

Water Metering

Future Trends
MetroWaMet Workshop
15.-16.09.2021 U. Eff





Agenda

- Digitalisation
- Mechanical Meters
- Static Meters
- Additional Functionalities
- Communication
- Legal Metrology Aspects
- Future Standardization



Digitalisation / Mega Trend

- Utilities will have to act against
 - Climate change
 - Water scarcity

- Watermeters will become digital and communicative

- Watermeters will be part of the Internet of Things

- Watermeter Data will be used not only for billing






Mechanical Meters / Evolution



Watermeter with Clip-On-Module

Watermeter with electronic register



Electronic Watermeter / Static Watermeter / All in One



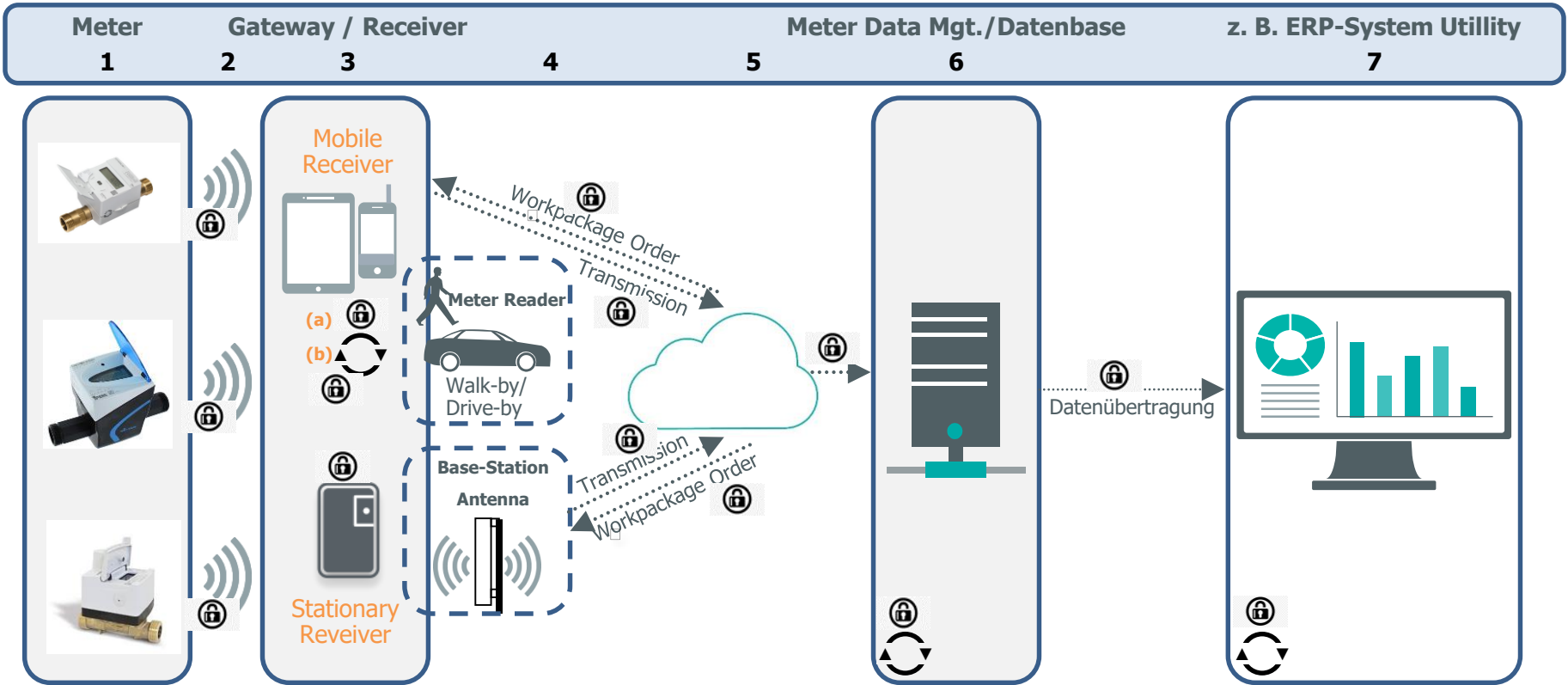


Additional Functionalities

- Electronic water meter
 - Measurement of actual flow
 - Measurement of water temperature
 - Datalogging (1 value/day) and fixed date storage (e.g. 31.12.xx)
 - Measurement of return volumen
 - Leakage detection (burst and minimum night flow)
 - Communication interfaces
 - Wired; e.g. Mbus (EN 13757-2), ...
 - Wireless; e.g. wMBus (EN13757-4), ...
- Additional for static water meters
 - Air in the pipe not measured
 - Independent from installation orientation
- Standard: EN 14154-4 Watermeters - Additional functionalities

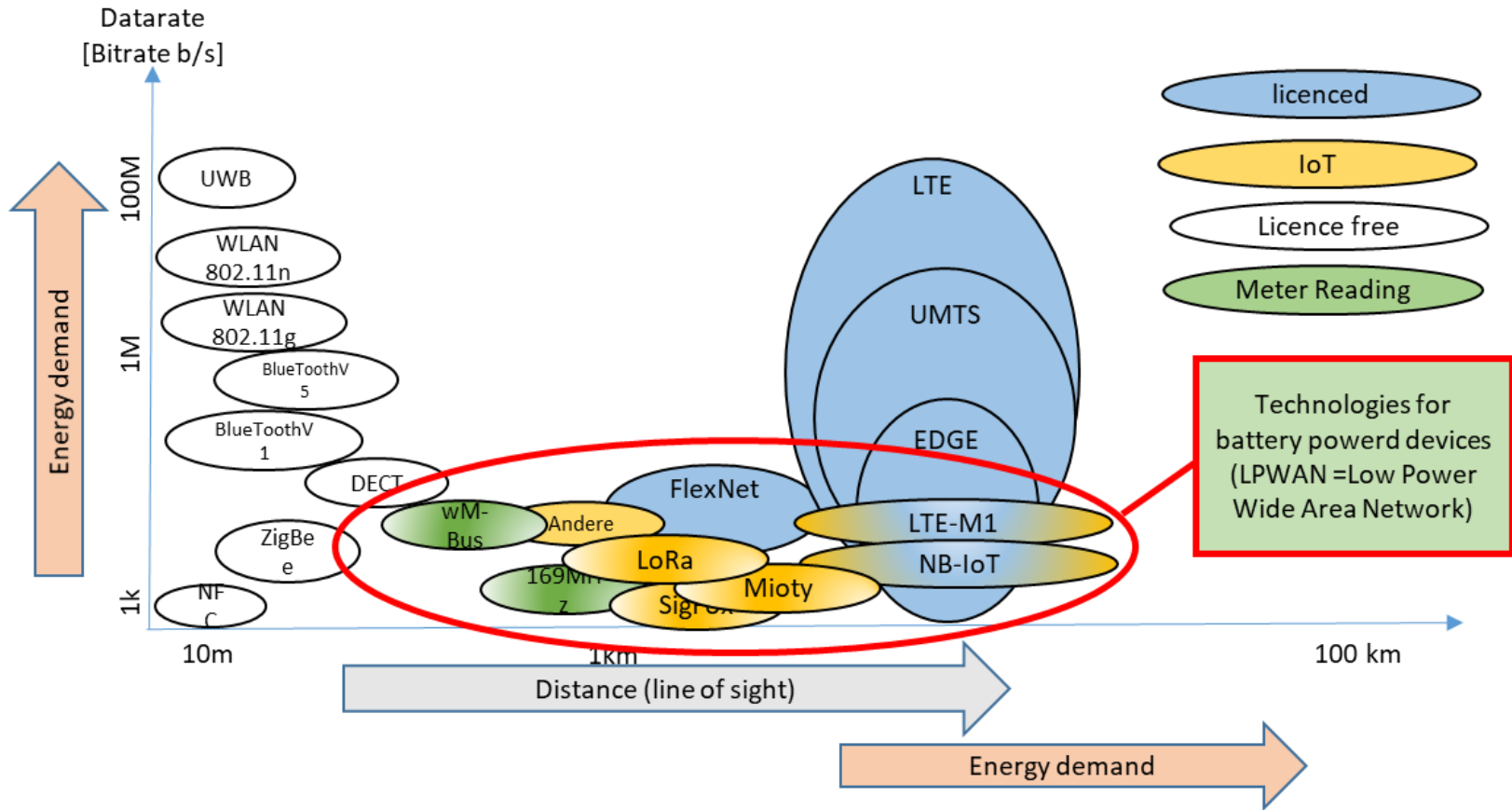


Communication / wired - wireless





Radio Communication Technologies





Legal Metrology Aspects

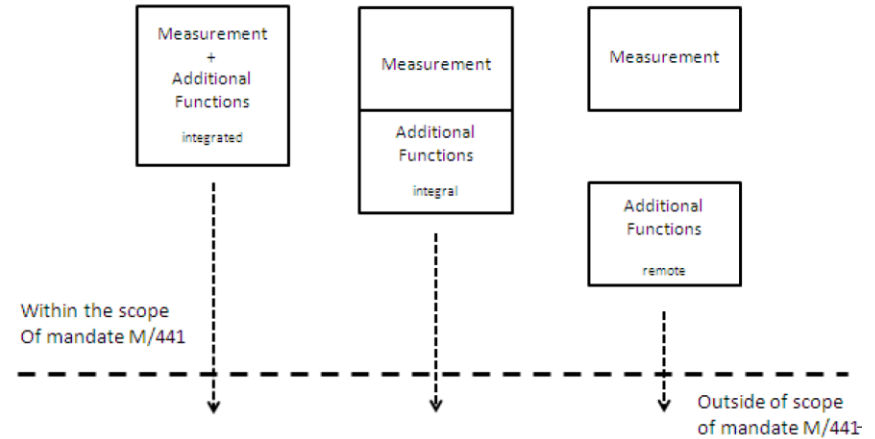
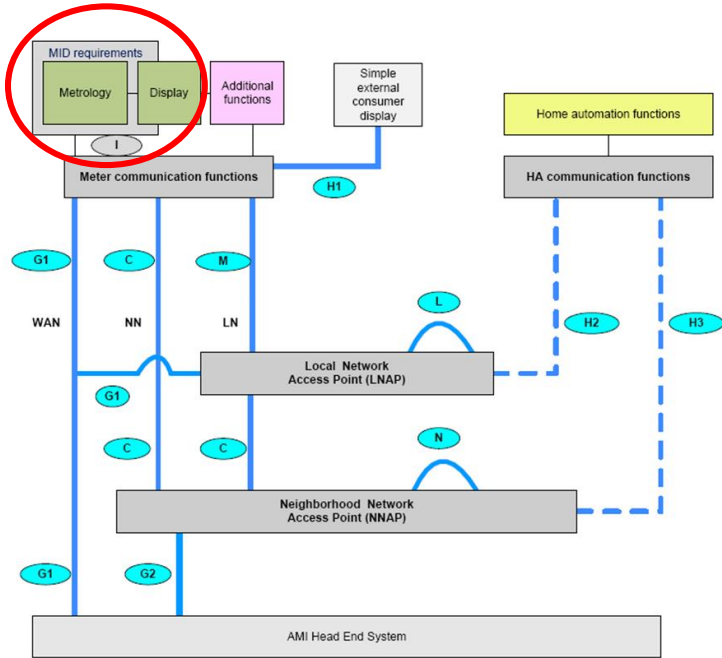


Figure 1 — Additional functionality device

CEN/CLC/ETSI/TR 50572
Functional reference architecture
for communications in
smart metering systems

EN 14154-4
Watermeter – Additional functionalities



Standardization Topics

ISO 4064 Watermeter

- ISO TC30/SC7/TG1 Non-Expl-MPE
- Summary report available
- ISO TC30/SC7
 - NWIP announced for general update of ISO4064

EN 14154-4 Watermeter – Additional functionalities

- CEN TC92/WG2 finished update of Part 4
- Update references
- Some minor clarifications
- Submission for inquiry 10th Sept. 2021



Question?

Discussion welcome



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