

## MOSL Technology Advisory Group

9 December 2021 | 10:00 – 13:00 - By videoconference

Members	Attendees
John Davies (MOSL CIO and TAG Chair) Jacob Tompkins (Water Retail Company) Quentin Gallagher (Portsmouth Water) Dhiraj Sood (South East Water) Stuart Reid (Castle Water) Nathan Morgan (Waterscan) Paul Williams (Everflow) Laura Allan (Business Stream) Joe Stepney (Thames Water) Stuart Wallace (Thames Water) Wesley Thomas (Anglian Water) Leila Smith (SevernTrent) David Halliday (NWG) Stuart Mercer (Southern Water) Paul Tate (Waterlevel) Samuel Barber (Wave) Sean Brookfield (Waterplus) Emma Birch (United Utilities) <b>Apologies</b> Darren Thresh (Yorkshire Water) Steve Walker (Wessex/ Water2Business)	John Briggs (MOSL Chief Architect) Andrew Johnson (MOSL Company Secretary & General Counsel) Ricardo Wissmann-Alves (Head of IT Operations and Cyber) Aneesa Rahman (Paralegal) Liz D'Arcy (Head of Data Insight and Analytics) Luke Austin (Data Strategy and Governance Lead) Martin Hall (Market Improvement Lead) Dene Marshallsay (Artesia Consulting Limited)

### Agenda

Item	Description	Who to lead?	Time
1.	<b>Introductions and Welcome</b>	John Davies/All	10:00
2.	<b>Data Insight</b> <ul style="list-style-type: none"> <li>Demonstration of recent Dashboards</li> <li>Discussion session on TAG data priorities for Q4 and beyond</li> </ul>	Liz D'Arcy	10:10
	<b>5 MINUTE BREAK</b>		10:55
3.	<b>Strategic Metering Review Update</b> focusing on the Enhancing Metering Technology Workstream	Martin Hall and Dene Marshallsay (Artesia Consulting Limited)	11:00
4.	<b>Update from Anglian Water on Smart Meter API</b>	Wesley Thomas (Anglian Water)	12:00
	<b>5 MINUTE BREAK</b>		12:30
5.	<b>Data Strategy</b> <ul style="list-style-type: none"> <li>Data &amp; Information Charter</li> <li>Data Strategy Outline and Approach</li> <li>Discussion and feedback as group</li> </ul>	Luke Austin	12:35
6.	<b>AOB and Close</b>	John Davies	12:55

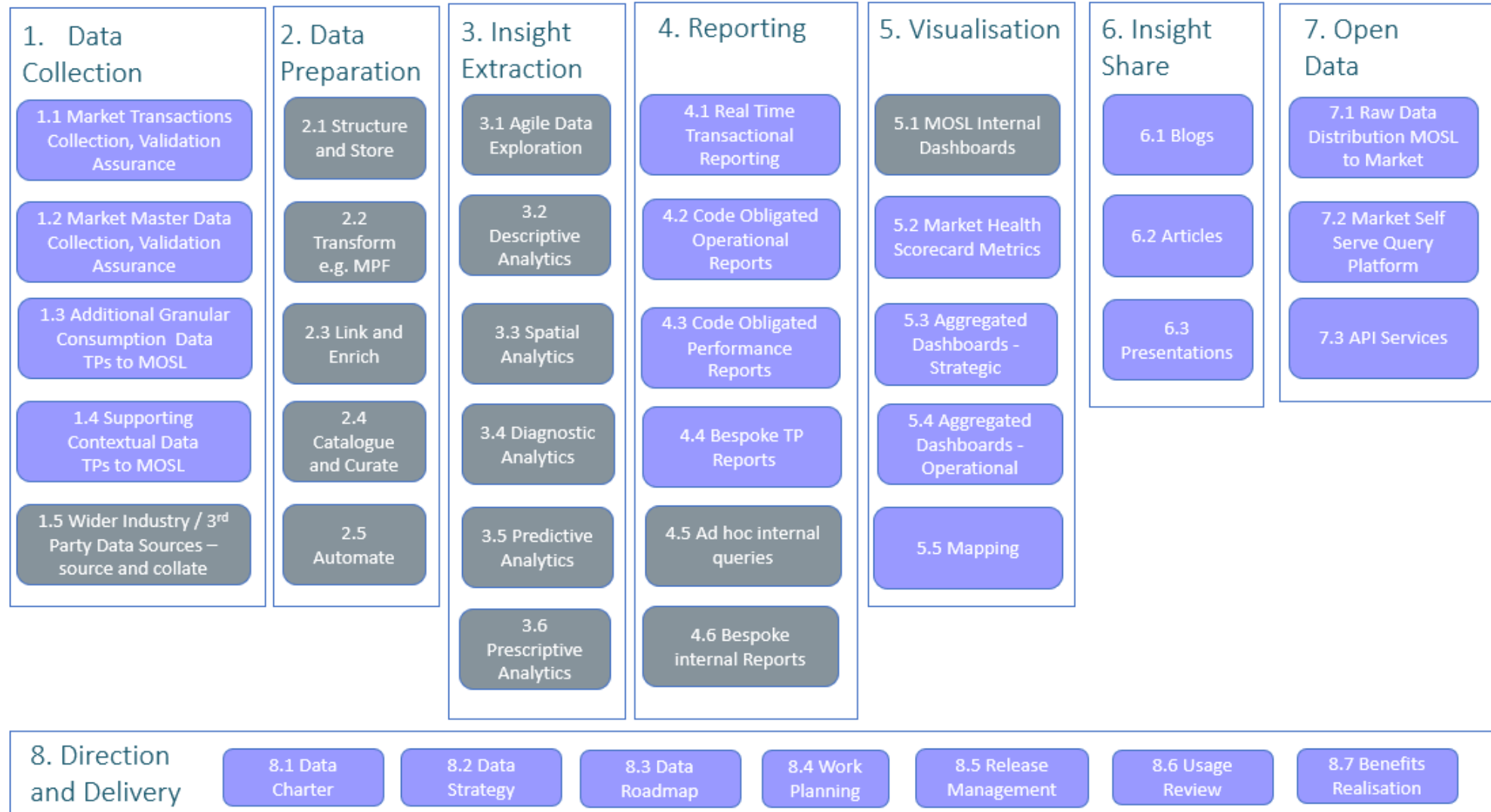
# TAG

Data Insight – update and steer on priorities

Liz D'Arcy

*Dec 2021*

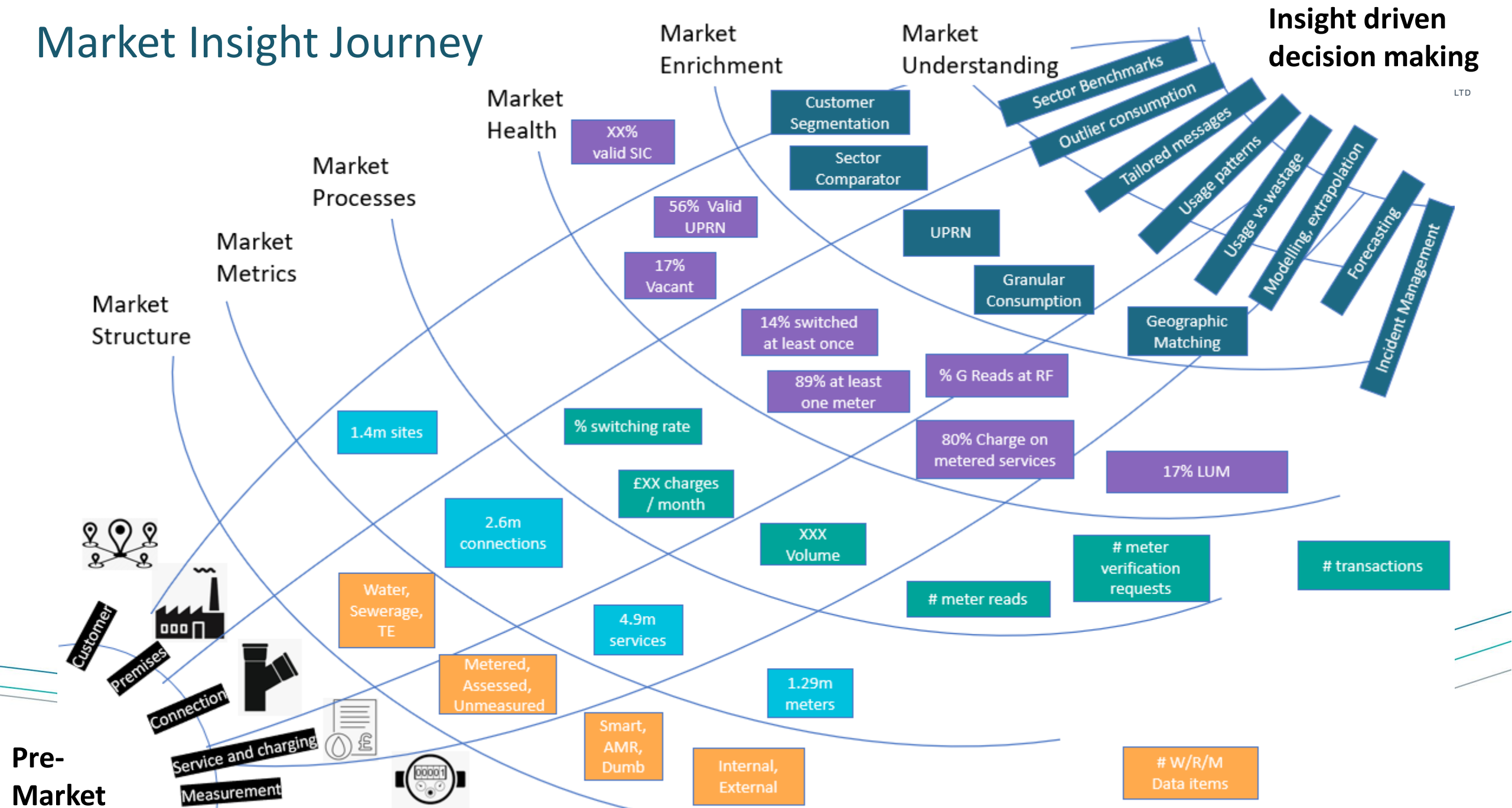
# Market Insight Capabilities – reminder from last TAG

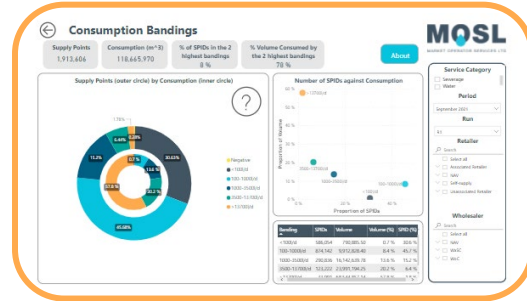
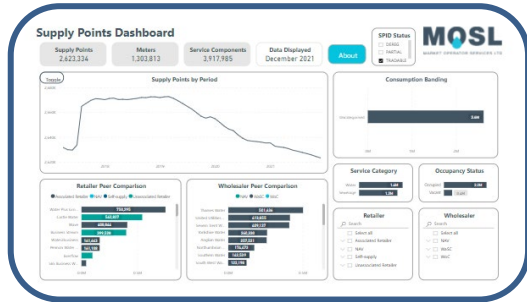


# Market Insight Journey

Insight driven decision making

LTD





**Supply and Consumption**  
 Find out more about supply and consumption and how this is shared across trading parties.  
[Learn more](#)

**Customer Segments**  
 Not all customers are the same. Find out more about segmentation here.  
[Coming soon](#)

**Market Meters**  
 Over 90 per cent of non-household supply points are metered, but not all are the same. Find out more here.  
[Coming soon](#)

**How is the market operating?**

**Switching Activity**  
 The market is all about choice. Find out more about how those choices are made here.  
[Learn more](#)

**Wholesale Settlement**  
 Find out how money flows through the market, and how it is reconciled each month.  
[Coming soon](#)

**Market Data Flows**  
 We operate a complex market built on meter reading data. Find out more here.  
[Coming soon](#)

**How is the market performing?**

**Trading Party Performance**  
 How wholesalers and retailers are performing for customers.  
[Learn more](#)

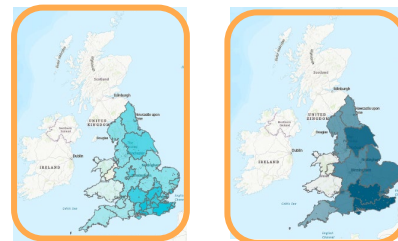
**Environmental Impact**  
 Discover information surrounding water efficiency, water boundaries, greenhouse gas emissions and more.  
[Learn more](#)

**MOSL Portal**  
 Trading parties can access the Portal for more detailed market information.  
[Learn more](#)

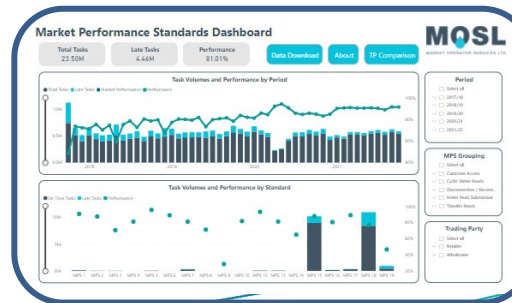
## Market Meters Dec 2021



Trading Party Locations



Switching Rates





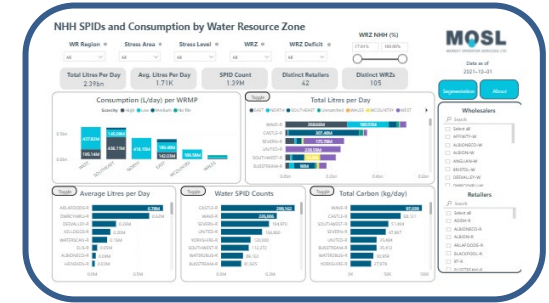
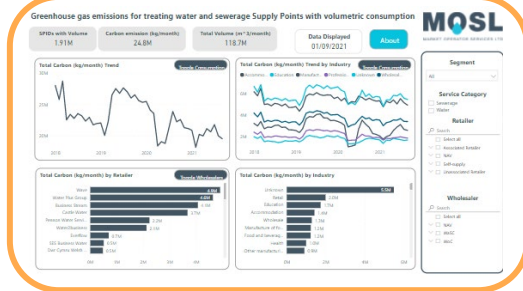
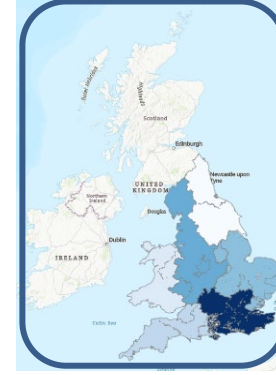
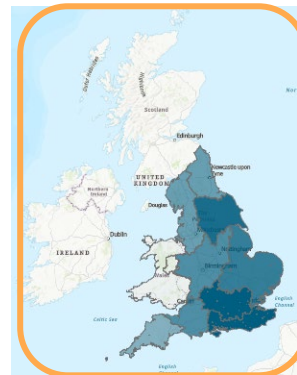
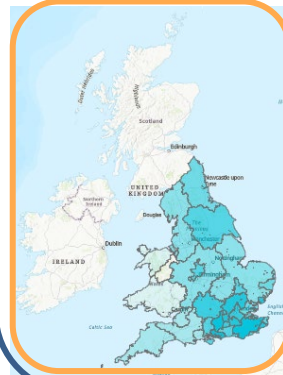
# The NHH market... collated wholesaler context

## Operational Boundaries

Water

Sewerage

Water Resource



### Carbon Statement

Carbon output summary (kilograms per month for volume-based service components)

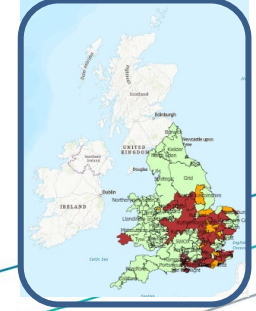
Carbon output	Market total carbon output	Market share	No. of wholesalers
462,978,523 kg	21,766,605,378 kg	2.13%	25

Carbon output by Wholesaler and service component (kilograms per month for volume-based service components)

Wholesaler	Wholesaler	Water	Sewerage	Drainage	Other	Total
GRITCH W	Grinch Water (WZ)	2,037,280	0.0000	0.0000	0.0000	2,037,280
ARLCO W	Arden Water (WZ)	6,407,798	5,147,787	0.0000	0.0000	11,555,585
BRISTOL W	Bristol Water (WZ)	31,191	0.0000	0.0000	0.0000	31,191
NORTHSEA W	Northsea Water	60,023	277,460	0.0000	0.0000	337,483
PROTECTOR W	Protektor Water	8,114,564	0.0000	0.0000	0.0000	8,114,564
WYTHAM W	Wytham Water	8,144,327	0.0000	0.0000	0.0000	8,144,327
SOUTHSEA W	South Sea Water	3,434,743	0.0000	0.0000	0.0000	3,434,743
SOUTHSTAR W	South Star Water	79,278	0.0000	0.0000	0.0000	79,278
SOUTHWEST W	South West Water	28,793	0.0000	5,302	0.0000	34,095
SOUTHSH W	South Shropshire Water	1,917,257	0.0000	4,113,078	0.0000	6,030,335
SOUTHON W	South On Water	3,894,402	0.0000	0.0000	0.0000	3,894,402
SOUTHST W	South Star Water (WZ)	194,673,758	0.0000	84,141,776	0.0000	278,815,534
WITTON W	Witton Water	5,337,797	0.0000	3,280,198	0.0000	8,617,995
WYTHAM W	Wytham Water	68,467	0.0000	48,458	0.0000	116,925
WYTHAM W	Wytham Water	119,777	0.0000	139,190	0.0000	258,967

Strategic Metering Review  
More granular consumption data



Decarbonisation

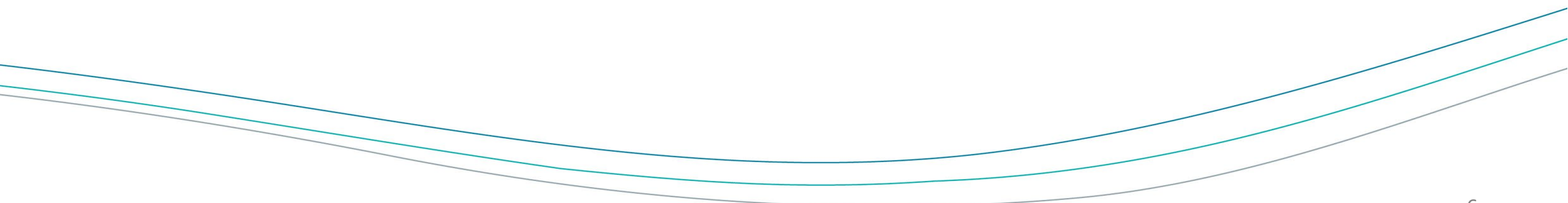
Consumption Data

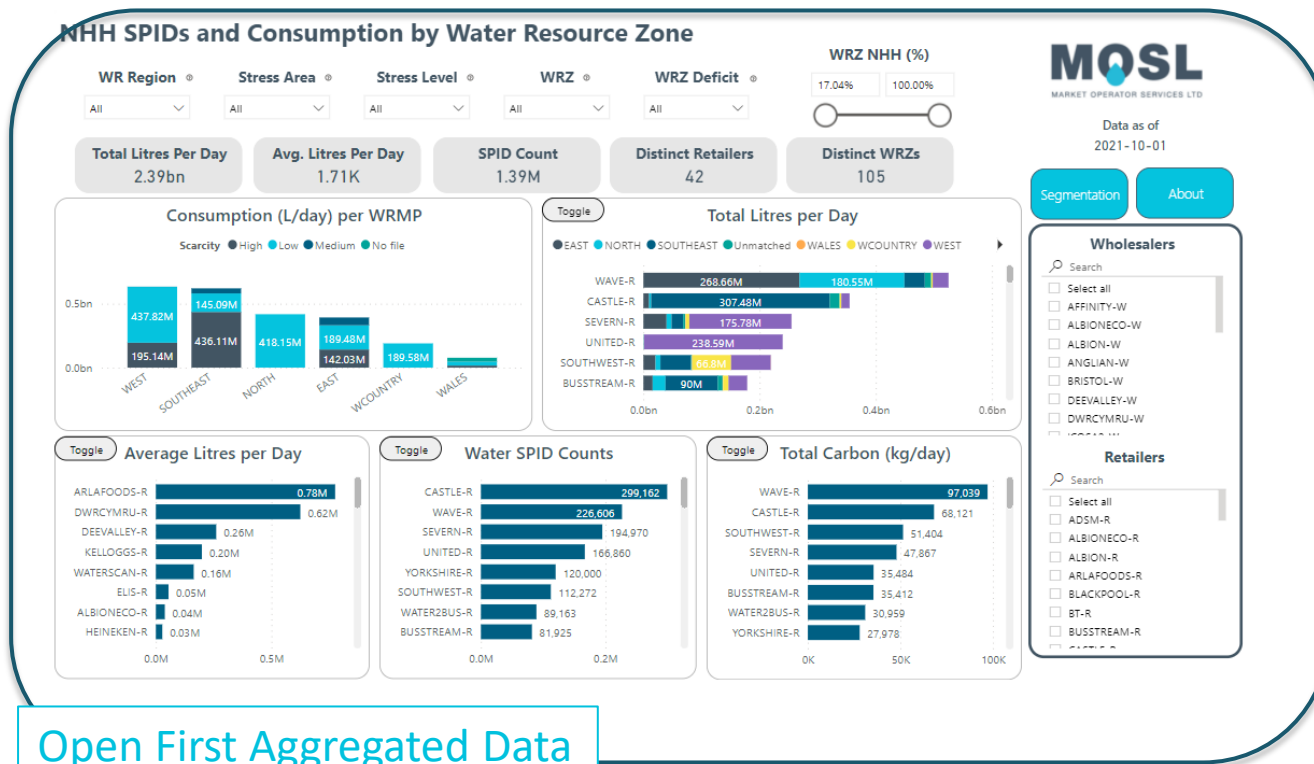
Water Scarcity



# The NHH market... national view to work beyond water

- Importance of critical link fields (eg UPRN) importance – fix from centre
- LIDA – industry segmentation consistent schema
- Beyond water data and enrichment
  - EA datasets
  - NHH Sector data - National Usage Benchmarks
  - Combined carbon reporting





<https://mosl.co.uk/market-insight>

Data sharing agreements templates and best practise Customer protection

Collaboration with Stream / BIM4Water

Data services / External Data Sharing Platform

Aggregated Data (now)

Open Data



# Demo of Dashboards and Maps

# Discussion

## Previous TAG

- ◆ Are you aware of the 4 MOSL Data Sharing capabilities described on page 25 of the slide pack?
- ◆ Does your organisation use any of the 4 Data Sharing capabilities described?
- ◆ Do you have any challenges with accessing the MOSL Portal / SharePoint?
- ◆ Which are the key teams in your organisation that access the MOSL Data sharing capabilities described?
- ◆ How can we improve awareness and use of the data sharing capabilities described?
- ◆ What should MOSL's top Data Sharing focus be in the next 3 months / 6 months / 1 year?
- ◆ Is there anything else you would like to feedback to MOSL on data sharing capabilities?

## This TAG

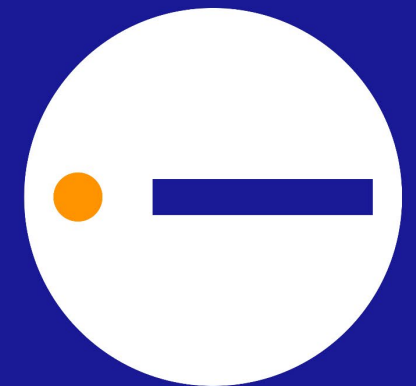
- ◆ Other market visualisations?
- ◆ Any other datasets we need to collate within water industry
- ◆ Or beyond water?
- ◆ View on sharing aggregated data / disaggregated data?

MOSL:TAG

Enhanced metering technology

2021-12-09

Dene Marshallsay, Giles Fox



# Overview

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1. Introductions
2. Background to the project
3. Our approach
4. Engagement
5. Themes
6. Non-household meter measurement chain
7. Enhanced metering benefits
8. Meter segmentation
9. Emerging strategies

# Objectives, challenges and opportunities

To develop a technology strategy for the market, and a template business case to support trading party input to the WRMP and PR24

This means that we would like to increase the volume, quality and timeliness of consumption data available to the market, which will improve the ability for trading parties to provide timely and accurate bills to customers, and explore the value and benefits that enhanced metering technology could have in the Market to customers, retailers and wholesalers.

There are some significant challenges:

- Since the market opened in 2017 there was insufficient evidence to include investment requirements and incentive mechanisms in PR19. As a result, there has been little investment in NHH metering assets in the last 4 years.
- Wholesalers are responsible for defining their own metering strategies and these are typically developed to serve household customers. As a result, there are a wide mix of metering solutions being implemented ranging from dumb metering to smart (AMI) metering.
- There is currently not a coherent technology or data strategy and little standardisation for metering in the market and this leads to complexity and a challenging environment for retailers working across wholesaler areas.

There are also opportunities

- WRMP24 and PR24 offer an opportunity to modernise the metering stock if wholesalers and retailers work collaboratively to develop appropriate plans and approaches.
- Wholesalers use non-household meter data to feed into a range of strategic planning, reporting and operational activities, these add intrinsic value to the meter asset base, which could form the basis for both retailers and wholesalers to benefit from enhancing and maintaining the non-household data measurement chain.

# Our approach

## Internal research and gap analysis

- We have a lot of information and data on how non-HH consumption data is used.
- We also have access to a data set of 15-minute non-HH data that we have been given permission to use to help quantify potential benefits

## Stakeholder engagement

- Retailers, wholesalers, self supply, customers and Ofwat
- Identify what good looks like, benefits, challenges, barriers, etc
- Key part of the process for identifying the strategic options

## Develop the enhanced meter strategy

- Considering the measurement chain from meter to data to insight
- Short, medium and long term aspirations
- Financial implications and strategies

## Reporting

- Reporting all findings, recommendations and conclusions
- Template sections for WRMP24 and PR24
- Any other information that will help in taking the strategy forward





MOSL

Retailers

Customers

Ofwat

CC Water

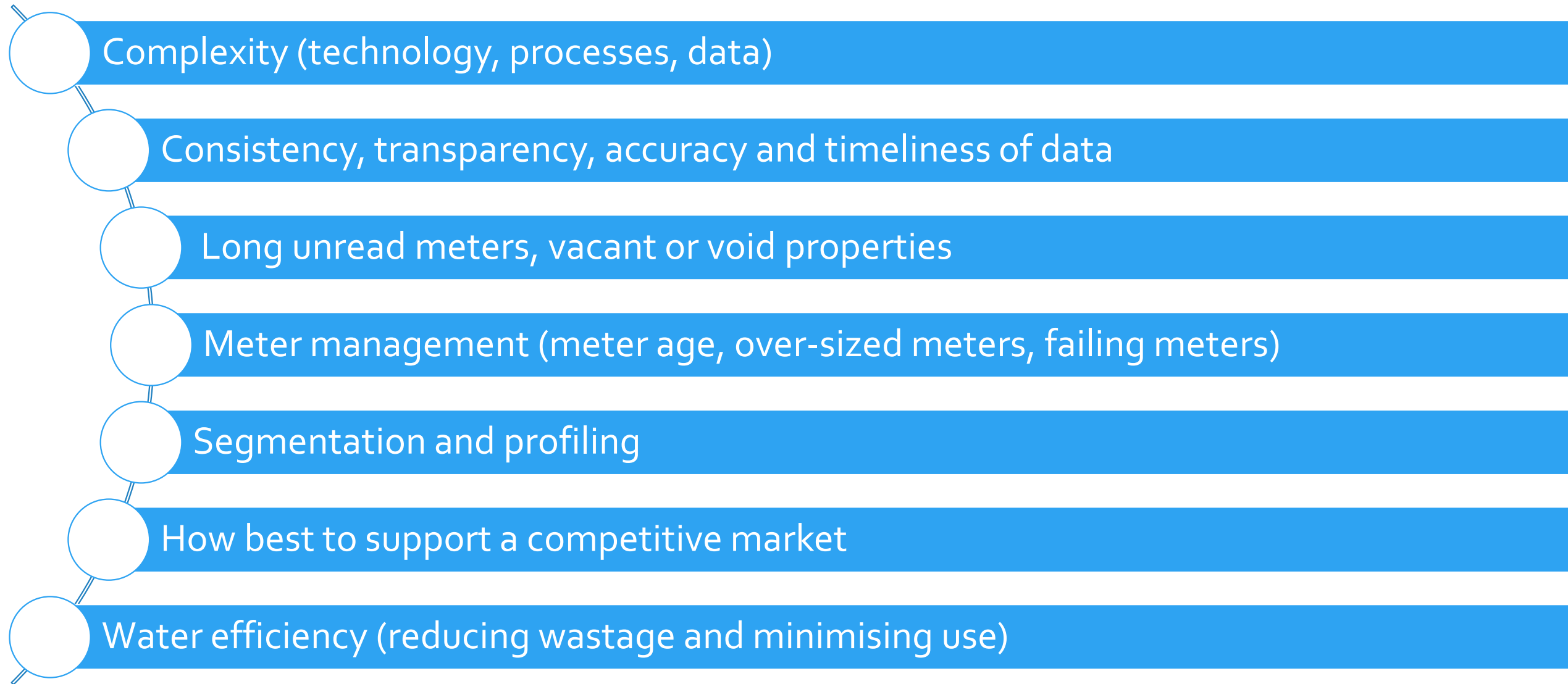
Meter reading  
organisations

Wholesalers

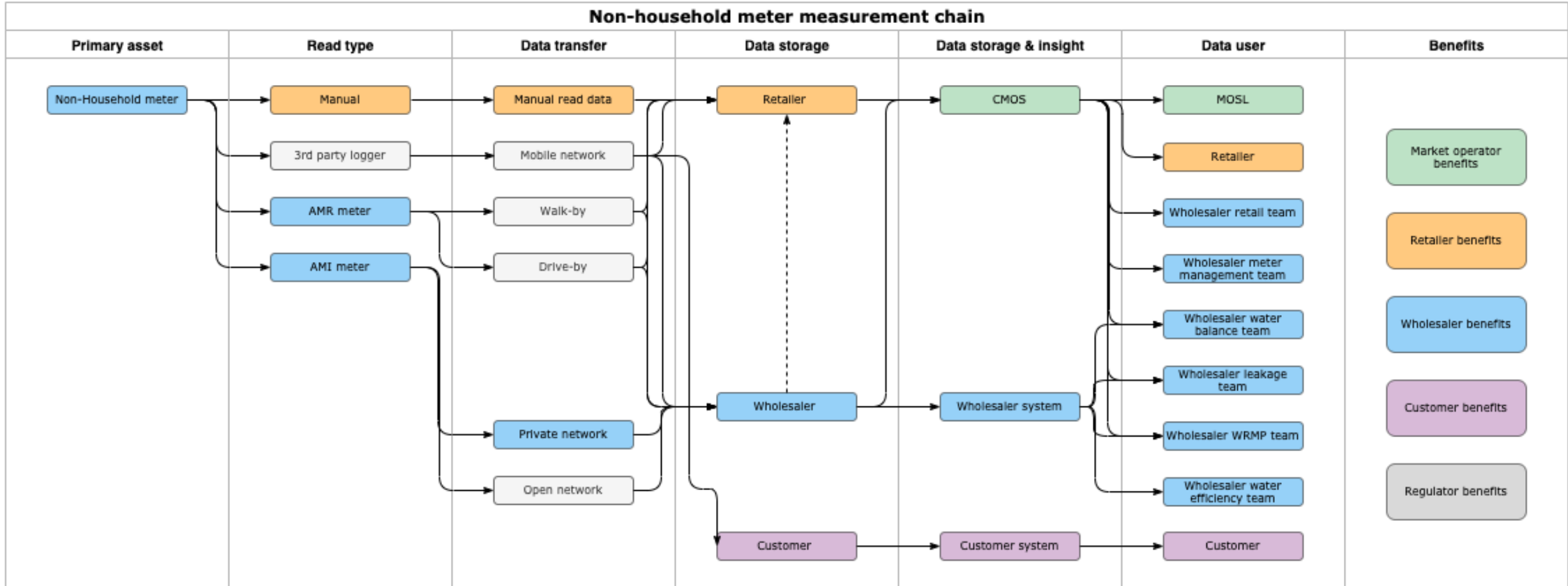
Self supply  
community

# Themes

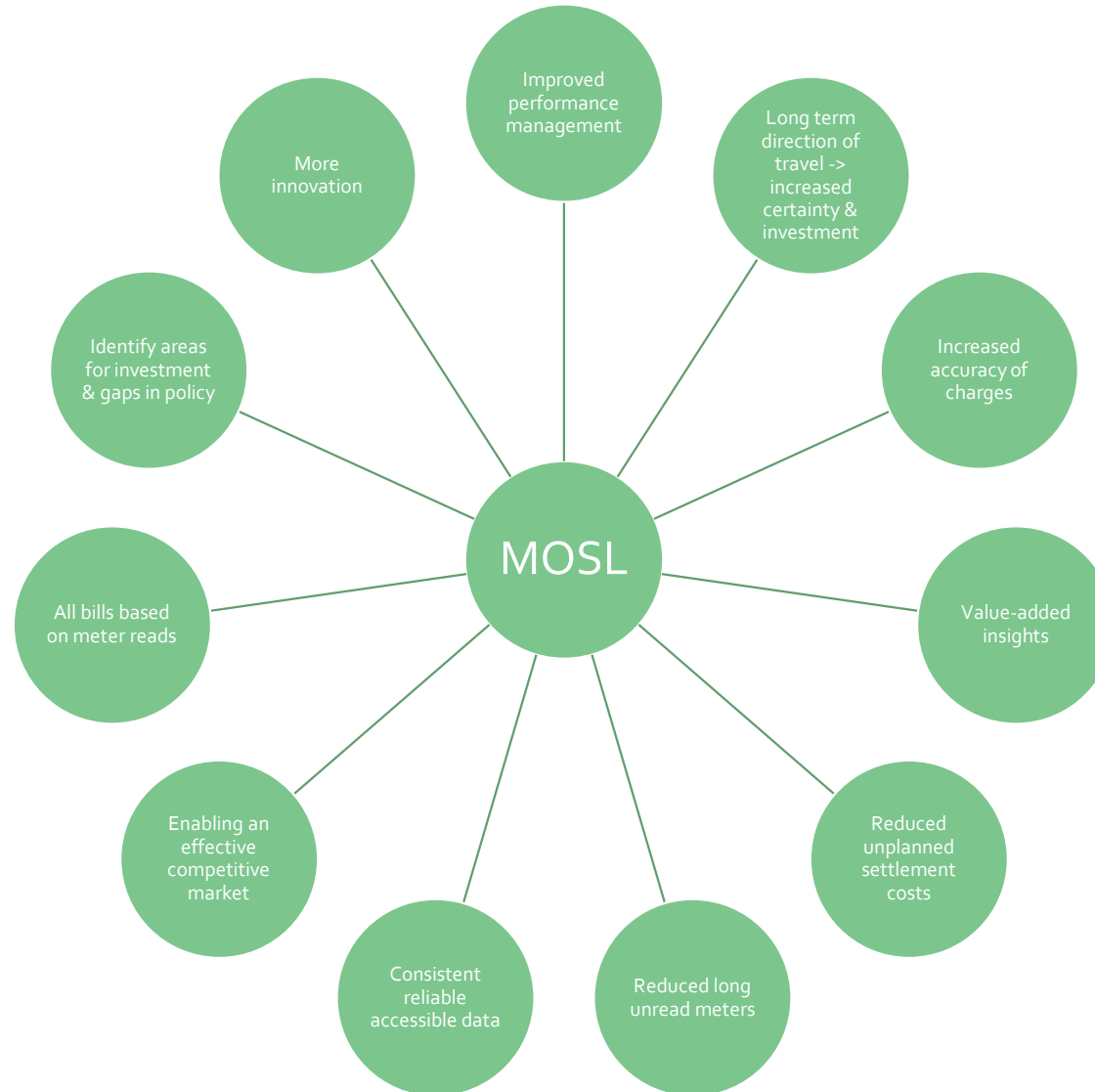
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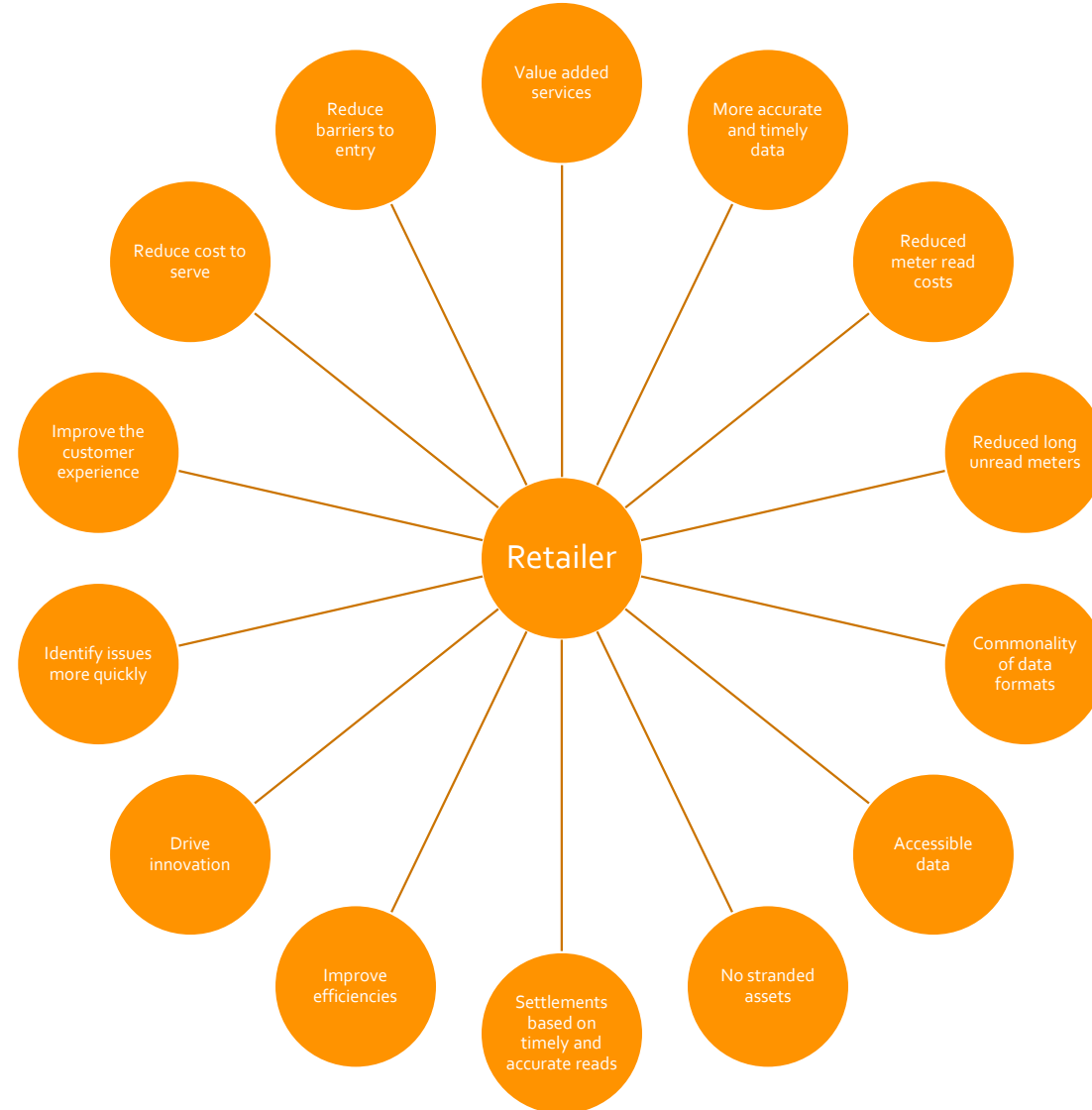
# The non-household metering chain



# Benefits: MOSL



# Benefits: Retailer

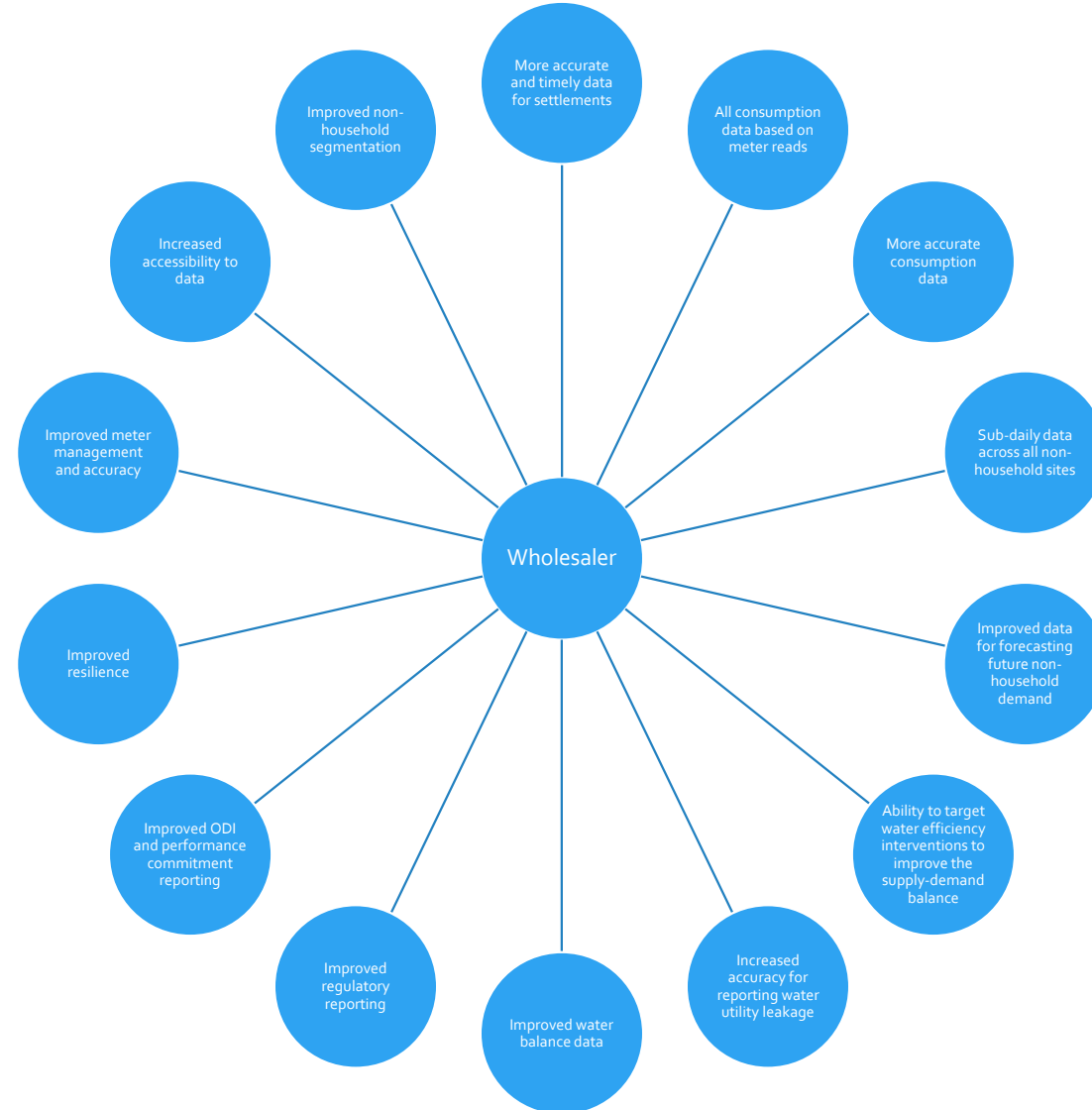


# Benefits: Customers



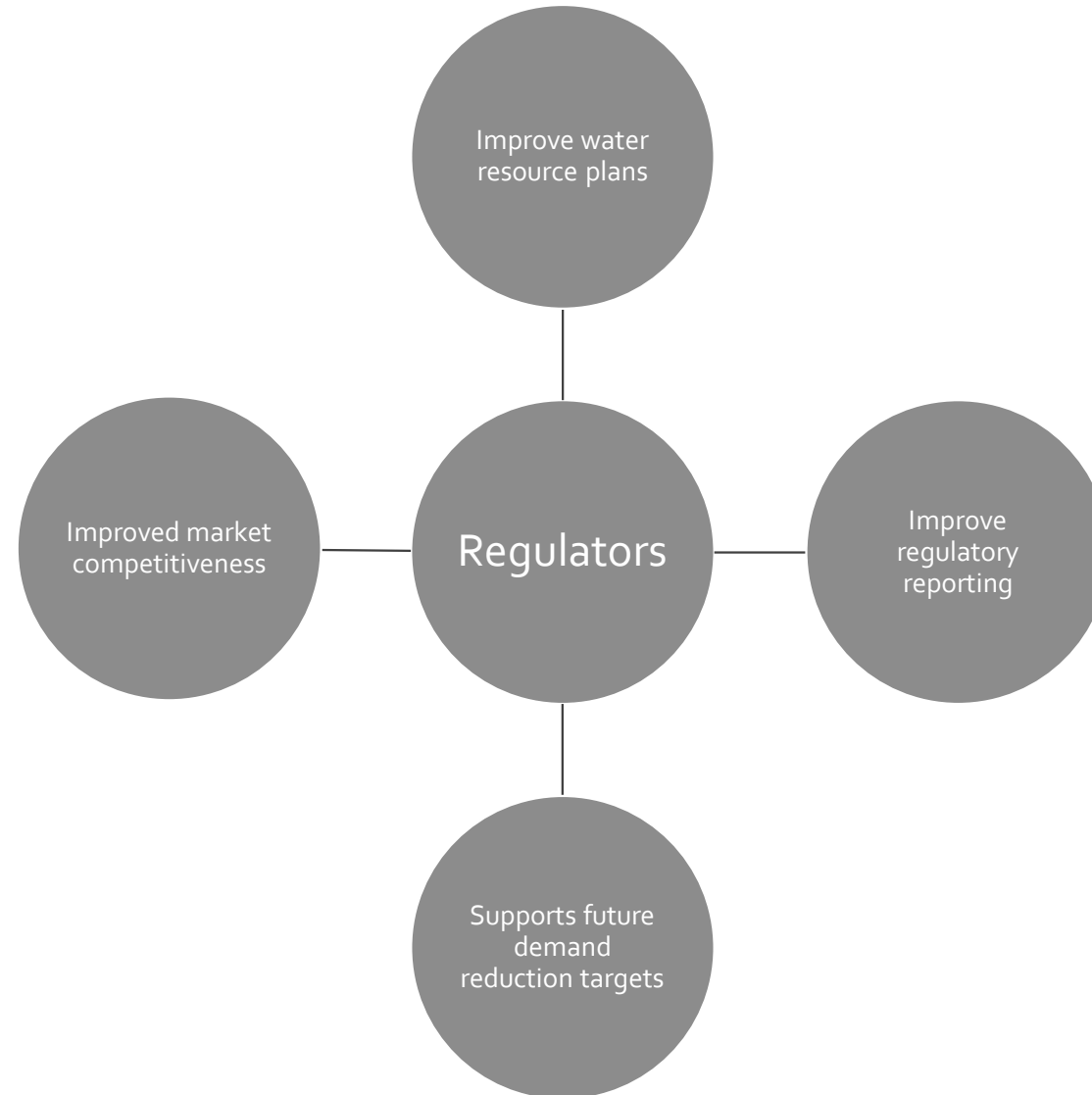


# Benefits: Wholesaler



# Benefits: Regulators

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# Meter segmentation: Strategies should be developed for large and small meter cohorts

Meter size	Percentage of meter stock (1,304,290)	Average daily consumption (l/meter/day)	Percentage of total long unread meters (225,200)	Meter technology (percentage for each size cohort)		
				Dumb	AMR	AMI
No-data	0.2%	10,720	0.8%	96%	4%	-
<25 mm	87%	853	88.4%	72%	26%	3%
25 to <80 mm	12.4%	11,875	10.5%	78%	19%	3%
>80 mm	0.4%	135,950	0.3%	77%	16%	7%

**Small meters**

- 90%+ of all meters fall in this category
- Low average daily consumption and low bills
- Leakage and wastage can form a large proportion of the bill, but the cost benefit for the customer for fixing this is small
- Resolving leakage and wastage can be beneficial for wholesalers in supply demand deficit areas (i.e. demand reduction options for WRMP)
- 3/4 of meters are dumb
- 90%+ of long unread meters fall in this category

**Large meters**

- About 10% of all meters fall in this category
- High average daily consumption and low bills
- The cost benefit for the customers for fixing leakage and wastage can be high
- The ability for retailers to offer cost effective services to customers for resolving leakage and wastage is greater in this segment
- 3/4 of meters are dumb
- 10%+ of long unread meters fall in this category – but the bill implications per customer are greater

# Emerging strategies for enhanced meter technologies

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## Aim:

- Enhanced meter technology, improving the timeliness, accuracy and accessibility of data for use by MOSL, retailers, customers, wholesalers and regulators to improve the market.

## Technology improvement:

- **All meters:** large meter and small meter customers
- **Improve asset health:** remove old poor performing meters and improve the performance of meters
- **Remote data communications:** allow meters to be read remotely in a timely manner and on demand, provide data from difficult to access meters, and improve the accuracy of consumption data
- **Sub-daily data:** support the reduction of wastage/leakage, to support water efficiency and improve innovation and valued services to customers
- **Interoperability:** consistent data collection and consistent data formats
- **Wider accessibility to data:** improve sharing of data, integration with other data and improve insights to realise benefits across all stakeholders
- **Identify a range of funding / investment options:** based on the value derived from non-household data

# Data & Information Charter Market Data Strategy

Luke Austin

*December 2021*

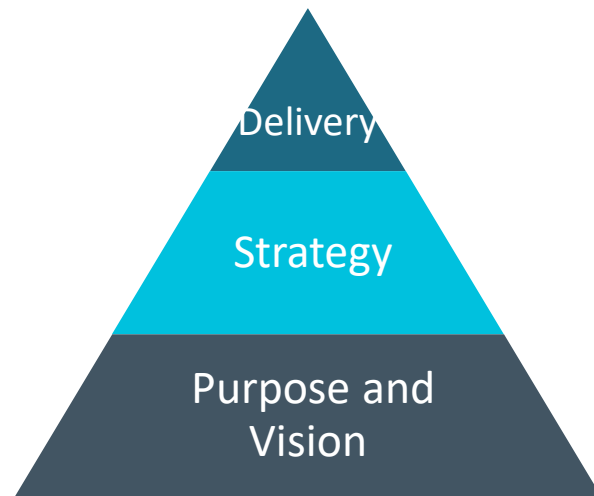
# Introduction: Market Data Strategy and Charter

## Problem:

- ◆ Data is fundamental to market operation and driving evidenced-based improvement
- ◆ No single, complete and adopted strategy or charter to govern data related activity and improvement

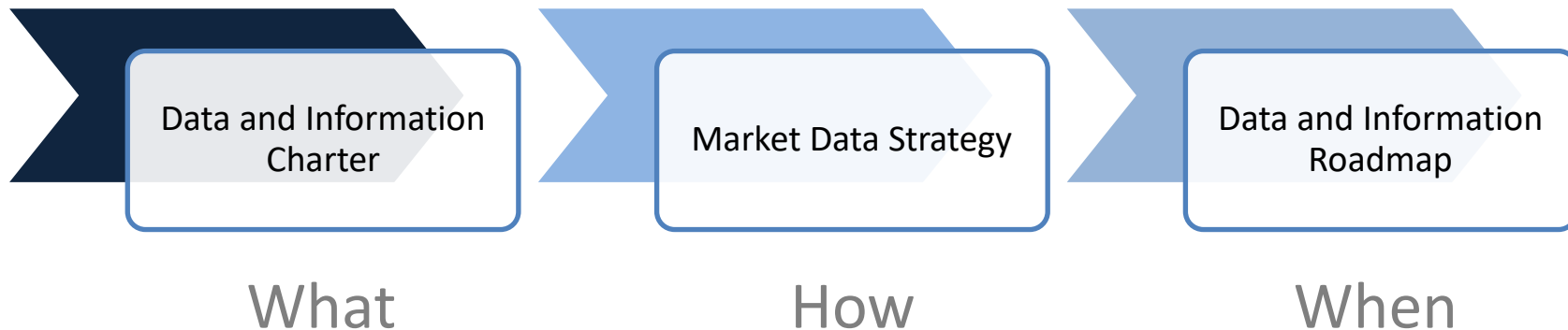
## Solution:

- ◆ Develop **Data and Information Charter** and **Market Data Strategy** aligned to wider purpose, vision and strategy
- ◆ Work with information management consultancy Aimi





## Overview: Market Data Strategy & Charter



- ◆ **Data and Information Charter:** Defines the principles of data and information management and outlines MOSL's commitments to the market
- ◆ **Market Data Strategy:** Building on the Charter, sets out how data and information will be used to achieve the goals of the market.

# Approach and timing

Milestone	Completion date	Status
Charter workshops	w/c 9 <sup>th</sup> August 2021	Complete
Draft Charter document	w/c 23 <sup>rd</sup> August 2021	Complete
Collect feedback and review draft Charter	w/c 13 <sup>th</sup> September 2021	Complete
Publish draft Charter	w/c 20 <sup>th</sup> September 2021	Complete
Strategy working sessions	w/c 18 <sup>th</sup> October 2021	Complete
Draft Strategy document	w/c 13 <sup>th</sup> December 2021	In progress
Collect feedback and review draft Strategy	January 2022	Not started
Publish final Charter and Strategy	February 2022	Not started

## Key inputs

Trading party voice

MOSL strategy

Market codes

DDC, User Forum & TAG

Ofwat & CCW



# Data & Information Charter

## Managing data

All data has a defined lifecycle which starts when the data is captured or collected and ends when the data is discarded. We work consistently to ensure that market data is reliable, securely accessible, and fit for purpose.

1  
Simple, cost-effective  
data capture

2  
Data is secure

3  
Redundant and obsolete  
data is properly  
managed

## Building the value of data

Good quality data is an asset for everyone in the market. We therefore ensure that it is secure, provides insight and helps us make decisions to drive the best customer and environmental outcomes.

4  
Consolidated view of  
market data

5  
Data is outcome and  
value driven

## Improving how we work together

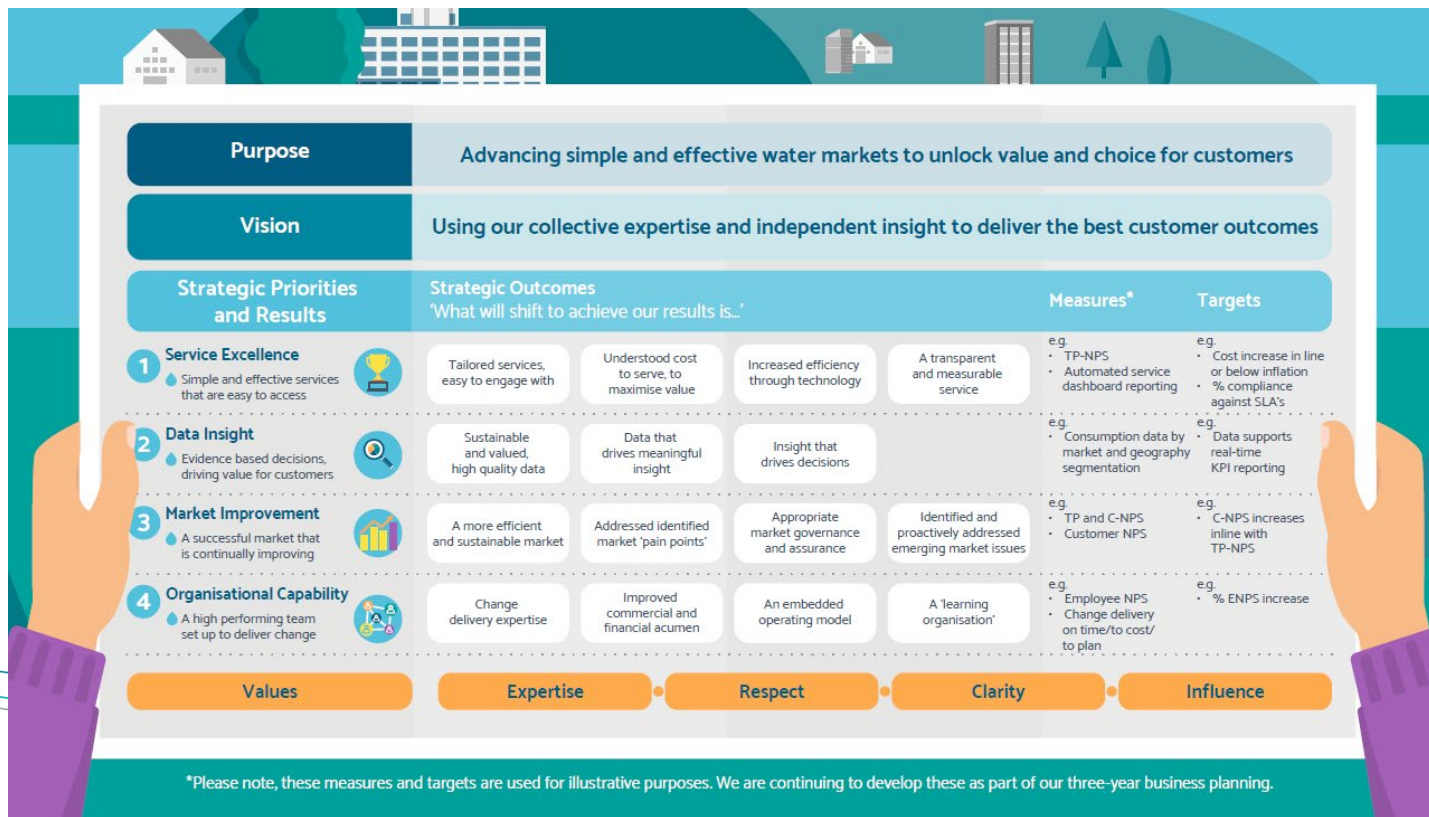
Data can be used to help us work more efficiently together. We know that the data capture is consistent and reliable which, together with having clear owners, improves its trustworthiness.

6  
Data is easily accessible,  
consumable and  
user friendly

7  
Data is assured and  
can be trusted

8  
Data is owned

# MOSL Data Insight Strategy Architecture



# Direction of Data Strategy Use-Cases

## MOSL Strategic Architecture

Identified and proactively addressed emerging market issues

A more efficient and sustainable market

Appropriate market governance and assurance

Understood cost to serve, to maximise value

## MOSL and trading party strategy workshops



## Data & Information Charter Principles

Managing data

Building value of data

Improving how we work together

## Data Strategy Use-Cases / Programmes of Work

1. Reduce the cost and increase the value of market data
2. Develop a market data management framework
3. Use data proactively to uncover risks, issues and opportunities

## Next steps

- ◆ Drafting the Strategy document ready for sharing with the market
- ◆ Continue seeking feedback on Draft Charter – **Please share your views!**

For further discussion or to send feedback, please contact [luke.austin@mosl.co.uk](mailto:luke.austin@mosl.co.uk)