

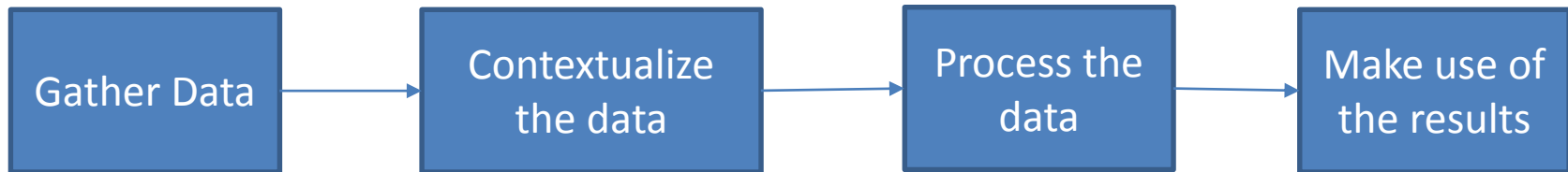
Smart Water in Wales – The WISDOM Project

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- Smart Water
- The WISDOM Project
- Data Integration with WISDOM
- Smart Metering in Wales

- There is no precise definition to term "Smart Water"
- Generally means the process of making the water network more intelligent.
- This can mean many things:
 - Increased sensing.
 - Increased automation.
 - Better decision support.
- To do any of this we must be able to:



There are many challenges in achieving this idea of "Smart" water networks:

- Data is often housed in a multitude of systems.
- Lack of interoperability between software systems – not all systems talk together.
- Context of data is often embedded in individuals or in paper based documentation.
- Systems often differ between water network operators.
- Systems may also differ between parts of the water network i.e. waste / clean , distribution / treatment.
- Often uncertain what extent of sensing infrastructure is required.
- Automatic / semi-automatic actuation is an end goal – but very challenging due to the critical nature of the water supply.

- Collaborative EU – FP7 Funded Project

Local
authorities



Water
utility



Industrial



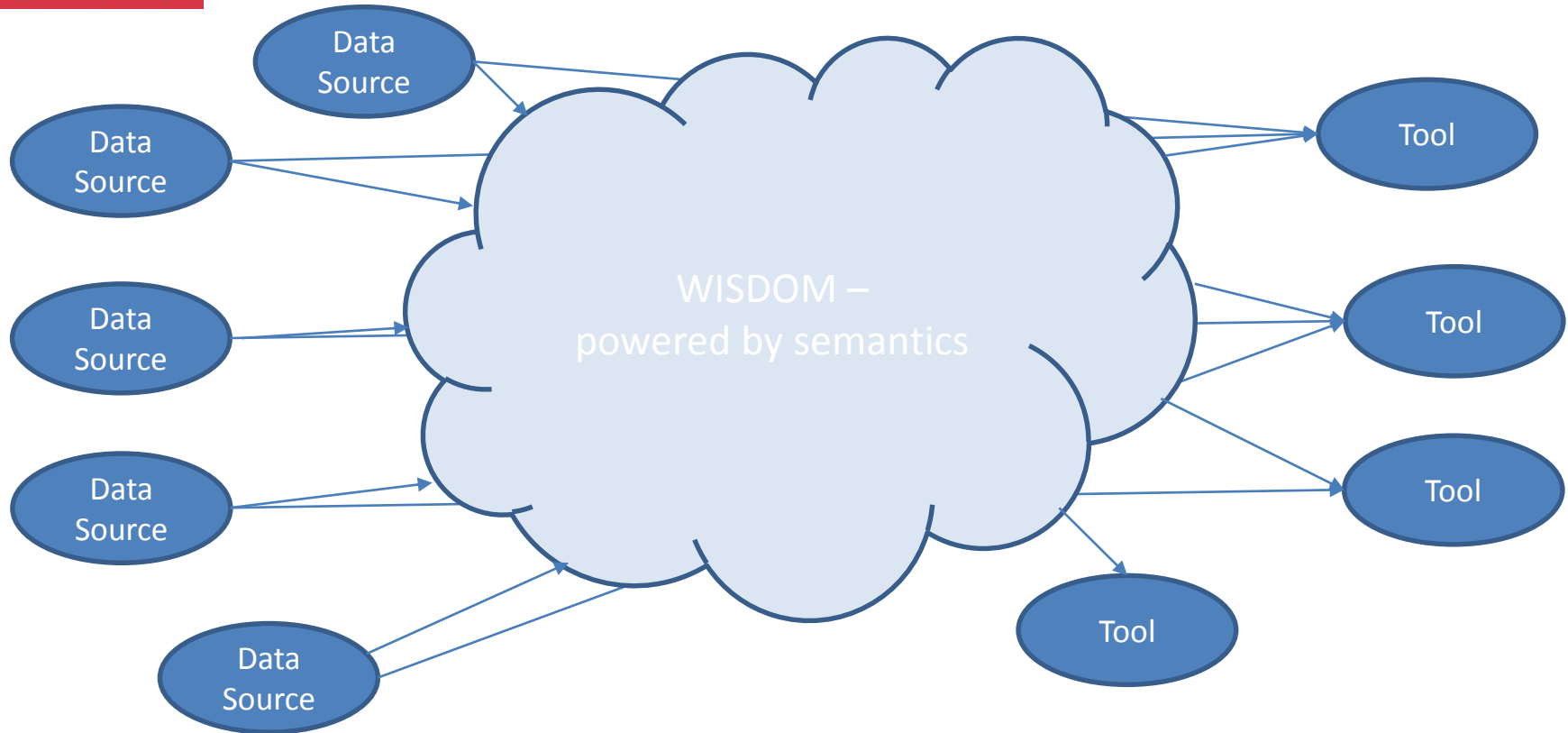
Consulting



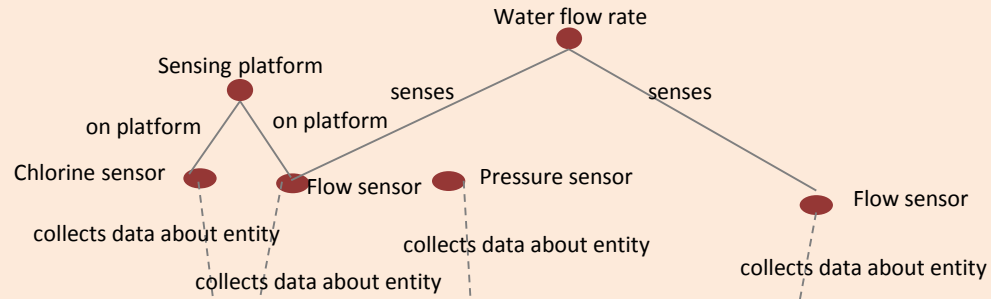
Academic &
Research

Imperial College
London

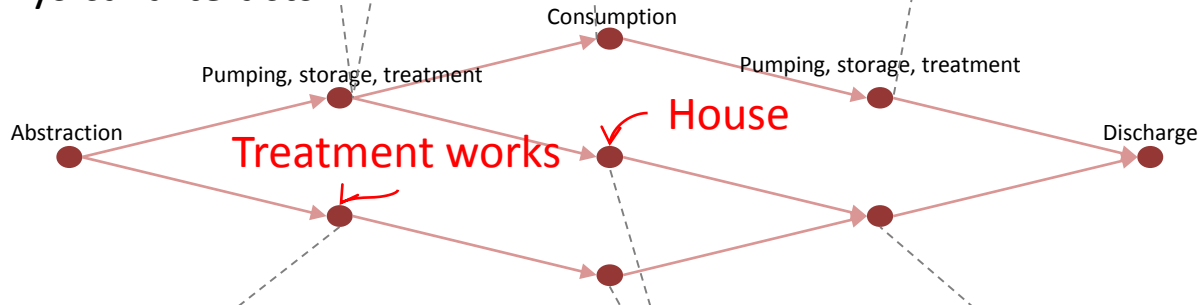




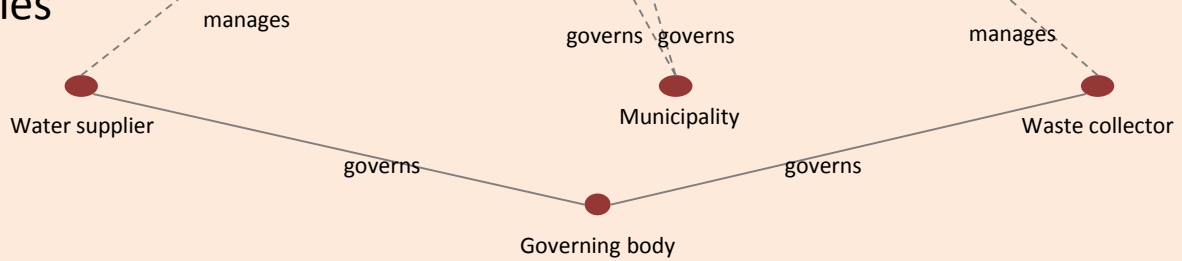
Sensor concepts



Physical artefacts



Social entities



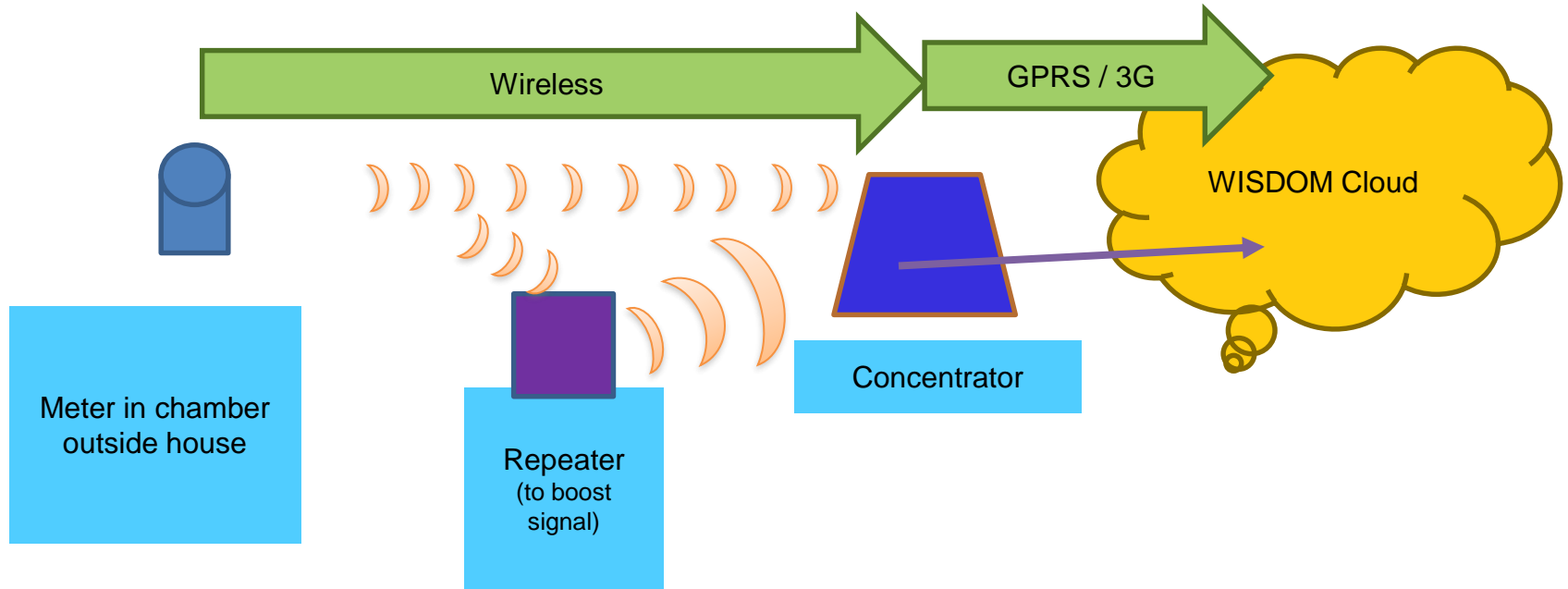
WISDOM Uses Semantics to:

- Integrate legacy systems.
- Contextualize data from different systems using a common data model.
- This means all components have the same view of the domain, meaning of all data is shared between software.
- This means data can be integrated across different scales within the water network.
- We are working with what standards bodies already exist to standardise our work: W3C – Semantic Water Interoperability Model Group

Within the WISDOM Project we are deploying a large smart metering roll out in Wales.

Within the WISDOM project a scientific study are being performed using this smart metering data. The goals of this study are:

- To understand how effective near real-time user-oriented water feedback system in increasing people's awareness of their consumption.
- To understand how the level of information available to consumers about their water usage affect their water usage.
- To gain a better understanding into how water is utilised across the day.
- To gather data on the water energy nexus to help us understand how water and energy usage is linked.



Deploying Smart Metering in Wales



Thank you!

Any Questions?