

## INTERLINK D.1 Library list of relevant literature

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### Approval for main versions

	Version	Name	Role	Date
Proposed	1.0	Aonghus O'Keeffe	WPA Leader	21/11/2016
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### *Acknowledgement*

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## 1 Project information

<b>Project title</b>	Information management for European Roads using LINKed data		
<b>Acronym - Logo</b>	<b>Interlink</b>		
<b>CEDR Topics addressed</b>	<p><u>CEDR Call 2015: Asset Information using BIM:</u></p> <p>A. Exploration of procuring asset information</p> <p>B. Exploration of BIM data structures</p> <p>C. Design for common principles for object-type library</p> <p>D. Design and test a basic object-type library and open BIM standards</p>		
<b>Project Coordinator</b>	Bart Luiten TNO	<b>Email</b>	bart.luiten@tno.nl
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<b>Partners</b>	TNO	<b>Country</b>	NL
	Roughan & O'Donovan Consulting Engineers (ROD)		IRL
	Royal Haskoning DHV (RHDHV)		NL
	AEC3		DE
	Vianova Systems (VNS)		NO
	interactive instruments (ii)		DE
	Semtech		NL
	planen-bauen 4.0 (pb4.0)		DE
<b>Start date</b>	01/09/2016	<b>Duration (in months)</b>	24
<b>End date</b>	31/08/2018		
<b>Project Website</b>	<a href="http://www.RoadOTL.eu/">http://www.RoadOTL.eu/</a>		

## 2 Document Scope

As part of WPA and WPB, Deliverable D.1 was provided as a dynamic web-based library of relevant pre-existing literature reviews and recently developed literature. This document was revised at the end of the INTERLINK project to include reference literature from other work packages, including WPC, WPD1 and WPD3.

## 3 Abbreviations

Abbreviation	Explanation [optional context]
AI	Asset Information
AM	Asset Management
BIM	Building Information Management/Modelling
CEDR	Conference of European Directors of Road
D.x	Deliverable x [INTERLINK]
EU	Europe, European
IM	Information Management
INTERLINK	INformation management for European Roads using LINKed data
LD	Linked Data concept [W3C]
M.x	Month x [INTERLINK]
NRA	National Road Authority
OTL	Object Type Library
WP	Work Package [INTERLINK]
WPL	Work Package Leader [INTERLINK]
Y1, Y2	Year 1, Year2 [INTERLINK]

## 4 Methodology

Various sources were used to identify and gather suitable reference literature for this research project, as follows:

- INTERLINK consortium members
  - These organisations operate in various countries and areas of expertise. Extensive literature was made available by the members.
- National Roads Authorities (NRAs), especially the CEDR members
  - Literature is being sought from NRAs by both email contact and during the ongoing research interviews.
  - Various standards and guidance documents are published on NRA websites, many of which have been collated for this research.
- Industry contractors, consultants and academics
  - Literature is being sought from parties by both email contact and during the ongoing research interviews.
- National standardisation bodies
  - These bodies publish various relevant national, European and international standards.
- Associated research projects
  - Relevant literature reviews have been carried out for other associated research projects, e.g. Virtual Construction for Roads (V-Von).
  - Associated research projects have produced and continue
- National and international development programmes
  - Various parallel development programmes are continuing during this project. Output from these programmes is collected by INTERLINK consortium members through strategic links.
- Academic journals
  - Various papers have been gathered from academic journals, with a focus on quality publications.

## 5 Literature Library List

The list of reference literature is provided in Appendix A. The list provides the title, publisher/author, publication year, literature type and a web link where available. Where possible, the web link is directly to the literature. However, in cases a document is protected by copyright the link is to a resource where the document can be purchased, such as a national standardisation body.

The types of literature included are:

- Research papers;
- Reports;
- Presentations;
- Websites;
- Journal articles;
- Standards;
- Specifications;
- Books;
- Guidance documents; and
- Leaflets.

Although the INTERLINK consortium has sought to identify all relevant literature, the field of BIM for road infrastructure assets is broad and interfaces with many associated fields of research and practice. Also, some relevant literature is already listed and reviewed in associated research reports. As such, some relevant literature may not be listed at this time. Further, rapid developments are ongoing in parallel research projects and in the industry application of BIM for the management of road infrastructure assets. As such, this list should not be considered exhaustive.

## 6 Appendix A

Author /Publisher/Source	Literature Title	Type	Year	Link
Abanda et al.	Exploring the Relationship Between Linked Open Data and Building Information Modelling		2013	-
Ahuja et al.	IT enhanced communication protocols for building project management	Journal Article	2010	<a href="#">Link</a>
ALIGNED	ALIGNED: Aligned, Quality-centric, Softwares and data Engineering D2.7 - Metamodel (Phase 2)	Project Deliverable	2016	<a href="#">Link</a>
AM4INFRA	D3.1 - Asset Data Dictionary	Project Deliverable	2018	<a href="#">Link</a>
AM4INFRA	D3.2 - Business Blueprint of an Asset Information management Core System	Project Deliverable	2018	<a href="#">Link</a>
Amann, Borrmann	Creating a 3D-BIM-compliant road design based on IFC alignment	Report	2015	<a href="#">Link</a>
Andreas Irgartinger	Die Anwendung von BIM im Straßenbau Aktueller Stand der DEGES-Aktivitäten	Presentation	2018	<a href="#">Link</a>
Andries van Renssen	Integration of 1D, 2D and 3D Product Models	Report	2010	<a href="#">Link</a>
Anumba et al.	Collaborative project information management in a semantic web environment	Journal Article	2008	<a href="#">Link</a>
Anweisung Straßeninformationsbank - ASB	Anweisung Straßeninformationsbank Segment Bauwerksdaten	Report	2013	-
Apache Jena	A free and open source Java framework for building Semantic Web and linked Data applications	Website	NA	<a href="#">Website</a>
Apache Jena	SPARQL Tutorial	Website - Tutorial	NA	<a href="#">Website</a>
Austroroads	Data Standard for Road Management and Investment in Australia and New Zealand: Version 1	Standard	2016	<a href="#">Link</a>
Austroroads	Asset Data Harmonisation Stage III BIM IFC Alignment Review	Technical Report	2018	<a href="#">Website</a>
AVW	DS 2016 13 Uitbouwen van een as-built data model voor AVW	Project	2016/ 2017	-

Author /Publisher/Source	Literature Title	Type	Year	Link
BASt	Bauwerk-Management-System (BMS) (in German)	Website	NA	<a href="#">Website</a>
BASt	BISStra, Traffic Statistics (in German)	Website	NA	<a href="#">Website</a>
BASt	Intelligent Road Transport Infrastructure through 3D Models and RFID tags (in German)	Report	2013	<a href="#">Link</a>
BASt	Maintenance management of the federal trunk roads	Leaflet	2014	<a href="#">Link</a>
BASt	OKSTRA (in German)	Website	2016	<a href="#">Website</a>
BASt	Overview of Relevant Regulation for (tunnels, Bridge, noise protection walls) (in German)	Website	NA	<a href="#">Website</a>
BASt	Overview of Road Maintenance Planning (in German)	Website	NA	<a href="#">Website</a>
BASt	Pavement Management Systems	Website	NA	<a href="#">Website</a>
BASt	SIB-Bauwerke (Tender Documents)	Report	2016	<a href="#">Link</a>
BASt	SIB-Bauwerke	Website	NA	<a href="#">Website</a>
BASt	Smart Bridge	Report	NA	<a href="#">Link</a>
BASt	UML – Diagram for discussion on 27-28/07/2016	Diagram	2016	-
BASt (Bundesanstalt für Straßenwesen), Germany	ASB-Ing		2014	<a href="#">Link</a>
Beetz Jakob	3rd International Workshop on Linked Data in Architecture and Construction (LDAC)	Workshop Report	2015	<a href="#">Link</a>
Beetz Jakob	A scalable network of concept libraries using distributed graph databases	Paper	2014	<a href="#">Link</a>
Berners-Lee	5 stars open data	Website	2012	<a href="#">Website</a>
Berrueta & Phipps	Best Practice Recipes for Publishing RDF Vocabularies	Report	2008	<a href="#">Link</a>
BIM Alliance Sweden	BIM Alliance Sweden	Website	2016	<a href="#">Website</a>
BIM Locket	Atlas van Open BIM Standaarden 1.1	Presentation	2016	<a href="#">Link</a>
BMVI	Stufenplan Digitales Planen und Bauen (in German)	Report	2015	<a href="#">Link</a>
Bohms	LD Use Case Types	Presentation	2016	-
Bohms et al.	LD Approach V-Con by TNO and RWS (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Bohms et al.	Linked Data Vision for bSI (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-



Author /Publisher/Source	Literature Title	Type	Year	Link
Borrmann et al.	IFC Infra Overall Architecture (presented at buildingSmart Summit, South Korea, 2016)	Paper	2016	-
Borrmann et al.	IFC Infra Overall Architecture - Progress Update Expert Panel Meeting (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Borst et al.	An Application of Ontology Construction	Journal Article	1996	-
Bosch	Beheren van bouwwerken met BIM: Een onderzoek van bouwwerken met BIM	Report	2014	<a href="#">Link</a>
Bosch et al.	BIM in the operations stage: bottlenecks and implications for owners	Report	NA	<a href="#">Link</a>
Brickley & Guha	RDF Schema 1.1	Report	2014	<a href="#">Link</a>
British Standards Institute	BS 1192:2007 + A1:2015 Collaborative production of architectural, engineering and construction information – Code of practice;	Standard	2015	-
British Standards Institute	PAS 1192-2:2013 Specification for information management for the capital/delivery phase of construction projects using building information modelling;	Specification	2016	<a href="#">Link</a>
British Standards Institute	PAS 1192-3:2014 Specification for information management for the operational phase of assets using building information modelling (BIM)	Specification	2014	<a href="#">Link</a>
British Standards Institute	BS 1192-4:2014 Collaborative production of information. Fulfilling employer's information exchange requirements using COBie. Code of practice	Standard	2014	<a href="#">Link</a>
British Standards Institute	PAS 1192-5:2015 Specification for security-minded building information modelling, digital built environments and smart asset management	Specification	2015	<a href="#">Link</a>
British Standards Institute	BS 8536-2:2016 Design and construction: Code of practice for asset management (Linear and geographical infrastructure)	Standard	2016	<a href="#">Link</a>
Bryden Wood	Data Driven Infrastructure From Digital tools to manufactured components	Report	2017	<a href="#">Link</a>
buildingSmart Finland	buildingSmart Finland	Classification	2016	<a href="#">Link</a>
buildingSmart International	bSI Technical Room Results and Conclusions (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
buildingSmart International	buildingSmart International home of openBIM	Website	NA	<a href="#">Website</a>
buildingSmart International	Data Dictionary	Website	NA	<a href="#">Website</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
buildingSmart International	Infrastructure Asset Managers BIM Requirements Delivering the information 'Asset Managers' need and can trust using Open BIM	Report	2017	-
buildingSmart International	IFC4x1 Alignment Extension	International Standard	NA	<a href="#">Link</a>
buildingSmart International	IFC Alignment (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	<a href="#">Link</a>
buildingSmart International	IFC Alignment (Project Web Page)	Project	NA	<a href="#">Website</a>
buildingSmart International	IFC-Infra Common Definitions (presented at buildingSmart Summit, South Korea, 2016)	Leaflet	2016	-
buildingSmart International	ifcOWL	Standard	2017	<a href="#">Link</a>
buildingSmart International	Linked Data Working Group	Website	NA	<a href="#">Website</a>
buildingSmart International	Proof the value of LD for Infra (presented at buildingSmart Summit, South Korea, 2016)	Leaflet	2016	-
buildingSmart International	Towards distributed, collaborative concept libraries for the construction industry	Report	2013	-
Butterfiel & Siguero	Proving Value through Digital Management in Asset Creation, Commissioning and Whole Life	Presentation	2016	-
Byggtjanst, Sweden	BSAB / CoClass System	Website	2016	<a href="#">Website</a>
Cambridge semantics	Example Semantic Web Applications	Website	2013	<a href="#">Website</a>
Castaing	IFC Bridge Project	Presentation	2016	-
Castaing	Resolutions – IFC Roads and Railways (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Castaing & Benning	IFC Bridge / Data Dictionary (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Castaing and Grand	XP P07-150 Standard Experimentation (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
CEDR	Information Management for European Road Infrastructure using Linked Data; Investigating the requirements	Report	2017	-
CEDR	European roadOTL - INTERLINK publications	Website	NA	<a href="#">Website</a>
CEDR	Open information exchange (BIM) of National Road Authorities is of vital importance for Asset management		2016	<a href="#">Link</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
CEDR	S3 Information BIM-Report	Report	2016	-
CEDR	S3 Information Interim Report	Report	2015	<a href="#">Link</a>
CEN	CEN/TC 442 BIM (OGC & CEN Subcommission) Web Page	Website	2016	<a href="#">Website</a>
CEN	CEN/TC 442 (2015) Business Plan	Report	2015	<a href="#">Link</a>
COINS Project Group	COINS Building Information System	Website	2016	<a href="#">Website</a>
COINS wiki	COINS	Website	NA	<a href="#">Website</a>
COINSweb	COINS (Construction Objects and the Integration of Processes and Systems)	Website	NA	<a href="#">Website</a>
Cox and Ireland	Managing Construction Supply Chains: The Common Sense Approach	Report	2002	<a href="#">Link</a>
Crossrail	Asset Lifecycle Information Management Roadmap	Roadmap	2016	-
Crossrail	Crossrail Asset Data Dictionary	Good Practice Document	2018	<a href="#">Website</a>
Cyganiak et al.	RDF 1.1 Concepts and Abstract Syntax	Report	2014	<a href="#">Link</a>
Danish OpenBIM Study	Danish OpenBIM Study - Seminar Programme Leaflet	Leaflet	2013	<a href="#">Link</a>
Das et al	An ontology-based web service framework for construction supply chain collaboration and management	Journal Article	2015	<a href="#">Link</a>
Dave et al.	Opportunities for enhanced lean construction management using Internet of Things standards	Journal Article	2016	<a href="#">Link</a>
DCMI	Dublin Core Metadata Initiative	Website	2017	<a href="#">Website</a>
Debruyne, Clinton, McNeerney, Lavin, O'Sullivan	On the Construction for a Linked Data Platform for Ireland's Authoritative Geospatial Linked Data	Paper	2017	<a href="#">Link</a>
Dentten, Ross	Better Information Management to Optimise Whole Life Business Decisions	Technical Paper	2018	<a href="#">Website</a>
DODGE data & analytics	SmartMarket Report - The Business Value of BIM for Infrastructure 2017	Report	2017	<a href="#">Link</a>
Dutch Building Information Council	CB-NL Dutch concept library for the built environment	Website	2016	<a href="#">Website</a>
Eadie et al.	A survey of current status of and perceived changes required for BIM adoption in the UK	Journal Article	2015	<a href="#">Link</a>
Eadie et al.	BIM implementation throughout the UK construction project lifecycle: An analysis	Journal Article	2016	<a href="#">Link</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
Edrum-Fotwe et al.	Reconciling construction innovation and standardisation on major projects	Report	2015	<a href="#">Link</a>
Eero Hyvönen	Semantic Web Infrastructure and Applications	Presentation	2017	<a href="#">Link</a>
EI-Diraby	Validating Ontologies in Informatics Systems: Approaches and lessons learned for AFC	Report	2014	<a href="#">Link</a>
EUBIM taskgroup	Handbook for the introduction od Building Information Modelling by the European Publin Sector	Report	2017	<a href="#">Website</a>
EURODICTI	Abstract EU Proposal EURODICTI	Abstract	2014	-
EURODICTI	Mobility Growth 8.1	Abstract and Call text	2014	-
EURODICTI	Proposal Submission Form	Proposal	2014	-
European Commission	BIM Communication	Report	2013	-
European Commission	Commission Staff Working Document - Guide for the procurement of standards-based ICT	Report	2013	<a href="#">Link</a>
European Commission	European INSPIRE directives - ISO/TC 211	Overview	NA	<a href="#">Website</a>
European Commission	INSPIRE Data Specification on Transport Networks - Technical Guidelines	Website	NA	<a href="#">Website</a>
European Commission	Open Standards	Website	NA	<a href="#">Website</a>
Feigenbaum et al.	SPARQL 1.1 Protocol	Report	2013	<a href="#">Link</a>
Finnish Road Administration	Pilot for Road datamodel	Workshop report		-
Flanagan and Marsh	Measuring the costs and benefits of information technology in construction	Report	2000	<a href="#">Link</a>
Gandon & Schreiber	RDF 1.1 XML Syntax	Report	2014	<a href="#">Link</a>
Gibb and Isack	Client Drivers for Construction Projects: Implications for Standardization	Leaflet	2013	<a href="#">Link</a>
GitHub	SHACL API in Java based on Apache Jena	Website Programming Language	- NA	<a href="#">Website</a>
Gregor Gebert	BIM-Pilot in NRW Schwelmetalbrücke, A1	Presentation	2018	<a href="#">Link</a>
Grove, Wilson, Koals & Wiegand	GeoSPARQL Query Tool A Geospatial Semantic Web Visual Query Tool	Paper	2014	<a href="#">Link</a>
Halpin et al.	When owl:sameAs isn't Same: An Analysis of Identity Links on the Semantic Web	Article	2003	<a href="#">Link</a>
Harris & Seaborne	SPARQL 1.1 Query Language	Report	2013	<a href="#">Link</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
Highways England	Interim Advice Note 182/14 - Major Schemes: Enabling Handover into Operation and Maintenance	Guidance	2014	<a href="#">Link</a>
Highways England	Interim Advice Note 184/16 - Highways England Data & CAD Standard Instructions on naming conventions, file types and data structures for the delivery and transfer of CAD / BIM files to Highways England and its supply chain.	Guidance	2016	<a href="#">Link</a>
Highways England	Information Asset Owner's Handbook	Handbook	2017	-
Highways England	Building Information Modelling (BIM) Employer's Information Requirements	Project	2017	-
Highways England	Information Modelling (IM) – NEC4 ECC secondary Option X10 Information Model Requirements	Project	2018	-
Highways England Asset Information Group	Asset Data Management Manual ADMM – Additional Information	Manual	2018	<a href="#">Link</a>
Highways England Asset Information Group	Asset Data Management Manual ADMM – Data Principles and Core REQUIREMENTS	Manual	2018	<a href="#">Link</a>
Hooper	BIM Standardisation efforts - The case of Sweden	Report	2015	<a href="#">Link</a>
Hyland et al	Best Practices for Publishing Linked Data	Report	2014	<a href="#">Link</a>
IAM (The Institute of Asset Management) Exchange	State of Infrastructure Industry	Report	2016	<a href="#">Website</a>
ICE: Institution of Civil Engineers	From Transactions to Enterprises A new approach to delivering high performing infrastructure	Report	2017	<a href="#">Link</a>
Idar Kirkhorn	BIM Cost Savings in Infra projects	Presentation	2018	-
Infra Formaatti	Infra –pohjatutkimusformaatti versio 2.3		2015	<a href="#">Link</a>
InfraBIM	Infra FINBIM Boosted the Breakthrough of Infrastructure Modelling	Article	2015	<a href="#">Link</a>
InfraBIM	InfraBIM Common Requirements and Classification System	Website	2016	<a href="#">Website</a>
Infrastructure and Projects Authority	Transforming Infrastructure Performance	Report	2017	<a href="#">Link</a>
ISO	InfraGML - Linking pin between Geo and BIM	Presentation	2014	<a href="#">Link</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
ISO	ISO 10303 -233: Industrial automation systems and integration -- Product data representation and exchange -- Part 233: Application protocol: Systems engineering	Standard	NA	-
ISO	ISO 12006-2:2015 Building construction - Organization of information about construction works - Part 2: Framework for classification	Standard	2015	<a href="#">Link</a>
ISO	ISP 12006-3:2007 Building construction - Organization of information about construction works - Part 3: Framework for object-oriented information	Standard	2007	<a href="#">Link</a>
ISO	ISO 15926: Industrial automation systems and integration -- Integration of life-cycle data for process plants including oil and gas production facilities; especially parts 1, 2, 4 and 11	Standard	NA	-
ISO	ISO 16354: Guidelines for knowledge libraries and object libraries	Standard	NA	-
ISO	ISO 55000 Asset Management - Overview, Principles and Terminology	Standard	2014	<a href="#">Link</a>
ISO	ISO 55001 Asset Management - Management Systems - Requirements	Standard	2014	<a href="#">Link</a>
ISO	ISO 55002 Asset Management - Management Systems - Guidelines for the Application of ISO 55001	Standard	2014	<a href="#">Link</a>
ISO	ISO/TC 211 Geographic information/Geomatics	Website	NA	<a href="#">Website</a>
Jackson	Asset Managers BIM Requirements - An Interim Report on Progress & Engaging in Next Stage (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Jackson	InfraRoom (Update)	Presentation	2015	<a href="#">Link</a>
Jakob Beetz	Facilitating distributed collaboration in the AEC/FM sector using Semantic Web Technologies	Thesis	2009	<a href="#">Link</a>
Jetlund	GML Application Schemas	Presentation	2015	<a href="#">Link</a>
Kellermann	German Commitment to Bridge Standardisation (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Kellermann	OKSTRA German Data Exchange for Road and Bridge (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Kendall & McGuinness	Ontology 101 - An Introduction to Knowledge Representation and Ontology Development	Conference	2015	<a href="#">Link</a>

Author /Publisher/Source	Literature Title	Type	Year	Link
Knublauch & Kontokostas	Shapes Constraint Language (SHACL)	Report	2017	<a href="#">Link</a>
Knublauch Holger	SHACL and OWL Compared	Article	2017	<a href="#">Link</a>
Krause	Systematische Straßenerhaltung und Pavement-Management-System (in German)	Report	2001	<a href="#">Link</a>
LandXML	LandXML.org - Open Data Standard	Website	NA	<a href="#">Website</a>
Lebo et al.	PROV-O: The PROV Ontology	Report	2013	<a href="#">Link</a>
Leea et al.	Validations for ensuring the interoperability of data exchange of a building information model	Journal Article	2015	<a href="#">Link</a>
Liebich	Common Approach to IFC (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Liebich	German IFC Road and Rail Review Project (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Liikennevirasto - Finnish Transporth Agency	BIM Guidelines for Bridges	Guidelines	2014	<a href="#">Link</a>
Lóscio et al	Data on the Web Best Practices	Report	2017	<a href="#">Link</a>
Love et al.	A Model for Supporting Inter-Organizational Relations in the Supply Chain	Report	NA	-
Luiten et al.	Linked Data Vision for the BSI InfraRoom by TNO & RWS (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
McGraw Hill	SmartMarket Report - Business Value of BIM for Construction in Major Global Markets	Report	2014	<a href="#">Link</a>
McGraw Hill	SmartMarket Report - Measuring the Impact of BIM on Complex Buildings	Report	2015	<a href="#">Link</a>
McGraw Hill	SmartMarket Report - The Business Value of BIM for Owners	Report	2014	<a href="#">Link</a>
MINnD	Diagram of BIM Projects Interaction	Diagram	NA	-
MINnD	MINnD Project Website	Website	NA	<a href="#">Website</a>
MINnD	National Research Project MINnD – Interoperable Information Model for Sustainable Infrastructure	Leaflet	NA	<a href="#">Link</a>
Miskimmin and Dentten	Infrastructure Asset Data Dictionary for the UK	Presentation	2016	-
National Institute of Building Sciences, USA	National BIM Standard - United States	Leaflet	2015	<a href="#">Link</a>
National Institute of Building Sciences, USA	National BIM Standard - United States (NBIMS-US V3)	Website	2016	<a href="#">Website</a>



Author /Publisher/Source	Literature Title	Type	Year	Link
NBS, UK	International BIM Report	Report	2013	<a href="#">Link</a>
NBS, UK	National BIM Report	Report	2013	<a href="#">Link</a>
Nordic Road & Rail BIM Collaboration	Memorandum of Understanding	MoU	2017	<a href="#">Link</a>
Noy et al.	Ontology Development 101: A Guide to Creating Your First Ontology	Guide	NA	<a href="#">Link</a>
Oha et al.	Integrated system for BIM-based collaborative design	Journal Article	2015	<a href="#">Link</a>
O'Keeffe	Improving information management and interoperability for national roads authorities	Presentation	2017	<a href="#">Link</a>
Open Geospatial Consortium	OGC® Land and Infrastructure Conceptual Model Standard (LandInfra)	Standard	2016	<a href="#">Link</a>
Otter and Brouwers	ANZ15-IN02 BIM, The Dutch Approach	Presentation	2015	<a href="#">Link</a>
Papandonikolaki et al.	Supply chain integration with BIM: a graph-based model	Journal Article	2015	<a href="#">Link</a>
Pauwel	Linked Data Session (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Pazlar, Turk	Interoperability in practice: Geometric data exchange using the IFC standard	Journal Article	2008	<a href="#">Link</a>
Perera, Nand, Bačić	Semantic Web Today: From Oil Rigs to Panama Papers	Paper	2017	<a href="#">Link</a>
Plume, Rönsdorf & Simmons	buildingSMART International and Open for Geospatial Consortium Framework for Collaboration on BIM-GIS Interoperability	Presentation	2017	<a href="#">Link</a>
Porwal and Hewage	Building Information Modeling (BIM) partnering framework for public construction projects	Paper	2016	<a href="#">Link</a>
Prud'hommeaux & Carothers	RDF 1.1 Turtle	Report	2014	<a href="#">Link</a>
Rasmussen	Linked Building Data - Inspiration for the INTERLINK project team	Presentation	2017	-
Rasmussen et al.	Web-based topology queries on a BIM model	Conference Paper	2017	<a href="#">Link</a>
Rector et al.	Simple part-whole relations in OWL ontologies	Report	2005	<a href="#">Link</a>
Reinhardt Simon	Property Reification RDF Vocabulary	Website	2009	<a href="#">Link</a>
Renssen Van, Andries	Integration of 1D, 2D and 3D Product Models	Website	2017	<a href="#">Link</a>
RI-EBW-PRUEF	Regulation for Assessment of Structures Regarding Defects	Report	2013	-



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Sauermann et al.	Cool URIs for the Semantic Web	Report	2008	<a href="#">Link</a>
Schaap & Beetz	Linked Data Approach (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Schaap and Plume	InfraRoom Work Plan 2017 Development (presented at buildingSmart Summit, South Korea, 2016)	Presentation	2016	-
Semantic Web	VoID	Website	2011	<a href="#">Website</a>
SHACL Playground			NA	-
SOSI	Fagomrade - Ledningsnett 4.5 (Wiring Standard) (in Swedish)	Standard	2016	<a href="#">Link</a>
Speicher et al.	Linked Data Platform 1.0	Report	2015	<a href="#">Link</a>
Statens Vegvesen, Norway	BIM in Asset Management	Presentation	2016	-
Statens Vegvesen, Norway	From a table based Feature catalogue to GML Application schemas	Presentation	2015	<a href="#">Link</a>
Statens Vegvesen, Norway	Modellgrunnlag - Kravtil Grunnlagsdata og Modeller (Requirements for basic data and models) (in Norwegian)	Guidance	2015	<a href="#">Link</a>
Stefan Franz	BIM – Pilot Tunnelkette A44 in Hessen	Presentation	2018	<a href="#">Link</a>
Steve Thompson	Product Data Definition A technical specification for defining and sharing structured digital construction product information	Technical Specification	2016	<a href="#">Link</a>
Stolk et al.	Data Clouds for Product Life-Cycle Management	Conference Paper	2016	-
Sustainable Built Environment National Research Centre	Developing a Cross Sector Digital Asset Information Model Framework for Asset Management	Leaflet	2017	<a href="#">Link</a>
Tawelian & Mickovski	The Implementation of Geotechnical Data Into the BIM Process	Conference Paper	2016	<a href="#">Link</a>
The Institute of Asset Management	Asset Management - An Anatomy - Version 3	Report	2015	<a href="#">Link</a>
TNO	Configuratie van BIM-Standaarden		NA	-
Trafikverket, Sweden	Implementation of BIM in the design, procurement and construction of the Stockholm bypass (by Karin Anderson)	Presentation	2016	-
Trafikverket, Swedish Transport Administration	BIM for Infrastructure Trafikverkets view on Open standards	Presentation	2017	<a href="#">Link</a>
Tulke	Stufenplan Digitales Planen und Bauen	Presentation	2015	<a href="#">Link</a>

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Ugwu et al.	Ontology development for agent based collaborative design	Journal Article	2001	<a href="#">Link</a>
UK BIM Task Group	BIM Task Group Website	Website	2013	<a href="#">Website</a>
UK Roads Liaison Group	BIM guidance for INFRASTRUCTURE BODIES	Guidance	2016	<a href="#">Website</a>
UK Roads Liaison Group	Well-managed highway Infrastructure: A Code of Practice	Report	2016	<a href="#">Website</a>
Underwood, Watson	An XML metadata approach to seamless project information exchange between heterogeneous platforms	Journal Article	2003	<a href="#">Link</a>
Uniclass2015	A Universal Classification System for the Construction Industry	Website	2015	<a href="#">Website</a>
V-Con	A European Project about OpenBIM	Presentation	2013	<a href="#">Link</a>
V-Con	Business Specification Phase 2	Specification	2015	-
V-Con	(Consultation leaflet)	Leaflet	2014	<a href="#">Link</a>
V-Con	D3.1 Inventory of available information exchange standards	Report	2013	<a href="#">Link</a>
V-Con	D3.2 Definition of Road Information Structure Selection of Information Exchange Standards	Report	2013	-
V-Con	Industry Day Presentation	Presentation	2015	<a href="#">Link</a>
V-Con	D3.4.2a International ontologies for V-Con	Specification	2016	-
V-Con	D4.3.2b Swedish ontologies for V-Con	Specification	2016	-
V-Con	D4.3.2c Dutch ontologies for V-Con	Specification	2016	-
V-Con	T3.3 IFC for Roads & Bridges Slides	Presentation	2013	<a href="#">Link</a>
V-Con	Technical Specification Phase 2	Specification	2015	-
V-Con	Technical Specification Phase 3	Specification	2016	-
V-Con	V-Con Project Website	Website	2016	<a href="#">Website</a>
Vejdirektoratet, Denmark	Generic process - capital preserving maintenance	Process	2016	-
Vejdirektoratet, Denmark	The Danish Road Directorate	Presentation	2016	-
Vejdirektoratet, Denmark	Model and Drawing Standard	Website	2018	<a href="#">Link</a>
Vestergaard et al.	DTU Byg Rapport SR 12-06 (in Danish)	Report	2012	<a href="#">Link</a>
Volk et al.	Building Information Modelling (BIM) for existing buildings — Literature review and future needs	Report	2014	<a href="#">Link</a>
W3C Community & Business Groups	Linked Building Data Community Group	Website	NA	<a href="#">Website</a>
W3C OWL Working Group	OWL 2 Web Ontology Language Document Overview (Second Edition)	Report	2012	<a href="#">Link</a>

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W3C Semantic Web	SKOS Simple Knowledge Organization System - Home Page	Website	NA	<a href="#">Website</a>
Weidner	Definition von Konvertierungsverfahren und prototypische Umsetzung einer Konvertierungs-Software zur Erzeugung von OKSTRA-Objekten für die Bestandsdatendokumentation (SIB) aus Datenbeständen des Entwurfsprozesses (in German)	Report	2016	-
Weise, Schmist & Hettwer	OKSTRA, IFC und BIM: Neue Wege im Umgang mit Straßeninfrastrukturdaten	Report	2018	<a href="#">Link</a>
Wim Gielingh	A Theory for the Modelling of Complex and Dynamic Systems	Paper	2008	<a href="#">Link</a>
World Economic Forum	An Action Plan to Accelerate Building Information Modeling (BIM) Adoption	Report	2018	<a href="#">Link</a>
Xun et al	A Framework for BIM-enabled Life-cycle Information Management of Construction Project	Journal Article	2014	<a href="#">Link</a>