



Network FOUntAIN: Network For ONtologies And Information maNagement

Benefits to all stakeholders (users of BIM, CDE, Digital Twin platforms)

“When it come to Information Management, it’s not a question of too much or too little standardisation. It’s a question of standardising the right things for a particular purpose.”

- Workshop 0 leader, Matthew West, Director, Information Junction

Summary

The vision of the Network is for all stakeholders in digital built Britain (DBB) to be able to meet their information needs. The Network undertook five workshop activities between July and December 2018, in order to establish the capabilities required under various Information Management (IM) themes.

The first workshop sought to establish the scope of “IM”. The second and third workshops focused on ontologies and reviewed the variety of standards currently available. The fourth workshop explored system requirements; it identified three modes of consuming information and the corresponding software requirements for each mode. The three modes identified are: Search & Retrieval, Browsing & Expiration and Information Delivery. The fifth workshop focused on business models and concluded that the capability was needed to identify and derive business value from IM.

The Network set out a research agenda required to deliver those capabilities. Fundamental research is needed to formulate a process of establishing the appropriate scope of standardisation for IM at project, organisation and industry levels. This research needs to unfold in the context of emerging related international standards.

Key Findings

Workshop	Issues Discussed	Capabilities
Workshop 0: Scope of Information Management	Information Management Landscape, Information Management Maturity.	Capability to gauge Information Management maturity.
Workshop 1: Ontologies	Variety of ontologies, standardisation vs. flexibility.	Capability to establish the appropriate scope of standardisation, and to design or extend existing ontologies in general.
Workshop 2: Cataloguing Information	Delphi Survey to achieve expert consensus on most suitable, adaptable and complete ontology and project process to be used for cataloguing information in DBB. There was no full consensus, but Uniclass-2015 stood out as a candidate.	Capability to develop current classification systems, schema and frameworks, Uniclass-2015 in particular, to maximise the potential to share data, in ways that make best use of current skills and investments
Workshop 3: System Requirements	Search & Retrieval, Browsing & Exploration, Information Delivery as models for information consumption in DBB.	Capability to develop fit-for-purpose software which enables stakeholders <ul style="list-style-type: none"> • to query information repositories visually or using natural language • to explore information repositories based on current models (such as Uniclass-2015) • to interrogate information repositories automatically using ontology-based tools, and • to set information delivery schedules based on industry and project protocols
Workshop 4: Business Models	The need for a process model for delivering business value through Information Management.	Capability to identify and derive business value from Information Management.

Impact and Value

- Our vision is for all stakeholders in a digital built Britain to be able to meet their information needs.

Long-term Vision

- The emergence of Digital Twins and projects such as the Data & Analytics Facility for National Infrastructure (DAFNI) of the UK Collaboratorium for Research on Infrastructure and Cities (UKCRIC) make the work of Network FOUntAIN extremely important. The team are working hard to enable their findings to inform these long-term initiatives.

Next Steps/Further Work

- Further research is needed to establish a method for determining the appropriate level of information standardisation at project, firm and industry levels. The team is exploring further research opportunities.

Acknowledgements:

Network Team:

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