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# SYSTEMS REFERENCE DELIVERABLE

## Smart city use case collection and analysis – Intelligent operations centre for smart cities –
## Part 1: High-level analysis

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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# SMART CITY USE CASE COLLECTION AND ANALYSIS – INTELLIGENT OPERATIONS CENTRE FOR SMART CITIES –

## Part 1: High-level analysis

## FOREWORD

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

| Draft | Report on voting |
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| SyCSmartCities/356/DTS | SyCSmartCities/369/RVDTS |

Full information on the voting for the approval of this systems reference document 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.

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.

A list of all parts in the IEC SRD 63302 series, published under the general title *Smart city use case collection and analysis – Intelligent operations centre for smart cities*, can be found on the IEC website.

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- withdrawn, or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

Digital solutions are accelerating the integration of real world applications in urban areas, including city governance, healthcare, environment, traffic, education, security and so on. However, many smart solutions are still implemented within single-domains. Isolated city services, data flows and data need integration. To be effective, the coordination of data and service requires an overarching framework coupled with an intelligent operations centre (IOC). The first step to identify solution options is by collecting and analysing relevant use cases.

IOC is tailored to provide urban managers, enterprises and citizens with access to operational and organized solutions. Based on city-level database and new technologies, such as big data, AI, cloud computing, blockchain etc., IOC processes city information and provides innovative services for urban managers, operators and other stakeholders. Compared with single-domain systems, IOC can better support monitoring and visualizing, decision making and cross-domain cooperation. IOC will play an important role in integrating city services such as police, health services traffic management and rescue services, including but not limited to the following methods.

a) The centralized operations dashboard and mobile application will allow real-time monitoring and information processing to improve response to emergencies.

b) The centralized and intelligent platform will enable noticeable improvements in the management of public safety, like crime prevention, emergency response, threat prevention and response, and traffic management.

c) The IOC's technologically advanced analysis, integrated communications, GPS and video surveillance capabilities will help residents and domain (energy, water, horticulture, waste and security) supervisors to collaborate in a smarter way.

d) The integrated data visualization, near real-time collaboration and deep analytics it provides will help agencies prepare for problems, coordinate and manage response efforts and enhance the efficiency of services,

e) IOC will enable residents to report issues such as broken street lights, electricity failure, water wastage, etc. and check resolution status using their mobile devices.

Currently, IOC solutions are being implemented in different cities around the world, and the stakeholders of these smart cities face similar challenges, including cross-domain cooperation, monitoring and visualizing, intelligent analysis, user-oriented experience, etc. The provision of standardization should be considered as one of key factors to support IOC development, including the development of the conceptual model, data exchange, IT infrastructures, services, and so on. This document focuses on collecting and analysing use cases from diversified areas, with the goal of developing consensus-based descriptions of IOC features and capabilities across all stakeholders, and uses this to scope out the standardization requirements related to the field of IOC.

# SMART CITY USE CASE COLLECTION AND ANALYSIS – INTELLIGENT OPERATIONS CENTRE FOR SMART CITIES –

## Part 1: High-level analysis

## 1 Scope

This part of IEC SRD 63302 provides use case collection and analysis, identifies the market relationships of relevant stakeholders, scopes out capabilities and a reference model of intelligent operations centre (IOC) for smart cities, and proposes the requirements for standards development in this field.

This document is for use by authorities, solution providers, utilities, citizens, and other relevant stakeholders, to identify good practices regarding IOC, and how they can implement them.

## 2 Normative references

There are no normative references in this document.