
**Privacy protection — Privacy
guidelines for smart cities**

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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

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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 document 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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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 27, *Information security, cybersecurity and privacy protection*.

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.

Introduction

The growing integration of ICT technologies (e.g. cloud computing, IoT, big data, mobile networks, artificial intelligence and machine learning) in smart cities will allow for improved data sharing capabilities to achieve better services. But the growing complexity of the ICT infrastructure will also create vulnerabilities at security and privacy level. Security incidents can lead to essential services not operating properly, for instance a massive electricity supply shortage. Likewise, unauthorized access to personal data can lead to major privacy breaches, for instance access to personal health data records.

Ensuring that privacy is properly dealt within smart cities is a challenge. First, a wide variety of public and private stakeholders can be involved such as:

- agencies in charge of managing essential city services for instance administration services;
- business organizations in charge of operating services for instance electricity distribution;
- organizations in supply chains associated with the deployment of related infrastructure for instance transport systems; and
- associations representing the viewpoints of citizens.

Secondly, a wide variety of standards can be used such as:

- privacy standards;
- smart city standards;
- cloud computing standards;
- IoT standards;
- big data standards; and
- IT governance standards.

[Figure 1](#) shows examples of such standards. This document thus focuses on providing guidance on the use of standards, while taking into account the variety of stakeholders in a smart city ecosystem.