DAFNI Champion Introduction
Infrastructure ontologies

Luke S. Smith

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luke.smith@ncl.ac.uk

Newcastle University

A proliferation of **standards**

Smart cities (entirety)
- NGSI-LD (data)
- PAS 184 (management)

Transport
- TransXChange
- GTFS
- GBFS
- NeTEx
- SIRI-(VM|SM|SX)

Sensor networks
- W3C Semantic Sensor Networks
- W3C Web of Things
- OGC SensorThings API

Discovery and metadata
- ~~HyperCat~~
- CKAN
- GDS API Catalogue

Smart buildings
- BRICK
- IFC
- BACNet, KNX, MODBUS

Urban Observatories: **Web of cities**

Shared vocabularies

Adoption of existing vocabularies

Responses incorporating **JSON-LD**

Standardisation of observation and data types

Shared concepts

Interaction patterns

- Pagination
- Collections
- Filters

Allows clients to process without detailed subject knowledge

Shared geography

Core geographies

- Boundaries
- Roads
- Land parcels?

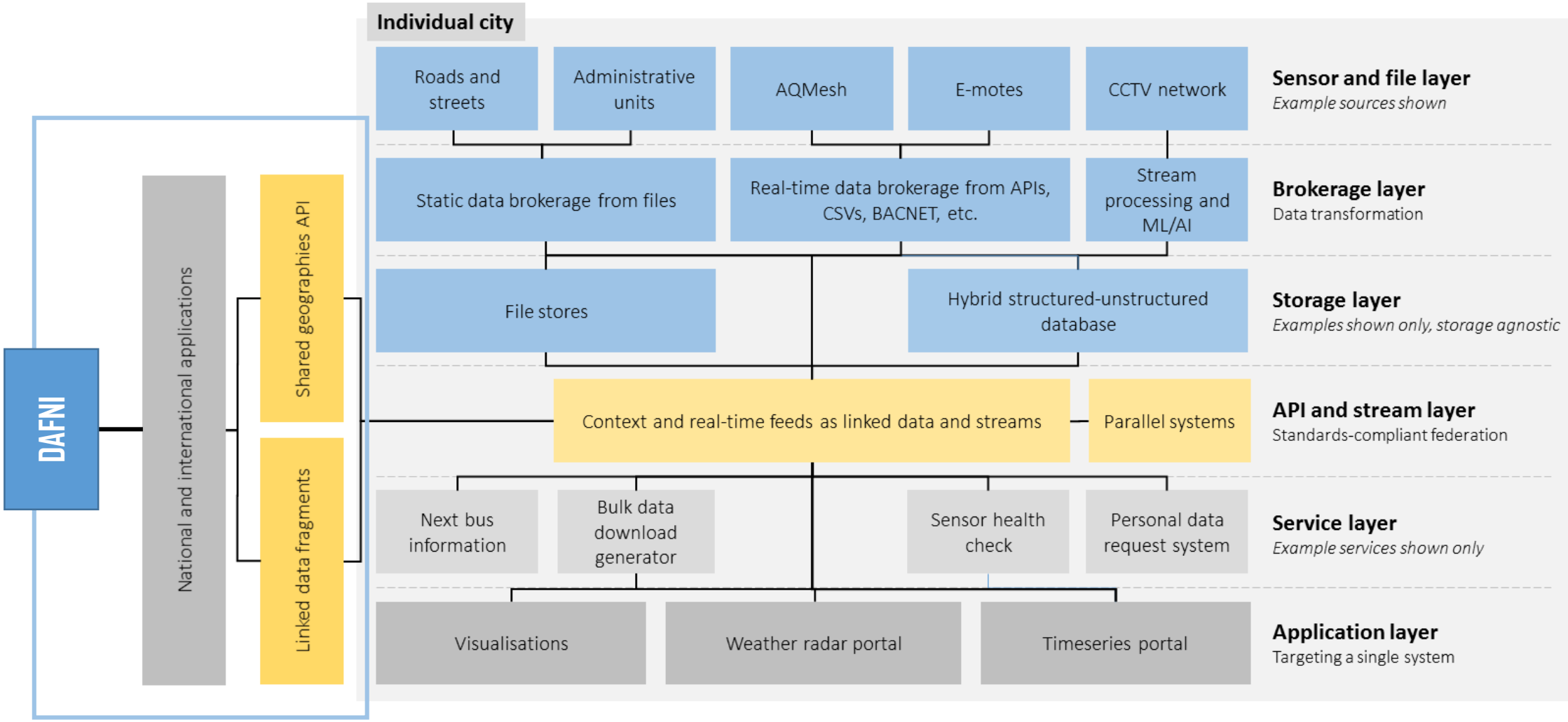
Maximising standards compatibility

Federated approach

Links infrastructure and services

Accommodating multiple ontologies

Linked data and hypermedia



Unofficial Draft

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UO Sensor Networks

Interoperability in observations from real-time sensor networks

urban observatory

3 1 ReSpec

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Living standard for IoT sensor networks in smart cities

https://github.com/urbanobservatory/standards/issues

Latest editor's draft:
https://urbanobservatory.github.io/standards/

Editor:
Luke Smith (Newcastle University)

Authors:
Simon Bell (University of Birmingham)
Aare Puussaar (Newcastle University)
Ettore Murabito (University of Manchester)
Ann Holden (Cranfield University)
Simon Jude (Cranfield University)
Patricio Ortiz (University of Sheffield)
Ulas Baloglu (University of Bristol)

Participate:
GitHub urbanobservatory/standards
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Abstract

To be completed.

Status of This Document

This document is draft of a potential specification. It has no official standing of any kind and does not represent the support or consensus of any standards organization.

Short-term **engagement** opportunities

- **Geospatial CDT** at Newcastle and Nottingham
- National work on **transport standards**
  - NeTEx: Public transport pricing
  - SIRI-SX: Disruptions profile for public transport
  - DfT: National Transport Data Access Point
- **COVID-19 response**
  - Public transport risk model for SAGE
  - Lack of data immediately accessible to central government