

3D and CityGML

Information integration for Future Cities



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Smart cities use cases areas

Air

Water

Fire = Energy

Food

People incl. Transport

Social incl. Communication

Smart cities use cases

- ▶ Optimise use of resources

 - Environment

 - Transport

 - Energy/Infrastructure

 - Food

 - Housing

 - Emergencies/Resilience

- ▶ Optimise processes (inc. social aspects)

 - Economy

 - Experience

 - Community

 - Responsibility

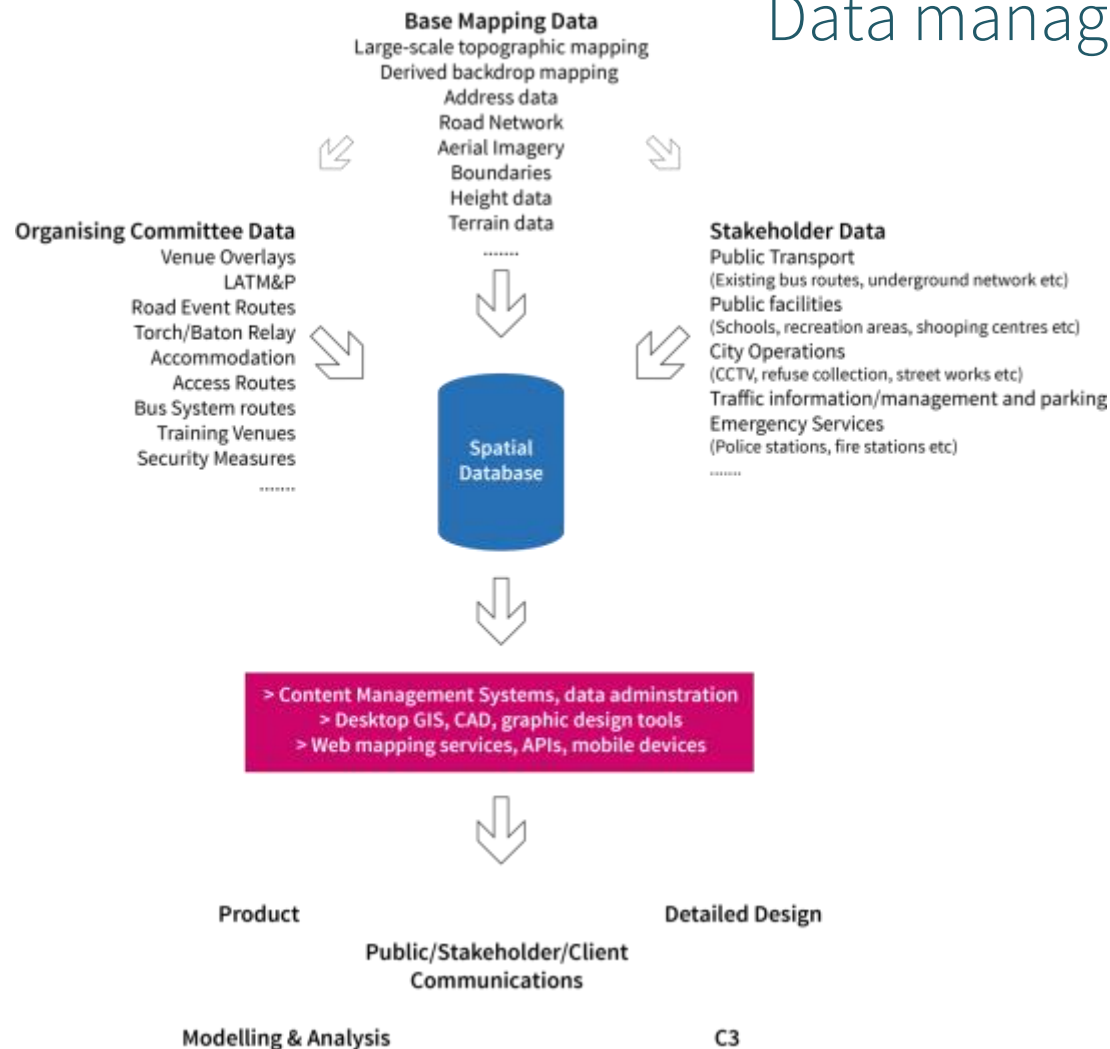
 - Competitiveness

London 2012 Olympic Park aerial imagery captured 14 times



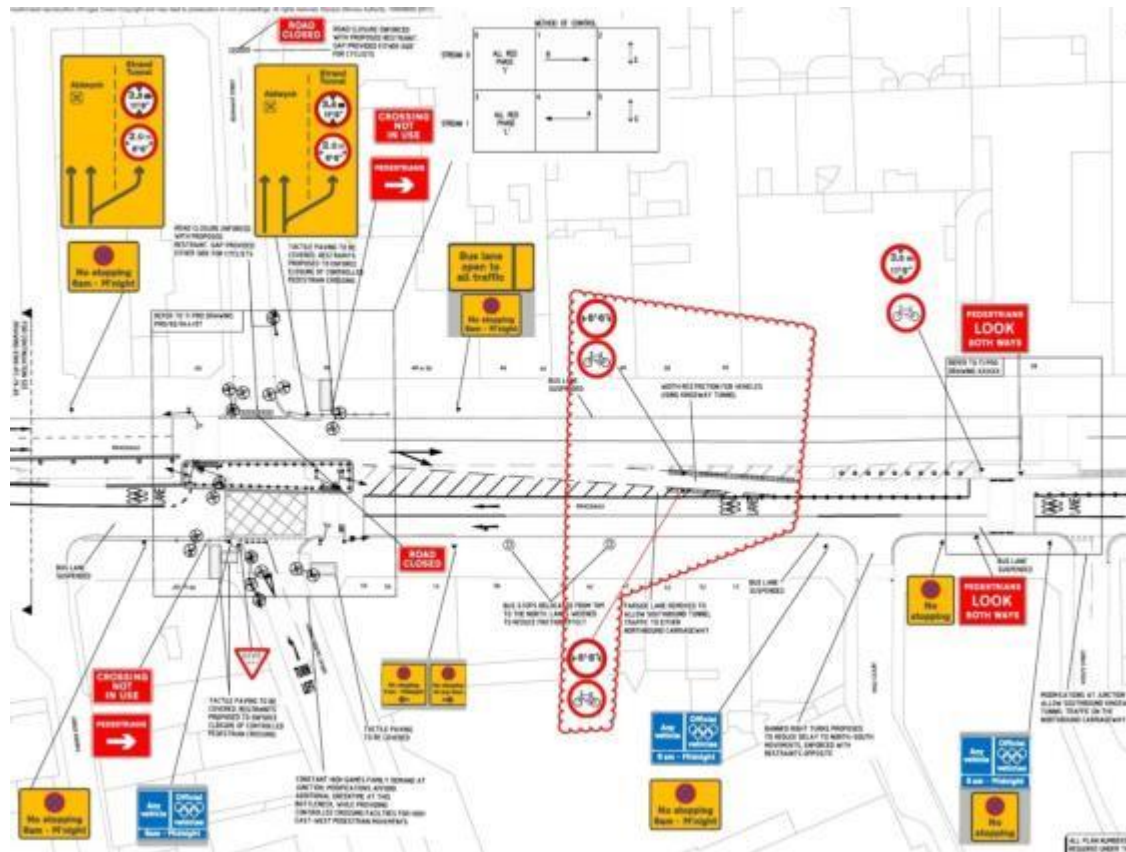
London 2012

Data management

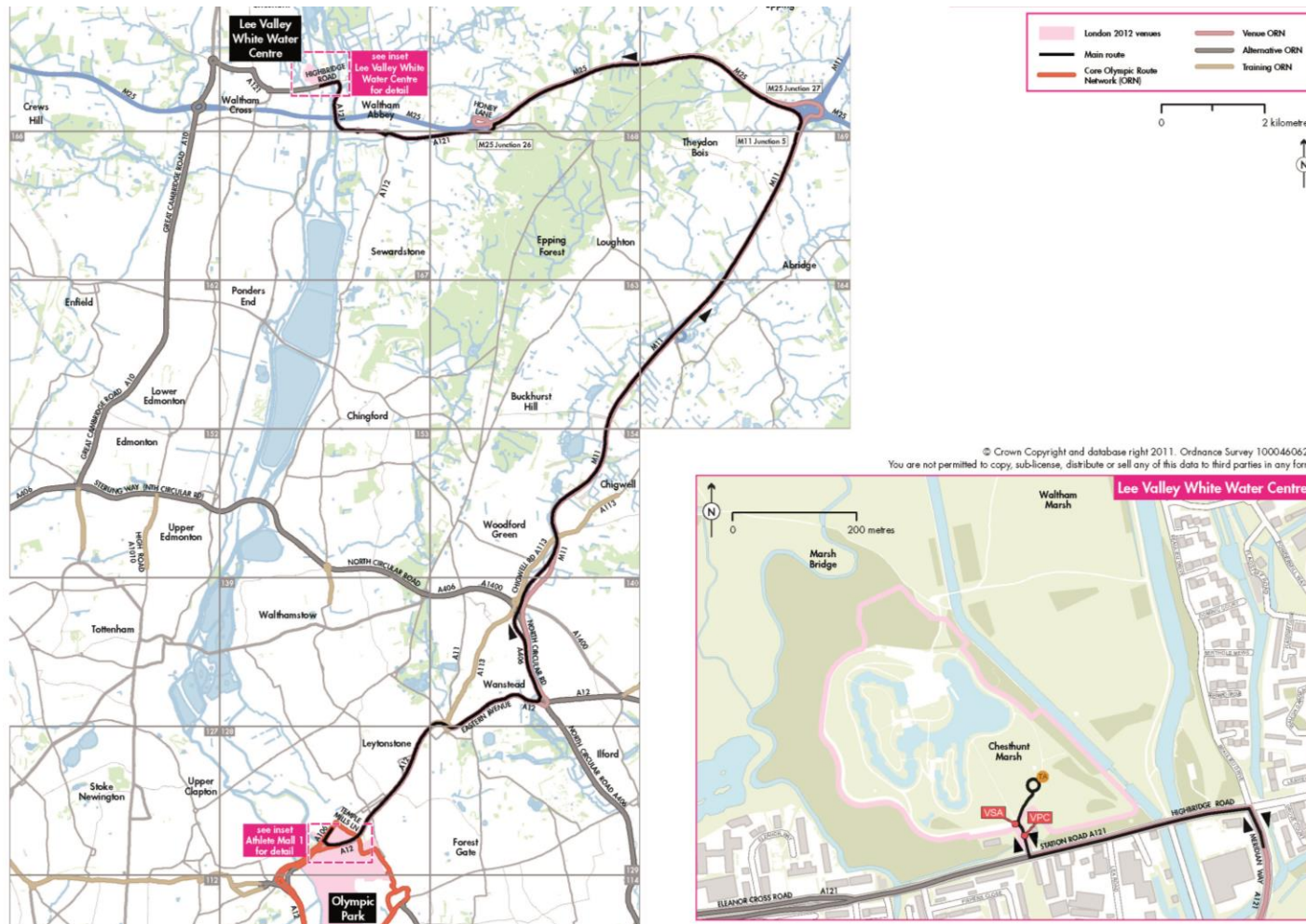


Analytics and design: Detailed design

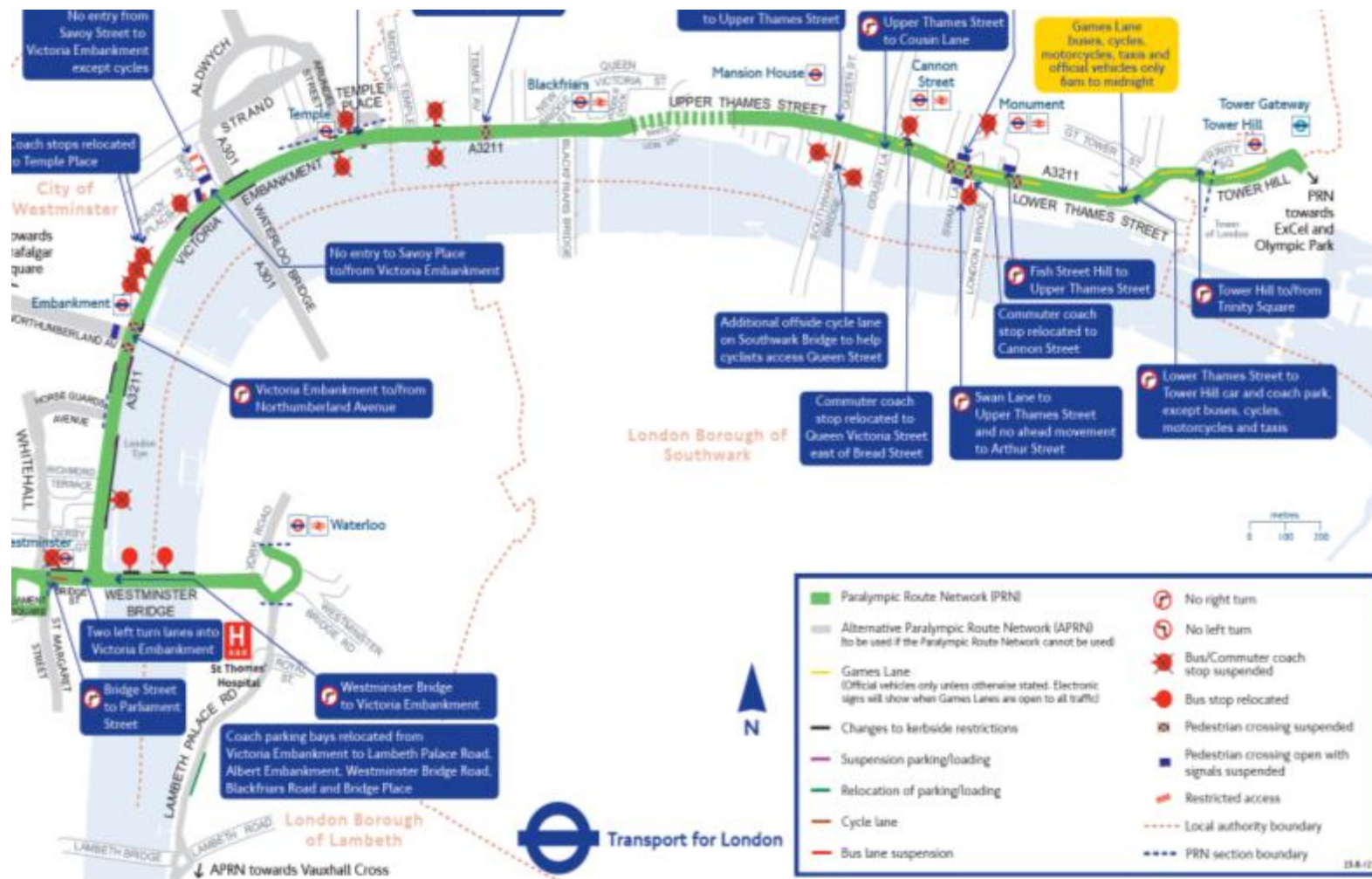
- Underpinned by Geographic Information context



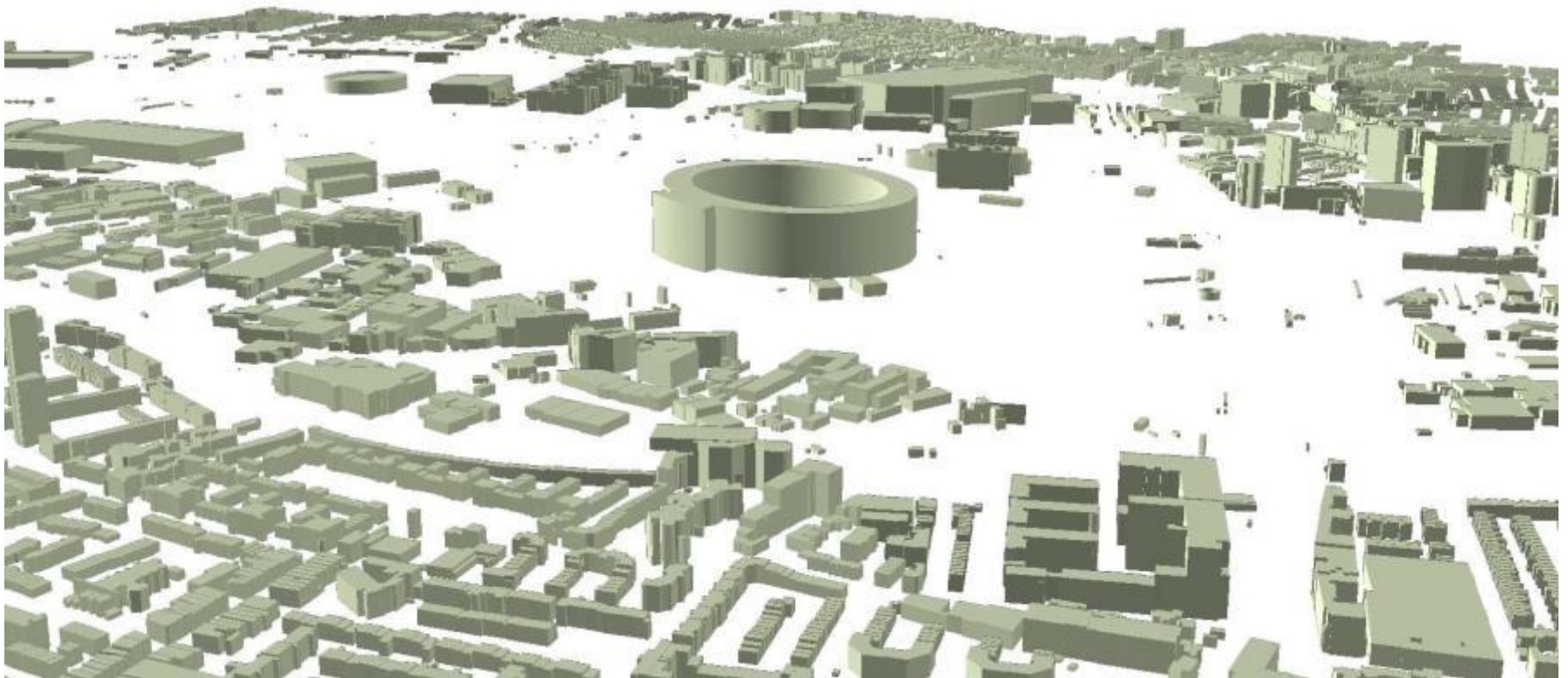
Analytics and design: Transport planning and routing



Communication: Release of information

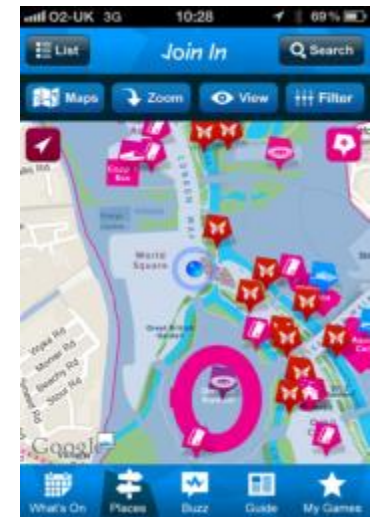


Enabling the third dimension



Building Heights were automatically generated using in-house developed software processing a combination of OS MasterMap Topography Layer and High Resolution Imagery

Product creation: Signage, wayfinding and spectator information



London 2012: Working collaboratively across Government: over 30 Government stakeholders



MINISTRY OF DEFENCE



Home Office



CabinetOffice



London Ambulance Service **NHS**
NHS Trust



How smart was London 2012?

How geospatially smart was London 2012?

What is a smart city?



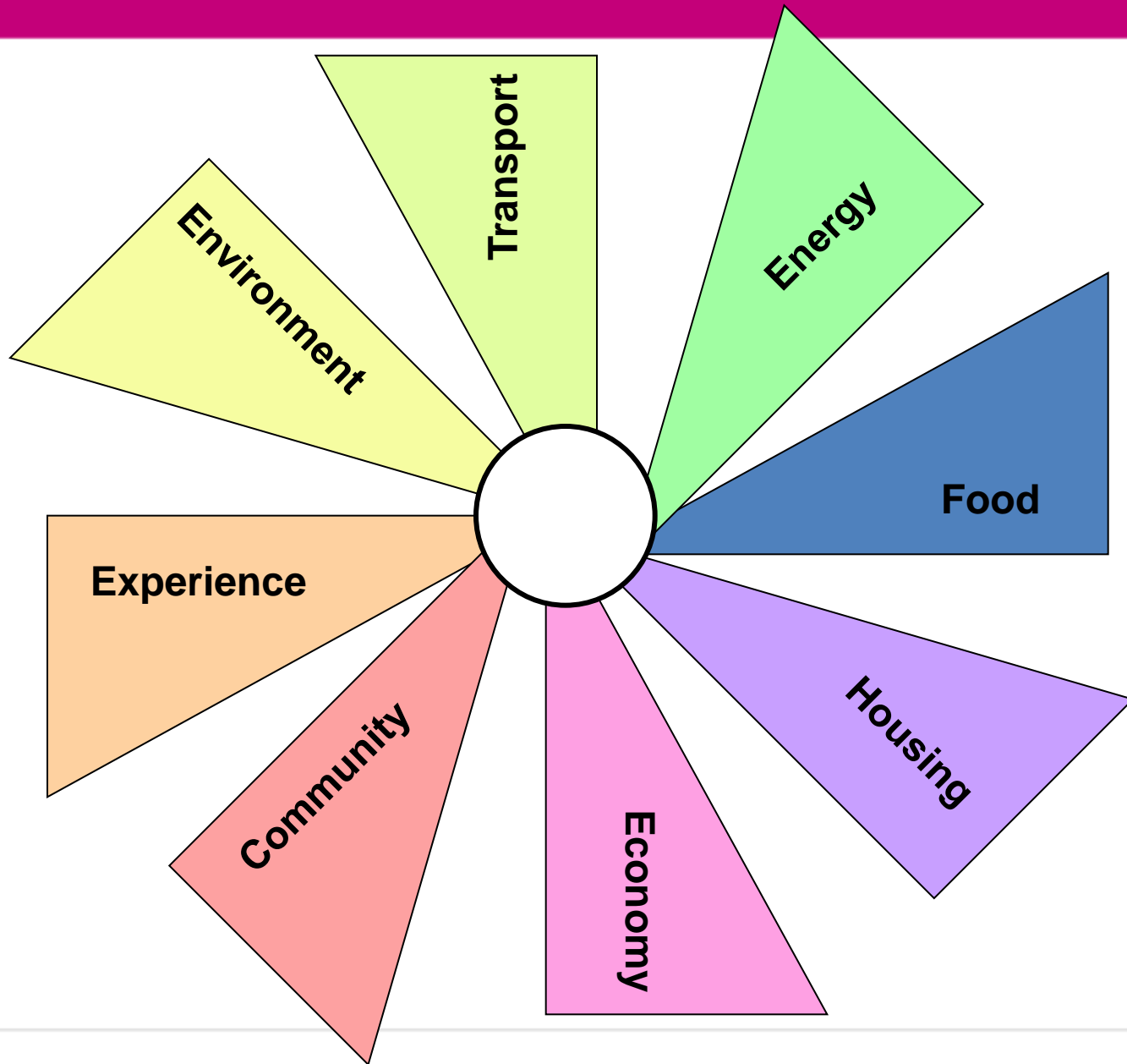
- Ubiquitous availability
and exchange of information
- Technology to make life better, safer and more sustainable
- Public, private and voluntary sector together with citizens

Smart, geospatially aware cities

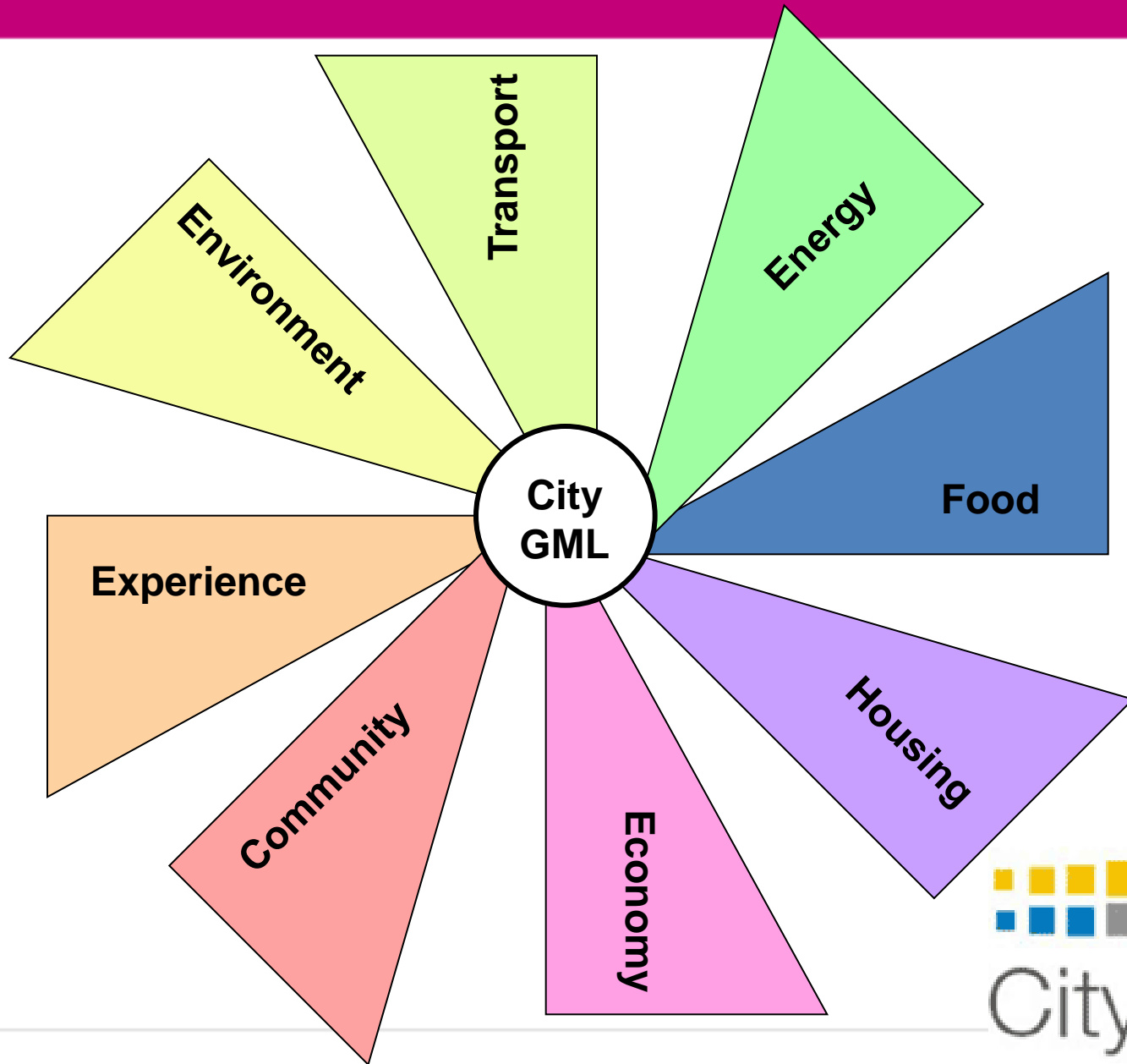
- Better experience through geospatial context
- Core reference data in 2D and 3D
- Identifiers and addressing
- Smart infrastructure (BIM, smart grid, ...)
- Indoor/outdoor integration
- Exploit spatial relationships

Information integration: Access, Analyse, Simulate, Steer

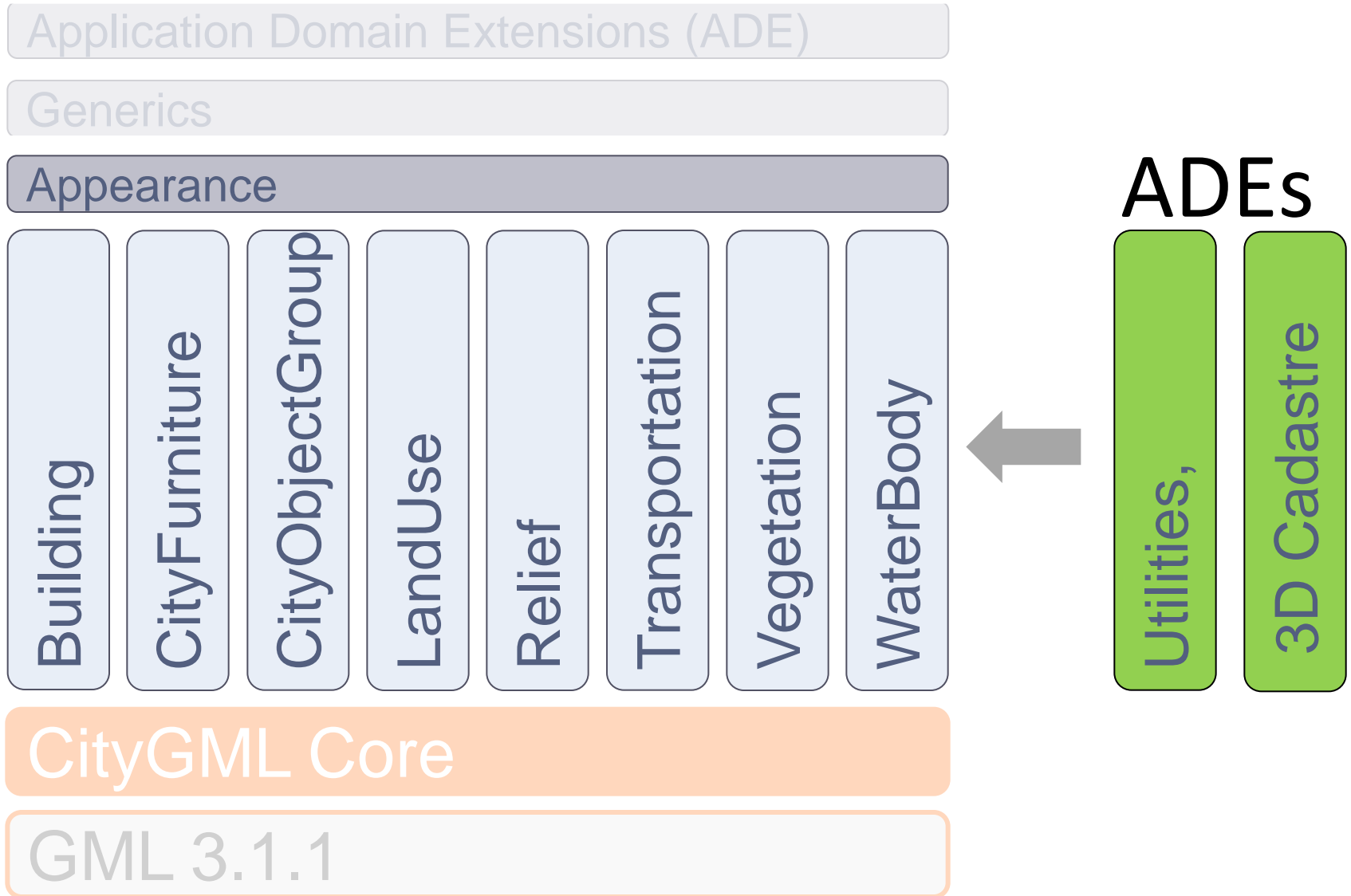
Needed: A data integration platform



CityGML: A data integration platform



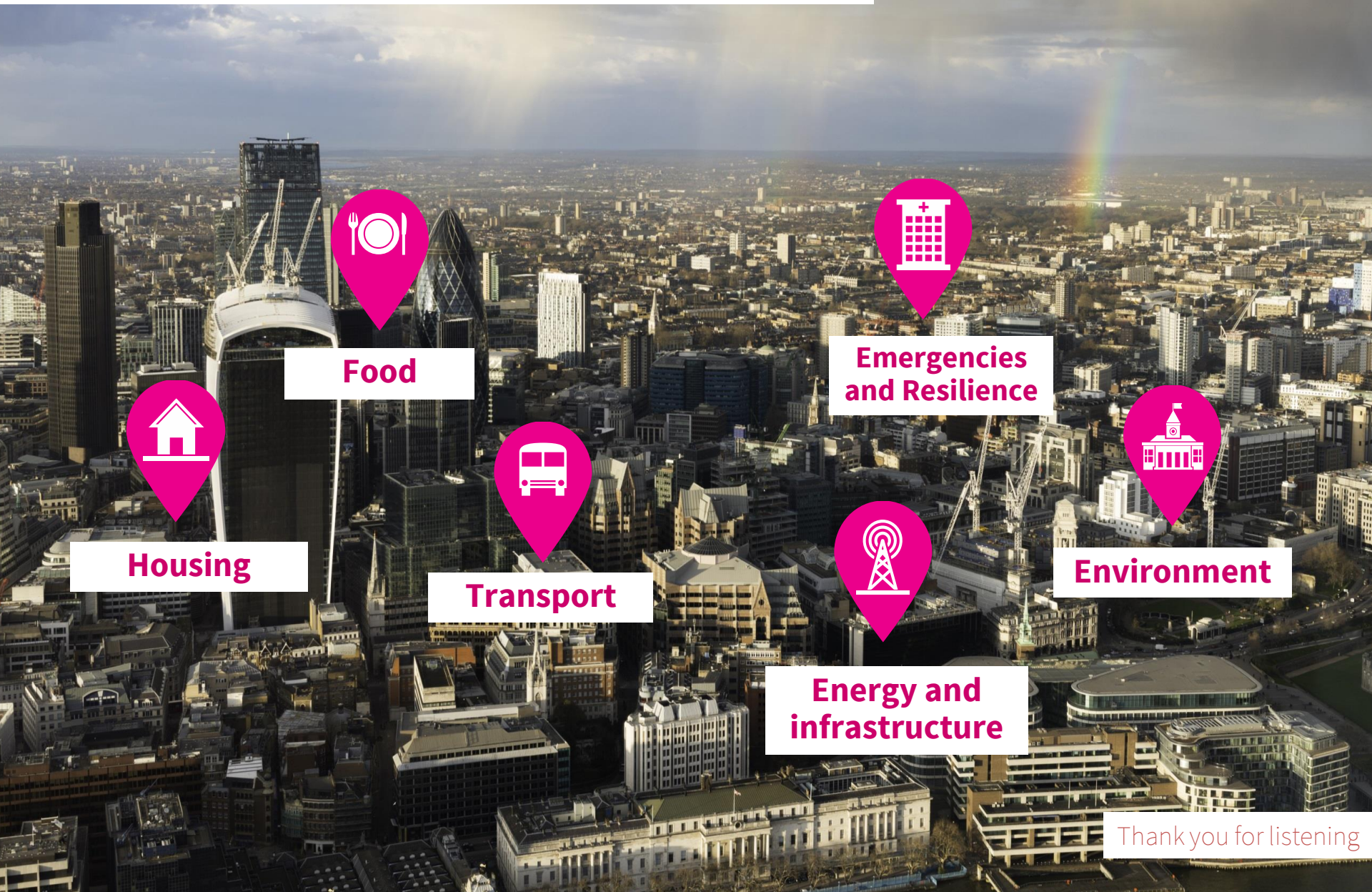
Scope of CityGML



CityGML—Future Cities platform



Information integration for smart cities



Food

**Emergencies
and Resilience**

Housing

Transport

**Energy and
infrastructure**

Environment

Thank you for listening

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