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**Smart community infrastructures —  
Data exchange and sharing for  
community infrastructures based on  
geographic information**

*Infrastructures territoriales intelligentes — Échange et partage de  
données pour les infrastructures territoriales basés sur l'information  
géographique*



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## Foreword

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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](http://www.iso.org/directives)).

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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](http://www.iso.org/members.html).

## Introduction

Data from community infrastructures, e.g. water, energy, transportation, waste, information and communication technologies (ICT), provides high-quality support for decision-making and social services. It is particularly important in the process of smart community construction. ISO 37156 focuses on data exchange and sharing for smart community infrastructures. It provides guidelines on principles and the framework to use for data exchange and sharing for entities with authority to develop and operate community infrastructure. The pilot project to investigate the utility of ISO/TC 268/SC 1 deliverables, including ISO 37156 and ISO/TR 37171, determined that more practically operational standards are needed to provide technical guidance on implementation and application scenarios of smart community infrastructure data exchange and sharing.

As intelligent transportation, urban management, environmental improvement, earthquake prevention and disaster mitigation create new needs for the use of geographic information regarding community infrastructures, geographic information has become an important basic information of a smart community. Data exchange and sharing for community infrastructure based on geographic information involves different stakeholders, various data types, and different periods of the data life cycle (e.g. production, storage, distribution). It is necessary to strengthen cooperation to clarify the relationship, boundaries, roles, objectives, and responsibilities between different stakeholders in order to support government decision-making and urban operation and management.

As an implementation case of ISO 37156 on geographic information, this document helps improve the operability of ISO 37156, and provides practical guidance for the ongoing ISO 37156 pilot city. This document is intended to guide data exchange and sharing in smart community infrastructure-related industries, including but not limited to, standard-setting, data production, equipment procurement and construction, platform construction and policy formulation.