

User Forum

MOSL

Online

Hosted by
Markus Lloyd & Simon Bennett
23 July 2024



Agenda



Item	Description	Who	Time
1	Introduction: MOSL	Markus Lloyd and Simon Bennett	3 – 3.05pm
2	Market Performance Framework consultation	Evan Joanette	3.05 – 3.15pm
3	New Trading Party Survey	Julie Carly	3.15 – 3.45pm
4	Change	Flo Monea	3.45 – 3.55pm
5	Roadmap to a Flourishing Market Consultation	Markus Lloyd	3.55 – 4.05pm
6	Wholesaler RFI: sharing granular consumption	Chris Dawson	4.05 – 4.15pm
7	Continuous Flow Definition and Guidance	Rosie Rand	4.15 – 4.30pm
8	Debate: Raw Consumption Data V Analysed Consumption Data, what would you like to see?	All	4.30 – 4.50pm
9	AOB and Close	Markus Lloyd and Simon Bennett	4.50 – 5pm

Questions for Chat

**Please put a
Q in front**



MOSL

Market Performance Framework (MPF) Reform programme

**Programme &
Consultation 4 update
for User Forum**

MOSL

23 July 2024

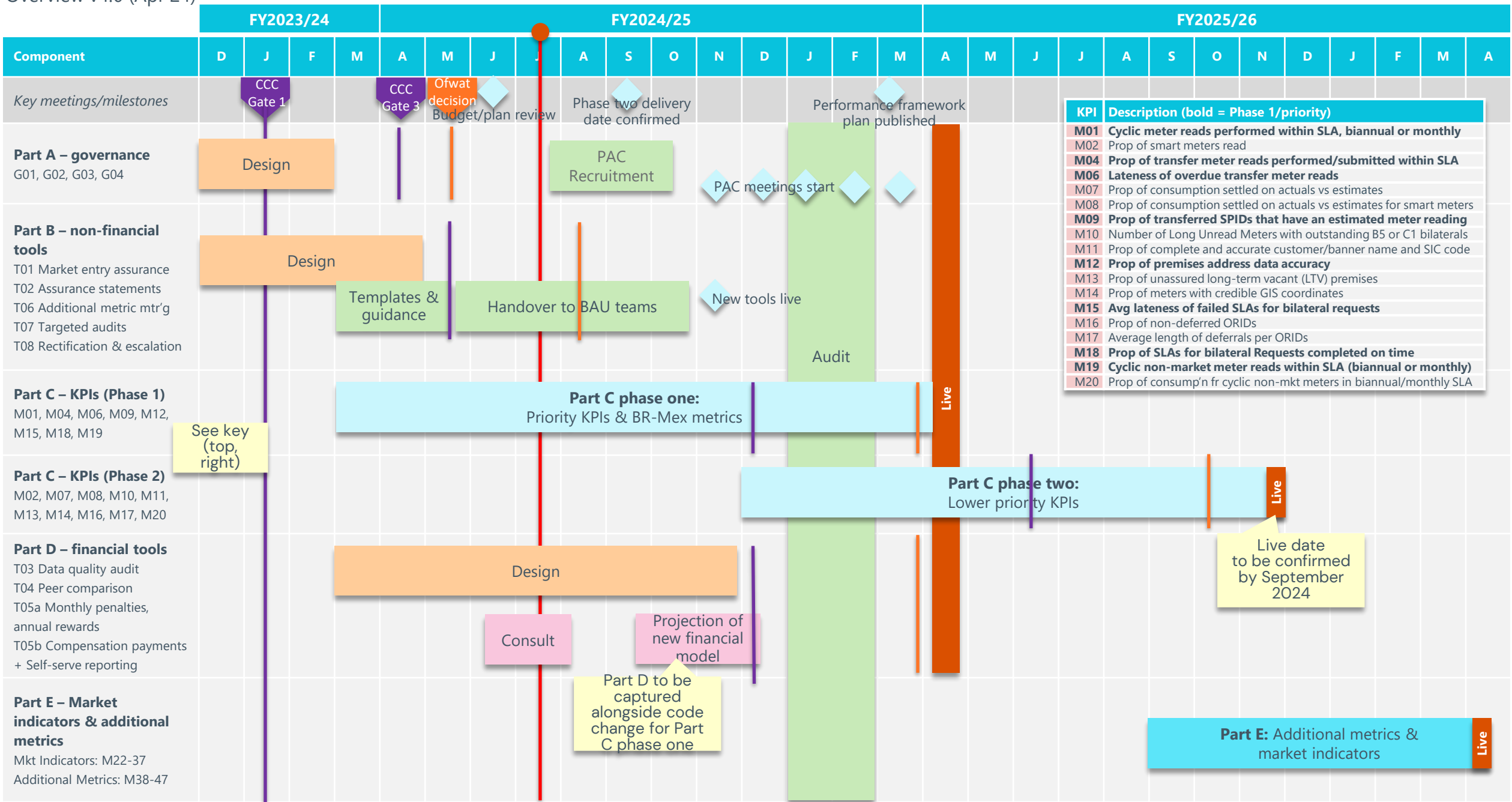


Headlines

- Programme previously on target for cost and quality, but time 'at risk'
- Following detailed review, Steering Group has agreed to phased delivery (next slide); time returns to 'on target' on this basis
- First of five parts of programme (Governance) now approved by Ofwat. Second part (Non-financial metrics) currently awaiting approval
- We have 'trued up' the budget and reviewed what will be delivered in 2024/25
- Recent survey showed very high level of awareness of programme and strong engagement
- Consultation 4 - financial incentives and penalties - is now live. Pre-reading documents issued for 'early sight'
- Workshops and conversations to identify which metrics may be used for Ofwat's Business Customer and Retailer Measure of Experience (BR-Mex) are progressing well.

MPF Plan-on-a-page

Overview v4.0 (Apr 24)



KPI	Description (bold = Phase 1/priority)
M01	Cyclic meter reads performed within SLA, biannual or monthly
M02	Prop of smart meters read
M04	Prop of transfer meter reads performed/submitted within SLA
M06	Lateness of overdue transfer meter reads
M07	Prop of consumption settled on actuals vs estimates
M08	Prop of consumption settled on actuals vs estimates for smart meters
M09	Prop of transferred SPIDs that have an estimated meter reading
M10	Number of Long Unread Meters with outstanding B5 or C1 bilaterals
M11	Prop of complete and accurate customer/banner name and SIC code
M12	Prop of premises address data accuracy
M13	Prop of unassured long-term vacant (LTV) premises
M14	Prop of meters with credible GIS coordinates
M15	Avg lateness of failed SLAs for bilateral requests
M16	Prop of non-deferred ORIDs
M17	Average length of deferrals per ORIDs
M18	Prop of SLAs for bilateral Requests completed on time
M19	Cyclic non-market meter reads within SLA (biannual or monthly)
M20	Prop of consump'n fr cyclic non-mkt meters in biannual/monthly SLA

See key (top, right)

Live date to be confirmed by September 2024

Part D to be captured alongside code change for Part C phase one

Projection of new financial model

Consult

Part C: delivering in phases

Phase 1: priority KPIs & BR-Mex

- **M01** – Cyclic meter reads performed within SLA (biannual/ monthly)
- **M04/05** – Proportion of transfer meter reads performed/ submitted within SLA
- **M06** – Lateness of overdue transfer meter reads
- **M09** – Proportion of transferred SPIDs with estimated reading
- **M12** – Proportion of premises address data accuracy
- **M15** – Average lateness of failed SLAs for bilateral Requests
- **M18** – Proportion of SLAs for bilateral requests completed on time
- **M19** – Cyclic non-market meter reads performed within SLA (biannual or monthly)

To go live: April 2025

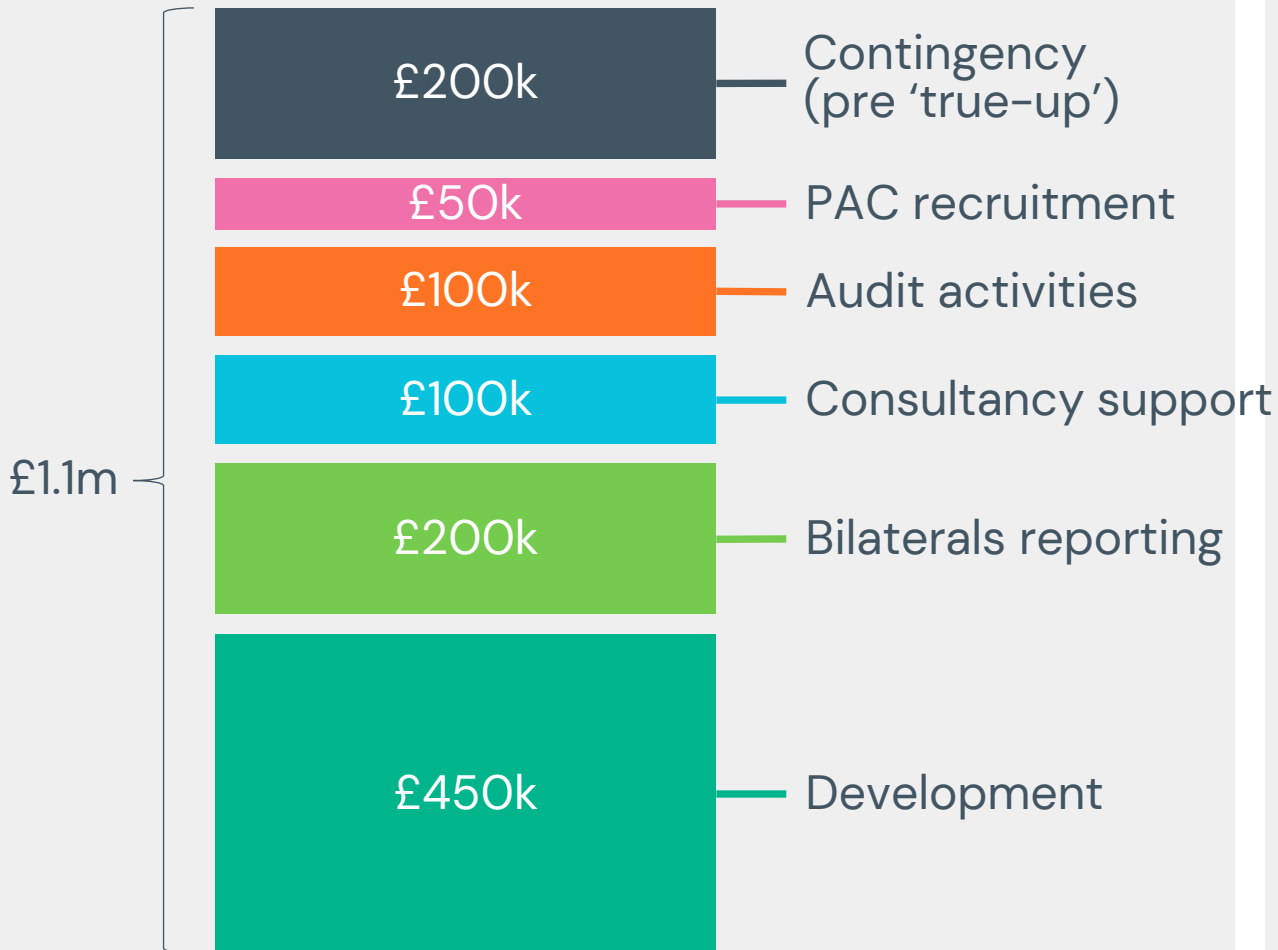
Phase 2: lower-priority KPIs

- **M02** – Proportion of smart meters read
- **M07** – Proportion of consumption from cyclic meter reads performed within the biannual or monthly Service Level Agreement
- **M08** – Proportion of consumption settled on actuals vs estimates for smart meters
- **M10** – No of Long Unread Meters with outstanding B5 or C1 bilateral
- **M11** – Proportion of complete and accurate customer name/banner name and Standard Industry Classification (SIC) code
- **M13** – Proportion of unassured long-term vacant (LTV) premises
- **M14** – Proportion of meters with credible GIS coordinates
- **M16** – Proportion of deferred ORIDs
- **M17** – Average length of deferrals per ORID
- **M20** – Proportion of consumption from cyclic non-market meter reads performed within the biannual or monthly SLA (November 2025 (TBC))

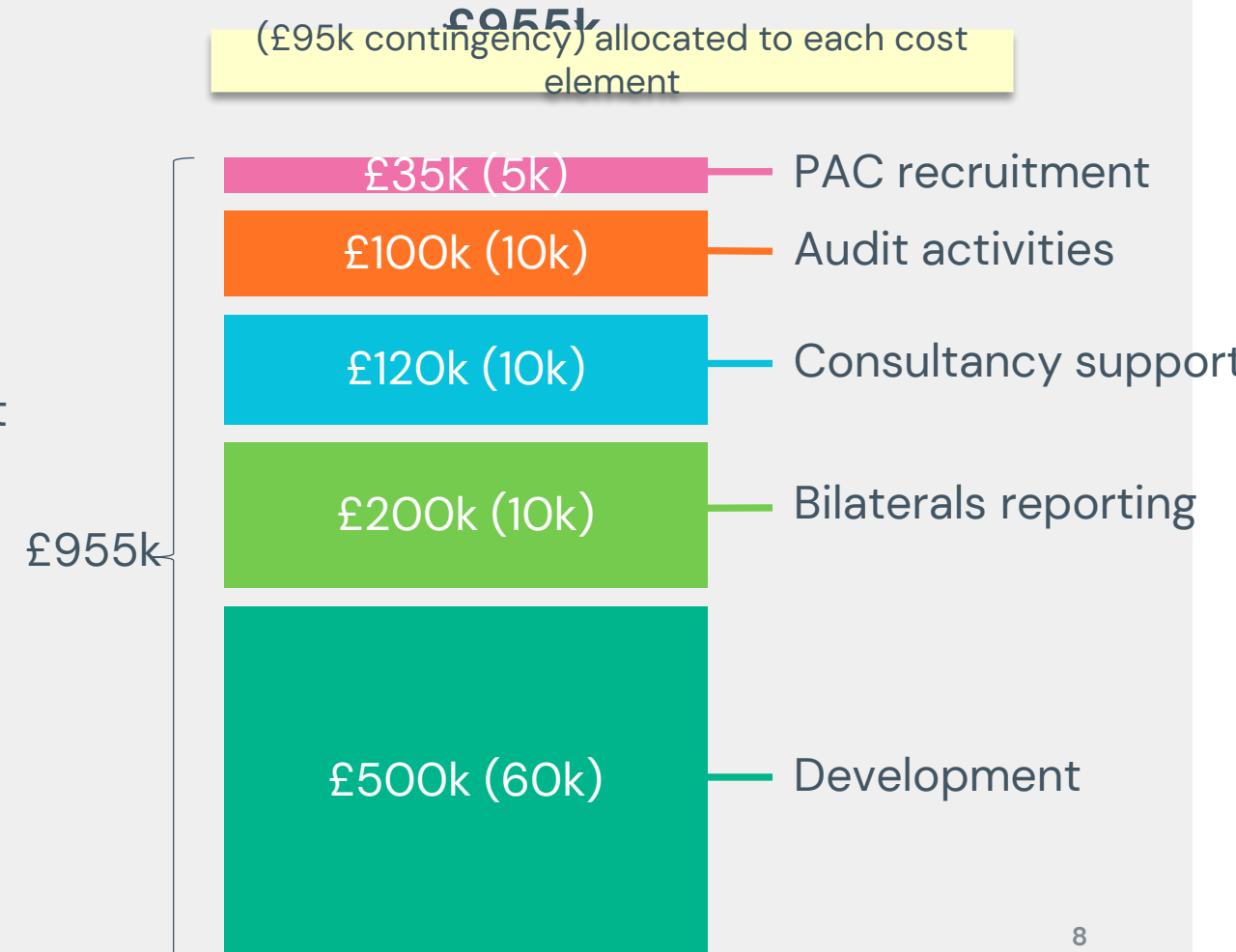
To go live: post April 2025

'Trued up' budget

Business case: £1.1m

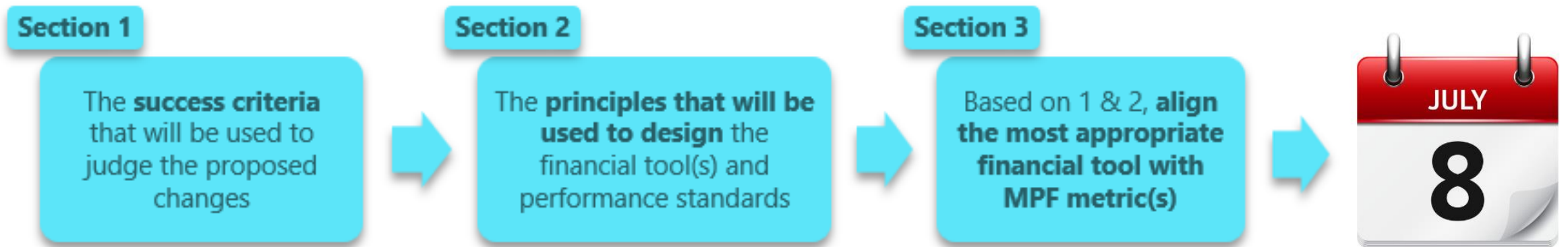


June review:



Consultation 4

Part D – financial tools



Consultation 4 focuses on the **design** of financial tools and aligning them to metrics.

The scale of charges (penalties, compensations and rewards) and **actual performance standards** for each KPI will be determined in the Autumn

Consultation 4

Part D – Section 1



Section 1: Process overview and success criteria

Includes:

- Overview of previous consultations
- Programme success criteria
- How proposals will be taken forward
- Explanation of each Section
- Overview of issues with the current MPF and possible solutions
- Sections 2 and 3 also have MOSL's view on how we have delivered against success criteria

Market Performance Framework (MPF) Reform Programme

Consultation 4
Pre-consultation document

Component 1 of 3: Process overview and success criteria

17 June 2024 mosl.co.uk

Success Criteria Table:

1	Facilitate Improved Customer Outcomes
2	Improve Trading Party Accountability
3	Support Competition
4	Consistency & Compatibility with Regulatory Regime
5	Enduring and Agile
6	Transparent and proportionate
7	Value for money
8	Simplicity

Consultation Flowchart:

Consultation 3 (September 2023) - Shortlist activities, metrics, tools and governance to create MPF Model → Consultation 4 (8 July 2024) - Part D - Financial Tools

Consultation 4

Part D – Section 2

Section 2: Design principles for financial tools and performance standards

Includes:

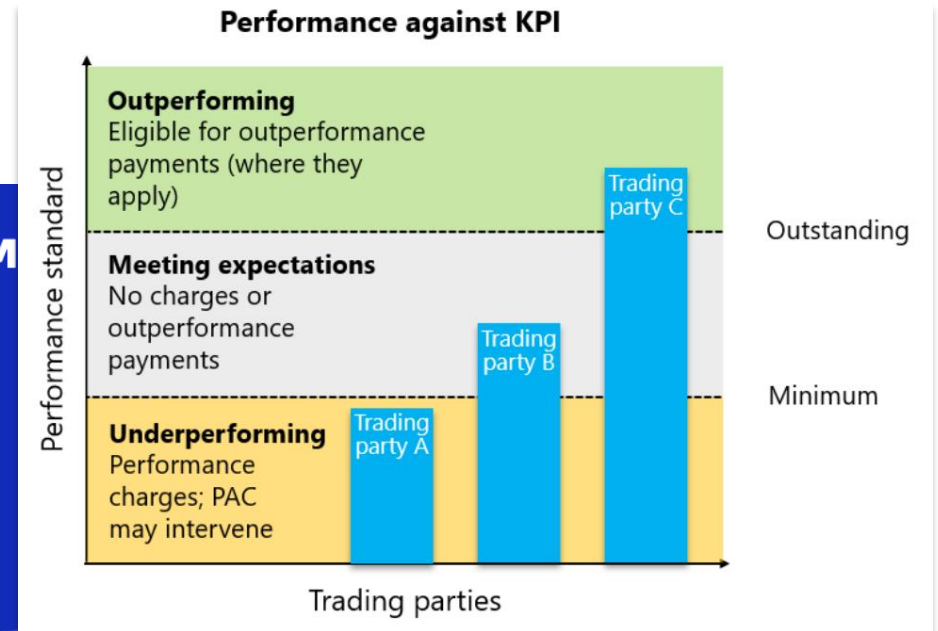
- Penalty charge principles x 10
- Outperformance payments x 9
- Compensation payments x 7
- Other financial principles x 6
- Performance standards principles x 14
- Performance standards model
 - ‘minimum’ & ‘outstanding’
 - Worked examples

Market Performance Framework (MPF) Reform Programme

Consultation 4
Pre-consultation document

Section 2 of 3: Design principles for financial tools and performance standards

24 June 2024



		Minimum	Outperforming				
Performance standard for illustrative purposes only		70%	90%				
Performance		Smaller trading parties			Larger trading parties		
		A	B	C	D	E	F
Month X	No of times task is performed	100	100	100	1,000	1,000	1,000
	Successes	65	75	95	650	750	950
	Failures	35	25	5	350	250	50
	Performance (%)	65%	75%	95%	65%	75%	95%
	Performance vs standard	Under-performing	Meeting expectation	Out-performing	Under-performing	Meeting expectation	Out-performing
Annual ¹	Performance (%)	95%	80%	95%	95%	80%	95%
	Performance vs standard	Out-performing	Meeting expectation	Out-performing	Out-performing	Meeting expectation	Out-performing
Impact ²	Penalty charges in month X	Yes	No	No	Yes	No	No
	Eligible for out-performance payment at year's end	Yes	No	Yes	Yes	No	Yes

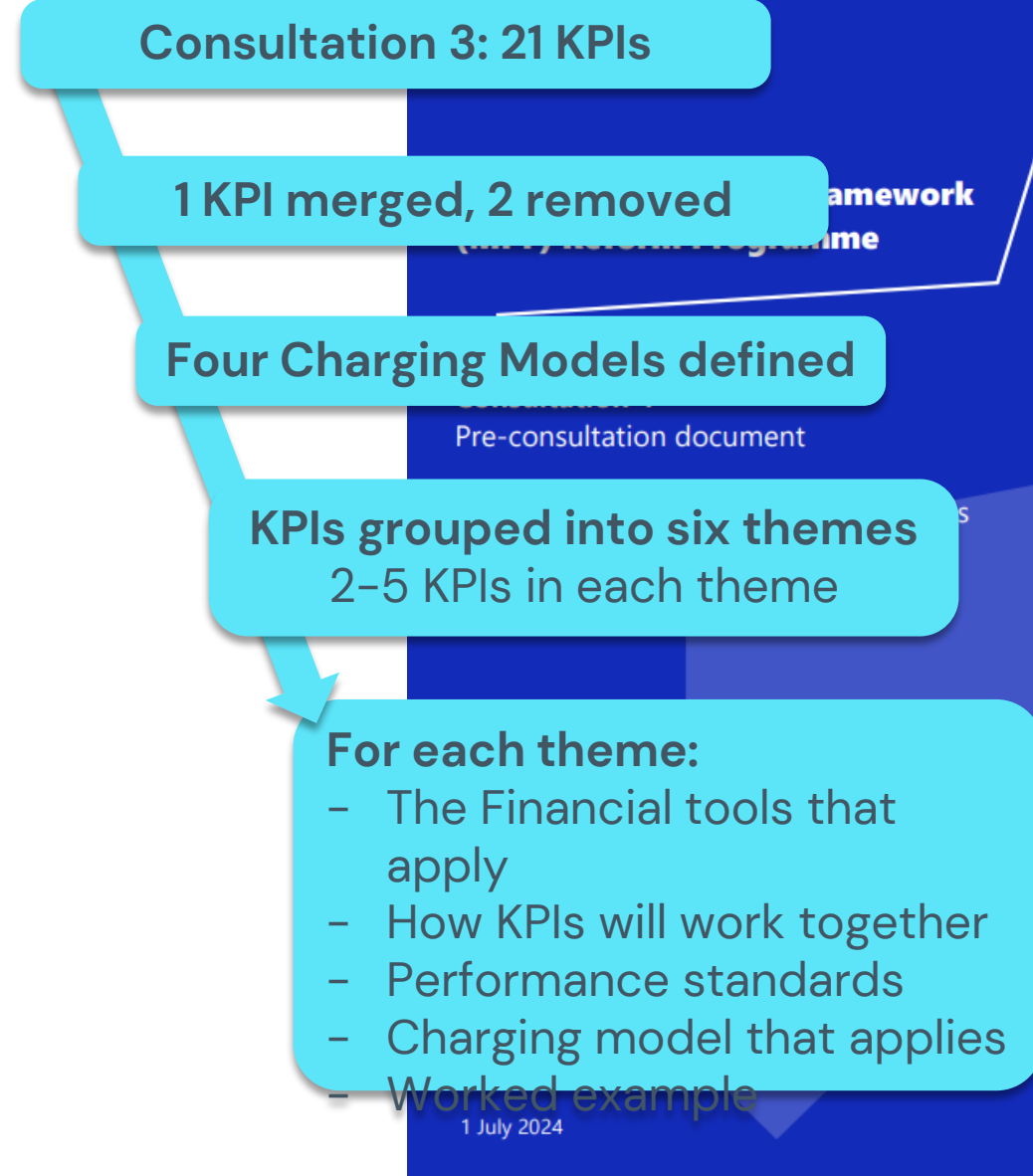
Consultation 4

Part D – Section 3

Section 3: Mapping metrics to tools

Includes:

- Our starting point – 21 metrics (now 18)
- Which metrics have associated incentives
- Grouping metrics into six 'themes'
- Explanation of four charging models
- Taking each theme in turn, providing:
 - Rationale for KPIs includes
 - How the KPIs work together
 - Calculations
 - Performance standards
 - Charging model
 - Worked examples



Responding to Consultation 4

- Deadline is Friday 2 August
- Question count is deceiving, questions are simple, all optional
- PDF and Word versions available in 'key documents'
- Text boxes allow fulsome responses if desired
- Queries to mppreform@mosl.co.uk



MOSL

Market Performance Framework (MPF) Reform
Consultation 4

Thank you for completing this survey. A PDF and Word version is available on the [MOSL website](#) if you would like to review and share the questions before submitting your response.

Only the 'about you' section has mandatory questions. The rest of the questions are optional, giving you the flexibility to concentrate on the areas you feel are most important to your organisation.

To go back to a previous answer, use the icons at the bottom of the page.

The deadline for submissions is Friday 2 August.
For any queries, please email mppreform@mosl.co.uk.

[View Survey](#)

[Online survey](#)
[PDF and Word](#)
[Webinar](#)

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Questions



To Follow



New Trading Party Survey platform

Julie Carly

Corporate Affairs Manager, MOSL

User Forum July 2024



Overview: movement across services and engagement

Service Area	March 2021	March 2024
Market Operation	3.6	3.9
Market Assurance	3.4	3.7
Market Improvement	3.5	3.8
Governance and Support Services	3.5	4.0
Engagement and Communication	3.4 (Oct 2021)	4.0
Website	4.0 (Oct 2021)	3.9
Overall Performance	3.8	4.0



Changes implemented

- Query management system (QMS) My MOSL
- Operational Performance, lagging of reports
- High volume of trading party requests process
- Trading Party Engagement: direct contact
- Website: search functionality improvement



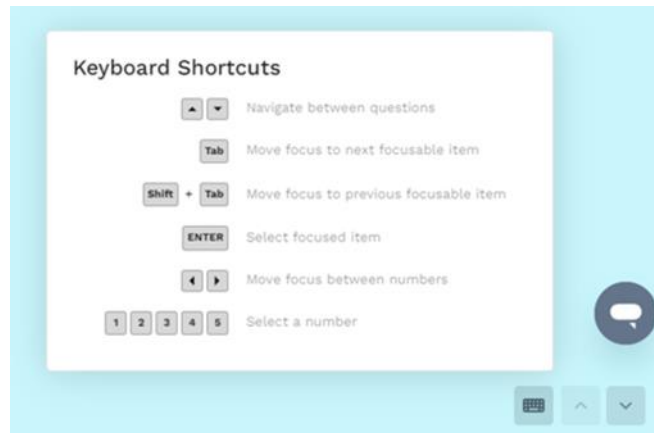
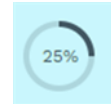
New Trading Party Survey process

- Moving away from two full surveys a year to:
 - First new Annual survey October 2024
 - One rated question asked in March
 - How would you rate MOSL's overall performance as market operator?
- New Survey Platform



New Trading Party Survey platform

- Make your survey experience more engaging
- Up to 10,000 characters for text responses
- Enables you to see how far you are through the survey
- Have your responses sent to you on completion
- Ability to move backwards
- Keyboard short cuts



Any questions?



Changes

Flo Monea
MOSL

23 June 2024



Change Proposals/Reports to table at CCC in the next 3 months*



Reference	Title	Summary	Stage	CCC meeting date(s)
CPW139h	Bilateral Hub(Additional enhancements pt2)	CPW139h will deliver	Recommendation	10 Aug 24
CPM059	MAC & MOSL Articles Duplication	Revise the Market Arrangements Code and MOSL's Articles of Association to eliminate redundancy and align membership, voting, and director appointments. Update the classification of Associated and Unassociated Retailers to match the Strategic Panel's approach.	Recommendation	10 Aug 24

Trading Party requests*

Reference	Title	Engagement type	Start date	End date

Awaiting Ofwat Decision*

Reference	Title	CCC Recommendation	Decision Due	Implementation Date
CPM058 & CPW149(b)	MPF Reform - Non-financial tools	Unanimous recommendation	14 Aug 24	13 Sept 24
CPW142	Wholesaler Smart Reads	Majority recommendation	13 Jun 24	06 Dec 24
CPW132	Credit Support and Wholesaler Credit ratings	Unanimous rejection	Overdue	Overdue
CPW151	WRC Housekeeping		08 Oct 24	08 Nov 24

Awaiting Implementation*

Reference	Title	Central System Impact	Date of Release
CPW148	Transfer Read Notifications for Outgoing Retailers	Y	06 Dec 24

Implementations*

Reference	Title	Central System Impact	Date of Release
CPM058 & CPW149 (a)	MPF Reform - Governance	N	26 Jun 24
CPW139f	Bilateral Hub (Accredited Entities, Planned & Unplanned events, additional enhancements pt1)	N	26 Jun 24

Roadmap to a Flourishing Market

Markus Lloyd

23 June 2024










Introduction : Strategic Panel (sub-group in yellow)

 <p>Trisha McAuley OBE Chair</p>	 <p>Pamela Taylor Independent Strategic Panel Member</p>	 <p>Paul Smith Independent Strategic Panel Member</p>	 <p>Rick Hill Independent Strategic Panel Member</p>	 <p>Christina Blackwell Strategic Panel - Customer Representative</p>	 <p>Dan Mason Ofwat Strategic Panel Representative</p>	 <p>Shaun Kent Ofwat Strategic Panel Representative</p>	 <p>Michael Charlton Defra Strategic Panel Representative</p>
 <p>James Cleave Retailer Strategic Panel Member</p>	 <p>Johanna Dow Retailer Strategic Panel Member</p>	 <p>Andrew Beaver Wholesaler Strategic Panel Member</p>	 <p>Chris Offer Wholesaler Strategic Panel Member</p>	 <p>Dr Sarah McMath MOSL CEO</p>	 <p>Adam Richardson Strategic Panel Secretary</p>	 <p>Lucy Darch Previously Retailer Strategic Panel Member</p>	

Roadmap Consultation

The Reference Codes

Conditions	Investment Confidence (Win-Win Market Economics)	Market Structure / Definition (Scope Clarity)	Regional Consistency	Efficient Market Processes	Information Accessibility	Clear Obligations	Data Accuracy
Reference prefix	IC	MSD	RC	EMP	IA	CO	DA
Actions	Strategic Panel	Ofwat	MOSL	CCW	Defra	Retailers	Wholesalers
Reference prefix	P 	O 	M 	C 	D 	R 	W 

Roadmap Consultation Questions

General and Conditions

Q1: Overall, to what extent do you support the approach to the draft roadmap?

Q2: Do you believe the conditions will drive the desired customer behaviours and therefore outcomes?

Q3: Are there any conditions you think should not be included? If so, please use the reference code(s)

Q4: Are there any conditions that should be **added or changed**? If so, please use the reference code(s)

Roadmap Consultation Questions

Actions and General

Q5: Do you believe the actions outlined will deliver the conditions?

Q6: Are there any actions you think should **not** be included? If so, please use the reference code(s)

Q7: Are there any actions that should be **added or changed**? If so, please use the reference code(s)

Q8: Is there any other feedback you would like to provide on the draft roadmap?

Timings

Panel Round Table – 30 Jul 24

Consultation Closes – 6 Aug 24

Panel Open Forum – 23 Sep 24

Strategic Metering & Data sharing RFI responses

Chris Dawson

July 2024



National Metering Strategy launch & Follow on Work

Strategy downloaded 1,500 times

- Strategic - work continues Data Sharing & related outputs
- Other examples
- Continuous flow definition/guidance – published July 2024
- Standard process/format for reporting Rollout plans – Dashboard to be developed by MOSL for 2025
- Rollout plans communications – MOSL awaiting invite to RWG unplanned/planned subgroup and plan to meet with UKWRC chair
- Wholesaler data charges – review from November 2024
- Leakage allowance/smart meters – awaiting invite to RWG policy group meeting
- Cost of meter reading – Work commenced

THE WATER REPORT COMPETITION WATCH
SKIN IN THE GAME
 Retailers and wholesalers have different, but aligned, interests in making the smart meter rollout a success, as their representatives on the Strategic Panel explain.

THE WATER REPORT
THE WATER REPORT
 POLICY | REGULATION | COMPETITION

Strategic Panel
 REVIEW | LUCY DARCH

MOSL @MOSL_ · Apr 29
 We were delighted to be invited to present at the Smart Water Systems Conference last week. Metering Sponsor, Steve Formoy, gave an overview of the Strategic Panel's recently published Metering Strategy:
bit.ly/3Uc3f8w

3 Sharing smart metering data

Standard approach

- Wholesalers should adopt a consistent approach.
- Options are currently being explored.

1 Arxiva Consulting has researched options for data sharing (available on MOSL website)

- Three options:
 - Organic growth (not recommended)
 - Central data hub
 - Peer-to-peer sharing via a 'trust framework'
- Process being developed to make final assessment and decision

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Steve Formoy speaks at the smart metering conference

Follow the link to read the strategy

[Link to all documents](#)

Data Sharing RFI - Summary

Data sharers

Section 1- Wholesalers currently sharing data with retailers.

Sharers:

Sharing data from smart meters

- Anglian Water
- Thames Water

Sharing data from loggers and AMR meters

- South West Water
- Wessex Water
- Yorkshire Water

MOSL
Section 2- Wholesalers not currently sharing data with retailers but planning to do so.

Non-sharers:

- Affinity
- IWNL (NAV)
- Leep Water Networks (NAV)
- Northumbrian Water
- Portsmouth Water
- SES Water
- South Staffordshire
- Southern Water
- United Utilities Water

Are you currently using the data format as set out in the Granular Data Sharing Specification published by MOSL and the Metering Committee?

Reminder - The Granular data standard Specification defines a format for sharing consumption data.

Scope -The document covers the format of files for sharing granular consumption data (15 minutes, hourly, daily) from AMI meters, AMR meters and Data Loggers.

Granular Data Sharing Specification



- Please follow the Granular Data Standard Specification.

Of those wholesalers currently sharing data only 2 (Anglian & Thames) are using the Granular Data Sharing Specification

Points of note

1. Creating a standardized data service that caters to retailers

2. Caution against isolated solutions and emphasize the need for standardization to support Retailers effectively

4. Platforms we would likely be using are industry standard and would expect to be able to match other companies

3. Our approach will be determined by the proposed method of data sharing

5. MOSL should think about providing guidance for a consistent approach for all retailers and wholesalers to sharing granular data

7. We intend to align to the agreed industry data sharing approach and will continue to engage in these discussions as the approach is agreed and the solution is developed

8. Strongly advocate for a centralized market solution to receive granular data from Wholesalers, avoiding the pitfalls of multiple inconsistent interfaces and additional costs

6. We believe the end user should be considered for access into the data sharing mechanism.

9. At this point it's difficult to confirm any future evolution of these services until MOSL have further defined an enduring solution

Questions

Are you holding off and waiting on MOSL?



Retailers – What do you needed?
(value added services/
daily/hourly/15minute
reads)

Data sharing – next steps

July

Initial data gathering
– use cases, RFI on
current systems and
processes, TP visits



August

Identify data gaps and
resolve - e.g.
requirements
specifications needed
for key use cases



September

Assess options
Draft proposal
(including business
case)



October & beyond

- Seek Metering Committee input & Panel mandate on draft proposal
- Consultation
- Finalise Business Plan





NHH Continuous Flow Good Practice Guidance

(including CF Standard Definition)



**STRATEGIC
PANEL**
& Committees

Strategic Panel's Metering Committee – Rosie Rand

Continuous Flow Good Practice Guidance

Background

- Most of the nation has been classified as under water stress by the Environment Agency
- England and Wales now have national water targets, driving both household and business water use reduction
- Most water companies will soon be rolling out smart meters across homes and businesses
- Smart metering will identify continuous flows, which represent great water saving opportunities
- Reducing continuous flow will become one of the most important demand reduction actions to ensure we have enough water for future generations and business growth

With the strategic rollout of smart meters to non-households (NHH) premises across the UK, this opens up many benefits to the NHH market. Identification of continuous flow from smart meter data is a key benefit of smart metering, with lots of benefits to the market for Wholesalers, Retailers and their customers.

Continuous flow can help identify potential leaks or wastage, but also flag high bills or customer issues proactively. It is important that there is a consistent approach to help drive service and opportunity across all Wholesaler regions and Retailers. Currently there is no standard definition or guidance for continuous flow.

Continuous Flow Good Practice Guidance

About this guide

This good practice process has been developed by the Strategic Panel's Metering Committee under Quick Start Project QSP16 to produce a practical guide on continuous flow in the NHH market, including a standard definition, insights, recommendations and potential code changes to maximise the benefits of smart meter data and continuous flow.

As always, trading parties are expected to continue working together constructively to utilise smart meter data to benefit the market and customers appropriately and in accordance with their existing Code responsibilities and obligations.

This work relates to the strategic metering programme's aim to make granular consumption data available to all.

As Wholesalers continue to roll out smart meters, this guide aims to drive a consistent definition and roles and responsibilities in the NHH market.

Good Practice Guide Content

1. Continuous Flow insights

- What is Continuous Flow and Types
- Data and Market insights

2. NHH Standard definition of Continuous Flow

3. Good Practice

- Roles and Responsibilities
- Communication and Activities
- Challenges
- Conclusions and Recommendations

4. Appendices

What is Continuous Flow?

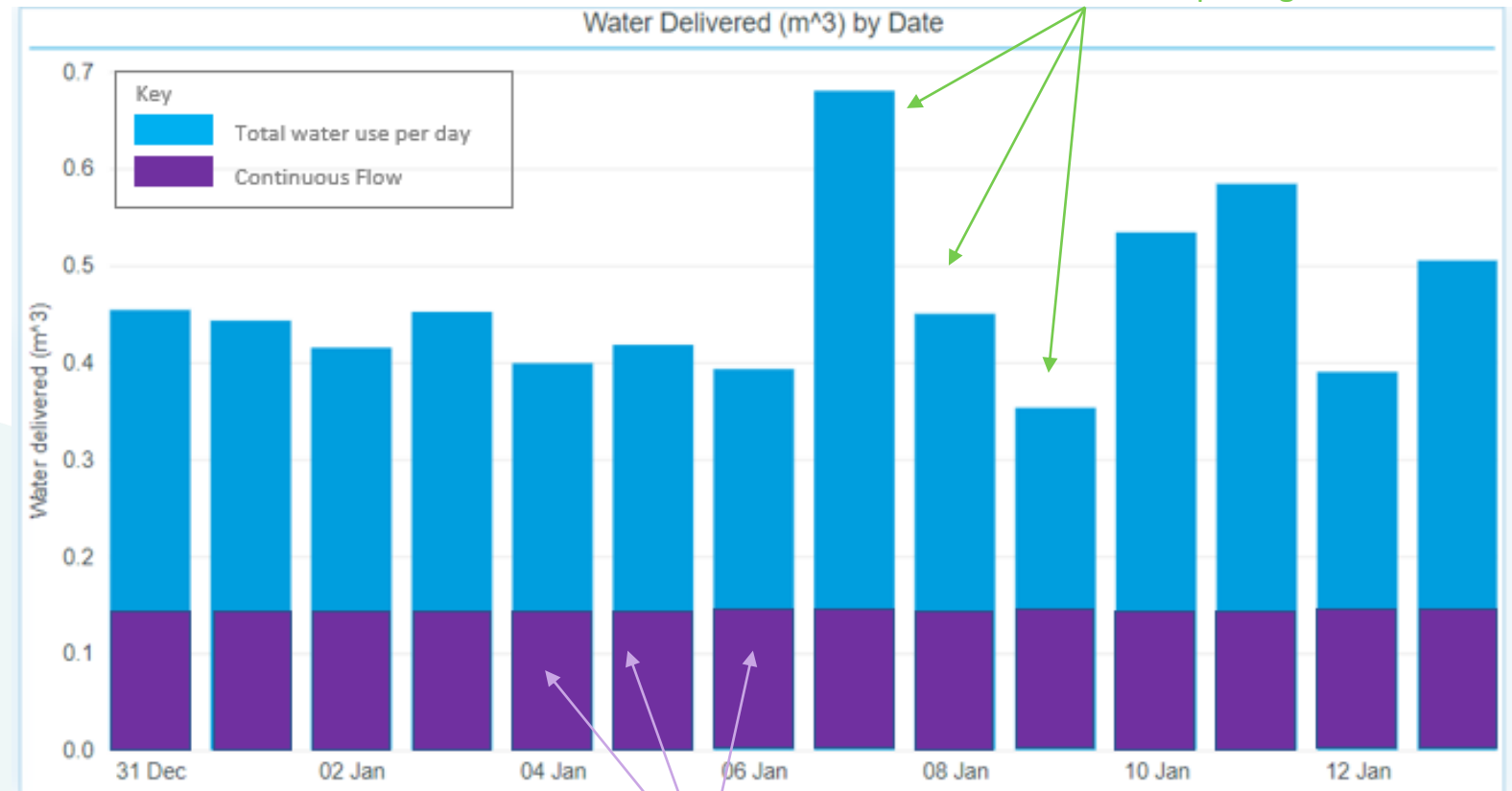
Continuous flow (CF) is a constant flow of water through a property's water meter. This can be flagged either:

1. Using smart meter readings or logger usage data
2. Automatically from alerts built into the meter technology

For the purpose of this Guidance Document, we are defining the continuous flow definition using smart meter readings data to calculate continuous flow.

Figure 1 is an example of daily water use in a business with continuous flow.

Figure 1: Example of business with continuous flow



Total daily water consumption will vary each day depending on business opening hours and use

Total daily continuous flow each day is normally consistent (in this example it is around 0.15 m³ a day)

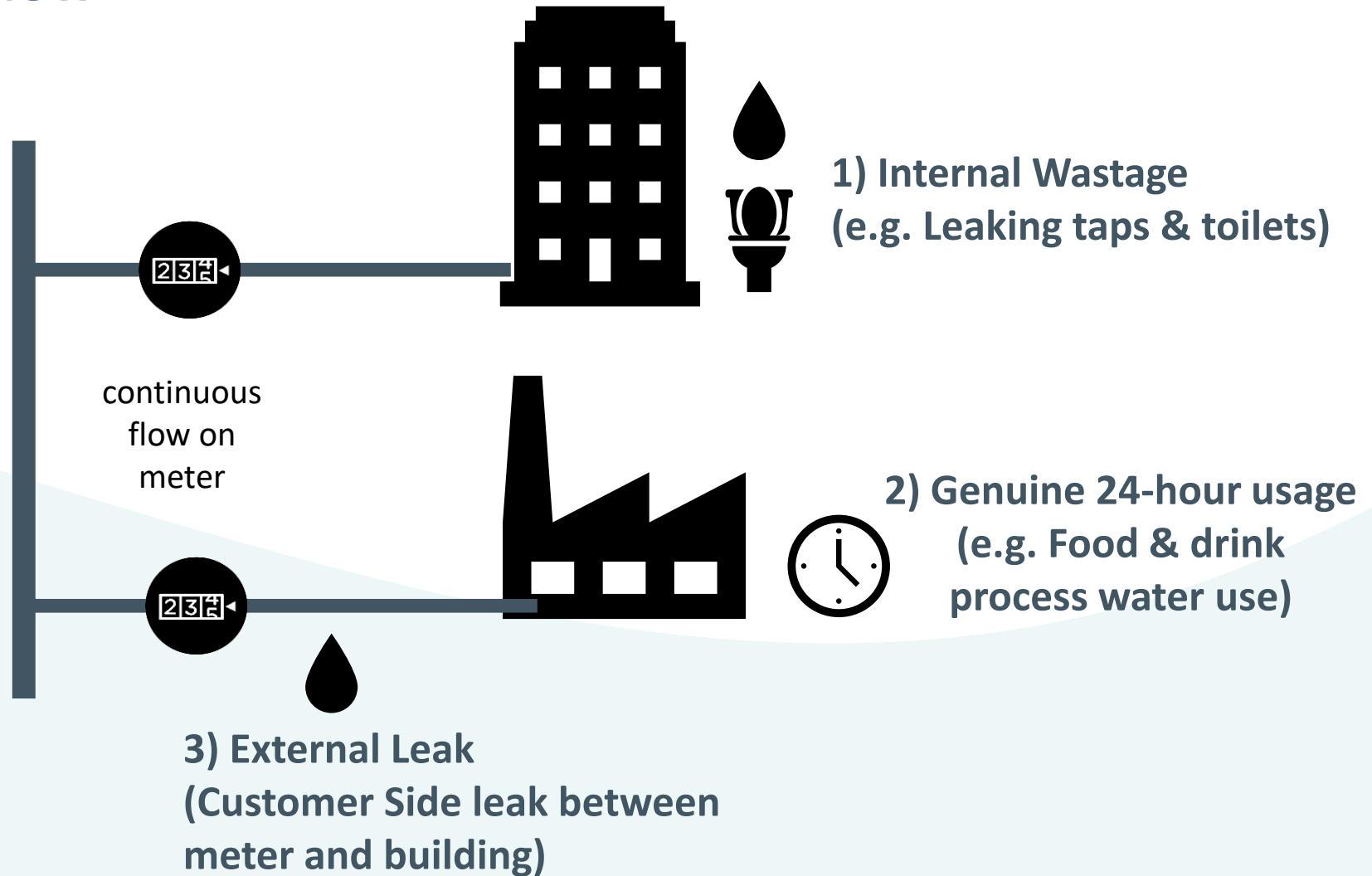
Types of Continuous Flow

NHH continuous flow (CF) can either be classed as:

1. Internal Wastage
2. Genuine 24-hour usage
3. External leak

See appendix 1 for more detail on CF types.

More data & information is needed to be able to determine the split of continuous flow into these 3 elements. As more continuous flow is actioned, and data obtained this insight will be vital.



1a. Types of Continuous Flow: Internal Wastage

Continuous flow from internal wastage fix data* on high footfall businesses with high domestic water use (toilets, urinals & taps) show that total wastage is caused by the following:

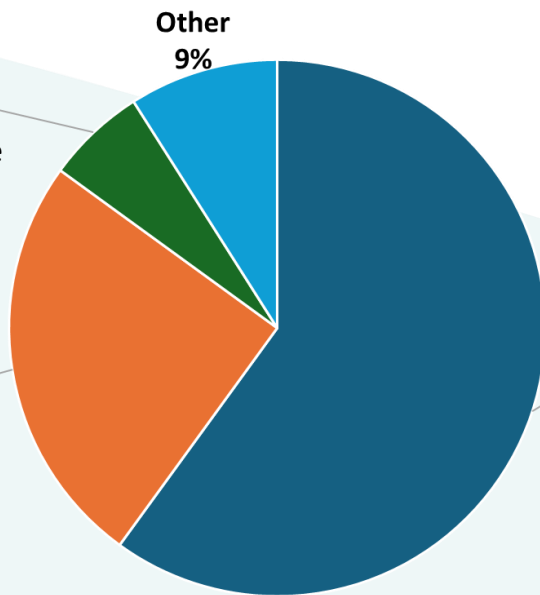
Spot the leaky loo
Have you seen one of these?

Trickle
200 litres/day
£161.33/year

Rippling
600 litres/day
£483.99/year

Flowing
8,000 litres/day
£6,453.20/year

Thames Water logo



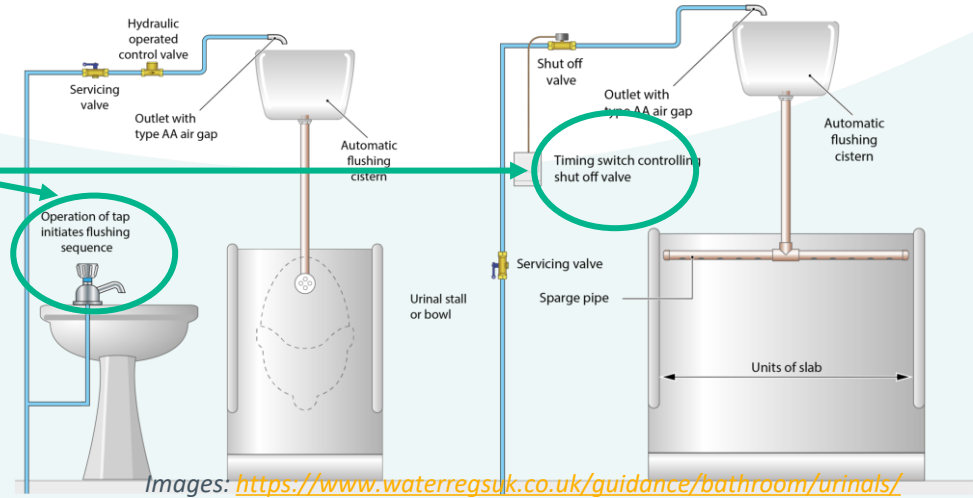
Leaking taps 6%
Leaking taps can waste 1 – 1,800 litres a day, average 275 l/d)

Uncontrolled urinals 25%
Savings of 2,100 litres a day per urinal control installed

Leaky loos can waste 200 – 8,000 litres a day, average 2,100 litres

Without urinal control valves or infrared sensors, urinals can flush multiple times an hour every hour (24hrs a day), even when not in use.

Fitting urinal controls is a simple and easy way to reduce internal wastage.



*from Thames Water Smarter Business Visit data

Smart meter data insights on Continuous Flow

Early insight using live smart meter data and this good practice CF definition suggests:

- Around 25%* of all NHH smart meters have Continuous flow of at least 1 litre/hr on any day, and Artesia data analysis showed that up to 42%** of meters across a year will have a continuous flow event of at least 1 litre/hr.
- 23% - 30% of all the water flowing through NHH meters at any point in time is continuous flow*
- The average continuous flow on any day is around 2,132 litres per day, with the median value being 363 litres per day. Qualitative data suggests that the average is skewed by genuine consumption sites and large supply side leaks that are yet to be identified*.
- The cost of an average continuous flow could add around £6 a day or £2,000 a year to a water bill (example using a nominal water and sewage cost of around £3 per m³ and a continuous flow of 2,000 litres a day) – please note that water costs vary across the UK
- From Artesia's insight from 8206 NHH smart meters, there was a total of roughly 4.5 MI/d of CF. If this was scaled up to all 1 million NHH's in England, this could represent around 550 million litres of continuous flow a day**.

~25% of all NHH meters show Continuous Flow *

23 -30% of all NHH usage is Continuous Flow*

550 MI/d of business water use in England could be Continuous Flow

**Thames Water data of "live" continuous flows*

***Artesia CF Analysis using data over a year*

Why use a standard definition of Continuous Flow?

Impact of definition:

It is important to understand that the definition of continuous flow (i.e. the number of days and minimum quantity of water through meter) can have significant impacts on:

- The total number of meters flagged as having continuous flow and the amount of water associated with Continuous flow
- Wholesalers water balance and leakage calculations
- Amount of communication, action and impact to Wholesalers, Retailers & their customers – the definition will impact how many alerts and how regularly these will be flagged. It is important that there is a careful balance to ensure genuine continuous flow events are notified, and too many notifications could mean that they are ignored.

As part of this Good Practice Guide, Artesia carried out Continuous flow (CF) analysis for MOSL* to determine a draft definition of CF. Using smart meter data, an analysis was carried out using different definitions with CF volumes ranging from 1 - 1,200 litres an hour and 1 - 28 days duration. Below is a summary of the variance using a sample of different flow rates and durations, and the impact on the total demand (water use) from CF and the % of total NHH properties with CF:

These examples show a comparison of 7 days and 14 days duration and various flow rates to show impact of Continuous flow over the whole year of smart meter data. The percent of total NHH demand from CF can range from 6.1 - 24.4%, and % of total NHH properties from 0.5 – 48.5% depending on definition, so it is important that a standard definition is used by the NHH market.

CF duration (days)	CF flow rate (l/hour)	CF % of total NHH demand	% of total NHH properties
7	1	24.4	48.5
7	2	24.4	43.8
7	5	23.9	35.3
7	10	23.4	28.8
7	360	13.7	4
7	720	9.6	1.6
7	1200	7.1	0.7

CF duration (days)	CF flow rate (l/hour)	CF % of total NHH demand	% of total NHH properties
14	1	22.8	42.4
14	2	22.8	37.8
14	5	22.3	30.2
14	10	21.8	24.1
14	360	12.2	2.9
14	720	8.1	1.2
14	1200	6.1	0.5

*Artesia carried out this analysis using Thames Water smart meter data. See full report “MOSL_CF-analysis-on-non-households_Artesia_20240328”

NHH Standard Definition of Continuous Flow

The definition of continuous flow has been set out below as good practice for the NHH Market, taking recommendations derived from the smart meter data analysis carried out by Artesia and final report*.

It should be noted that one standard CF definition may not be appropriate for all types and sizes of businesses, and these definitions are best used for NHH properties with an average daily consumption (ADC) of less than 11,000 l/prop/day for targeting water demand savings. They can also be used on large NHH properties, but it should be noted that there is more chance of the continuous flow having an element of legitimate water use. This standard definition is a starting point for the NHH market with smart meter rollouts, and will be reviewed as more evidence and data is obtained:

For detection of CF & Water Balance Calculations:

1 litre/hour or more flowing through a meter every hour (24hours) for **14 consecutive days or more**

The rationale for setting the standard definition of continuous flow at 14 days was that the analysis showed that this was the point at which you would see genuine continuous flow (rather than short-term issues like taps being left on) that needs an intervention. Using a longer duration would reduce the speed of response but will ensure that the Retailer or business doesn't get too many alerts, and action will be taken when needed.

For targeting or actioning CF:

≥ 10 litre/hour flowing through a meter every hour (24hours) for **14 consecutive days or more**

This guidance suggests that a higher flow value of 10 l/hr is used to notify or carry out activities from continuous flow data.

This is 240 litres a day or more and equivalent to a very small leak on a toilet or tap. Anything less than this is difficult to locate and can be non-economical to fix.

*Artesia carried out this analysis using Thames Water smart meter data. See full report "MOSL_CF-analysis-on-non-households_Artesia_20240328"

Roles & Responsibilities – minimum standards

Organisation	Role & Responsibility	Continuous Flow (CF) Actions	Frequency	Format
Wholesaler	<p>Responsible for</p> <ul style="list-style-type: none"> • Delivery of statutory Water Resource Management Plan activities to meet supply-demand balance targets • Reducing business demand & leakage – core action for demand reduction performance commitment and Defra national water target agenda • Enforcing Section 75 of the Water Act • Working closely with Retailers & their NHH customers • the rollout of smart meters and replacement programmes. • providing smart meter granular data & continuous flow data • Reducing business demand & leakage 	<ul style="list-style-type: none"> • Calculate continuous flow using smart meter granular data & standard definition • Provide CF data to Retailers & their customers • Communicate with Retailers and agree comms route (Wholesaler led, Retailer led, or joint branded) • Notify Retailer of any comms to their customers as per market codes. • Notify NHH premises with CF & support with external leak fixes if appropriate (depending on wholesaler policy) • Track water savings from CF fixes using smart meter data • Identify any vacant properties with CF and action. • Action leakage or wastage fixes under Section 75 of the Water Act 1991 if required. • Utilise CF data and action fixes in specific areas as an event response if required (supply demand events or other). 	<p>Continuous flow alerts/ data to Retailer and/or customer:</p> <ul style="list-style-type: none"> • Live data preferred • or monthly updates (minimum expectation) • Priority 1 large CF should be sent much quicker to internal customer side leakage teams 	<p>Data to Retailers:</p> <ul style="list-style-type: none"> • Dashboard or Excel spreadsheet shared via email or secure file transfer • Average CF I/d • SPID, address and meter serial number of meter with CF. <p>Info to Customers:</p> <ul style="list-style-type: none"> • Letter/ Email/ Phone • Live online portal • In person visit if appropriate (P1 Customer side leakage)

Roles & Responsibilities – minimum standards

Organisation	Role & Responsibility	Continuous Flow (CF) Actions	Frequency	Format
Retailer	<p>Responsible for</p> <ul style="list-style-type: none"> Working closely with Wholesalers & NHH customers Identification of unusual high bills from CF and accurate billing. Notifying and communicating to end customers Helping customer to reduce demand and leakage Providing customer contact details to Wholesalers 	<ul style="list-style-type: none"> Utilising smart meter data and continuous flow data provided by Wholesaler to alert customer Allowing wholesaler to communicate CF to end customer, or provide similar comms and communicate any continuous flow alerts directly to NHH customers quickly Provide appropriate customer contact data to Wholesaler if they are contacting direct. Collate information and insight on CF activities carried out (date of comms sent by Retailer, fixes reported, genuine usage, etc) and share with Wholesaler within agreed timescale Identify any vacant properties with CF and action. Utilise CF data for event response (e.g. supply demand events and fixes to reduce impact) 	<p>Retailer comms to customers within 10 working days of receiving CF alert data:</p> <ul style="list-style-type: none"> Live data preferred or monthly communication to new CF sites (minimum expectation) <p>Retailer to feedback to wholesaler date of CF communication to customer and any action to resolve within a further 20 working days</p>	<p>CF information shared to Customers:</p> <ul style="list-style-type: none"> Letter/ Email/ Phone Live billing or usage online portal Details of quantity of CF and impact on bill (£) <p>Information shared with Wholesalers:</p> <ul style="list-style-type: none"> Customer contact data (if required) Details of Retailer comms sent and date Any feedback or action taken Details of sites with confirmed 24hour genuine usage or fixes

Roles & Responsibilities – minimum standards

Organisation	Role & Responsibility	Continuous Flow (CF) Actions	Frequency	Format
NHH customer/ premise owner	<ul style="list-style-type: none"> Water bill payer End user of water supply or business owner or landlord Responsible for fixing leaks on customer side pipework and internal issues 	<ul style="list-style-type: none"> Act or respond to Continuous Flow alerts from Retailer or Wholesaler Identify and self-fix any customer side leaks or wastage issues (leaking taps, toilets, uncontrolled urinals) Notify Retailer of any fixes resolved or genuine usage is cause of CF 	Ad hoc (when notified)	N/A
3rd Party	<ul style="list-style-type: none"> Offering additional services to Retailers and their NHH customers (e.g. water audits, water efficiency offers, logger companies) 	<ul style="list-style-type: none"> Utilise any granular data and CF alerts to notify both NHH customer & wholesaler 	Ad hoc	

Communication and activities

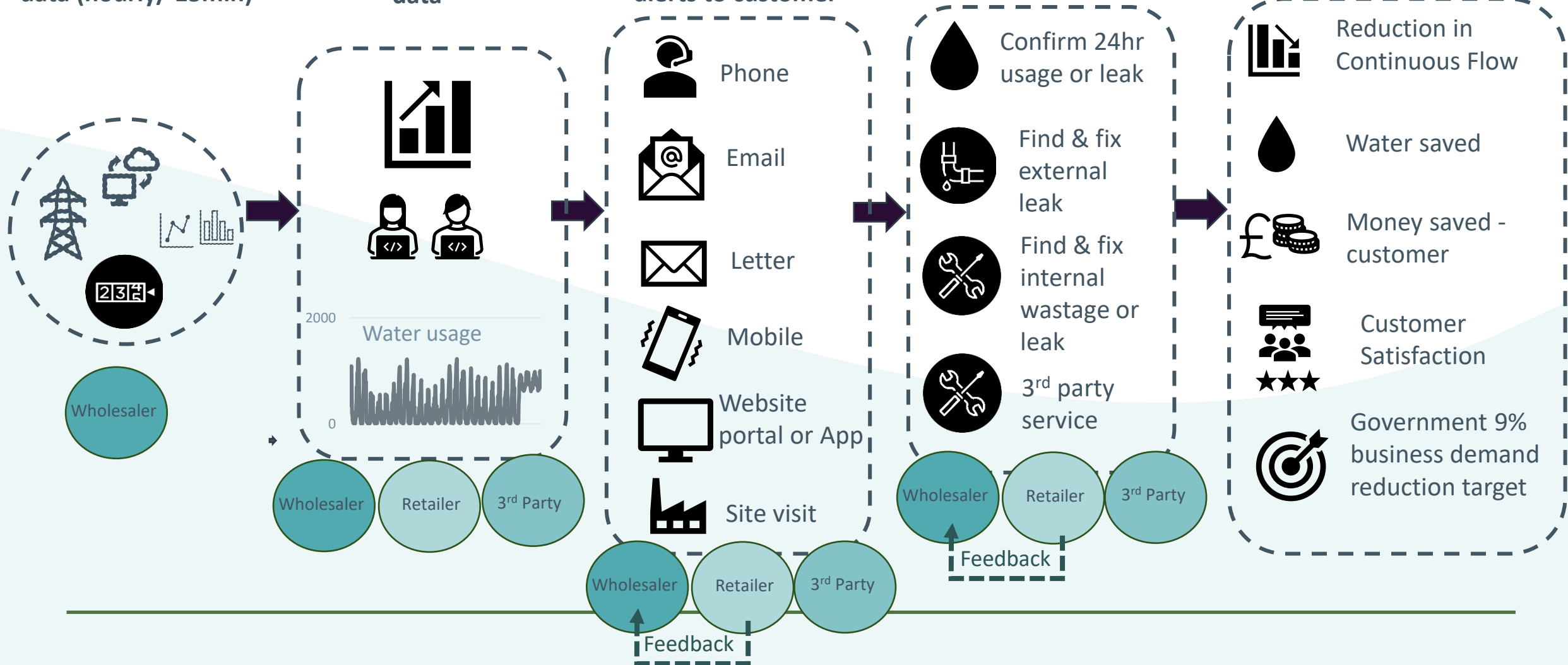
Smart meter granular data (hourly/ 15min)

Continuous Flow data

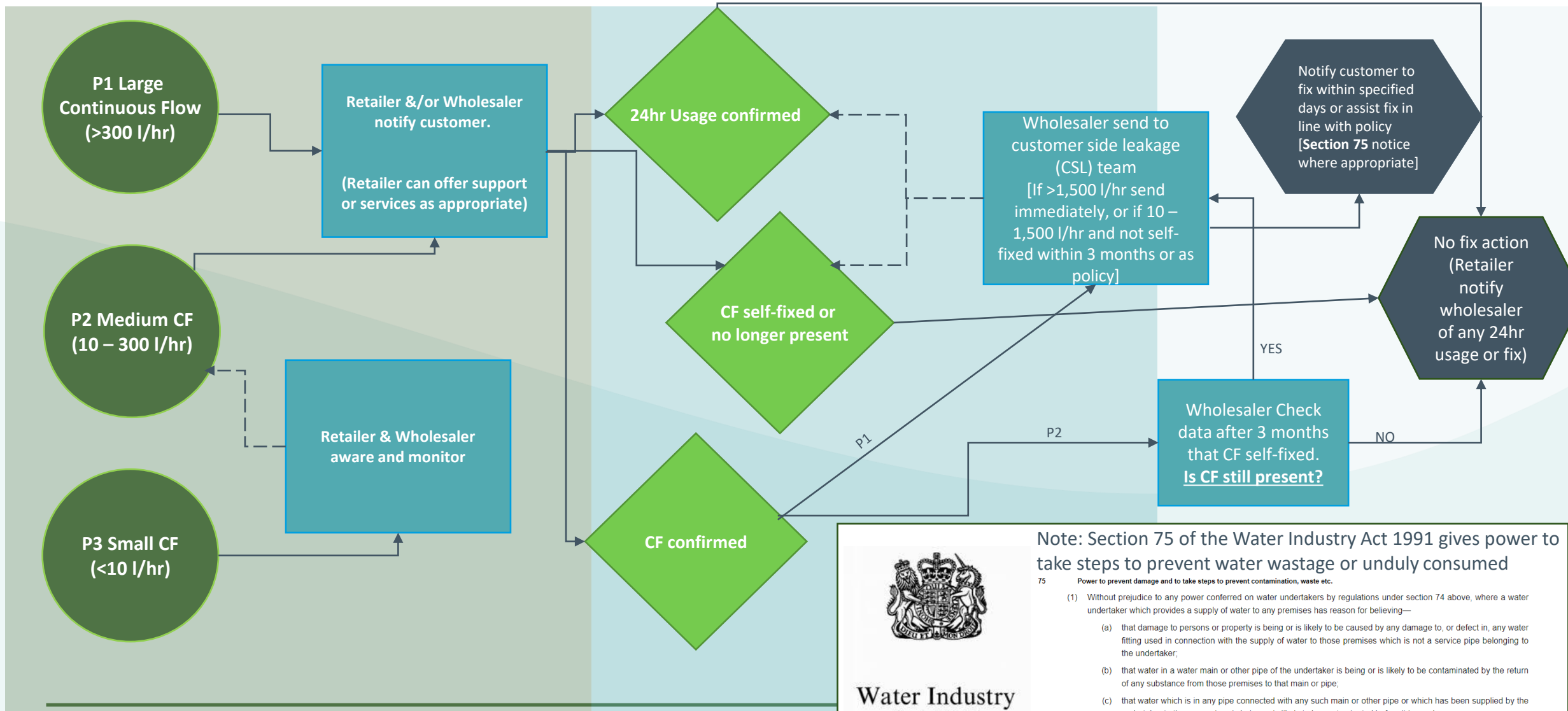
Communication or alerts to customer


Action

Result



Communication and activities – process flow





Water Industry Act 1991

Note: Section 75 of the Water Industry Act 1991 gives power to take steps to prevent water wastage or unduly consumed

75 Power to prevent damage and to take steps to prevent contamination, waste etc.

(1) Without prejudice to any power conferred on water undertakers by regulations under section 74 above, where a water undertaker which provides a supply of water to any premises has reason for believing—

- (a) that damage to persons or property is being or is likely to be caused by any damage to, or defect in, any water fitting used in connection with the supply of water to those premises which is not a service pipe belonging to the undertaker;
- (b) that water in a water main or other pipe of the undertaker is being or is likely to be contaminated by the return of any substance from those premises to that main or pipe;
- (c) that water which is in any pipe connected with any such main or other pipe or which has been supplied by the undertaker to those premises is being or is likely to be contaminated before it is used; or
- (d) that water which has been or is to be so supplied is being or is likely to be wasted or, having regard to the purposes for which it is supplied, misused or unduly consumed,

Conclusions

1. All NHH smart meter granular data should be used to calculate continuous flow using methodology in this guidance
 2. Fixing continuous flow should be seen as 'low hanging fruit' to achieve demand reduction targets without impeding business operations.
 3. Wholesalers and Retailers to work closely together to ensure continuous flow alerts are shared with end users, and action to fix issues.
 4. Retailers should share what notifications have been sent to customers and when, plus any additional actions carried out at the premise as a result of sharing continuous flow data.
 5. Better customer address data access for Wholesalers who need to alert NHH customers with Continuous flow
 6. Further analysis on fixes and water savings from both Retailer and Wholesaler communications.
-

Best Practice Recommendations

Immediate

- Continuous flow (CF) should be calculated using the standard definition in this guidance for any smart metered non-household property
- Wholesalers should share CF information with Retailers, authorised 3rd parties and end customer for any CF above 10 litres/hour
- Retailers and Wholesalers should work together to agree approach to notifying customers of Continuous flow.
- If Retailers do not notify, they must allow the Wholesaler to notify customers of any possible CF
- Retailers to share any customer data for Wholesaler CF notifications

Short- term next steps

- Retailers & Business customers to have real time access to their granular smart data and continuous flow data in a user-friendly way (align with sharing of granular data in the Market project).
- Continuous flow alerts sent quickly to customers from all smart data. This could be built into Retailer's front-end systems.
- Better customer contact data for notifying continuous flows in CMOS or other.
- Look at the effectiveness of various comms and notifications and impact on Continuous Flow fixes from both Wholesaler and Retailers.
- Gather more insight into how much of CF is genuine 24hr usage, wastage or leakage (using COCOA benchmarking & insights)
- survey of trading parties six months after the publication of the Guidance for feedback and review of standard CF definition.

Longer-term

- Potentially build a process into the Bilaterals hub for Wholesalers and Retailers to notify Continuous Flow actions and feedback
- Introduce a genuine continuous flow flag in CMOS for specific SPIDs or smart meters.
- Retailers could develop front end systems to share smart meter data and continuous flow alerts directly with customers and allow feedback.
- MOSL to look at how action on continuous flow could be incentivised within the Market Performance Framework at a futures point.



<https://mosl.co.uk/document/market-improvement/strategic-metering-programme/key-documents-smr/quick-start-projects/8416-qsp16-continous-flow-good-practise-guidance/file>



**Debate – Raw
Consumption Data V
Analysed
Consumption Data,
what would you like
to see?**



AOB & CLOSE

