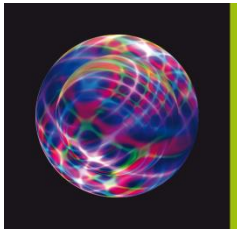
COST proposal SUMERA
Standardized Urban data Models for Energy Related Applications



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COST
European Cooperation in Science and Tech

EIFER

Funding for the creation of research networks, called COST Actions

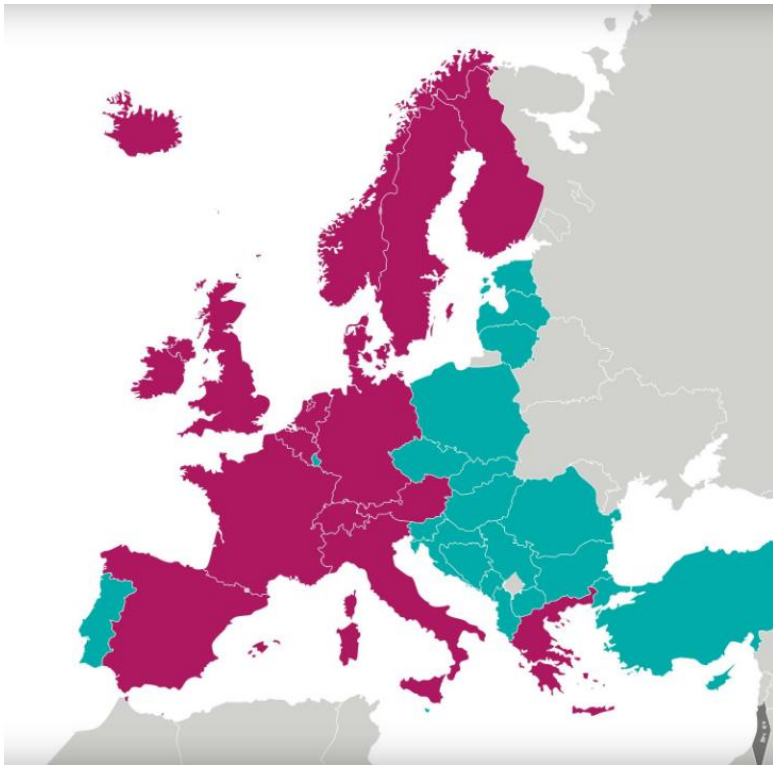
Collaboration among scientists across Europe and beyond (37 member countries)

EU funded COST Actions are interdisciplinary and open.

Funding for 3-4 years

Involving different stakeholders:

- universities,
- R&D,
- private sector,
- policymakers,
- civil society.



SUMERA

Standardized Urban data Models for Energy Related Applications

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Goal:
Free and accessible **modelling standard for representing the integrated energy chain in a city**; from generation and transformation, through distribution and down to consumption. A general modelling approach in order to enable **interoperability and exchange possibilities between the different stakeholders. tools and expert fields**.

Increase spatial data usage for energy applications in cities planning, modeling, simulation, maintenance, administration.

Both detailed **single-building simulations** and **city-wide assessments**. The design and validation of domain extensions for **CityGML** will be based on the current development of the **CityGML Energy ADE** and the **Utility Networks ADE**.

SUMERA strengths:

1. **Digitalization processes of the built environment** is definitely a hot topic after the crisis in the European construction sector between 2009 - 2014, therefore the research questions in the proposal are very challenging and in time.

2. The **CityGML** industrial standard **is promising and respectable** development.

3. **Link Energy ADE <<-->> UtilityNetwork ADE is useful** contribution.

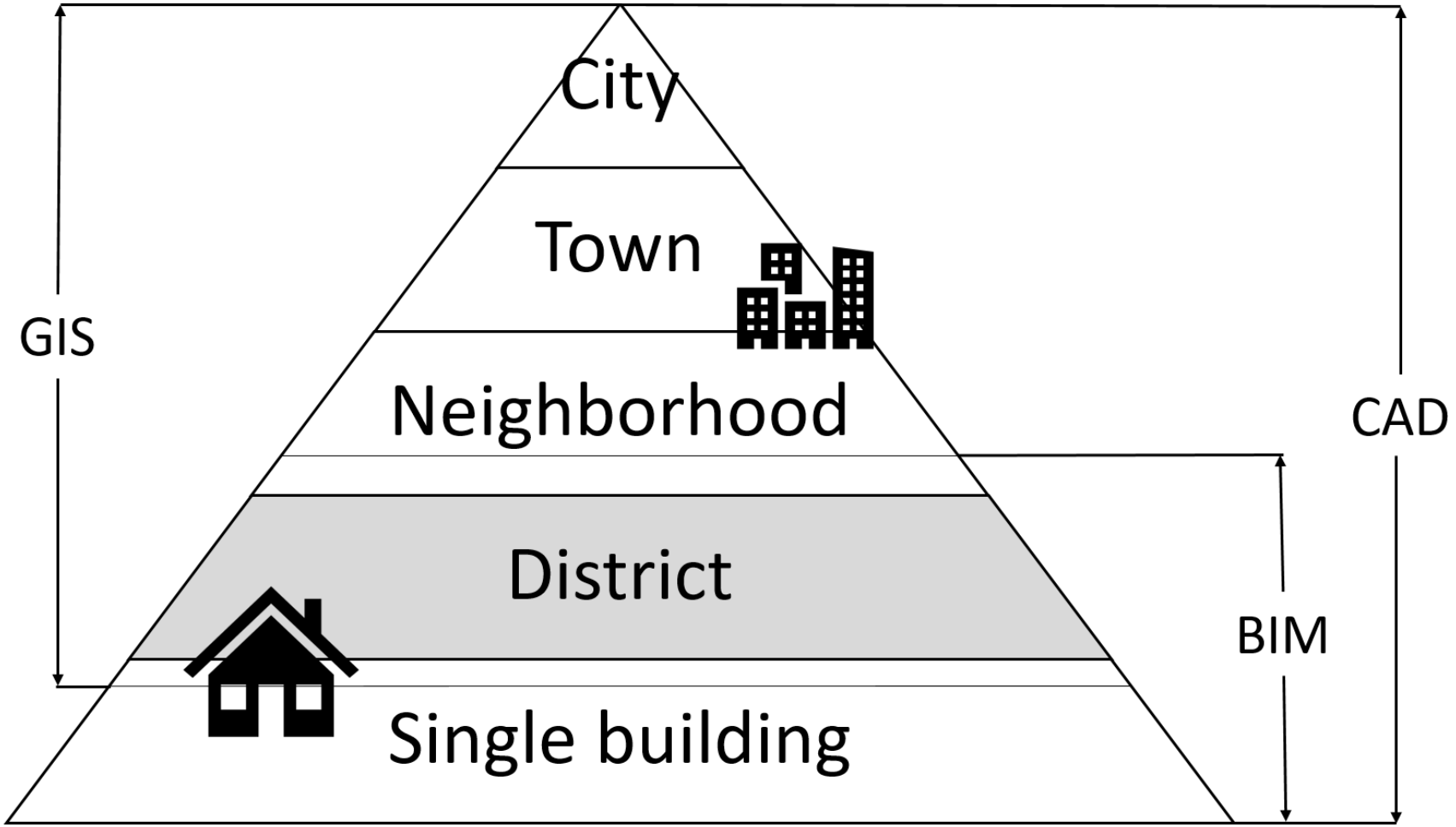
SUMERA strengths:

1. The **need to build a community addressing the problem of urban data modelling** for energy applications; such community can be active and have a strong impact on the more and more frequent applications related to **smart cities**, providing common data models.

2. **SUMERA can solve socio-economic problems** related to **better urbanization and better energy management and infrastructure planning**.

3. **Software development** entities with experience that will develop and support the standard

SUMERA strengths: Interoperability



SUMERA needs:

1. **Clarify scientific, technological and/or socio-economic impact**

2. **Integrate more BIM** (Building Information Modeling) and its parts (e.g. Industry Foundation Classes - IFC) is an official ISO and CEN standard but is only mentioned once in the proposal. BIM and its corresponding LOD level should be considered much more seriously in the proposal. Specifically: integrate **sensor data flow via IfC** (IfcSensor, IfcFlowTerminal etc.)

3. **Incorporate** important **specifications** like the **LandXML**, which models land and infrastructure (e.g. roads).

SUMERA needs:

1. Clearly **define extensions to Energy ADE and Utility Network ADE** for linking the two extensions.

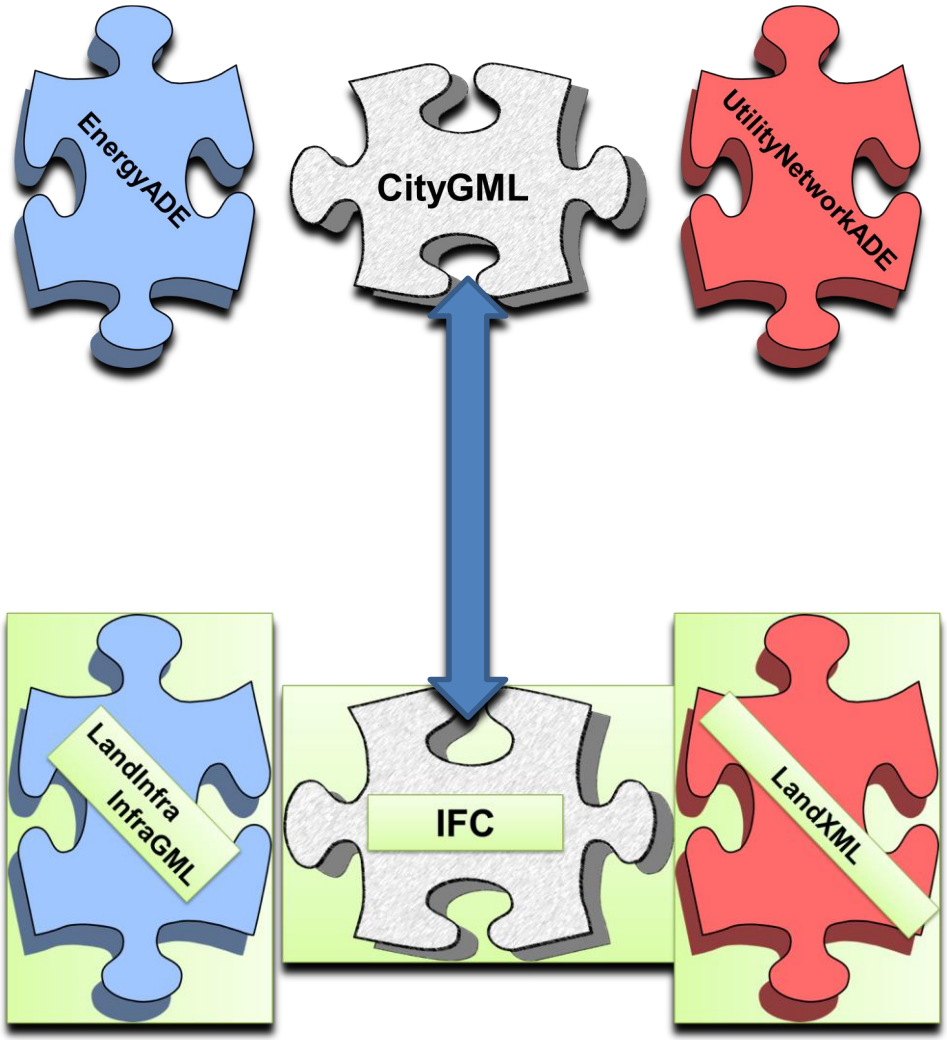
2. Identify and add to consortium **software exploitation entities**, support the standard (OGC, CEN)

3. Propose means/approaches for **integrating other (inter)national standards with international standards e.g. CIM to UtilityNetwork ADE**

SUMERA Open call

Build up a new coalition of the willing around the ADEs consortiums

Deadline:
5 September 2019



Thank you…

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