

ISO/TR 4445:2021-09 (E)

Intelligent transport systems - Mobility integration - Role model of ITS service application in smart cities

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Abbreviated terms	2
5	General overview and framework	3
5.1	Objective	3
5.2	National variations	3
5.3	Mandatory, optional and cooperative issues	3
5.4	Specification of service provision	3
5.5	Architecture options	3
6	Concept of operations	4
6.1	General	4
6.2	Statement of the goals and objectives of the system	4
6.3	Strategies, tactics, policies, and constraints affecting the system	4
6.4	Organizations, activities and interactions among participants and stakeholders	4
6.5	Clear statement of responsibilities and authorities delegated	4
6.6	Operational processes for the system	5
6.6.1	General	5
6.6.2	Service requirements definition	5
6.7	Appointment of an approval authority (regulatory)	5
6.8	In-vehicle system	5
6.9	User	5
6.10	Application service	6
6.11	Big data management entity	6
6.12	Data aggregator	6
7	Conceptual architecture framework	6
7.1	General	6
7.2	Actors	6
7.3	Service definition	8
7.4	Role model architecture	8
7.4.1	General	8
7.4.2	Jurisdictions	9
7.4.3	Application service actors	9
7.4.4	Service provider(s)	10
7.4.5	The OBE equipment installer	10
7.4.6	The OBE equipment maintainer	10
7.4.7	Approval authority (regulatory)	11
7.4.8	Security credential management system/public key infrastructure	11
7.4.9	Certification authority (digital)	12
7.4.10	Application service approval	12
7.4.11	Onboard equipment OBE approval	12

7.4.12	Vehicle user	14
7.4.13	Application service provision	15
8	Communications architecture	15
9	Quality of service requirements	15
10	Test requirements	16
11	Marking, labelling and packaging	16
12	Declaration of patents and intellectual property	16
	Annex A (informative) ITS data management architecture	17
	Bibliography	36