INTERNATIONAL STANDARD

ISO 37169

First edition
2021-08

Smart community infrastructures — Smart transportation by run-through train/bus operation in/between cities

This document is a preview generated by EVS

Reference number
ISO 37169:2021(E)

© ISO 2021

This document is a preview generated by EVS

COPYRIGHT PROTECTED DOCUMENT

© ISO 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

 © ISO 2021 – All rights reserved

Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Concept of smart transportation by run-through operation **1**
4.1 City development process with transportation organization 1
4.2 Solutions to transport service termination 2
4.2.1 Rail services 2
4.2.2 Bus services 2
4.3 Applicable city issues and advantage acceptors 3
4.4 Satisfaction of SDGs by smart transportation 3
5 Adoption of smart transportation by run-through operation **3**
5.1 Objectives 3
5.2 Target area 4
5.3 Requirements for smart transportation 4
5.3.1 General 4
5.3.2 Arrangements for run-through operation 4
5.3.3 Agreements for run-through operation 5
5.3.4 Technical specification adjustment between different rail/bus carriers 5
5.3.5 Specific application of run-through train operation 6
5.4 Installation of smart transportation 7
6 Maintenance of quality of smart transportation by run-through operation **7**
6.1 General 7
6.2 Parameters to be observed 8
6.3 Modification of smart transportation 8
Annex A (informative) **A large scale run-through operation enabling a large number of people to easily travel in a huge area and enjoy the benefit of saving time** **9**
Bibliography **13**

This document is a preview generated by EVS

© ISO 2021 – All rights reserved

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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 268, *Sustainable cities and communities,* Subcommittee SC 1, *Smart community infrastructures*.

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.

This document is a preview generated by EVS

 © ISO 2021 – All rights reserved

Introduction

Many cities are improving their transportation systems to provide greater accessibility, mobility and environmental benefits and to promote sustainable economic growth in their communities. Cities currently operating older transit systems, which require many transfers in multiple city centres and transportation hubs, are developing new rail and bus lines that offer more direct, frequent services with a one-seat ride. These services reduce the number of transfers within a city centre and outlying metropolitan areas. They offer through train or bus services in high quality transit corridors, defined as smart transportation.

This document describes how to organize run-through train or bus corridors using smart transportation in city centres, greater metropolitan areas and regions. This concept includes reprioritizing operations, management, organizational plans and agreements between multiple carriers so that new transit services can be provided while still maintaining the current rail and bus infrastructure and existing transit service within local communities and city centres.

This document is a preview generated by EVS

© ISO 2021 – All rights reserved

This document is a preview generated by EVS

Smart community infrastructures — Smart transportation by run-through train/bus operation in/between cities

This document is a preview generated by EVS

1 Scope

This document specifies a procedure for run-through train operations, identified as smart transportation. This concept provides direct, one-seat ride services in high quality corridors connecting cities and transportation hubs without forcing transfers. Improved operations planning, greater use of interchange or rental use arrangements are described so that these services can be implemented without constructing major infrastructure improvements in existing transportation corridors and right-of-way.

This document also describes the application of run-through operation in bus services that are strictly licensed to bus carriers using public roads, ending the inconvenience of forcing passenger transfers between routes or service territories.

NOTE Smart transportation by run-through operation is applicable to other transportation modes besides rail and bus services, if applied in services operated in the same mode. Refer to ISO 37154 for applicable transportation modes.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology 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/

4 Concept of smart transportation by run-through operation

4.1 City development process with transportation organization

A large city has been developed by extending transportation services from the city centre to the outside in order to expand city areas for citizens' lives and work. In old cities, they had gates to inspect visitors to a city to protect their citizens. The places where the gates were placed have been developed to have the function of sub-city centres. By following such historical culture, some old cities have rail terminals in sub-centres where trains are not allowed to directly come into the metropolitan area beyond sub-centres. This manner avoids traffic congestion caused in the area by trains rushing into one point with their large number of passengers. Bus and streetcar or tram systems have been organized for the local transport in the metropolitan area to connect the city centre and sub-city centres. The subway was then introduced when the ground transportation does not provide sufficient capacity to meet demand. Thus, transportation services are often terminated in sub-centres where all passengers are forced to change trains whenever coming to/going out from a metropolitan area.

Even if a city does not have such a historical background, many cities began investing in grade separated urban rail systems such as subways or "over ground" systems on aerial structures within crowded metropolitan areas to reduce surface congestion. These systems also grew rapidly, where vast

© ISO 2021 – All rights reserved