

Connected Data for Effective Collaboration



What is CoDEC?

CoDEC is a project funded by CEDR (Conference of European Directors of Roads) aiming to develop practical methods for implementation of Building Information Modelling (BIM) principles within the European highways industry. CoDEC's aims are to ensure that asset data is:

- **Accessible:** data is not trapped in a certain application or part of the asset management system.
- **Reliable:** data quality is good.
- **Interoperable:** efficient data exchange between stakeholders and their IT systems.
- **Integrable:** data connectivity from different sources and formats.
- **Publishable:** data delivered and connected in a structured and vendor-neutral fashion based on international standards.

The project's overarching objectives

- **Understand the current status** of information management across the highways industry in Europe, and the risks and opportunities for the coming years.
- **Derive best practice guidance** in the use of sensor/scanning technology to drive Asset Management, by investigating real examples of application to assets.
- **Develop and demonstrate practical methods** for implementation of CEDR objectives for BIM, by undertaking applied projects in real use cases and consolidating outcomes.
- **Provide recommendations** for aligning the software industry with CEDR objectives for BIM by understanding the risks and opportunities involved in the market.

Expected outcomes

- **Produce** a prototype European Master Data Dictionary for asset management datasets (for key asset types).
- **Research** new and emerging asset data capture technologies – for example: 3D scanning, remote sensor monitoring, LiDAR – for use in highways Asset Management.
- **Create** a systematic approach to connect the Master Data Dictionary with Asset Management Systems using the European OTL Framework.
- **Demonstrate** application of BIM principles using existing datasets and systems currently used by European NRAs, and capture lessons learnt and recommendations.
- **Develop** and implement practical tools and processes to connect data across software systems.
- **Establish** a roadmap for alignment of the highways industry and software providers in relation to BIM and new data.

PILOT Projects

CoDEC will undertake three Pilot Projects, with the aim of researching and developing real, practical methods, tools and processes for implementing BIM principles in the European highways industry.

PILOT project 1

Building a digital twin of an existing highways asset using design/construction data and 3D scanning technologies, and linking to an AMS.

PILOT project 2

Taking remote sensor data feeds from various highways assets and using these to enrich legacy data in existing systems.

PILOT project 3

Associating asset data from multiple sources to a 3D BIM model of an urban area with many highways assets using automated "smart" methods.



This project has received funding from the CEDR Transnational Road Research Programme Call 2018

Project facts



Starting date:
1st October 2019



Duration:
24 months

Project Coordinator



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