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Sustainable cities and communities — Maturity model for smart sustainable communities

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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).

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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*.

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 United Nations (UN) sustainable development agenda, "Transforming Our World: The 2030 Agenda for Sustainable Development", was adopted by world leaders in New York in September 2015. Through 17 Sustainable Development Goals (SDGs) and 169 targets, this agenda aims to end poverty and promote prosperity and well-being by 2030, while reducing the adverse impact of human activities on the environment. The UN SDGs address cities directly through Goal 11, which aims to "Make cities inclusive, safe, resilient and sustainable".

This document was developed in response to an increasing demand from city and community leaders for a simple-to-use, high-level diagnostic tool that will give them an overview of the extent to which they are implementing good practices. The maturity model described in this document has been developed in close collaboration with several pilot cities, including: Birmingham, UK; Cambridge, UK; Glasgow, UK; London, UK; Peterborough, UK; Dubai, UAE; Tianjin, China; Singapore; Moscow, Russia; Sydney, Australia.

This document is structured in five parts:

— Clause 1 describes the scope of the Maturity Model for Smart Sustainable Communities (MMSSC);

— Clause 2 lists normative references;

— Clause 3 sets out the terms and definitions used in this document;

— Clause 4 describes the methodology and principles used in development of the MMSSC;

— Clause 5 presents the structure of the MMSSC that has resulted from this development process, and gives guidance on how to use the MMSSC, looking at

  — how to use the MMSSC to baseline current maturity of a community,

  — how to use the MMSSC to drive improved performance in future, and

  — how to use the MMSSC in conjunction with other maturity models that address specific elements of smart-enabled sustainable development in more detail (such as CEN's smart mature resilience model, and the quality assurance matrix for the key functions of local government described in ISO 18091).

Supporting tools are provided in three annexes:

— Annex A provides the detailed diagnostic tool to be used when applying the MMSSC;

— Annex B maps the wider set of ISO standards and guidance which communities can use in order to build on strengths and address weaknesses that they may identify through use of the MMSSC;

— Annex C provides more detailed mapping of this model against the key functions of local government described in ISO 18091, to facilitate joint use of the two tools.

Sustainable cities and communities — Maturity model for smart sustainable communities

1 Scope

This document provides a top-level maturity model for smart sustainable communities (MMSSC), which can be used for self-assessment by individual cities and communities and as the basis for cross-city benchmarking. The MMSSC is a simple way for community leaders to assess how mature their community is in its journey towards adoption of good practices as set out in ISO standards for sustainable and smart-enabled development; to identify strengths and weaknesses; and then to quickly find their way to the international standards and guidance that are most relevant to their needs.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 37100, *Sustainable cities and communities — Vocabulary*

ISO 37153, *Smart community infrastructures — Maturity model for assessment and improvement*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 37100 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/

4 Methodology and structure

4.1 Context

The MMSSC shall use the methodology for developing maturity models in ISO 37153. This is a highly relevant methodology which draws on other widely used standards for maturity models (such as the capability maturity model presented in the ISO/IEC 15504 series, which addresses maturity in the field of software development). This methodology and the resulting structure of the MMSSC is described below:

— 4.3 presents an overview of the MMSSC;

— 4.4 provides more detail on the dimensions and key characteristics of a sustainable and smart-enabled community that are assessed in the model;

— 4.5 describes the five levels of maturity which are used in the MMSSC to describe each of the key characteristics.

First, though, 4.2 sets out the principles that have been followed when applying the ISO 37153 methodology to develop the MMSSC.