

BIM-IoT Integrated Framework for AR/VR-assisted Digital Twinning

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Presenter

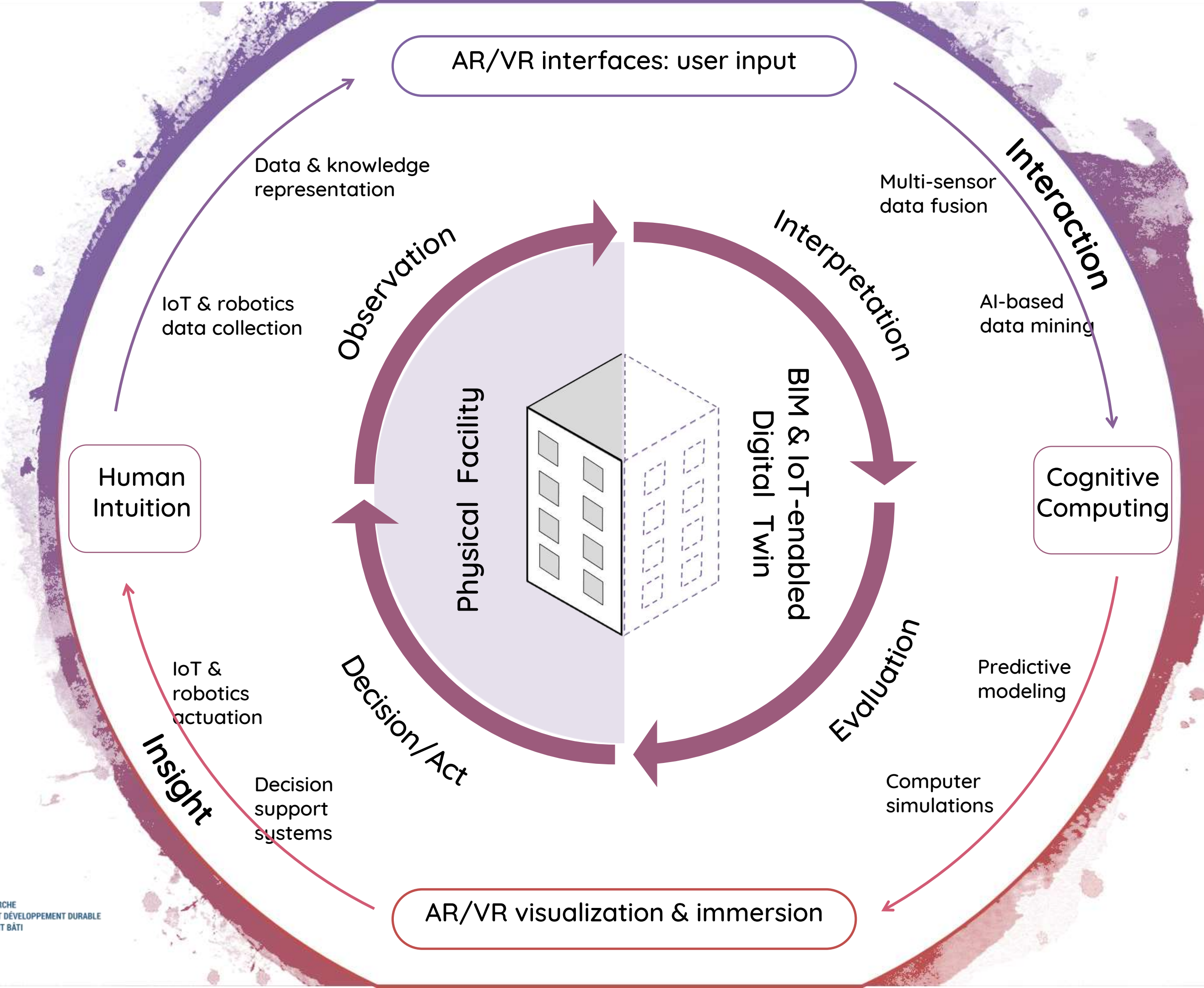


Mehrzaad SHAHIN
MOGHADAM

Cognitive Buildings:

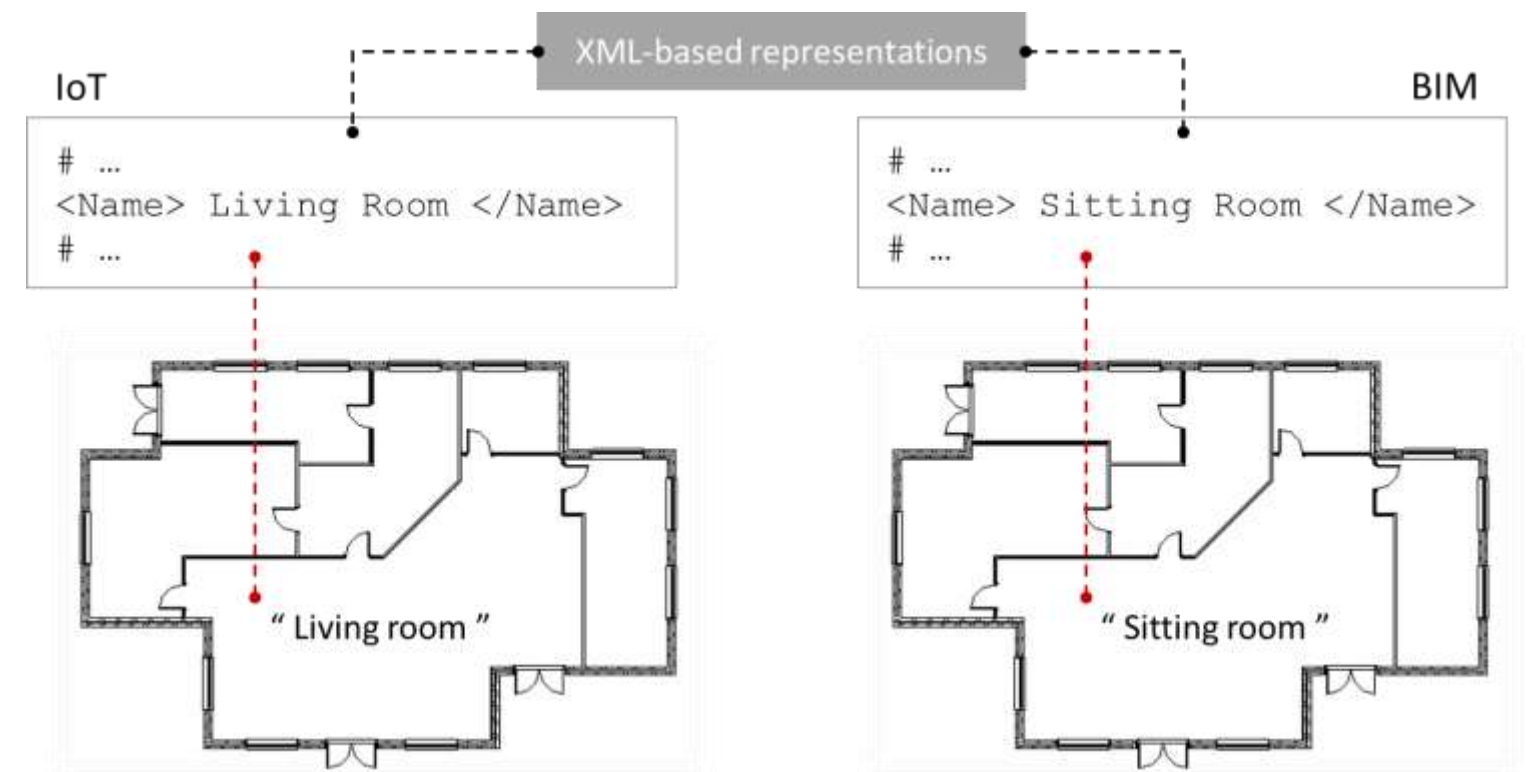
Living digital twins of buildings/jobsites

22



Problem

- Interoperability issues:
 - An ongoing challenge for both BIM and IoT.
 - It is not all about syntax, **semantic** issues are more profound.
- Interpretation issues:
 - Lack of semantic links between the disparate sources of building data holds back the potentials of advanced analytics.



Solution

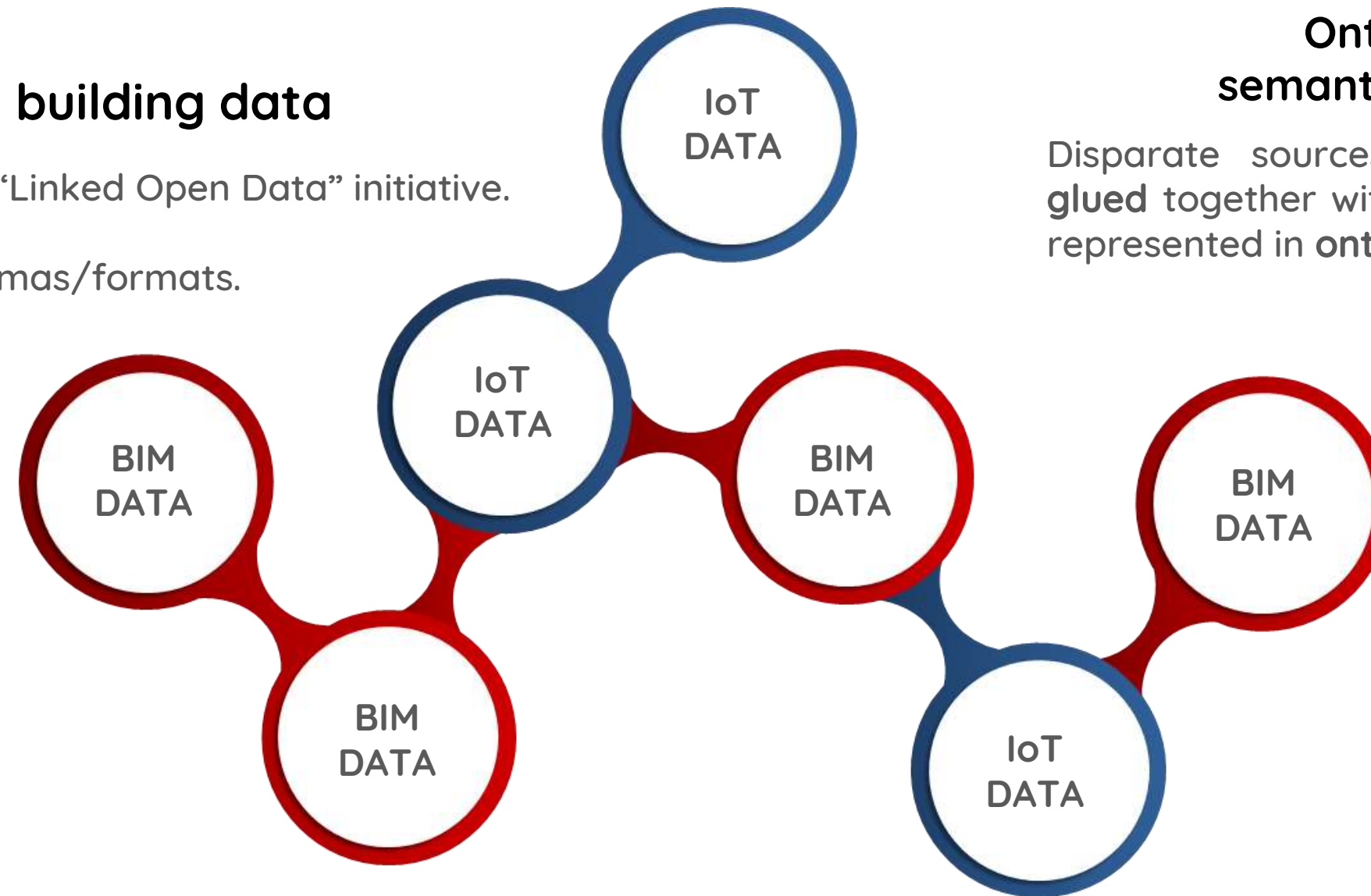
Linked open building data

Following the principles of “Linked Open Data” initiative.

Embracing open data schemas/formats.

Ontologies & semantic enrichment

Disparate sources of building data are **glued** together with **semantic relationships** represented in **ontologies**.

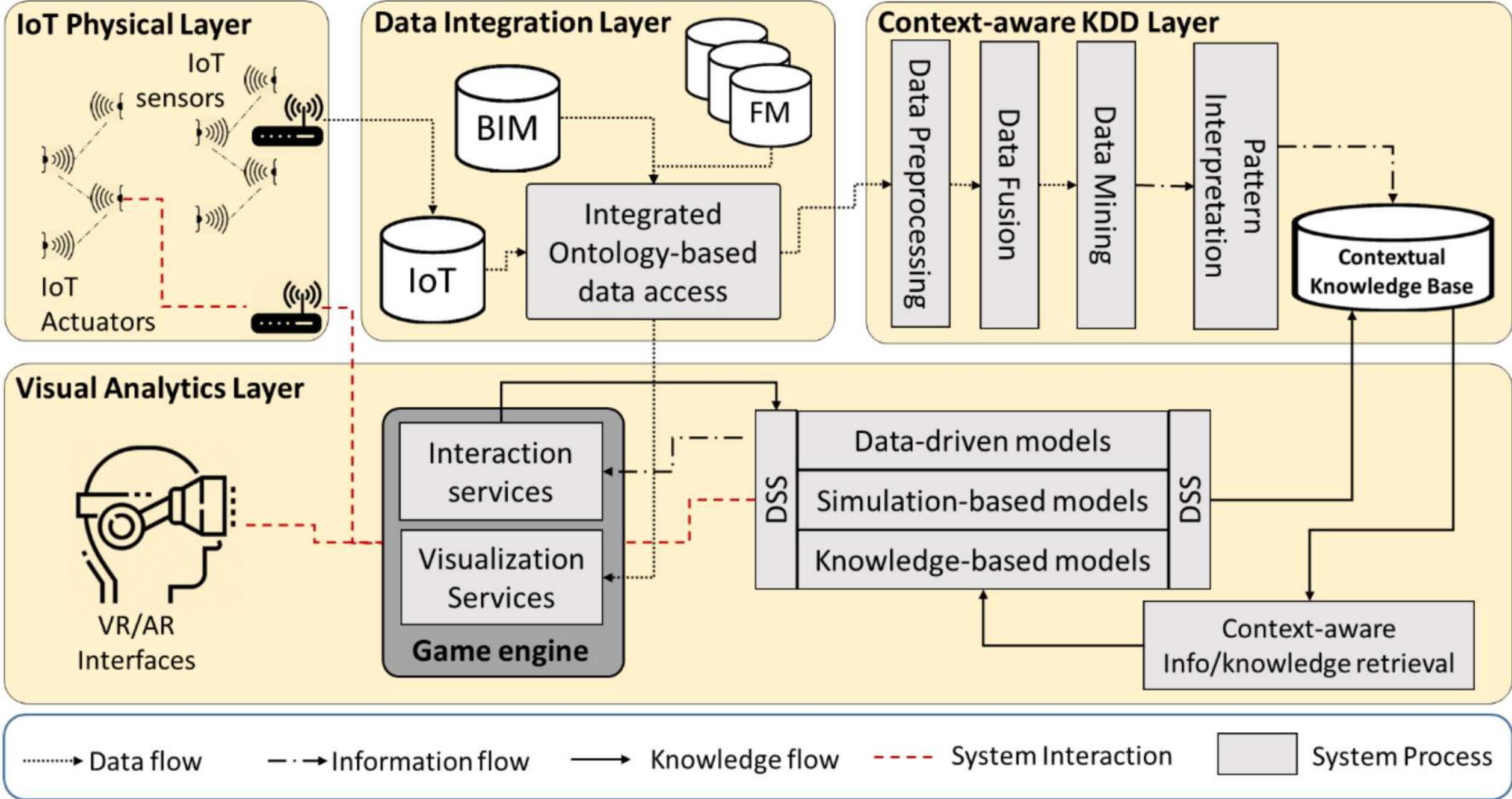


Ontologies are here !

Serious attempts have been taken by international consortiums, e.g., ifcOWL (BuildingSmart), and Semantic Sensor Network (W3C).

Proposed general architecture

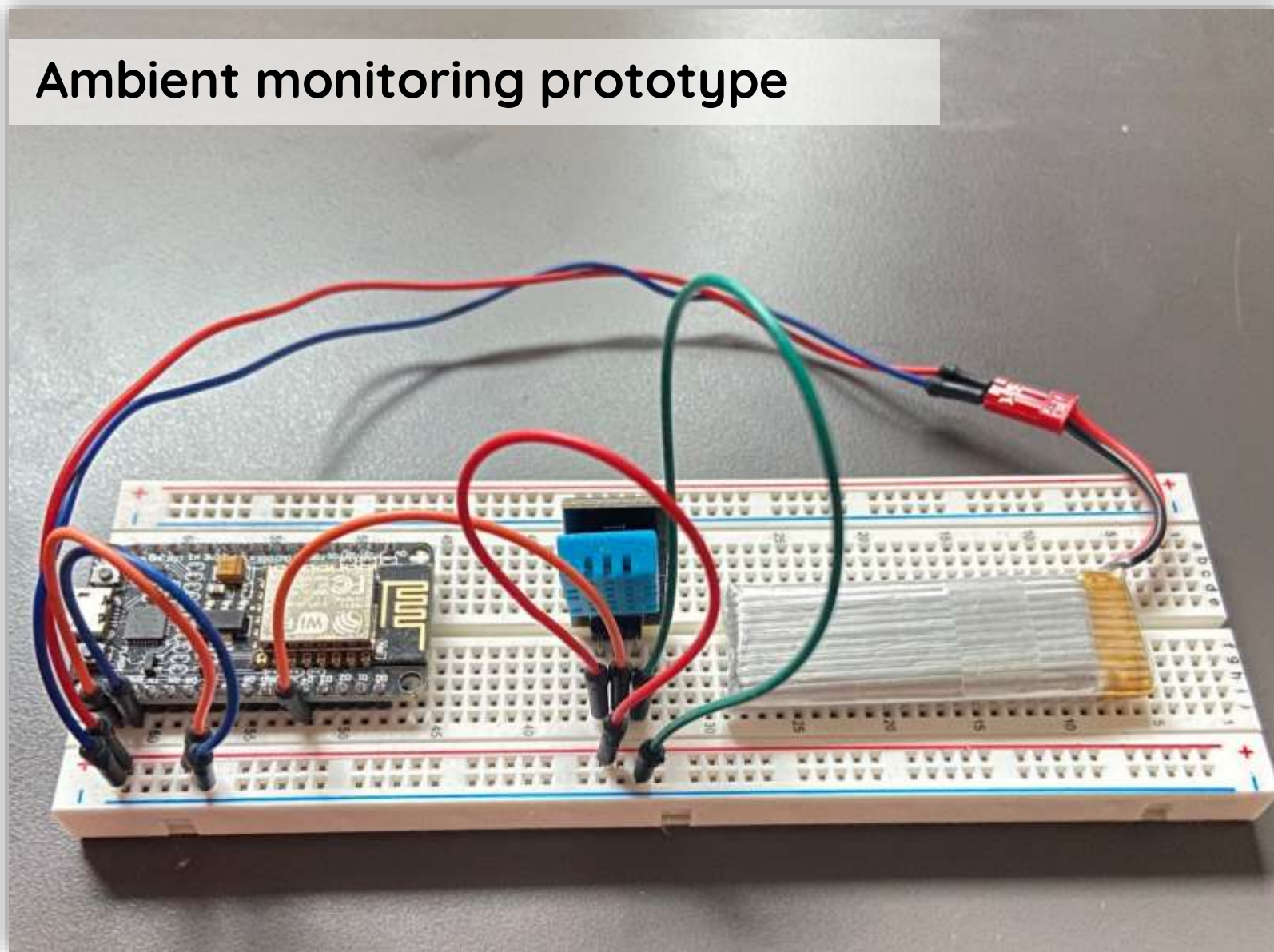
25



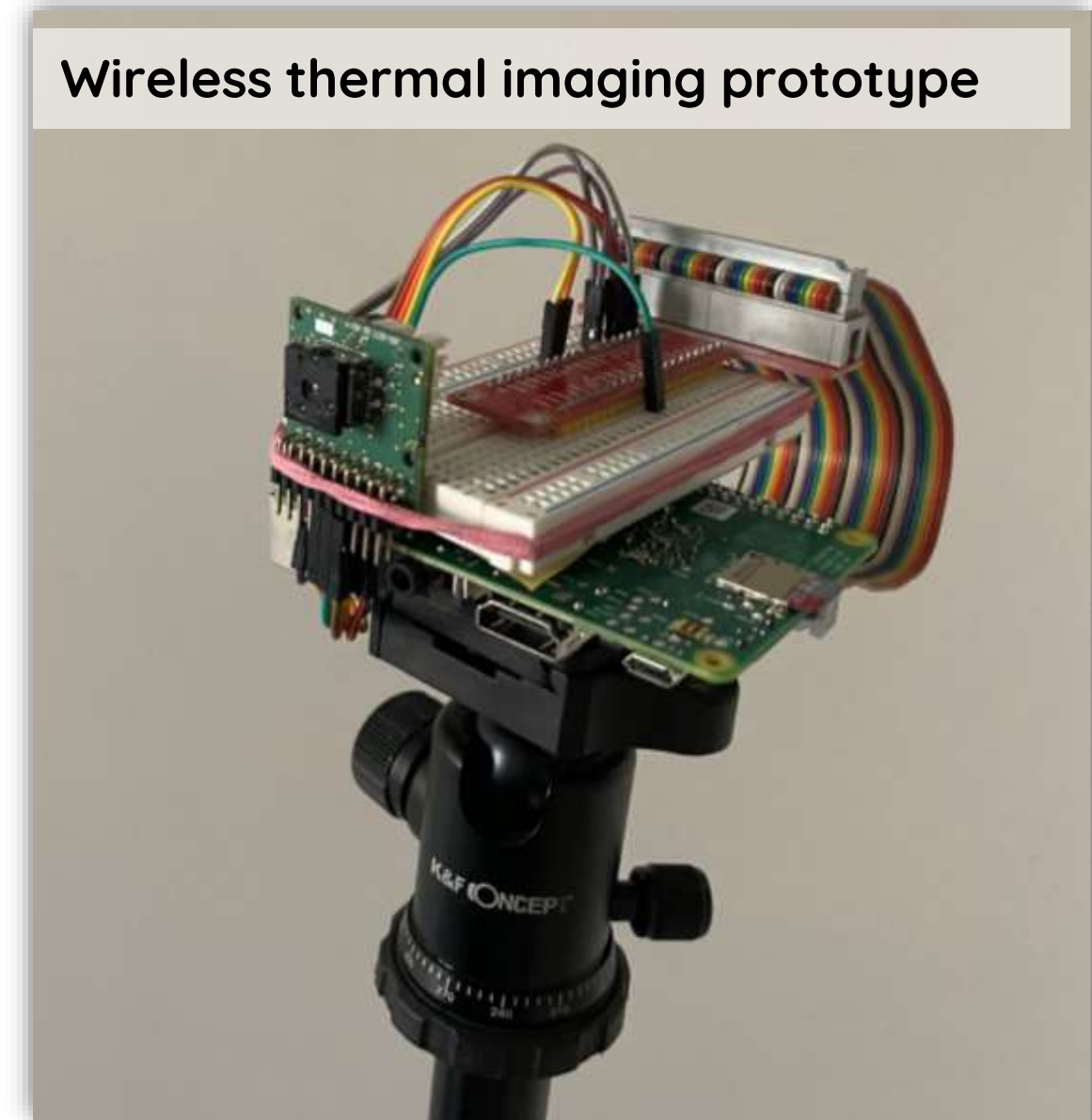
Examples of IoT prototypes

26

Ambient monitoring prototype

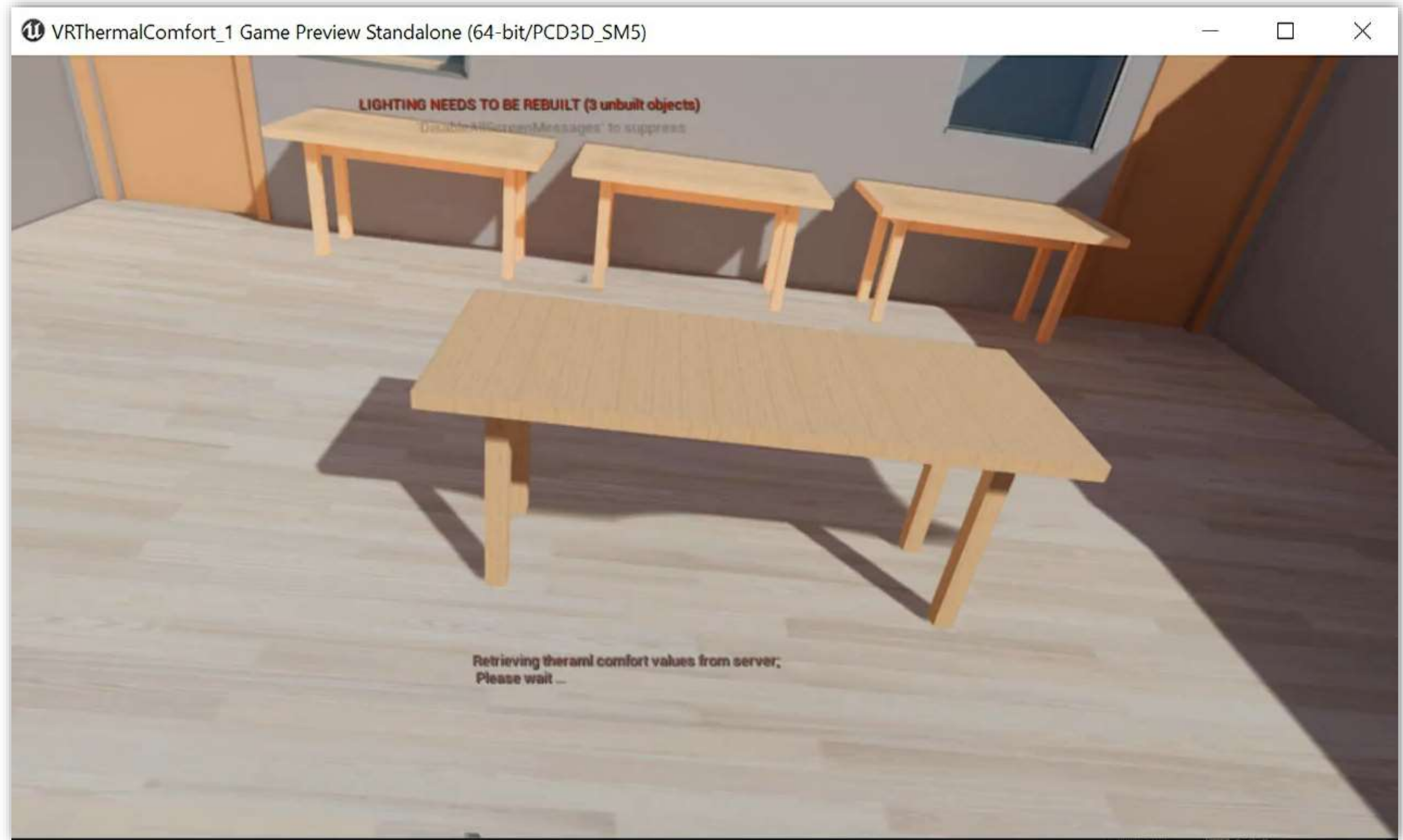


Wireless thermal imaging prototype



Demo

27



Thank you for your attention!

We thank our partners:

