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Information technology — Data use in smart cities —

Part 2: Use case analysis and common considerations

Technologies de l'information — Utilisation de données dans les villes intelligentes —

Partie 2: Analyse des cas d'utilisation et considérations générales

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Foreword

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Introduction

This document aims to provide common considerations about data use in smart cities based on the analysis of collected use cases.

The objectives and implications of this document are:

— to support effective, sustainable, comprehensive and innovative use of data as city-wide strategic resources for better performance, operation, service and sustainability of city;

— to support human-centred standardization collaboration on data use for better harmonization, connectivity, interoperability and reusability of data as strategic resources and assets in digital transformation of city;

— to synthesize common considerations that enable data availability, data usefulness, data connectivity, data security, and data enabled intelligent predictions and actions from city wide multi-stakeholder's interests from collected use cases;

— to collect good practices that enable mapping, building, operating, assessing and continuous improvement of data use in ICT development and application, investment, procurement, monitoring, auditing and performance assessment;

— to improve digital enhancement of total capabilities of data use and evidence-based decision making in smart cities such as data use for public health emergency and control across multi-dimensions, multi-domains, multi-layers and multi-regions;

— to support data-based and data-driven and data-enabled ICT development and application in smart cities including but limited to digital governance, legal governance, data quality governance, ICT governance, data security governance, smart governance;

— to support the appropriate use of rights related to data distributed within and between cities, including intellectual property rights and data privacy derived from human rights.

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Information technology — Data use in smart cities —

Part 2:
Use case analysis and common considerations

1 Scope

This document provides use cases and common considerations for use cases analysis for data use in smart cities.

In particular, this document includes:

a) methods for collecting use cases;

b) methods of analysing the collected use cases about data use in smart cities;

c) common considerations about data use in smart cities based on the analysis of collected use cases.

2 Normative references

There is no normative reference in this document.

3 Terms and definitions

For the purposes of this document, the terms and definitions given in the following 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 https://www.electropedia.org/

3.1
data use
handling or dealing with data for a specific purpose

Note 1 to entry: In smart cities, data use refers to activities enabling data value realization along with data value-chain, including data availability, data quality assurance, ease of data use, data use security, and data-enabled innovation from city wide multi-stakeholder's interests.

[SOURCE: ISO/IEC 5207:2024, 3.30, modified — Note 1 to entry has been changed.]

3.2
data value chain
intelligent use, management and reuse of data to deliver insight

Note 1 to entry: Data value chain in this document includes data availability, data quality assurance, ease of data use, data use security, and data enabled innovation for intelligent predictions and actions from city wide multi-stakeholder's interests.

[SOURCE: ISO/IEC 17917:2024,2.5, modified — Note 1 to entry has been added.]

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3.3
data protection
process and practice in place to ensure that data is safeguarded from unauthorized access or alterations including destruction available to those who need it, and handled in a way that is consistent with the expectations of privacy set forth by laws and policies

3.4
raw data
data in its originally acquired, direct form from its source before subsequent processing

[SOURCE: ISO 5127:2017,3.1.10.04]

3.5
stakeholder
person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity

[SOURCE: ISO Guide 73:2009, 3.2.1.1, modified — Note 1 to entry has been deleted.]

3.6
use case
description of a sequence of interactions used to help identify, clarify, and organize considerations to support a specific business goal

[SOURCE: ISO/IEC 27561:2024, 3.46, modified — “considerations" has taken the place of “requirements".]

3.7
use case scenario
set of circumstances under which the sequence of interaction describing a *use case* (3.6) takes place

[SOURCE: ISO 20077-1:2017, 3.19, modified — EXAMPLE, Note 1 and Note 2 have been deleted.]

4 Abbreviated terms

AI	artificial intelligence
API	existing data access interfaces
DIKW	data-information-knowledge-wisdom
DIKWPA	data–information–knowledge–wisdom–purpose-action
HCI	human–computer interaction
ICT	Information and communication technology
IoT	internet of things
IT	information technology
IPR	intellectual property rights
MoU	memorandum of understanding
UAS	uncrewed aircraft system

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