

Survey on infrastructure for drinking water leakage detection in Europe (in context of the EU EMPIR Project MetroWaMet)

Introduction

MetroWaMet (Metrology for real-world domestic Water Metering) aims at creating a metrological infrastructure, which will enable an integral characterization of domestic water meters close to real-world operation conditions. At the end of the project new capabilities will be available which allow to assess and calibrate domestic water meters under dynamic flow conditions. A metrological framework will be established to address water meter performance for different water qualities and for the withdrawal of low amounts of water. The aim of this survey is to assess the capabilities of European utilities in the field of **smart metering** and **leakage detection**.

Estimated time expenditure: 5 - 10 min

Thank you for participating in this survey and help us to fulfil the project objectives.

For detailed information, look at our website:

<https://www.ptb.de/empir2018/metrowamet/the-project/>

If you have any initial questions regarding the survey, please contact:

Veit Seypka

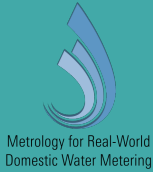
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General information

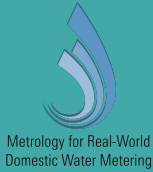
1 In which European country is your company located?

2 How many citizens do you currently supply with drinking water?

- | | |
|---|---|
| <input type="radio"/> less than 100 | <input type="radio"/> 50,000 up to 100,000 |
| <input type="radio"/> 100 up to 1,000 | <input type="radio"/> 100,000 up to 200,000 |
| <input type="radio"/> 1,000 up to 10,000 | <input type="radio"/> 200,000 up to 500,000 |
| <input type="radio"/> 10,000 up to 50,000 | <input type="radio"/> 500,000 and more |

3 What is your average yearly water output in m³ (including water loss)?

4 What is your percentage global water loss per year?



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Infrastructure

5 What type of water meter do you have installed at the dwellings (at the consumer)?

- Displacement water meter
- Mechanical velocity meter (e.g. impeller meter)
- Magnetic inductive meter
- Ultrasonic meter

6 If possible, please state the name and model of the meter(s) installed.

Meter 1:

Meter 2:

Meter 3:

Meter 4:

7 Do you use smart meters in your distribution network?

- Yes
- No
- No, but we plan to in the near future

8 Where are the smart meters installed?

- In the dwellings
- At the house entrance
- In the distribuion network

9

What is the share of smart meters from all your installed meters?

- < 20%
- 20% to 50%
- 50% to 80%
- > 80%

10

Has the introduction of smart meters influenced the amount of water lost in your network?

- Water loss is the same
- Water loss has increased
- Water loss has decreased
- If possible estimate the amount of water loss ('+' indicating an increase of water loss and '-' indicating a decrease).

11

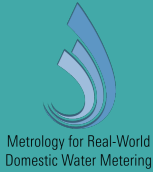
How is the smart meter data collected?

- Automated collection of meter readings, but the data still has to be extracted by a meter reader who has to visit the property.
- Unidirectional data transmission from the meter to the utility.
- Two-way communication between the meter and the utility.
- Other (please specify)

12

Which form of data transmission do you use for the data obtained by smart meters?

- Telephone wires
- Power cables
- Broadband
- Fibre optic cable
- Radio frequency (e.g. ZigBee)
- Cellular
- Other (please specify)



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Leakage detection

13 Do you perform leakage detection based on meter data?

- Yes
- No

14 What kind of leakage detection do you perform?

- Post meter leakage detection (inside the dwellings)
- Distribution network leakage detection
- Additional leakage localization (mainly applicable for distribution networks)
- Other (please specify)

15 What is the criteria for leakage detection?

- Minimum night flow
- Prediction models
- Flow patterns
- Unknown
- Other (please specify)

16

Do you offer a leakage alert service for your customers? If so, which means of communication do you use when contacting your customers?

- No, we do not offer a leakage alert service.
- Web portal
- Mail
- Next bill
- Smartphone app
- Phone call
- Email
- SMS
- Other (please specify)

17

Do you follow up with the customer after leakage detection? If so, which means of communication do you use?

- No, we do not do a follow up.
- Contact via personal phone call
- Web portal
- Email
- Send another letter
- Send another SMS
- Smartphone app
- Other (please specify)

18

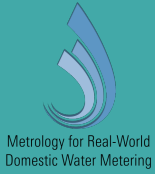
For how long a period have you been doing leakage detection?

- < 1 year
- 3 - 4 years
- 1 - 2 years
- > 4 years
- 2 - 3 years

19

Have you noticed a change in water consumption after including leakage detection? If so, can you quantify the change?

- No
- Yes ('+' indicating an increase in consumption and '-' indicating a decrease)



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Comments

20

Here you can add comments regarding the survey and its contents.



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End of Survey

Thank you very much for taking part in this survey.

If you have further questions regarding the project **MetroWaMet**, please contact:

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