

ISO/TR 7872:2022-05 (E)

Intelligent transport systems - Mobility integration - Digital infrastructure service role and functional model for urban ITS service applications

| Contents | | Page |
|--------------------|--------------------------------------------------------------------------------------|-------------|
| Foreword | | v |
| Introduction | | vi |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Abbreviated terms | 1 |
| 5 | General overview and framework | 2 |
| 5.1 | Objective | 2 |
| 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 | 4 |
| 6.6.1 | Service requirements definition | 4 |
| 6.7 | Appointment of an approval authority (regulatory) | 5 |
| 6.8 | In-vehicle system | 5 |
| 6.9 | User | 5 |
| 6.10 | Application service | 5 |
| 6.11 | Big data management entity | 6 |
| 6.11.1 | Big data management | 6 |
| 6.12 | Data aggregator | 6 |
| 6.13 | Map service providers | 6 |
| 6.14 | Digital infrastructure service provider | 6 |
| 7 | Conceptual architecture framework | 6 |
| 7.1 | General | 6 |
| 7.2 | Actors | 6 |
| 7.3 | Role model and functional model of digital infrastructure service provider | 7 |
| 7.4 | Service definition | 8 |
| 7.5 | Role model architecture | 9 |
| 7.5.1 | General | 9 |
| 7.5.2 | Application service actors | 9 |
| 7.5.3 | Service provider(s) | 9 |
| 8 | Quality of service requirements | 9 |
| 9 | Test requirements | 10 |

| | | |
|---------------|-------------------------------------------------------------------------------|-----------|
| 10 | Marking, labelling and packaging | 10 |
| 11 | Declaration of patents and intellectual property | 10 |
| 12 | Definition of service domains utilizing digital infrastructure | 10 |
| 12.1 | General | 10 |
| 12.2 | Referenced target use cases | 10 |
| 12.3 | Infrastructure operation management | 12 |
| 12.3.1 | Traffic management | 12 |
| 12.4 | Road traffic management | 13 |
| 12.5 | Enforcement | 14 |
| 12.6 | The role of service providers | 15 |
| | Annex A (informative) Use case of digital infrastructure service | 18 |
| | Bibliography | 19 |