spring Accelerating Water Sector Transformation

Delivering the Ofwat water consumption reduction target using in-home smart technology: the successful Portsmouth Water pilot with LeakBot

6th June 2023 10am -12pm

Agenda

1. Introduction to Spring
2. Introduction to speakers
3. Successful Portsmouth Water pilot with LeakBot
4. Questions & Answers

spring

Accelerating
Water Sector
Transformation

Carly Perry
Managing Director
Spring

Bob Taylor
CEO Portsmouth
Water

Craig Foster
CEO Ondo
InsurTech Plc

Helen Lonsdale
Client Success
Director Ondo
InsurTech Plc

Beth Corbould
Director – Policy and
Outcomes at Ofwat

Lianne Riggs
Water Efficiency
Lead, Portsmouth
Water Limited


spring

Tackling the challenge of reducing water consumption

Ofwat's expectations for improving water efficiency

Beth Corbould
June 2023

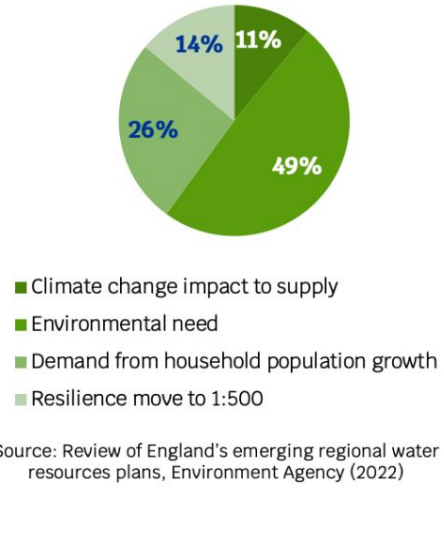
Ofwat

Why is it important to manage demand?

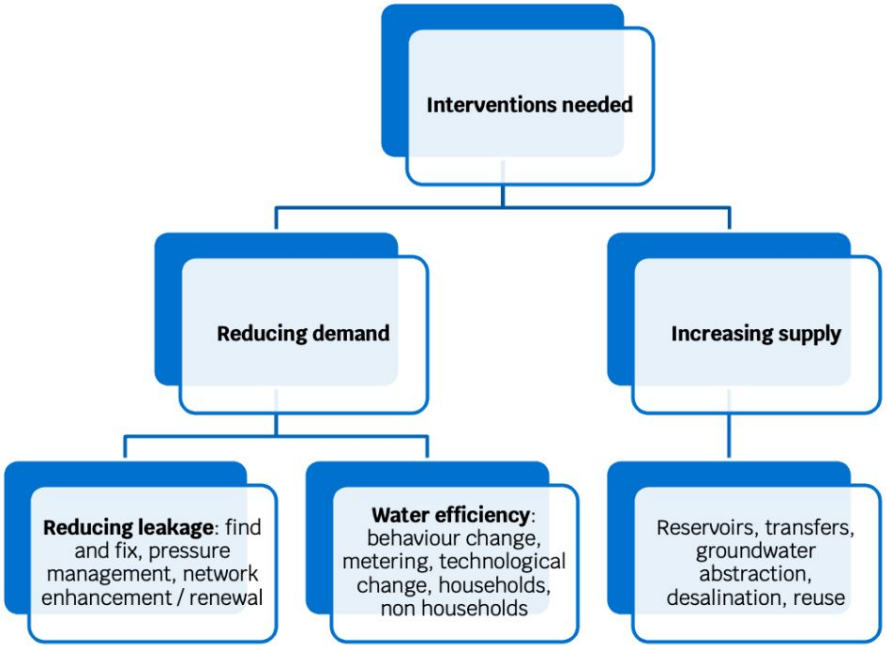
If no action is taken between 2025 and 2050, there will be a **shortfall of around 4,000 million extra litres of water per day** in public water supply. Almost half of this is projected to be in SE England.

Source: Review of England's emerging regional water resources plans, Environment Agency (2022)

Pressures on water supply

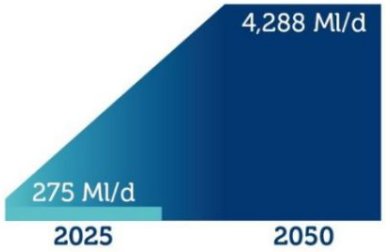


Source: Review of England's emerging regional water resources plans, Environment Agency (2022)

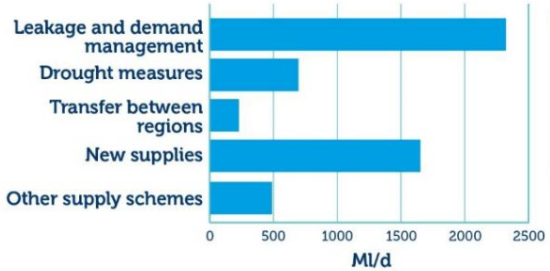


Meeting future water needs

Public water supply need

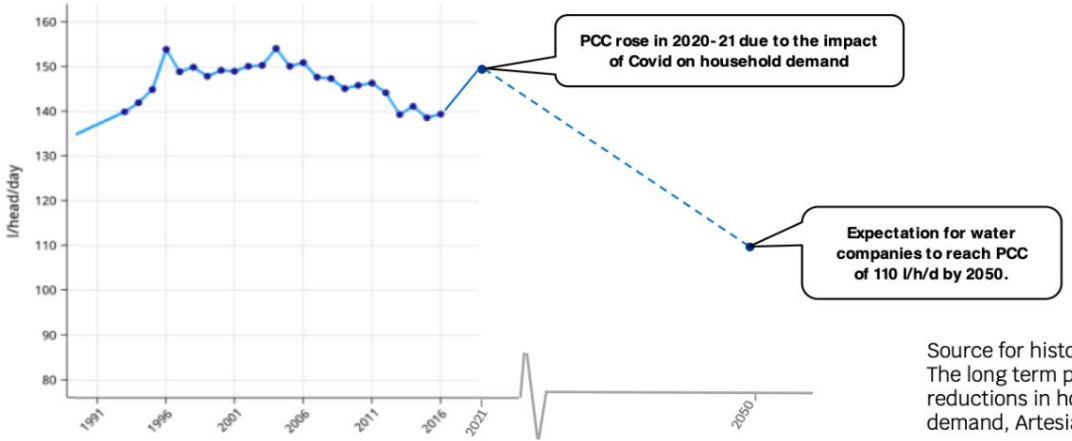


Public water supply proposals



Source: Summary of regional plans for water resources (November 2022)

Historic trend in household consumption (per capita consumption PCC) litres per head per day with 2050 target



Source for historic trend:
The long term potential for deep reductions in household water demand, Artesia Consulting (2018, p.7)

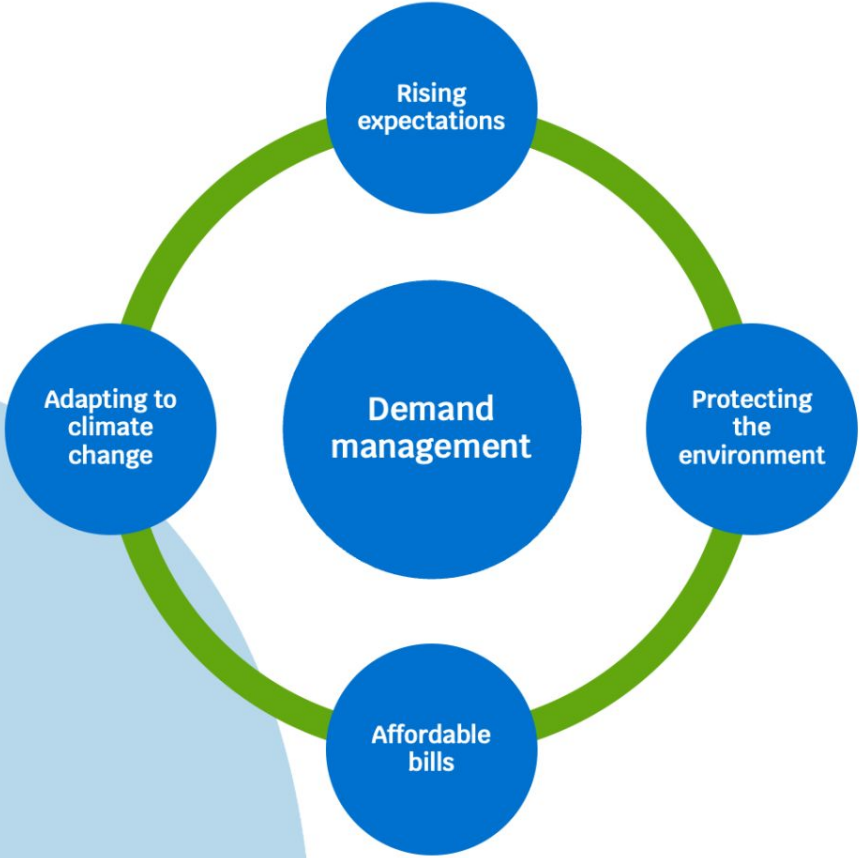
Demand management – what's being done?

Water demand target:
Reduce the use of public water supply in England per head of population by 20% against a 2019/20 baseline by 2037

Per Capita Consumption (PCC) to reduce from around 150 to 110 l/p/d by 2050

- ✓ Water companies developing a range of actions on water efficiency including smart metering, technology and behavioural change but familiar action that's not yet been transformational
- ✓ Government is introducing a mandatory water efficiency label
- ✓ Gov is also encouraging local authorities to adopt a higher building standard of 110 litres/person/day in all new builds where there is a clear local need
- ✓ Gov is developing a roadmap towards greater water efficiency in new developments and retrofits and explore more ambitious building regulations.
- × No changes to existing rules on water metering

Key challenges for PR24



Draft plans – is demand management on track?

Do the plans present the best way of meeting targets?

Will the targets be met?

Good ambition and alignment with targets

Concerns about delivery of targets

If targets aren't met, what will be the impact on customers and environment?

Thank you and questions

ofwat.gov.uk | discoverwater.co.uk | open-water.org.uk

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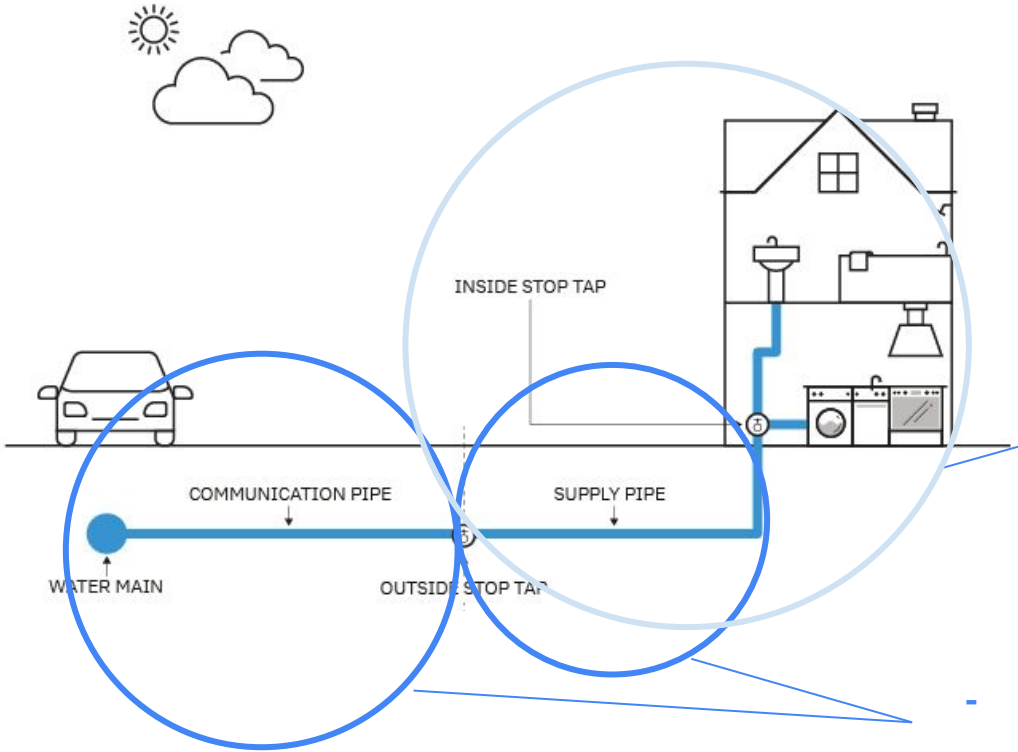
Portsmouth Water
50% of outstanding leakage is on the customer side

Can smart technology help?

Smart technology in the Water Industry...

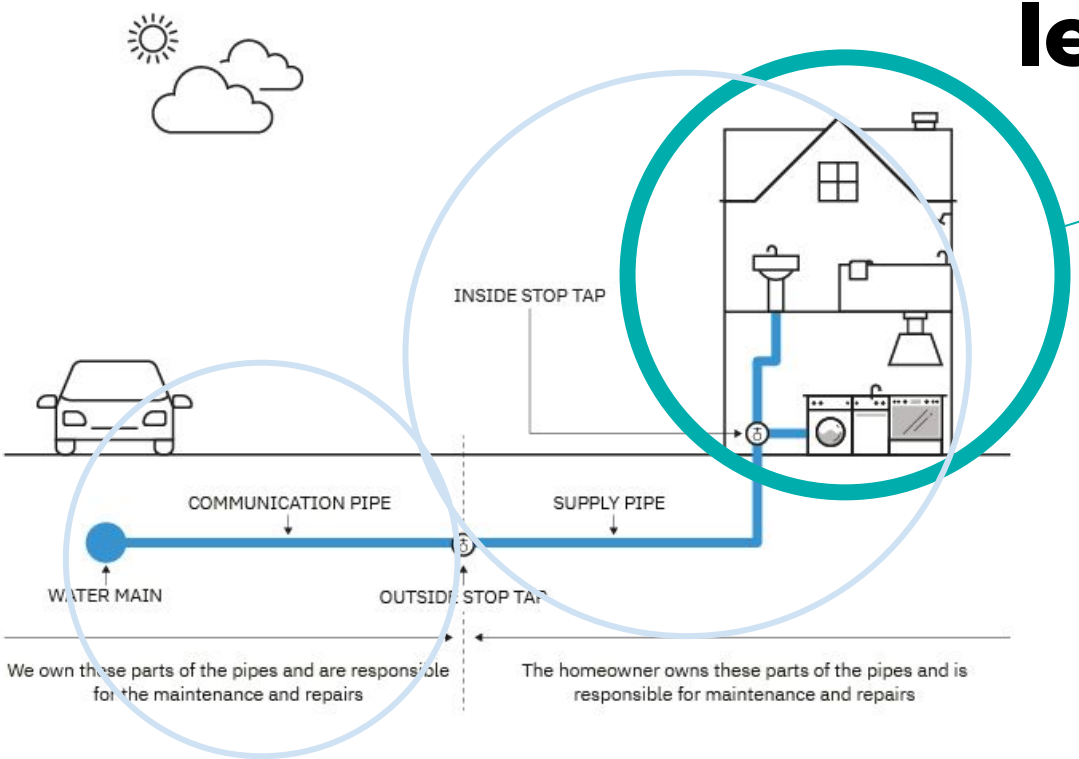


Water Meters:

- **Larger flow rates**
- **Only leaks on underground supply pipe are counted in industry leakage**

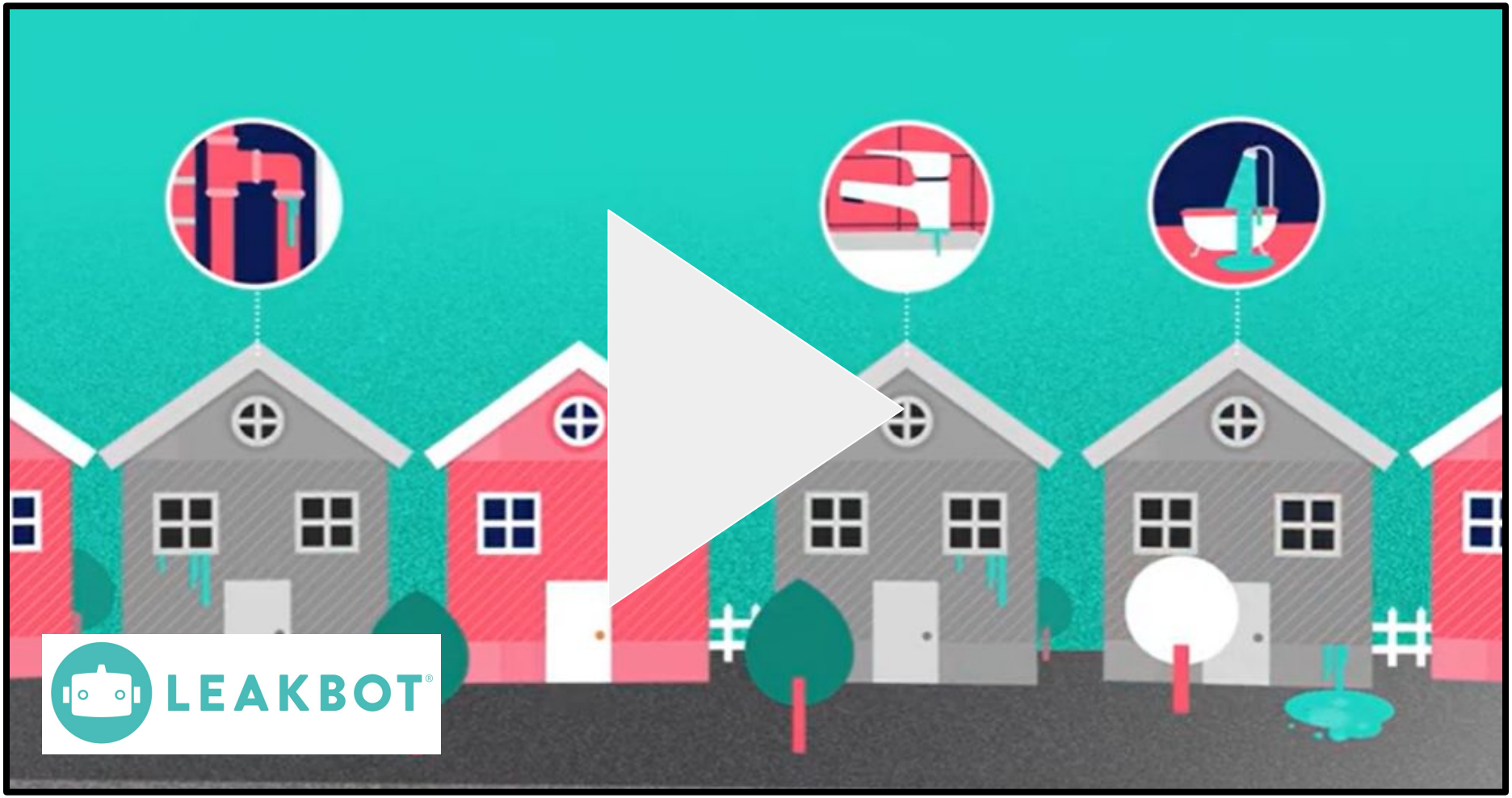
- **Traditional focus for industry leakage reduction**

Insurance industry has different focus in leak detection



Insurance industry focus:

- Smaller leaks < 30 L/day
- After the internal stop tap
- Causing £600m of water damage claims a year


LEAKBOT®

Q: Can insight & technology from insurance applications help the water industry?

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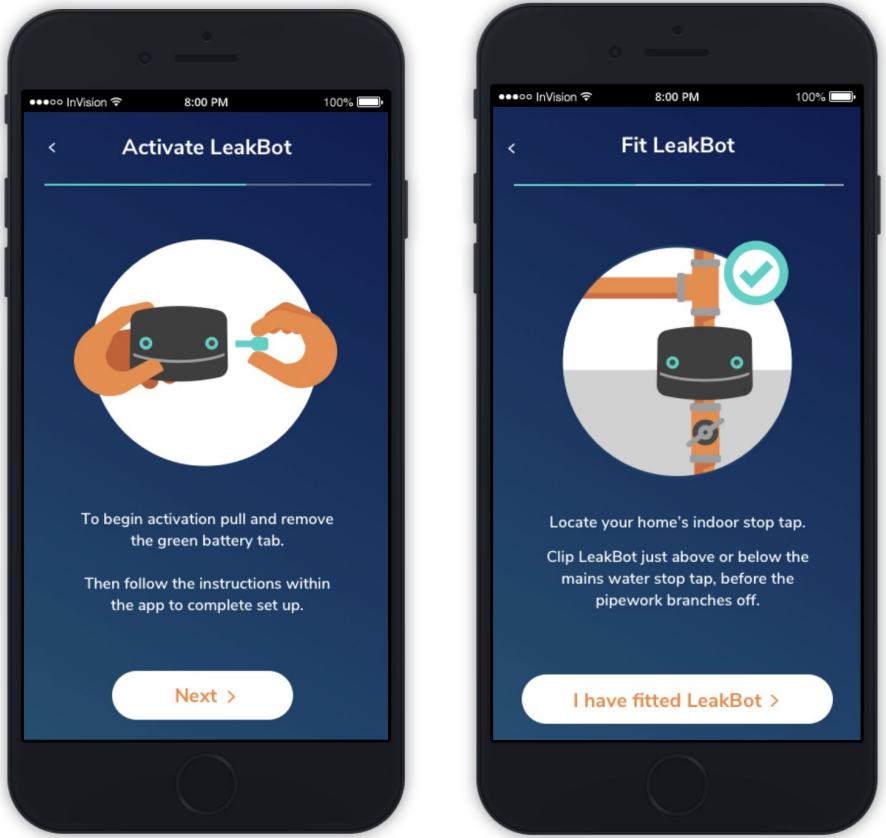
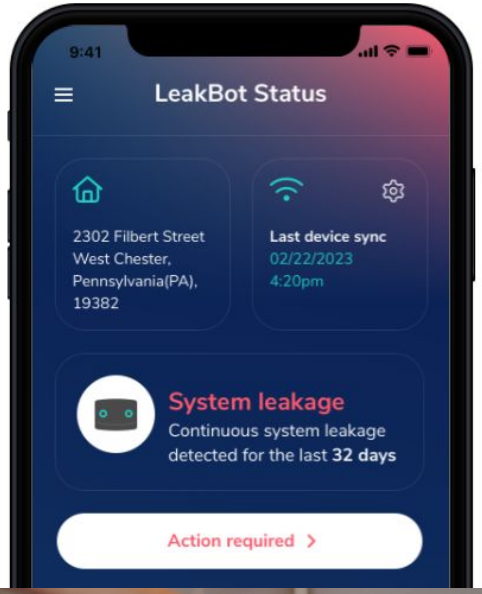
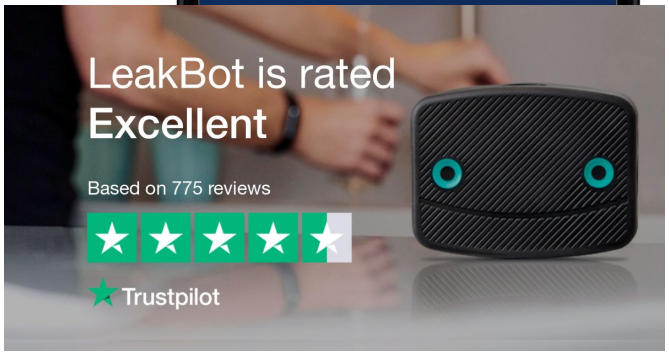
SELF-INSTALL

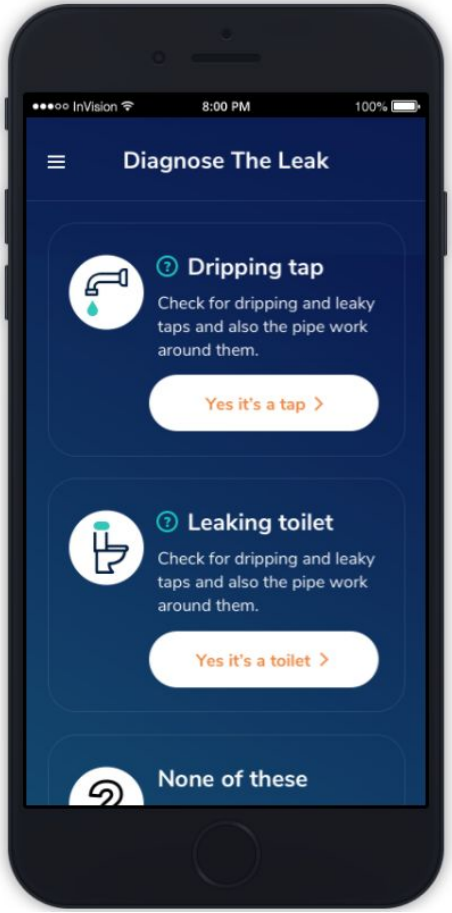


Alerts user to leaks

- Alerts to continuous water flow and high usage events
- Provide hints and tips on diagnosing leaks







Assisting homeowners to find and fix

- Help homeowners to self-diagnose the problem
- Nationwide network when customers need help paid for by home insurance companies

Temperature-based algorithm highly sensitive to small background plumbing leaks

Ambient Air Temperature

Water Temperature

Micro-leak test = Leak free

Micro-leak Detected!

20x more sensitive to background leakage than industry-standard water meters

5ml/min

7 l/day

LeakBot Thermi-Q

149 L/day

Volumetric Rotary Piston

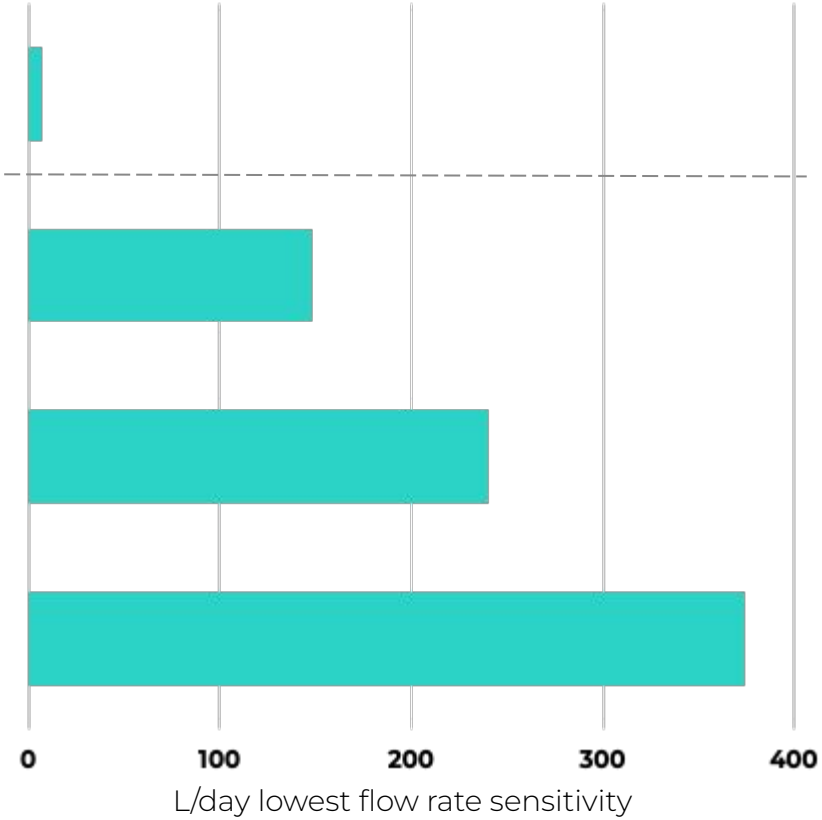
100ml/min

240 L/day

Ultrasonic

374 L/day

Multi-jet

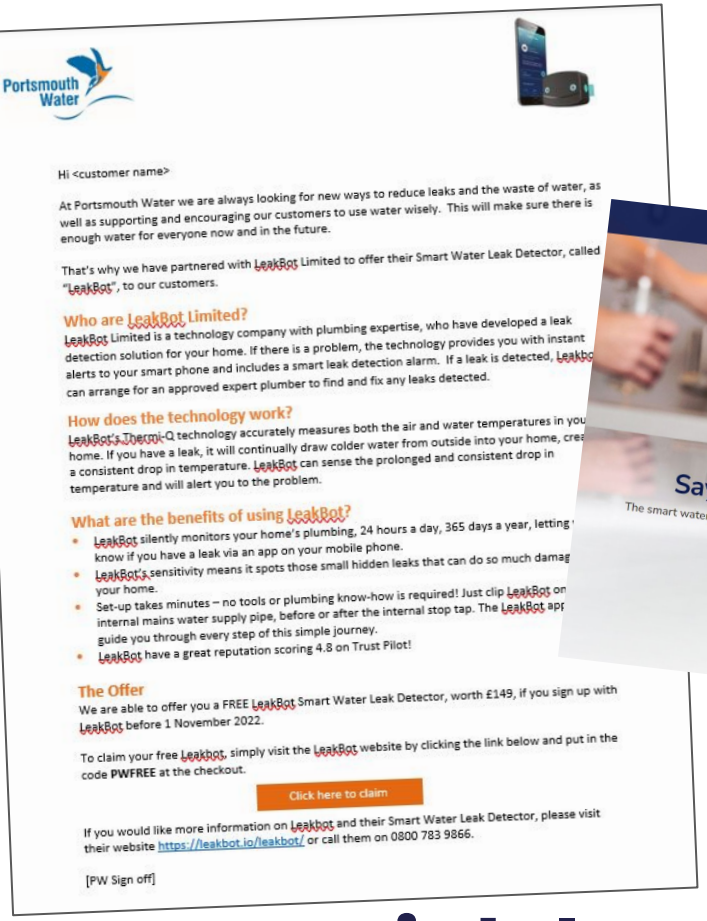


SOURCE: Pietrosanto, Carratu, Liguori (2020) “Sensitivity of water meters to small leakage”, *Measurement,* Vol 168, October 2020

Q: Can insight & technology from insurance applications help the water industry?

LEAKBOT®

THE RESULTS



Portsmouth Water

Hi <customer name>

At Portsmouth Water we are always looking for new ways to reduce leaks and the waste of water, as well as supporting and encouraging our customers to use water wisely. This will make sure there is enough water for everyone now and in the future.

That's why we have partnered with LeakBot Limited to offer their Smart Water Leak Detector, called "LeakBot", to our customers.

Who are LeakBot Limited?

LeakBot Limited is a technology company with plumbing expertise, who have developed a leak detection solution for your home. If there is a problem, the technology provides you with instant alerts to your smart phone and includes a smart leak detection alarm. If a leak is detected, Leakbo can arrange for an approved expert plumber to find and fix any leaks detected.

How does the technology work?

LeakBot's Thermi-Q technology accurately measures both the air and water temperatures in you home. If you have a leak, it will continually draw colder water from outside into your home, crea a consistent drop in temperature. LeakBot can sense the prolonged and consistent drop in temperature and will alert you to the problem.

What are the benefits of using LeakBot?

- LeakBot silently monitors your home's plumbing, 24 hours a day, 365 days a year, letting know if you have a leak via an app on your mobile phone.
- LeakBot's sensitivity means it spots those small hidden leaks that can do so much damag your home.
- Set-up takes minutes – no tools or plumbing know-how is required! Just clip LeakBot on internal mains water supply pipe, before or after the internal stop tap. The LeakBot app guide you through every step of this simple journey.
- LeakBot have a great reputation scoring 4.8 on Trust Pilot!

The Offer

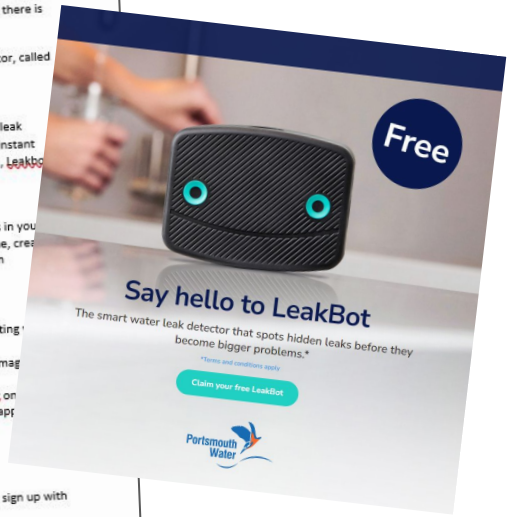
We are able to offer you a FREE LeakBot Smart Water Leak Detector, worth £149, if you sign up with LeakBot before 1 November 2022.

To claim your free Leakbot, simply visit the LeakBot website by clicking the link below and put in the code **PWFREE** at the checkout.

Click here to claim

If you would like more information on Leakbot and their Smart Water Leak Detector, please visit their website https://leakbot.io/leakbot/ or call them on 0800 783 9866.

[PW Sign off]



16k **Customers offered a free LeakBot**

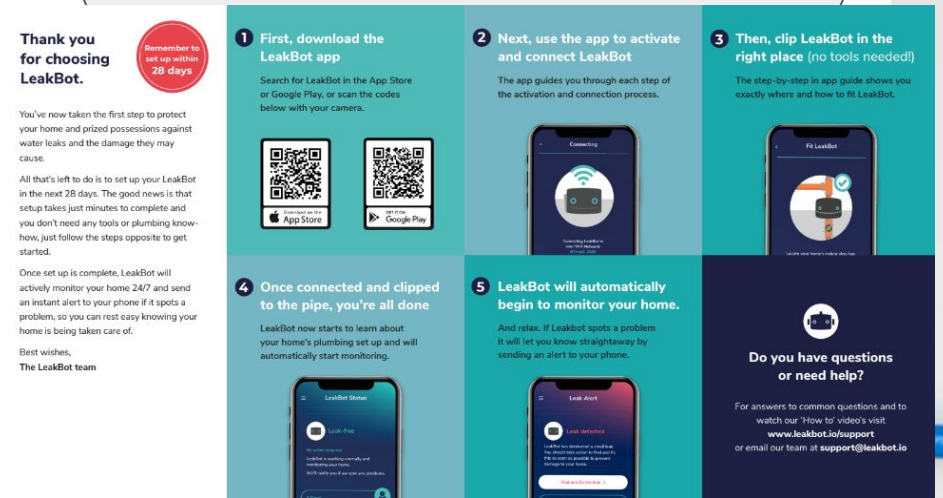
6.25 % **Take-up**
(could have been higher - campaigns stopped)

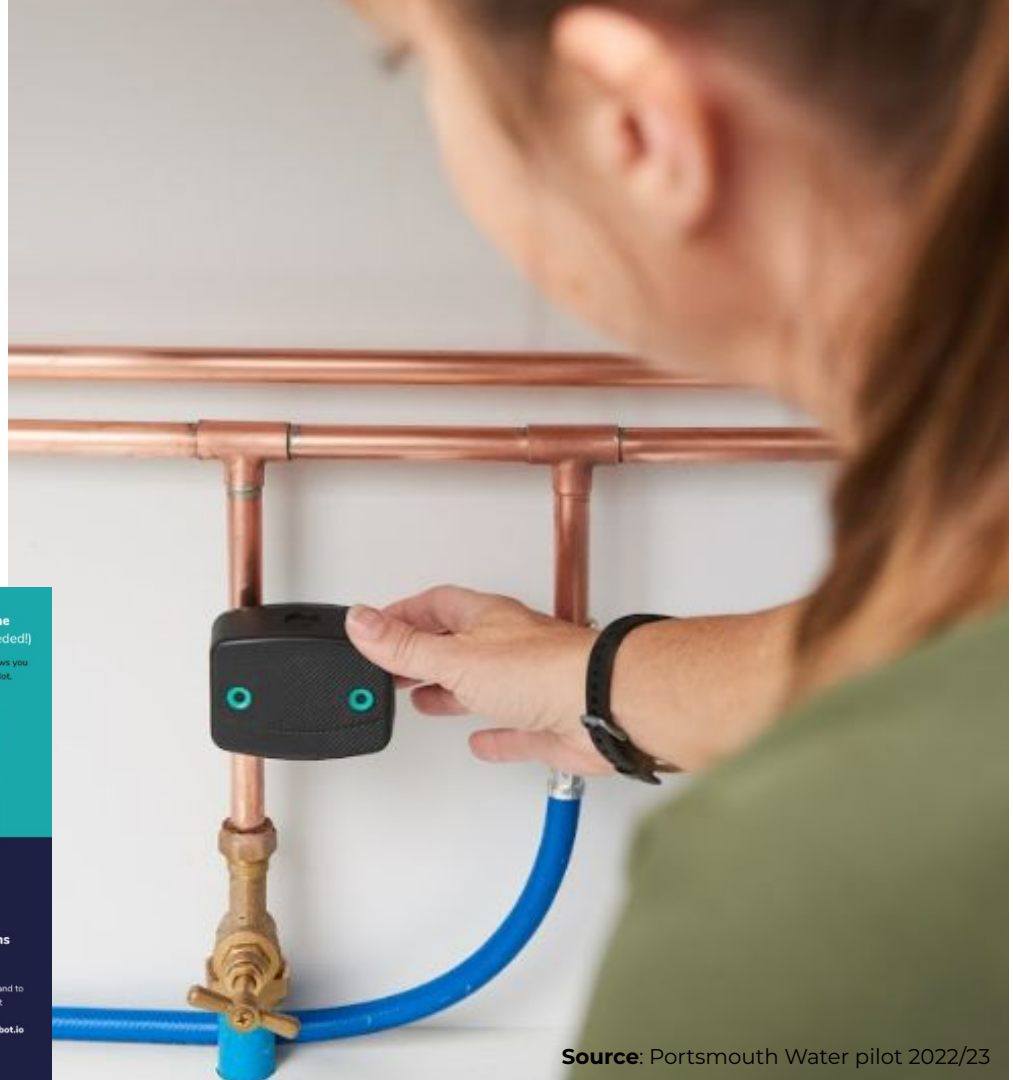
1k **Units sent in the post**

High levels of customer engagement

80%

self installed

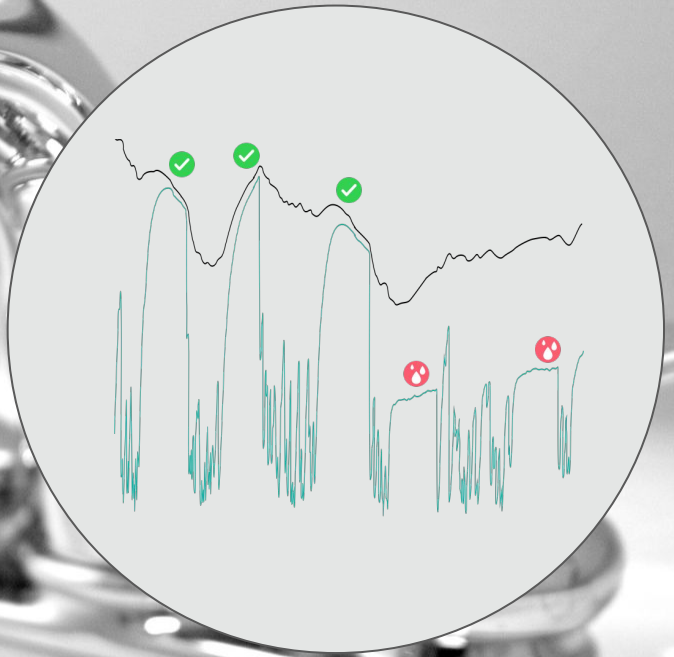




Source: Portsmouth Water pilot 2022/23

24%

Of Portsmouth Water houses had an existing leak



Source: Portsmouth Water pilot 2022/23

69%

Of customers interacted with app

70%

Diagnosed the issue in the app

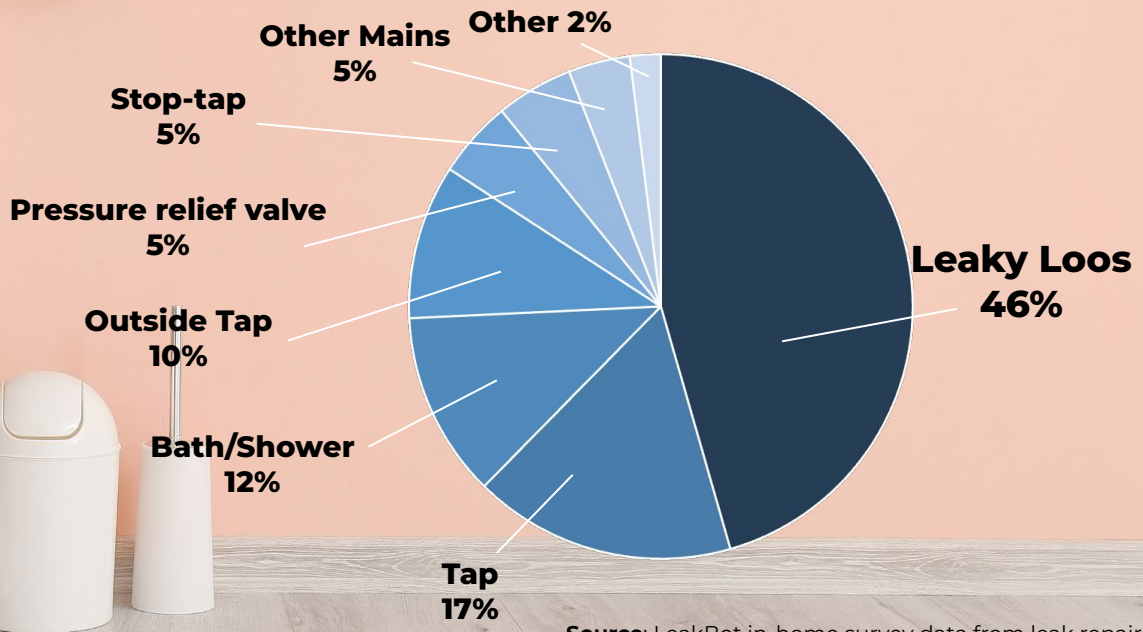
78%

Of leaks resolved

Source: Portsmouth Water pilot 2022/23

46%

Of leaks we find are leaky loos



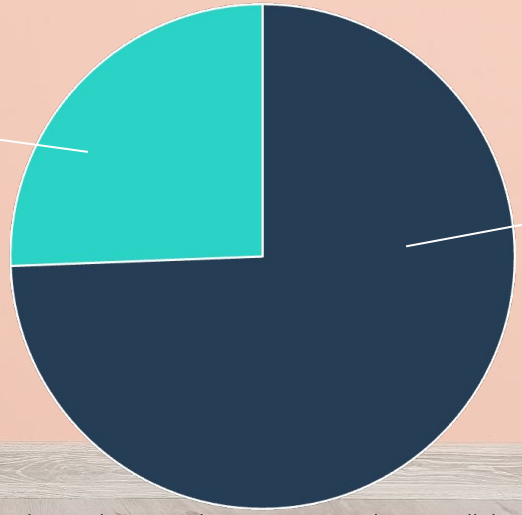
Source: LeakBot in-home survey data from leak repairs

...but leaky loos (at 215 litres/day[1] equate to est. 75% of leakage

75%

Leakage (volume)
= Average 133 litres/day

Everything Else
25%
@ 63 L/Day



Leaky Loos
75%
@ 215 L/Day

Source: 1 WaterWise Leaky Loos Phase II Water Industry Collaborative Fund Project 2015; LeakBot in-home survey data from leak repairs and Leak Rate Calculator readings

24%

Of Portsmouth Water houses had an existing leak

x

133 L/DAY

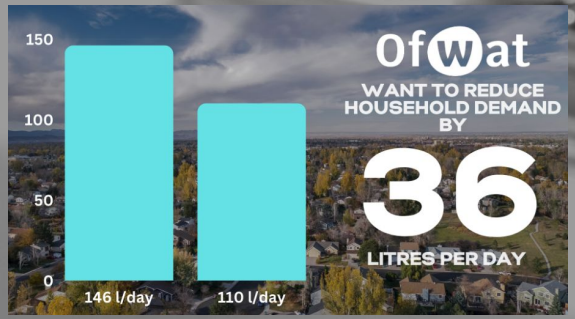
Average flow rate of leaks in leaky houses

=

32 L/DAY

Of average household demand is leakage:

89% of the **OFWAT target reduction**



Source: Portsmouth Water pilot 2022/23

RESULT: Post 6 months

Following LeakBot installation

24%

Of Portsmouth Water houses had a leak

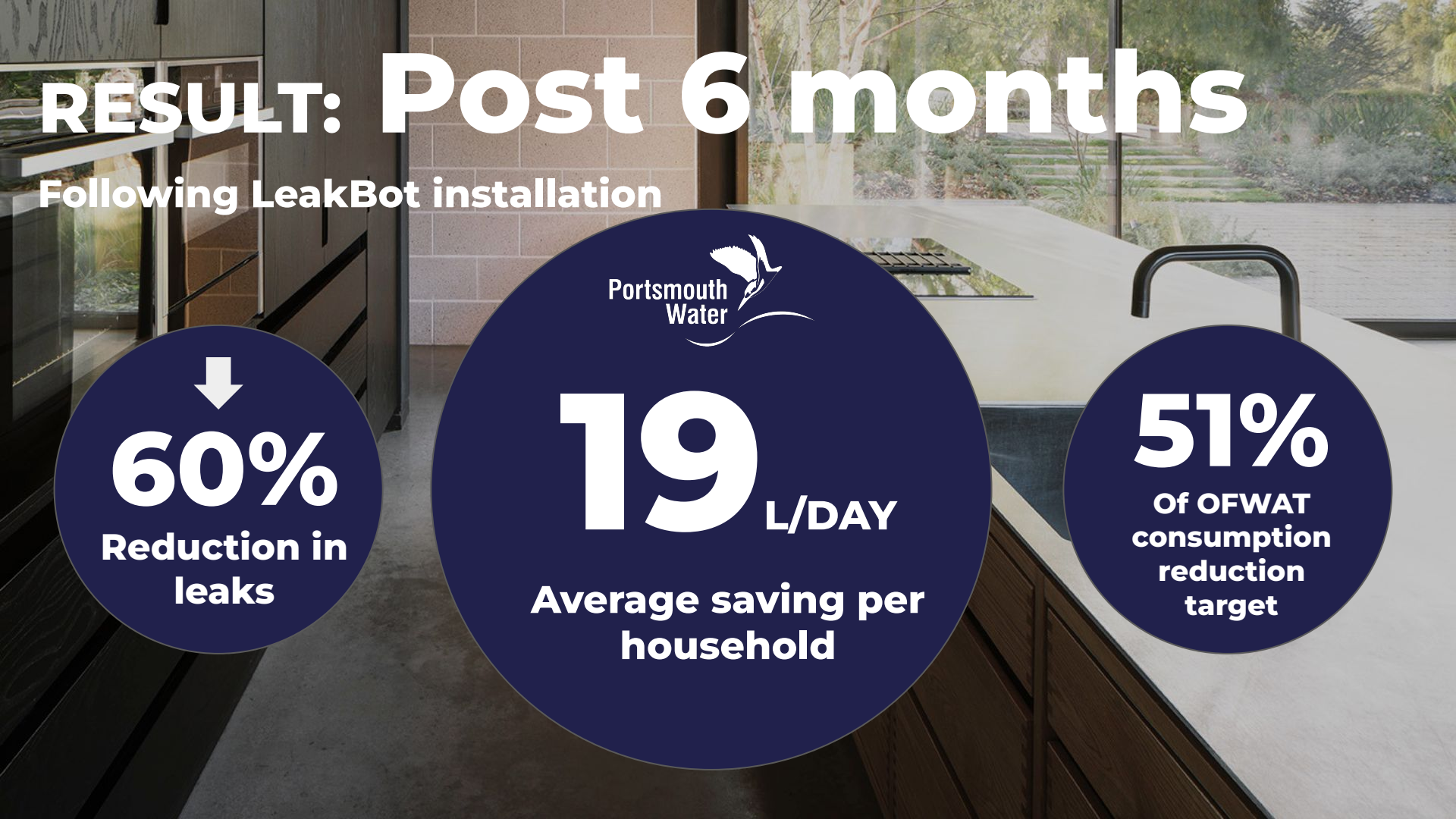
Portsmouth Water

10%

Of Portsmouth Water houses have a leak

60%

Reduction in leaks


RESULT: Post 6 months
Following LeakBot installation
Portsmouth Water
60%
Reduction in leaks
19 L/DAY
Average saving per household
51%
Of OFWAT consumption reduction target


Break

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Key learning

1. **Homeowners like receiving smart home tech from their water company**

- High take up rates
- High install rates
- High app engagement

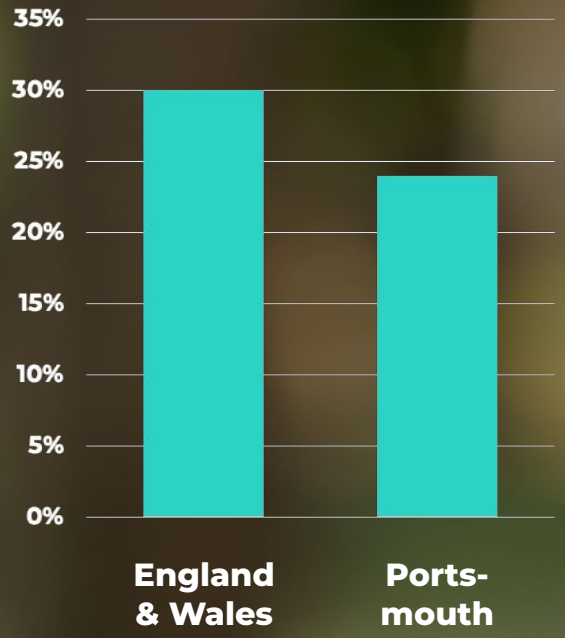
spring Accelerating Water Sector Transformation

Key learning

2. Plumbing side leaks are a BIG issue

- 24% of houses had a leak
- Most of the leakage is on leaky loos
- ~32 litres/day in Portsmouth homes

Plumbing side leakage is <u>even higher</u> nationally than in Portsmouth...



30%

Of houses in England & Wales have a pre-existing leak

40 l/day

Average Plumbing side leakage detected by LeakBot

Plumbing side leakage likely equals the entirety of OFWATS 36 L/day target

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Key learning

3. Smart home tech CAN drive down leakage

- 60% reduction
- 19 litres/day

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Key learning

4. Opportunity to further drive down household demand using this type of technology

- Get even more leaks fixed
- Use high customer engagement to drive behaviour change

… Get MORE leaks fixed

We hit 60% reduction… but 75% is a good target

75%

=

30 l/day

Per household saved

How?

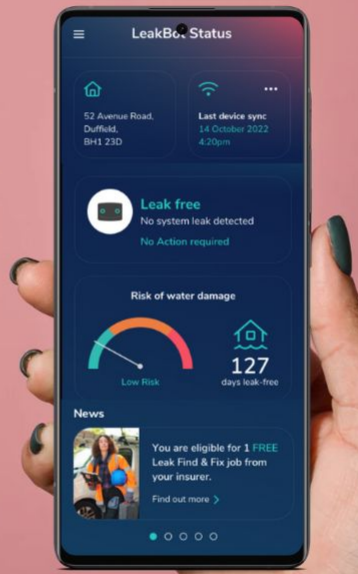
“Click here to book FREE repair courtesy of your home insurance provider”

Book Now

Insurance companies could be willing to pay for free repair visits for their home insurance customers to meet their needs to reduce household claims

… Use high customer engagement to drive behaviour change

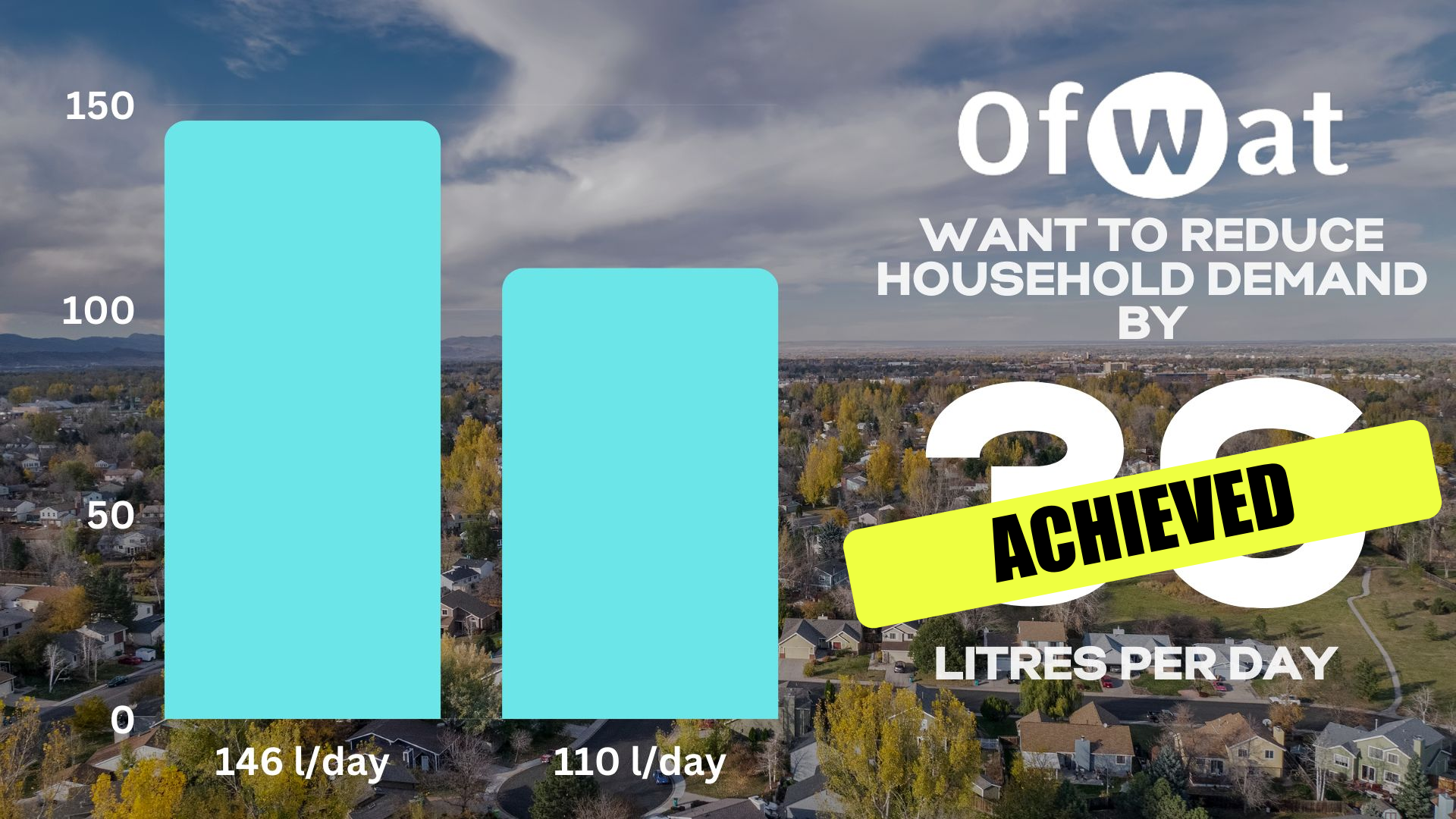
- Real time alerts to high usage
- Usage based insights
- Straight to customer's phone

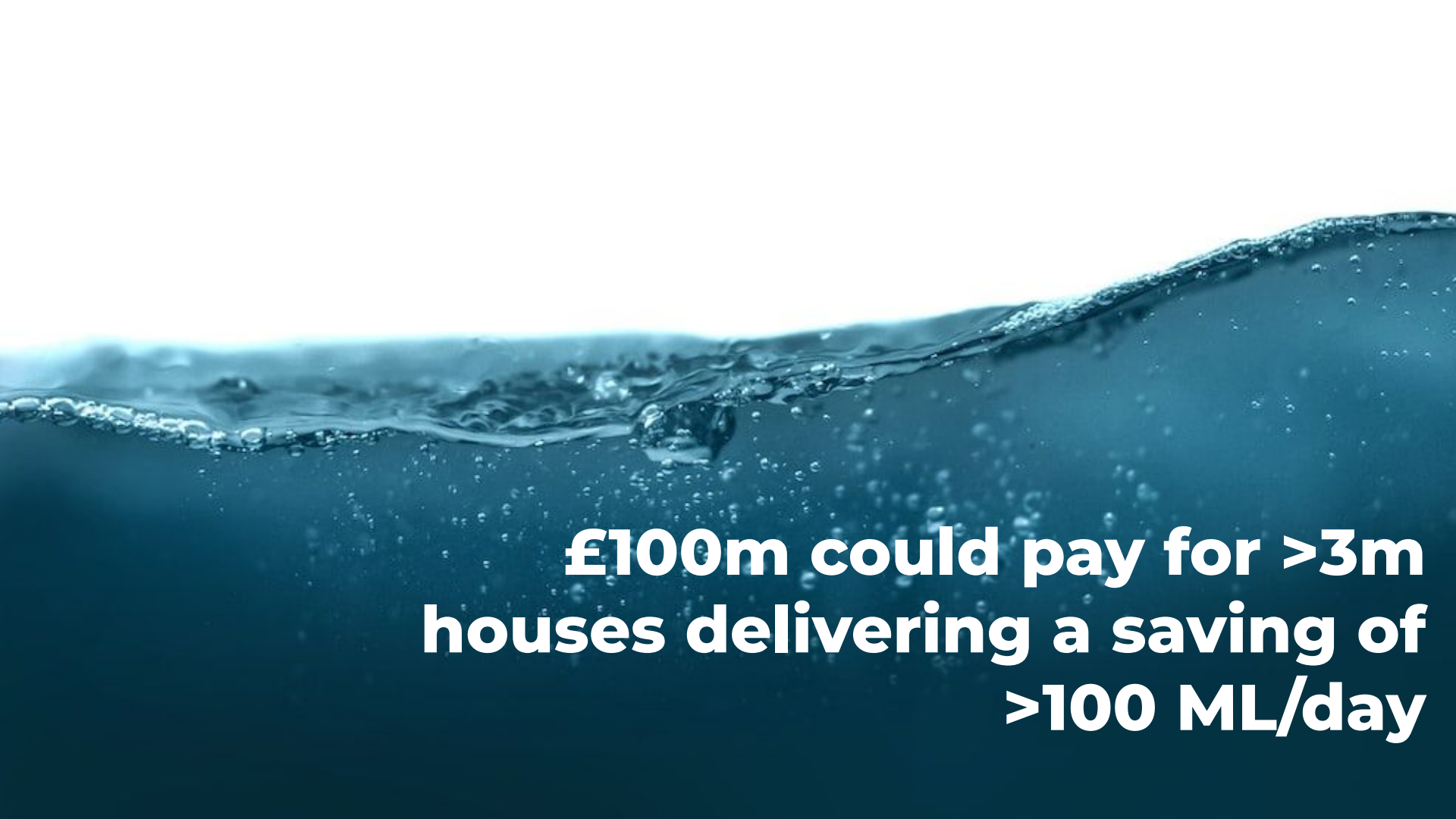


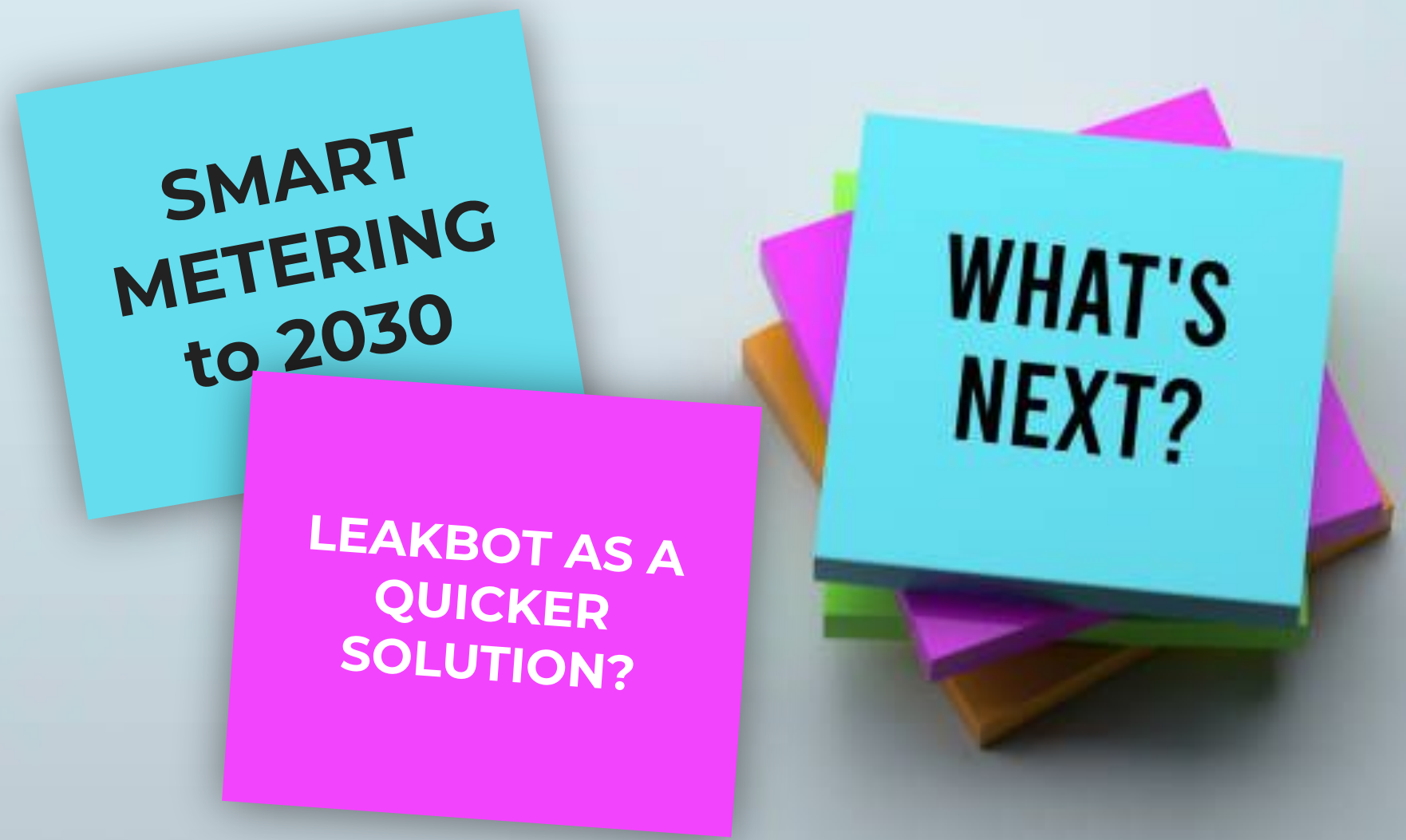
24 Seconds

6 l/day is equivalent to influencing someone to cut their average shower by 24 seconds

30 l/day from leakage + 6 l/day from behaviour change = ofwat 36 l/day target


150
100
50
0
146 l/day
110 l/day
Ofwat
WANT TO REDUCE HOUSEHOLD DEMAND BY
36
ACHIEVED
LITRES PER DAY


£100m could pay for >3m houses delivering a saving of >100 ML/day


SMART METERING to 2030
LEAKBOT AS A QUICKER SOLUTION?
WHAT'S NEXT?

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