

Innovative Smart Water Metering: Potential & Policy

Damien Giurco INSTITUTE FOR SUSTAINANABLE FUTURES

MMI Conference

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Outline

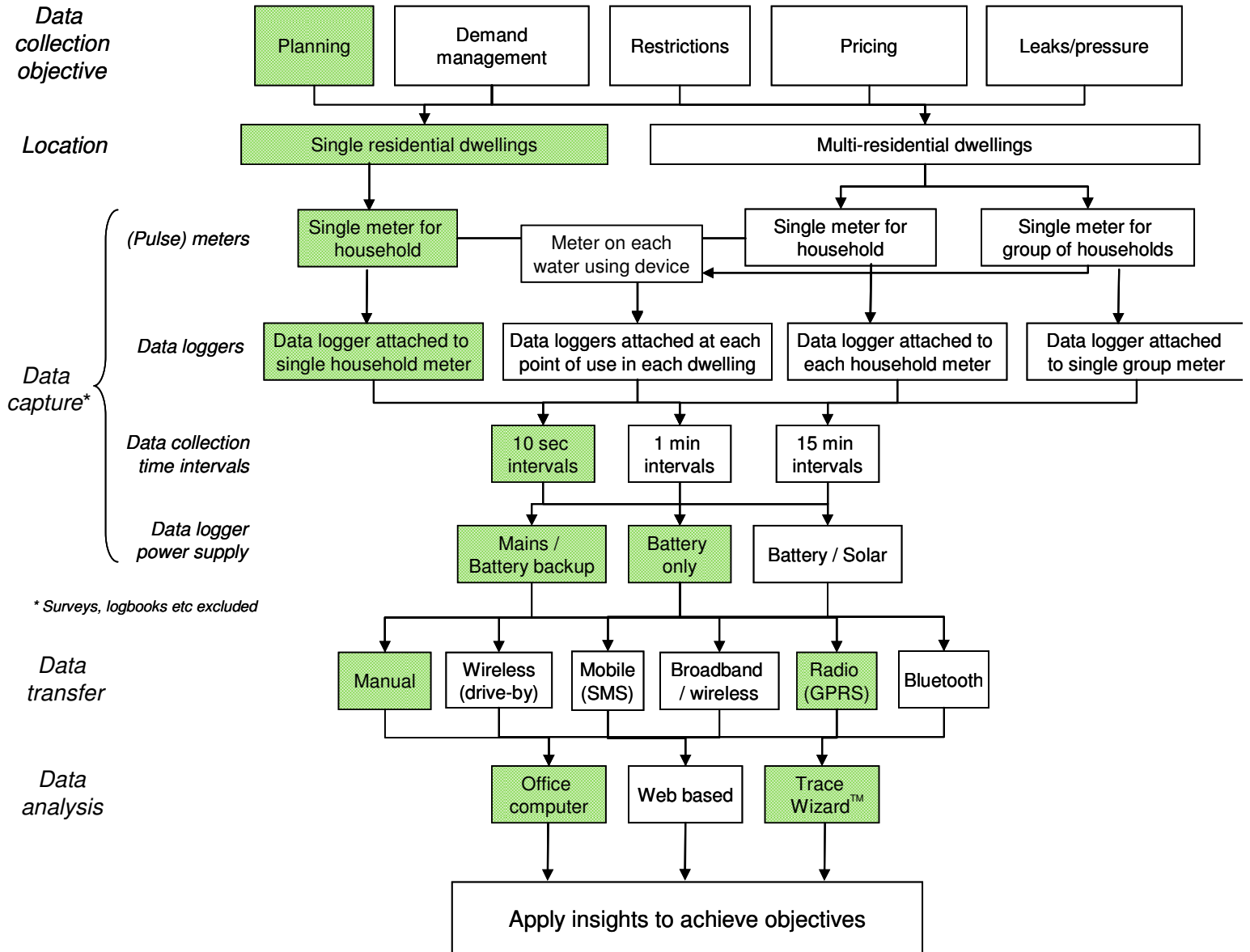
- > **Smart metering in Australia**
- > **Metering typology and potential**
- > **New technology development**
- > **Future considerations**



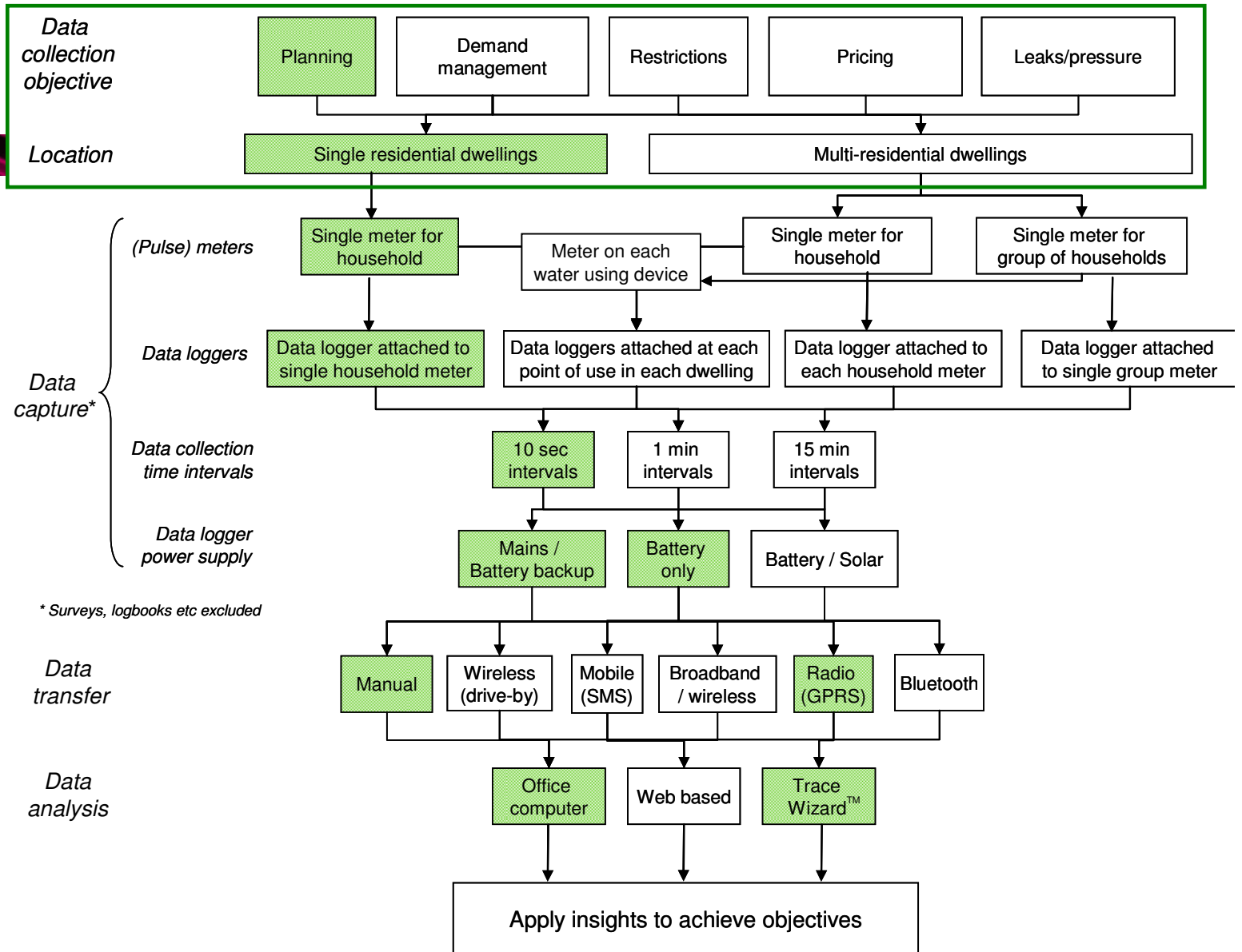
smart meters ► emerging potential



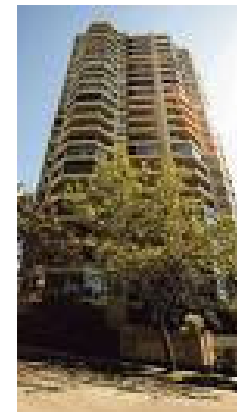
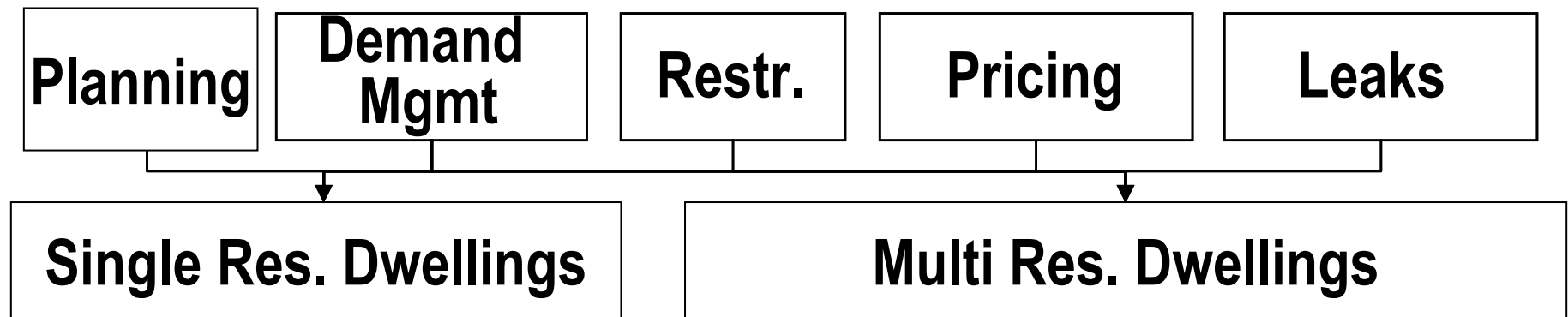
Metering Typology



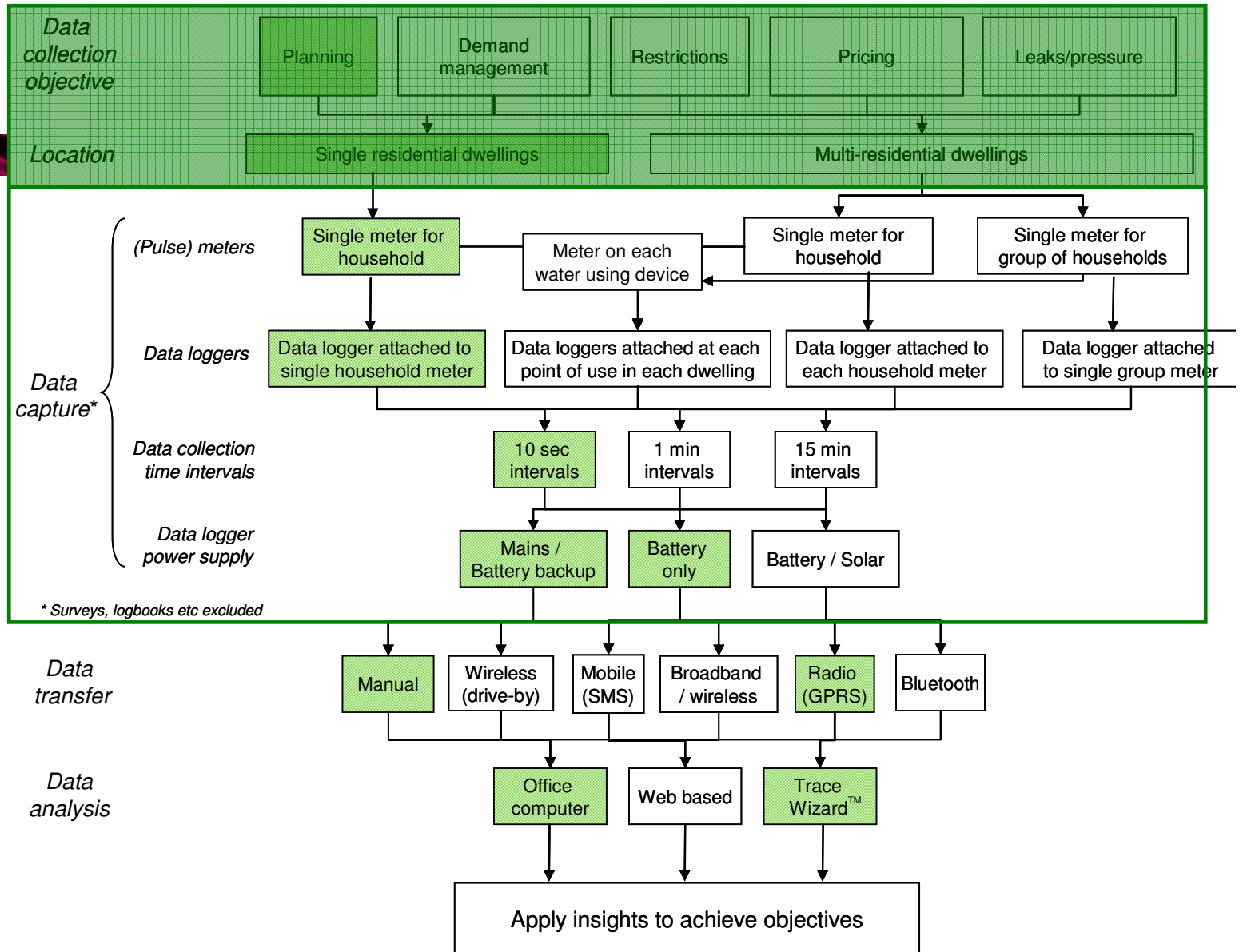
Metering Typology



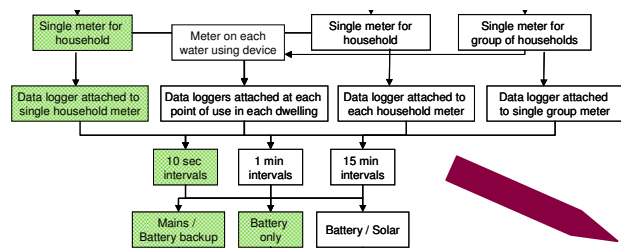
Data Collection Objective



Metering Typology



Data capture steps



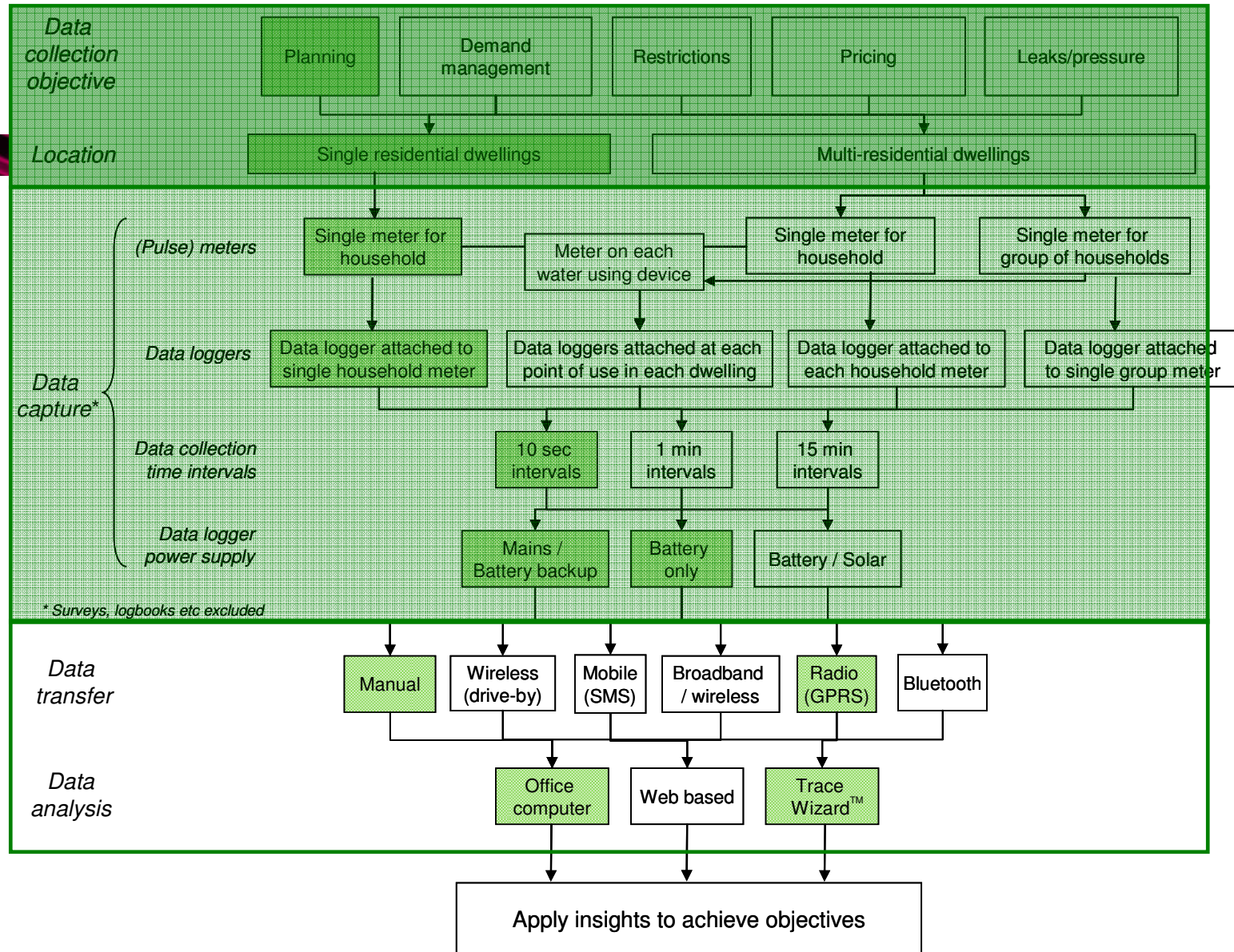
Meter *one .. many*

Logger *group .. house .. sub*

Data interval *10 sec .. 1 min .. 15 min*

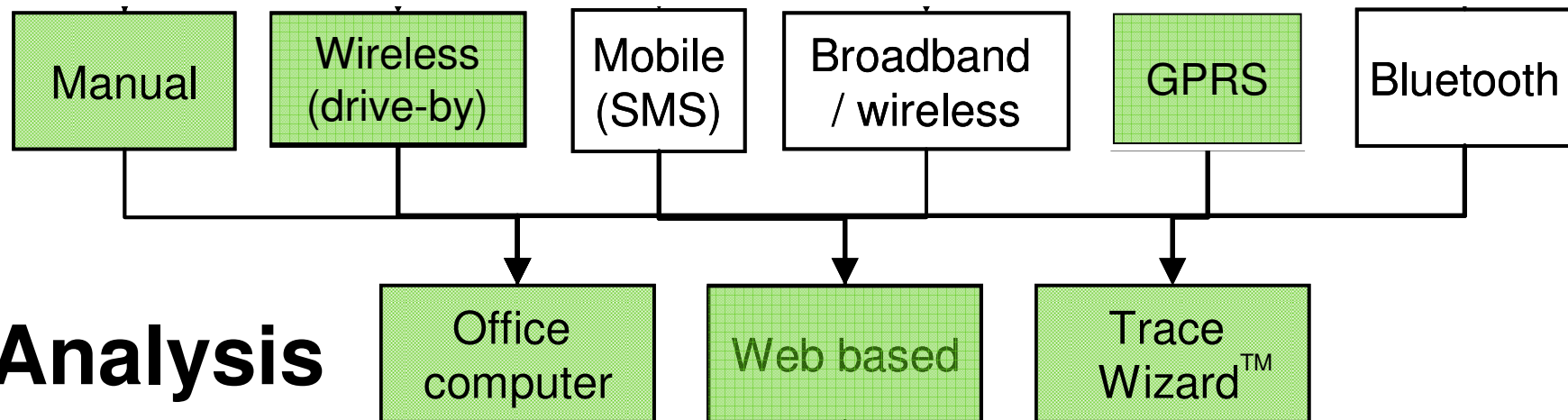
Power supply *mains .. battery .. solar*

Metering Typology



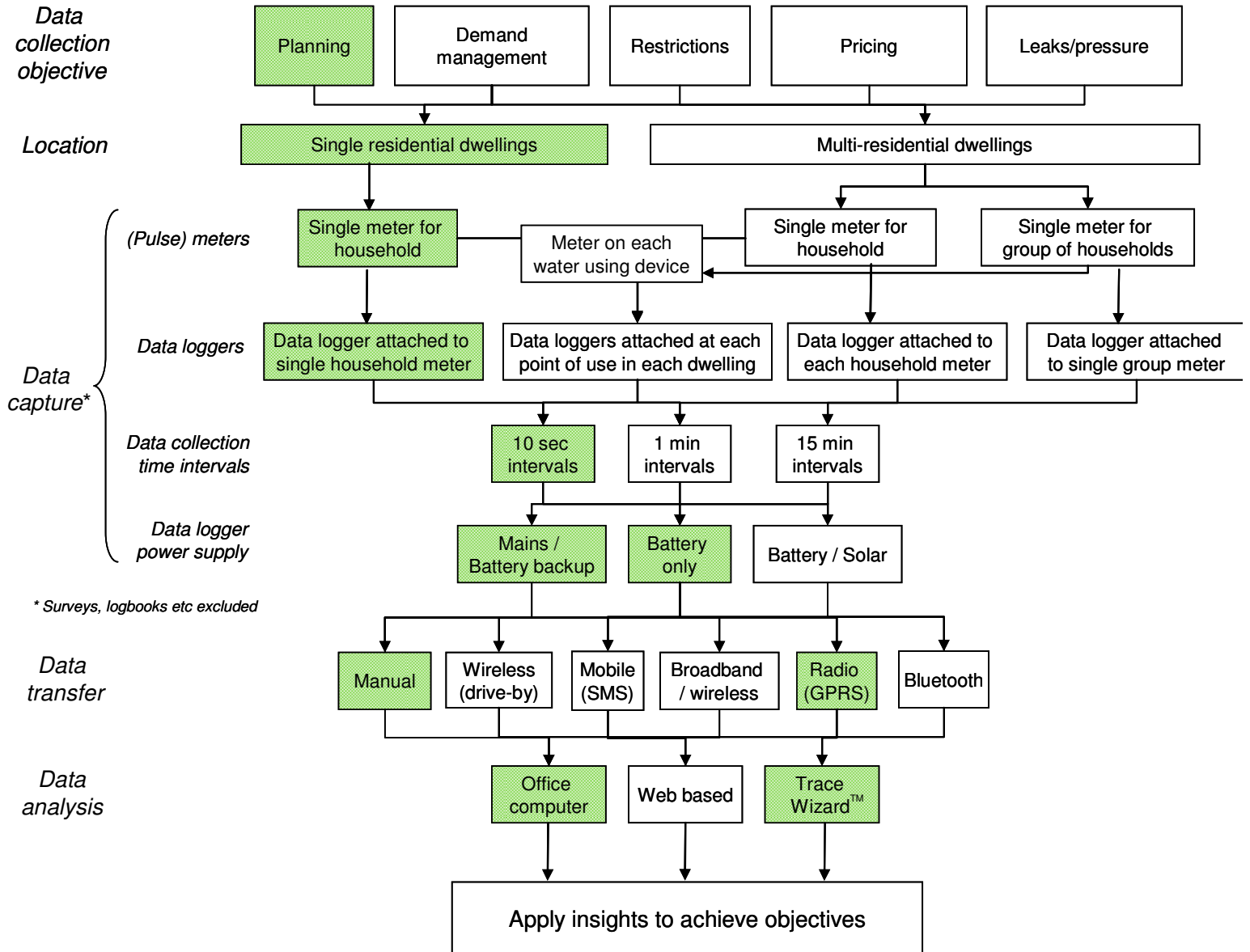
Data transfer & Data Analysis

Transfer



Analysis

Metering Typology



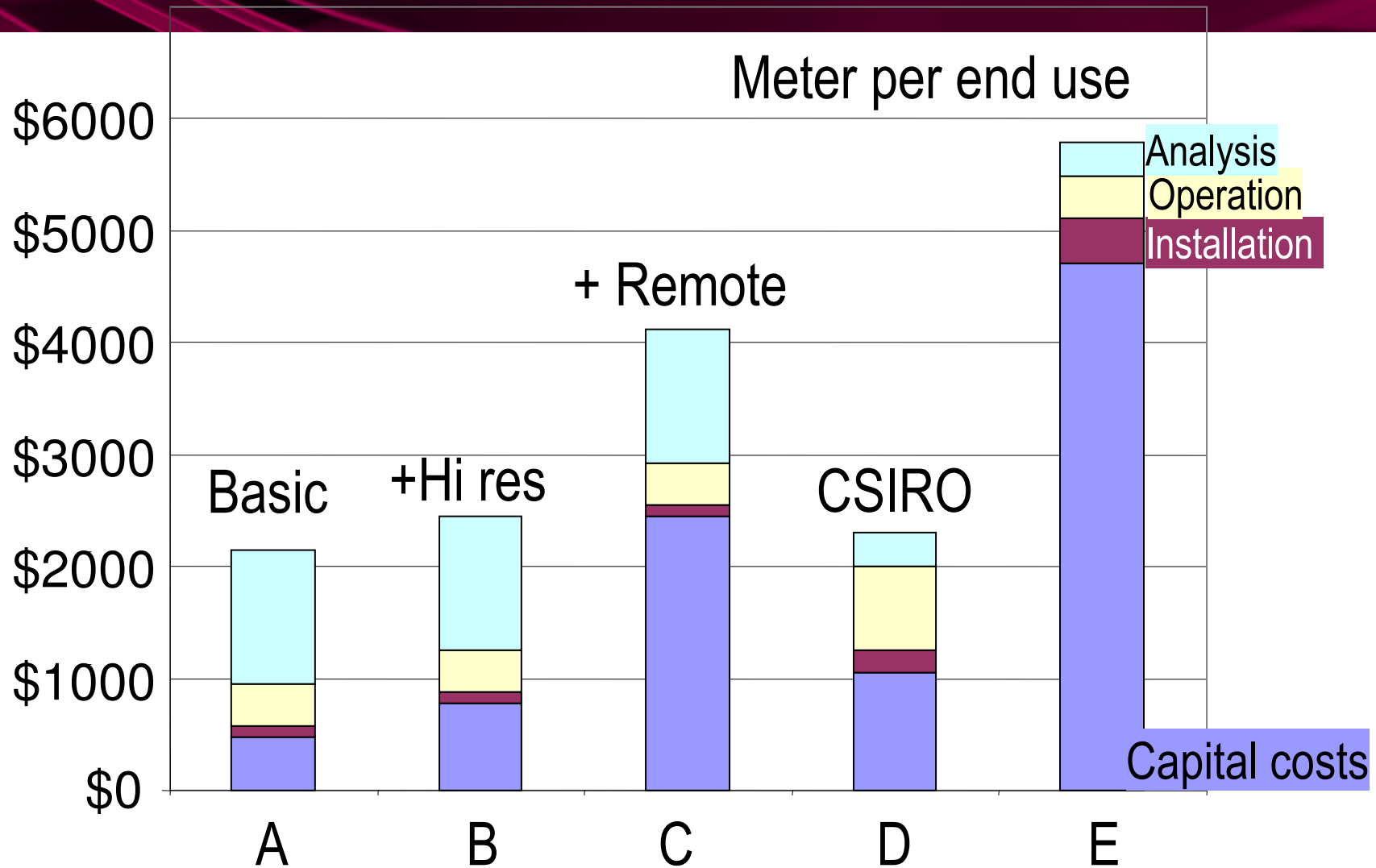
Outstanding issues

- > Lacking end-use resolution and automated identification
- > Information detail
 - planning by utilities
 - customer behaviour change
 - privacy
- > Water energy links
 - energy in water
 - water in energy



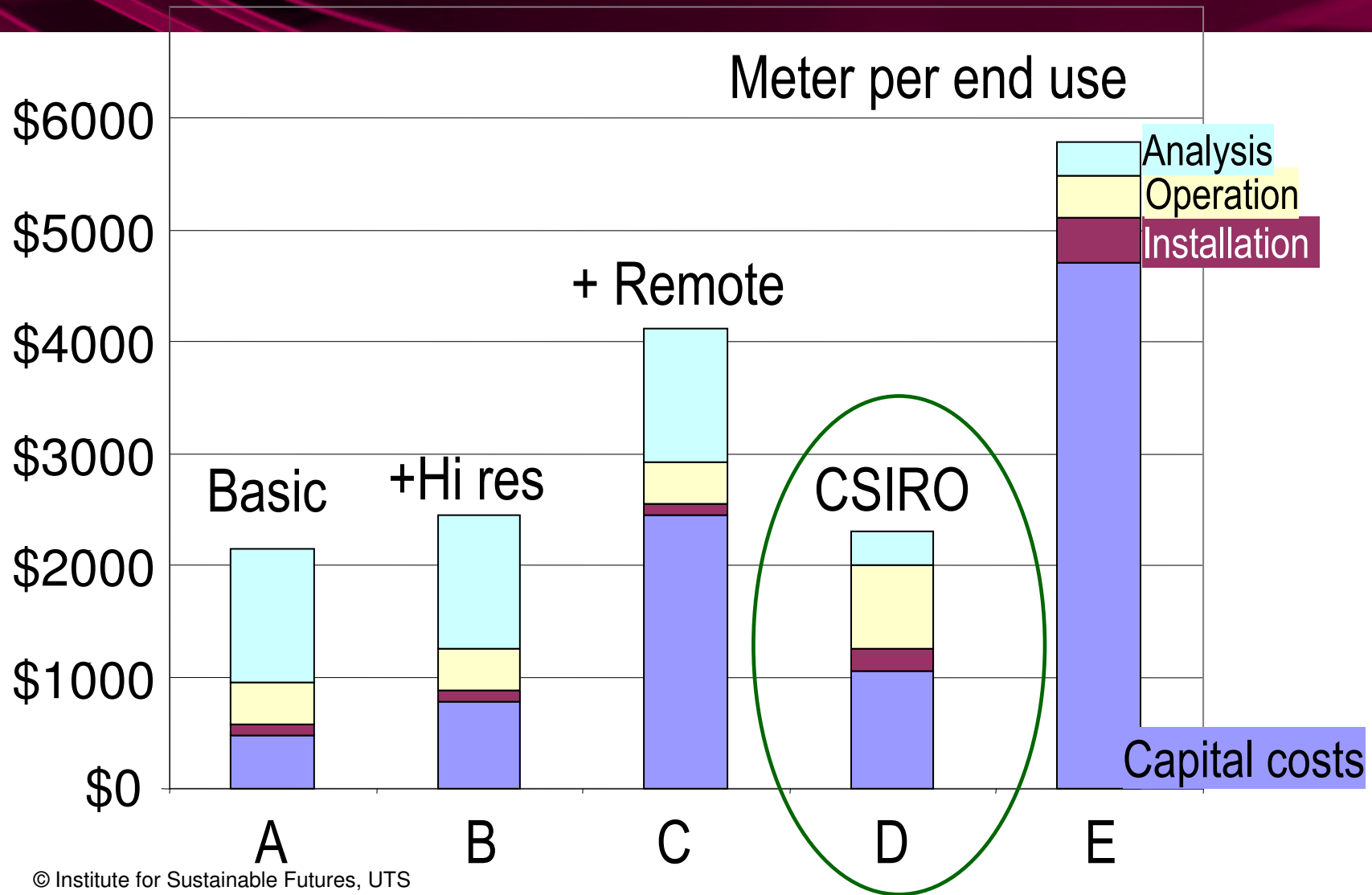
Technology costs

for one year of operation



Technology costs

for one year of operation



Technology development

Mini house CSIRO Highett

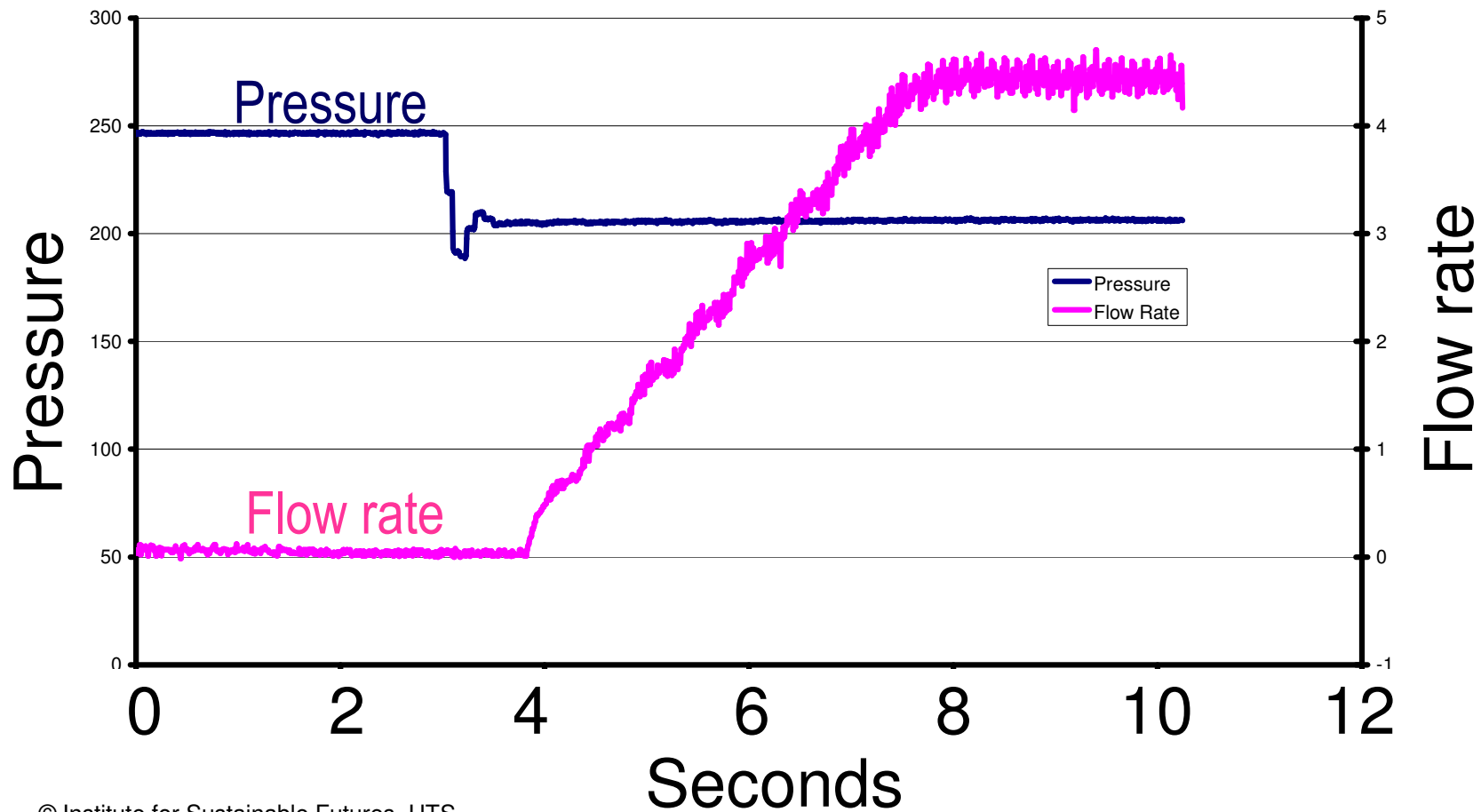


Water and pressure meter



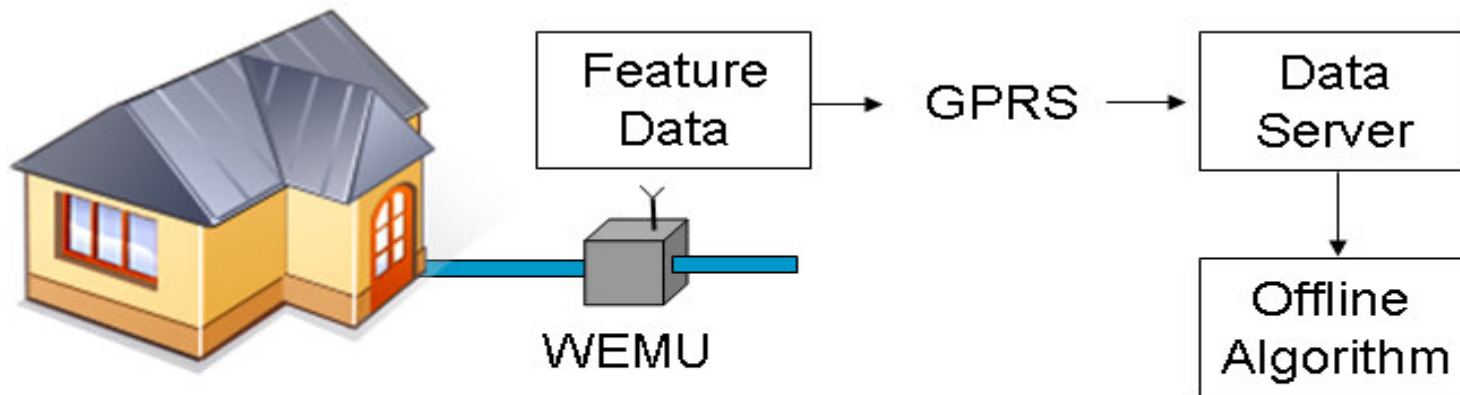
Event trace

Event start - toilet



Next generation

Water End Use Measurement Unit (WEMU)



Future considerations

**Water
Utilities**

Future considerations

**Water
Utilities**

Customers

Future considerations

**Water
Utilities**

**Technology
Vendors**

Customers

**Research
Providers**

Future considerations

**Water
Utilities**

**Gas,
Electricity**

Data

**Technology
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Regulators

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Future considerations

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Data

**Technology
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Customers

Regulators

**Research
Providers**

Trading

Future considerations

**Water
Utilities**

**Gas,
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Data

**Technology
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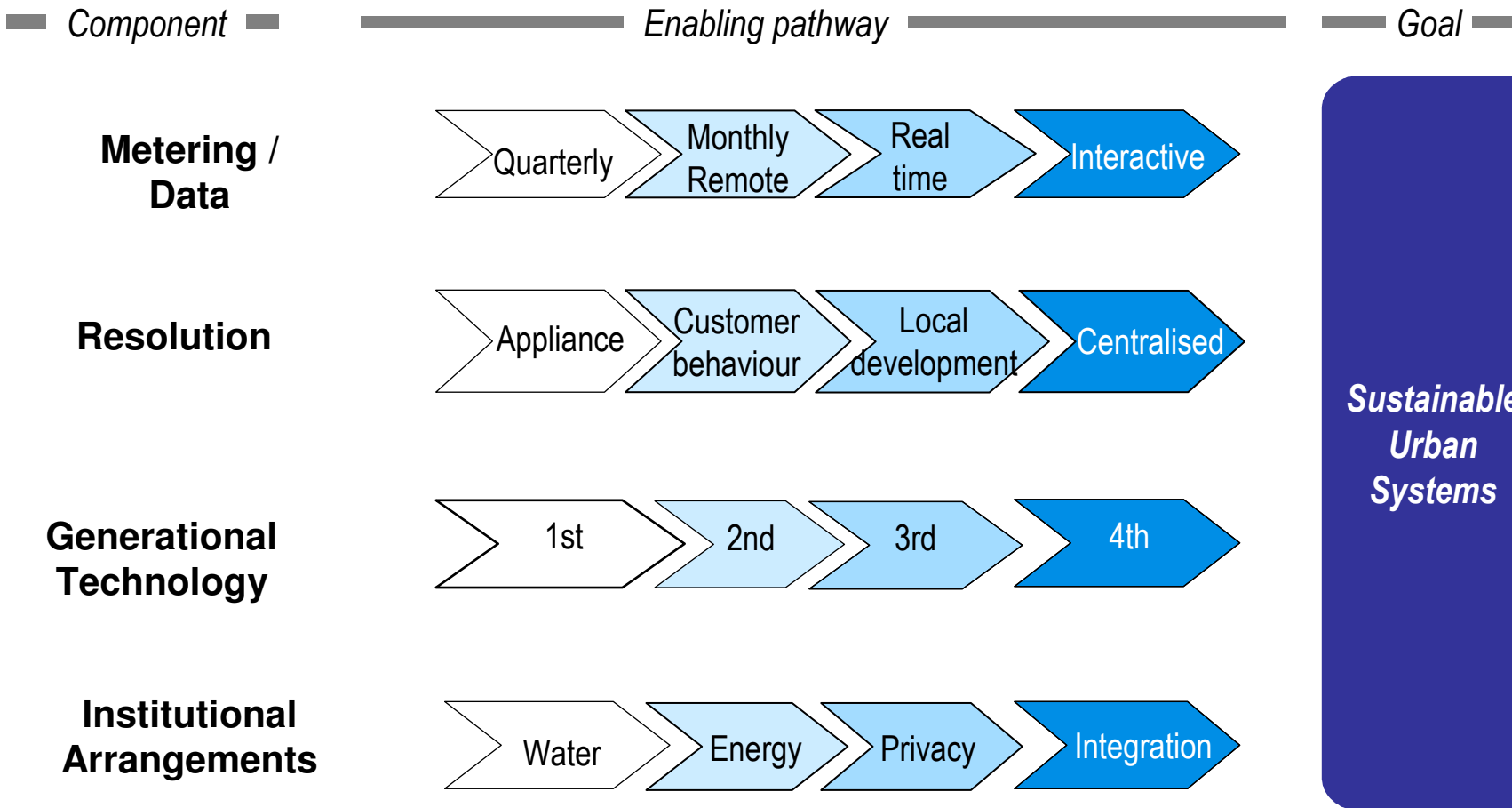
Regulators

Raintanks

**Research
Providers**

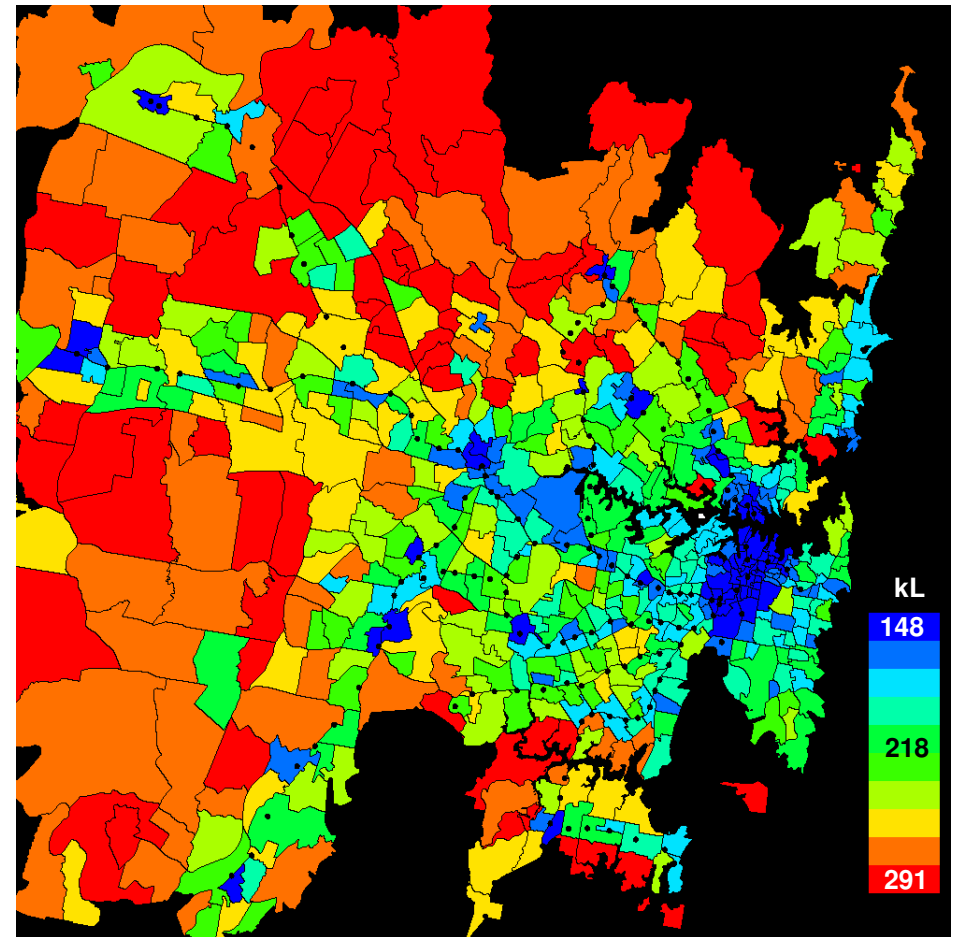
Trading

Integration required



Integrated planning – Urban Water, Energy, Transport

- > City scale planning tool based on integrated data
- > Population, land use, transport
- > Water and energy footprint



kL per **household**/yr₂₇

Contact details

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