Improving Road Asset Information Management

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INTERLINK

• CEDR

• Develop a way to define, link and manage asset information

• Consortium of eight partners

• European Road Object Type Library
LINKED DATA & SEMANTIC WEB

- **(Open) Data**: Common denominator, liberated from applications
- **Linked**: data from multiple sources connected
- **Web**: based on common W3C technology
- **Semantic**: add computer-readable meaning

Modular, scalable – the (best?) way
TEST CASES

• Nordic
  • alignment, furniture, BIM, GIS, unstructured

• German
  • bridge, inspection, condition, IFC

• Dutch
  • barrier maintenance
  • query & update centralised data
TEST CASE CONCLUSIONS

- Data integration
  - Across systems, formats, stages, domains
- Semantic richness
  - Support human and computer interpretation
- Modularity and scalability
  - Achieved relatively quickly
EUROPEAN ROAD OTL

Modelling & Linking Guide

Core EUROTL

- Meta Data
- Location
- Time
- Quantity/Unit

(Transport) Network
Road Network
Asset Lifecycle
Example query:
List all lighting columns on the E4 between Junctions 4 and 5 (in SPARQL)
In 2015, the Conference of European Road Directors of Roads (CEDR), on behalf of European National Road Authorities (NRAs), initiated research into the use of Building Information Modelling for information management during the delivery and operation of civil infrastructure. The aim of the research programme was to improve interoperability within European NRAs and their stakeholders.
CURRENT STATUS

• Norwegian NRA – Small scale testing
• Dutch NRA – Plan to adopt the Modelling and Linking Guide
• Belgium-Flanders NRA – Developing OTL
• CEDR included INTERLINK outcomes in 2018 Call
• buildingSmart – Considering adopting the M&LG
• CEN/TC 442 – New Work Item to standardise M&LG
VISION

- Gradually evolve to data-driven, hybrid, liberate data
- Linked data is the glue
- Make data uniform using M&L Guide
- Reuse OTLs
- Bottom up case-based development
- Top down leadership