ISO/IEC 24039:2022-06 (E)

Information technology - Smart city digital platform reference architecture - Data and service

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Overview **2**

5 Design principles **3**

6 Reference architecture **4**

7 Technical support **5**
7.1 Data collection 5
7.2 Data processing 6
7.3 Data storage 6
7.4 Development and testing 7
7.5 Operating tool 7
7.5.1 Life cycle management 7
7.5.2 System operation 7

8 Resource management **8**
8.1 Data governance 8
8.1.1 Data ownership identification 8
8.1.2 Metadata management 8
8.1.3 Data quality 9
8.1.4 Data policy 9
8.2 Data assets management 9
8.2.1 Data asset identification and registration 9
8.2.2 Data asset directory and catalogue management 10
8.2.3 Data asset model 10
8.2.4 Data asset association 10
8.2.5 Data asset security 10
8.3 Data intelligence 11
8.3.1 Data training 11
8.3.2 Data analysis 11
8.3.3 Data visualization 12
8.4 Service decoupling 12
8.5 Domain model 12
8.5.1 Domain knowledge 12
8.5.2 Domain business logic 12
8.6 Service extraction 13

9 Capability exposure **13**
9.1 Data service 13
9.2 Data operation 13
9.2.1 Authorization 13
9.2.2 Circulation 14
9.3 Data portal 14
9.4 Service integration 14
9.4.1 Service interaction 14

9.4.2 Service encapsulation 15
9.5 Service delivery 15
9.5.1 Service accessibility 15
9.5.2 Delivery management 15
9.5.3 Service evaluation 15
10 Interface 16
10.1 Collection interface 16
10.1.1 Secure access 16
10.1.2 Digital representation 16
10.1.3 Command distribution 16
10.1.4 Message push 16
10.1.5 Service access 16
10.1.6 Protocol and format translation 17
10.2 Delivery interface 17
10.2.1 Authentication 17
10.2.2 Inquire 17
10.2.3 Subscription 17
10.2.4 Procedure call 17
10.2.5 System call 17
10.2.6 Application programming interface (API) 17
Annex A (informative) **Example of SCDP data service reusability 18**
Annex B (informative) **Elaboration with ISO/IEC 30145-3 ..... 20**
Bibliography 22