

DIN SPEC 91357:2017-12 (E)

Reference Architecture Model Open Urban Platform (OUP); Text in English

Inhalt	Seite
Foreword	4
0 Introduction	6
0.1 General observation and context	6
0.2 Why a Reference Architecture?	7
1 Scope.....	8
2 Terms and definitions.....	8
3 Concept of Open Urban Platforms.....	11
3.1 General information.....	11
3.2 Characterization of Open Urban Platforms.....	11
3.3 Existing concepts and initiatives	13
4 Ecosystem of an Open Urban Platform.....	14
4.1 General information.....	14
4.2 Business models	14
4.3 Governance.....	16
4.4 Roles and Responsibilities	18
5 System Architecture and Capabilities.....	18
5.1 General Information.....	18
5.2 OUP as a System of Systems	19
5.3 Capabilities of an OUP.....	22
5.3.1 Capabilities explained.....	22
5.3.2 EIP SCC capability categories.....	23
5.3.3 EIP SCC capability map	24
5.3.4 Enhancements of EIP SCC Urban Platform Capability Map	24
6 Digital Use Cases	26
6.1 General information.....	26
6.2 Single OUP.....	27
6.2.1 Description.....	27
6.2.2 User Scenario	27
6.2.3 Implementation	28
6.3 System of Systems (OUP interacts with other management systems)	28
6.3.1 Description.....	28
6.3.2 User Scenario	29
6.3.3 Implementation	29
6.4 Federated OUPs – Same City.....	30
6.4.1 Description.....	30
6.4.2 User Scenario	30
6.4.3 Implementation	31
6.5 Federated OUPs — Across Cities.....	31
6.5.1 Description.....	31
6.5.2 User Scenario	31
6.5.3 Implementation	32
7 Data and Service Marketplace.....	32
7.1 General information.....	32
7.2 Open Interfaces to Access Urban Data.....	33
7.2.1 Raw Data Interfaces.....	35

7.2.2	Data Processing Interfaces.....	36
7.2.3	Data Integration Interfaces.....	36
7.2.4	Management Interfaces.....	36
7.2.5	Extended Interoperability.....	36
7.2.6	Conclusions	37
7.3	Data Architecture.....	37
7.3.1	Guidelines.....	37
7.3.2	Data model	38
7.3.3	Data value chain	39
7.3.4	Data Privacy.....	40
7.4	Smart Data and Service Provisioning	41
	Annex A (normative) Capabilities per category.....	43
	Bibliography.....	55

Figures

Figure 1	— Schematic picture of an open urban platform.....	12
Figure 2	— Digital Data & Services Marketplace	17
Figure 3	— Framework for the Reference System Architecture of an OUP.....	20
Figure 4	— EIP SCC Urban Platform Capability Map.....	24
Figure 5	— Illustration of a standalone OUP.....	28
Figure 6	— Illustration of OUP as System of Systems for green parking guidance.....	29
Bild 7	— Federated OUPs within the same City to support multi-modal routing	31
Figure 8	— Federated OUPs across multiple Cities (Berlin and Hamburg)	32
Figure 9	— Open Urban Platform layers	35
Figure A.1	— EIP SCC Urban Platform Capability Map with capabilities per category.....	54