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# Intelligent transport systems (ITS) — Urban mobility applications via nomadic device for green transport management —

## Part 1: General requirements for data exchange between ITS stations

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# Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204*, Intelligent transport systems.*

A list of all parts in the ISO 18561 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.


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# Introduction

The ISO 18561 series is intended to facilitate the development, promotion and standardization of the use of nomadic and portable devices to support intelligent transport systems (ITS) service provision and multimedia use, such as passenger information, automotive information, driver advisory and warning systems and entertainment system interfaces to ITS service providers and motor vehicle communication networks.

This document provides the application and specification for standardizing transportation management as a form of ITS in urban transportation networks to improve eco-mobility and sustainability. This document fosters the introduction of multimedia and telematics nomadic devices in the public transport and automotive world. These ITS technologies can increase operational efficiencies and unlock enhanced transportation safety and eco-mobility applications.

Via nomadic devices, the urban mobility applications build on existing transportation planning processes, including trip generation, trip distribution and modal choices with respect to extended measures of effectiveness (MOE) in transportation models, such as time effectiveness, cost effectiveness and green (eco)effectiveness.

In this document, the nomadic device is presented as a personal ITS station in order to communicate with the other stations, including vehicle, roadway infrastructures and centres for defining the requirements for interfaces between the stations in urban mobility applications to accommodate the specific needs of eco-mobility in a smart city.

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# Intelligent transport systems (ITS) — Urban mobility applications via nomadic device for green transport management —

# Part 1: General requirements for data exchange between ITS stations

## 1 Scope

This document gives guidelines for providing mobility information according to user preference on demand, utilizing a variety of existing applications on nomadic devices related to different means of transport. This document defines an integrated mobility information platform as a service methodology to be integrated with a variety of mobile apps with respect to different transport modes.

This document defines the following urban mobility applications:

— guidance documents to facilitate the practical implementation of identified standards in the transportation planning process, including related use cases;

— provision of urban mobility information integrated with a variety of mobile apps on nomadic devices by multiple transport modes for collecting trip production and attraction data;

— modal choice data based on time effectiveness, cost effectiveness, and eco-effectiveness in the trip distribution from origins to destinations.

## 2 Normative references

There are no normative references in this document.

## 3 Terms, definitions and abbreviated terms

### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

**3.1.1**
**nomadic device**
**ND**
implementation of a *personal ITS station* (3.1.2) which provides communication connectivity via equipment such as cellular telephones, mobile wireless broadband (WIMAX, HC-SDMA, etc.) or WiFi, and includes short range links, such as Bluetooth or Zigbee to connect portable devices to the motor vehicle communications system network

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