ISO/IEC 30182:2017-05 (E)

Smart city concept model - Guidance for establishing a model for data interoperability

Contents

- 0 Introduction vi
- 1 Scope 1
- 2 Terms and definitions 1
- **3** Using the SCCM 3
- 4 Concept, relationship and the SCCM 5
- 5 Mapping a dataset to the SCCM 8
- 6 Views illustrating how concepts are typically related 11
- 7 Definition of each concept and relationship in the SCCM 21

Annexes

Annex A (informative) Examples of use of the SCCM 48 Annex B (informative) Relationships in the SCCM 51

Bibliography 54

List of figures Figure 1 – Smart city levels of insight vii Figure 2 – Example of a directed graph 6 Figure 3 – Example of a directed graph for a concept 6 Figure 4 – Example of sub-concepts 7 Figure 5 – Example of a group concept 7 Figure 6 – Example of a dataset listing reported faults to lamp posts 8 Figure 7 – Items view 12 Figure 8 – Collections view 13 Figure 9 – Events view 14 Figure 10 – Objectives view 15 Figure 11 – Observing and responding view 16 Figure 12 – Services view 17 Figure 13 – Cases view 19 Figure 14 – Plans view 20 Figure 15 – Resources and decisions view 21 Figure 16 – ABSTRACT relationships 22 Figure 17 – ACCOUNT relationships 23 Figure 18 – AGENT relationships 24 Figure 19 – AGREEMENT relationships 25 Figure 20 – ASSUMPTION relationships 26 Figure 21 – BUILDING relationships 27 Figure 22 – CASE relationships 28 Figure 23 – COLLECTION relationships 29 Figure 24 – COMMUNITY relationships 30 Figure 25 – DECISION relationships 31 Figure 26 – EVENT relationships 32 Figure 27 – FUNCTION relationships 33 Figure 28 – ITEM relationships 34 Figure 29 – METHOD relationships 35 Figure 30 – METRIC relationships 36 Figure 31 – OBJECT relationships 37 Figure 32 – OBJECTIVE relationships 38 Figure 33 – OBSERVATION relationships 39

- Figure 34 ORGANIZATION relationships 40
- Figure 35 PERSON relationships 40
- Figure 36 PLACE relationships 41
- Figure 37 PLAN relationships 42
- Figure 38 RESOURCE relationships 43
- Figure 39 RULE relationships 44
- Figure 40 SERVICE relationships 45
- Figure 41 STATE relationships 46
- Figure 42 TARGET relationships 47
- Figure A.1 UK rail stations data mapped to the SCCM 48
- Figure A.2 Planning application data mapped to the SCCM 49

List of tables

- Table 1 Relevance of BSI PAS 181 guidance notes to this International Standard 4
- Table 2 Other barriers to interoperability5
- Table 3 Alphabetical list of prime concepts 10
- Table 4 Alphabetical list of group concepts
 11
- Table A.1 Mapping the health informatics concept model to the SCCM 50
- Table B.1 List of relationships in the SCCM 51