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Smart city use case collection and analysis - Water systems in smart cities - Part 2 : Use case analysis

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FOREWORD

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IEC SRD 63301-2 has been prepared by IEC systems committee Smart Cities: Electrotechnical aspects of Smart Cities. It is a Systems Reference Deliverable.

The text of this Systems Reference Deliverable is based on the following documents:

Draft	Report on voting
SyCSmartCities/382/DTS	SyCSmartCities/392/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Systems Reference Deliverable is English.

A list of all parts in the IEC 63301 series, published under the general title *Smart city use case collection and analysis – Water systems in smart cities*, can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

INTRODUCTION

The construction of a smart city can create benefits for a society and its stakeholders. Water is a critical resource to support urban development and its sustainable use is recognised as a United Nations Sustainability Goal. Water infrastructure development, water management efficiency, water supply resilience, and the safe operation and use of water are important focal areas for IEC systems committee Smart Cities.

This document focuses on water systems management, specifically water security whether directly from a natural source or via man-made infrastructure. Information communication technologies (ICT) and electrotechnologies can provide greater visibility and control, however its application does depend on the characteristics of individual water markets. Technology is not a panacea for resolving all issues and problems.

A gap exists in effective coordination and clear orientation and how industry and stakeholders are engaged within it.

Major stakeholders of water management and use include citizens, the water authority (government), and organisations (associations, business groups, utility companies). Each stakeholder has different and competing interests, market relationships and touch points to water system infrastructure, processes, operations, management and use.

Modelling these complex interactions into a systems architecture is a valuable exercise in understanding the issues, gaps and opportunities for sustainable water management.

This document focuses on use case collection and analysis to elicit requirements to support technical committees such as ISO/TC 224 and ISO/TC 147 in preparing sustainable water management standards for our cities and communities.

This document also seeks to inform IEC technical committees to enable them to provide the technical standards needed.

The IEC SRD 63301 series contains two parts:

– IEC SRD 63301-1: Smart city use case collection and analysis – Water systems in smart cities – Part 1: High-level analysis;

– IEC SRD 63301-2: Smart city use case collection and analysis – Water systems in smart cities – Part 2: Use case analysis.

This document is IEC SRD 63301-2, i.e. the use case analysis. This document aims to develop the list of user stories and the database of use cases, conduct integrative analyses of the use cases, scope out the requirements of water system standards and provide recommendations for IEC and other Standard Development Organizations (SDOs).

1 Scope

This part of IEC SRD 63301 develops the list of user stories and the database of use cases, conducts integrative analyses of the use cases, defines the requirements of water system standards and provides recommendations for IEC and other Standard Development Organizations (SDOs).

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.

IEC SRD 63301-1, *Smart city use case collection and analysis - Water systems in smart cities - Part 1: High-level analysis*