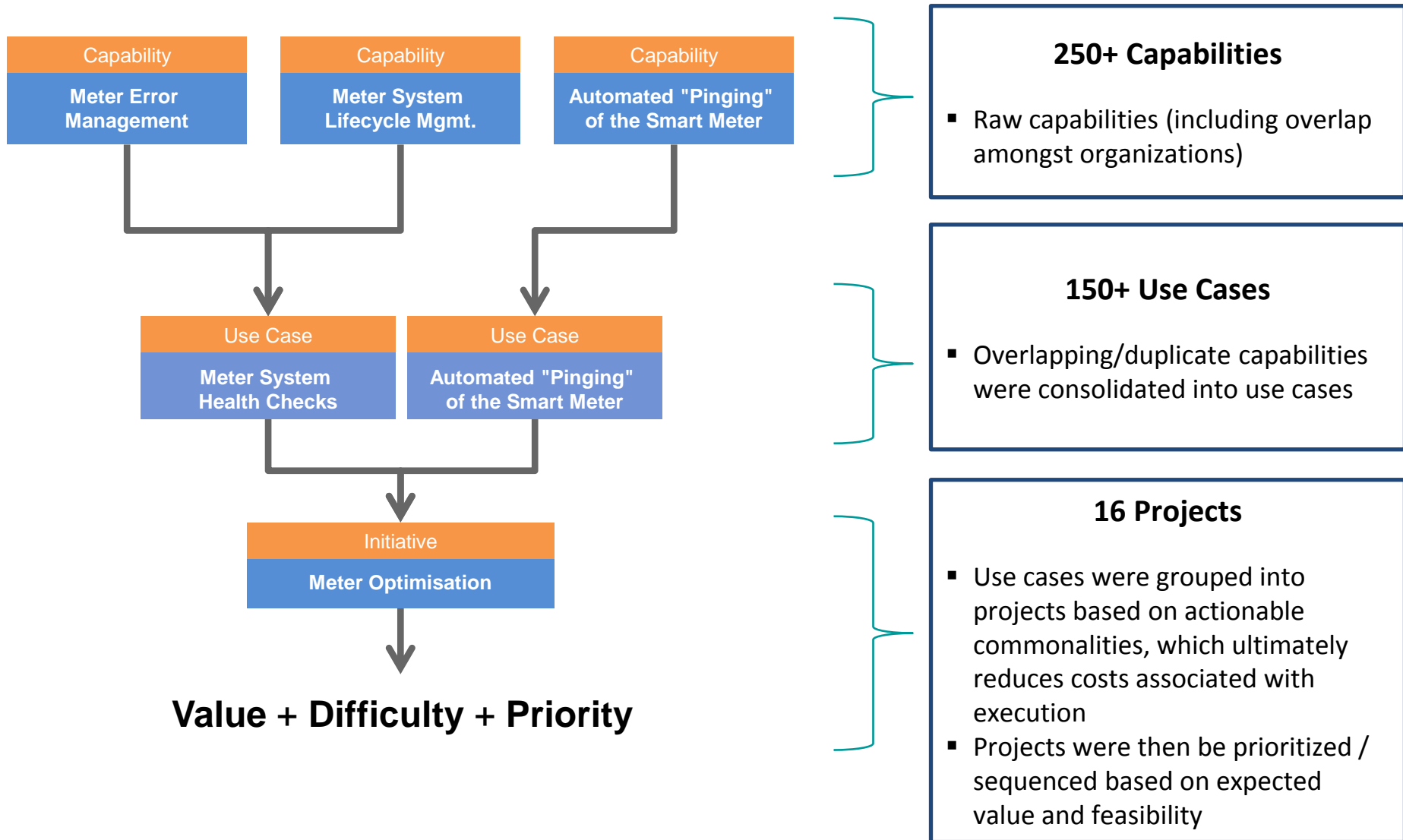
“PROVE VALUE or FAIL FAST”



Case Study: One utility identified 250+ total smart meter value opportunities across the enterprise



Case Study: These opportunities were consolidated into 150+ use cases

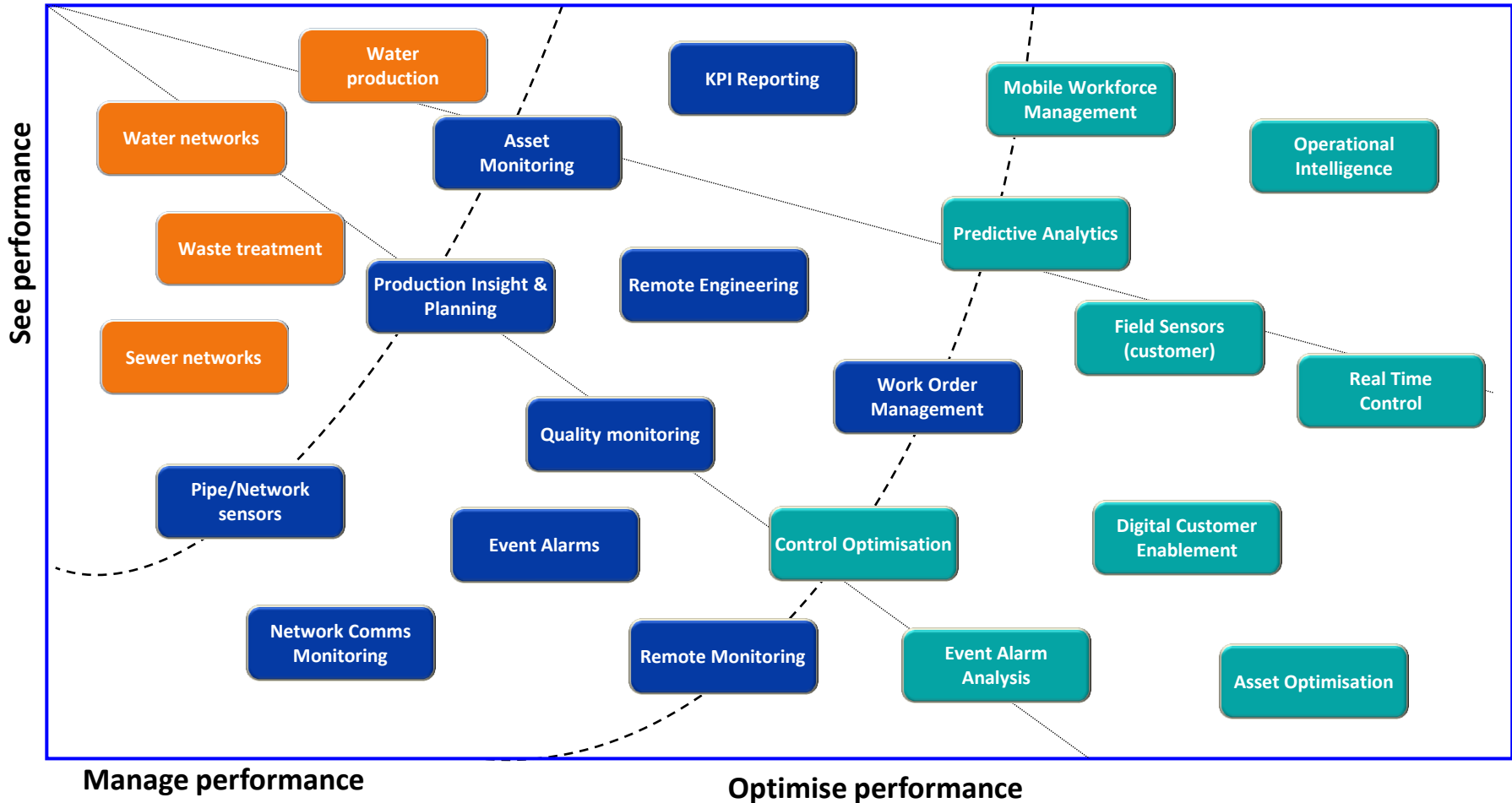


Case Study: Example roadmap from a Water Utility

Wave 1
9-12 weeks

Wave 2
6-9 months

Wave 3
1-3 years



We had the opportunity to deploy an analytics driven solution at Thames water, resulting in \$50M benefits over 5 years



- Thames Water's vision was to embrace the Internet of Things with Data Analytics to transform decision-making on the frontline.
- Frontline Information Technology Program is all about the new ways of working made possible by insight at the point of action and collaboration spurred by a single view of assets (including Smart meters)



**Limited Scale
Smart Meter
Deployment**



**9 months & 40
team members**



**Analytics
Platform**

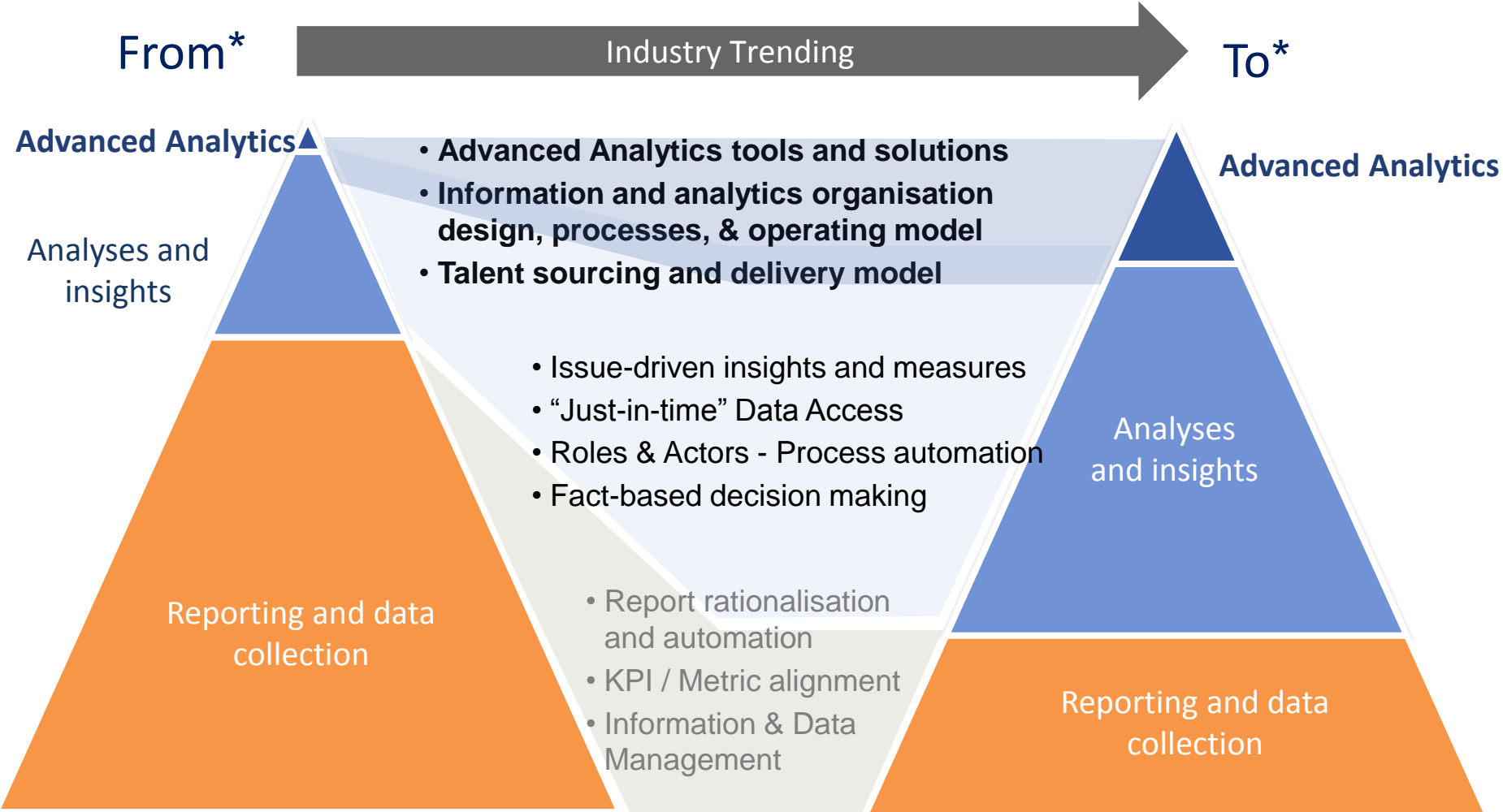


**Real Time &
Geospatial
Analytics**



**5 year Benefits
Estimate**

Smart Metering Data is in the midst of a “Data Renaissance,” don’t you want to start getting the Value today?



* Percentage of Time