

ISO/TC 268/SC 1 スマートシティフォーラム

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基準認証イノベーション技術研究組合

スマートコミュニティ・アライアンス

# IECの“スマートシティ”標準化活動のご紹介

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# City needs International Standard?

Example; 1904's Grate Fire in Baltimore

Although fire engines from Philadelphia, Washington, D.C., New York City, Virginia, Wilmington etc. responded, hose couplings could not fit Baltimore's hydrants-hose couplings!



# WTO recognized International Standardization Organizations

ITU; International Telecommunication Union

IEC; International Electro technical Commission

ISO; International Organization for  
Standardization

# New approach in IEC

IEC; home of industry

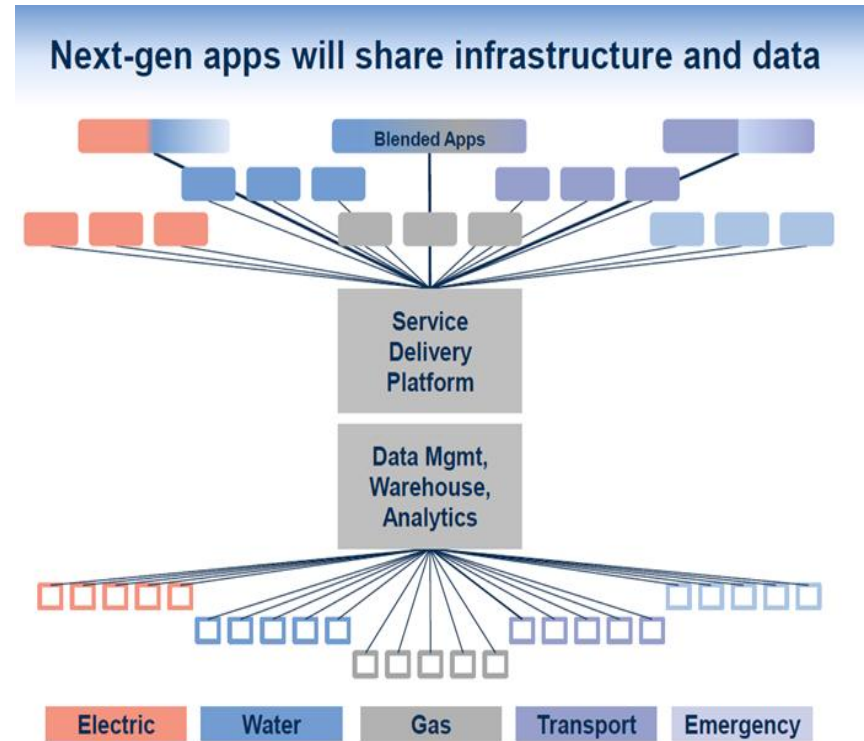
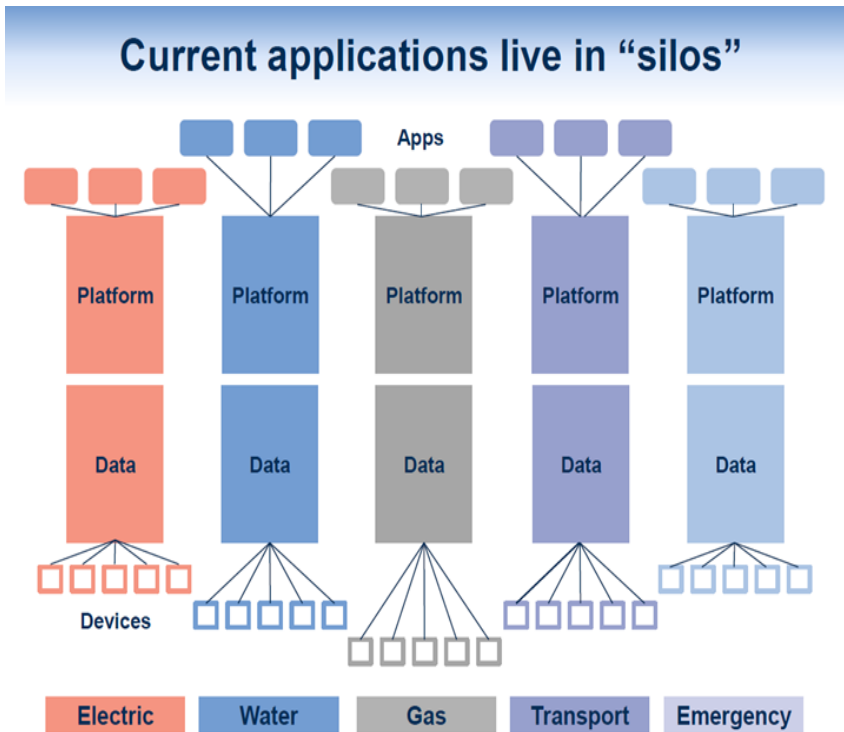
Technical Committee: TC

Individual Silos (Products)

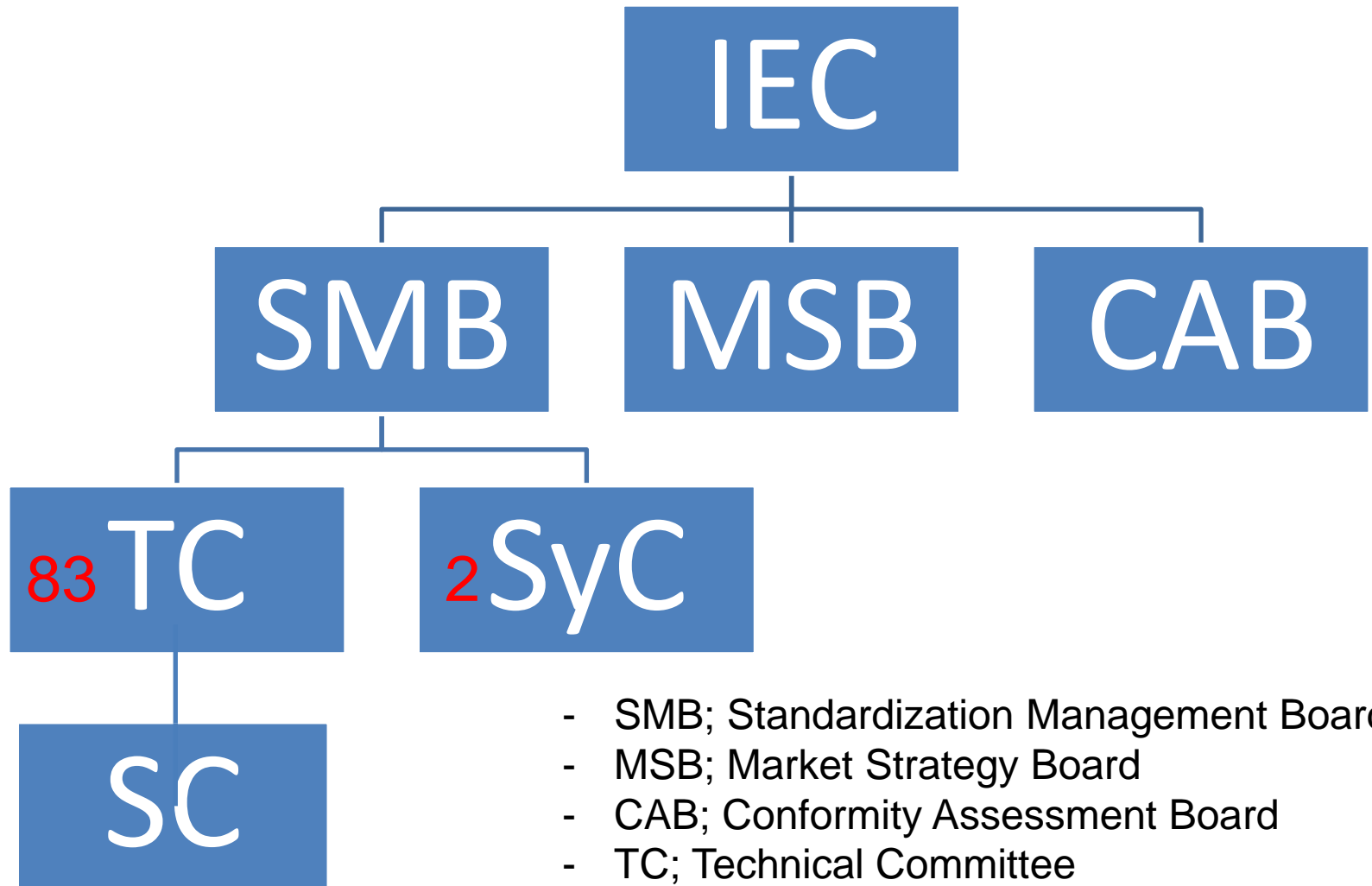
Systems Approach

(total optimization)

System Committee: SyC



# International Electro-technical Commission

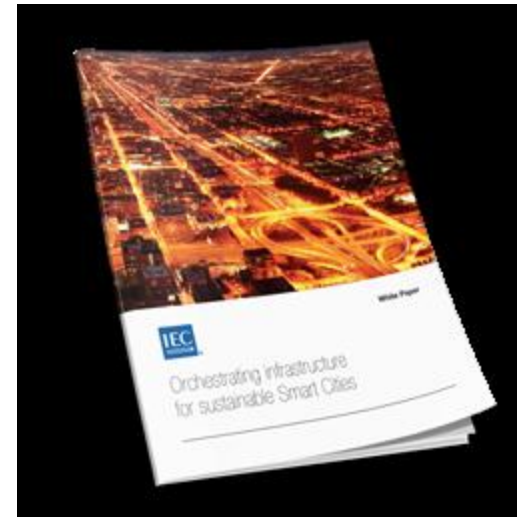


- SMB; Standardization Management Board
- MSB; Market Strategy Board
- CAB; Conformity Assessment Board
- TC; Technical Committee
- SyC; System Committee
- SC; Sub Committee



# IEC's white paper "Orchestrating infrastructure for sustainable Smart Cities" is just published!

This white paper explains what it needs to move cities to greater smartness; the what, who and how of smart city development. It calls for a wide collaboration between many stakeholders, including other international Standardization bodies to ultimately lead to integrated, cost-efficient, and Sustainable solutions.





# IEC White Papers by MSB

- Orchestrating infrastructure for sustainable Smart Cities
- Internet of Things: Wireless Sensor Networks

The development of this White Paper was led by the IEC MSB (Market Strategy Board) in cooperation with NIST (the US National Institute of Standards and Technology). The MSB brings together the CTOs of leading international organizations.

- Microgrids for disaster preparedness and recovery  
    With electricity continuity plans and systems
- Grid integration of large-capacity Renewable Energy sources and use of large-capacity Electrical Energy Storage
- Electrical Energy Storage
- Coping with the Energy Challenge

Electrical Energy Efficiency, under the leadership of Claude Breining of Schneider Electric



# Possible System Standards Activities in IEC

## Systems Evaluation Groups like ISO/TMB/SAG

First stage of systems development whose role is to engage the community of experts identify the relevant stakeholders and define the general architecture and boundaries of the problem to be addressed. (term: 18 to 24 month)

## Systems Committees (SyC) like a TC

Working at the systems instead of the product level to define reference architectures, use cases and appropriate standards.

## Systems Resource Group (SRG); Preparatory Stage of SyC

Group populated by systems experts whose purpose is to guide the development and use of specialized tools and software applications for Systems.





# SEGs of IEC

- **SEG1 on Smart Cities**
- **SEG2 on Smart Grid ⇒ SyC –Smart Energy –**
- **SEG 3 on Ambient Assisted Living**



# Systems Evaluation Group 1 on Smart Cities

- May 2013- Proposal to SMB by German, Chinese and Japanese National Committees to the IEC Standardization Management Board;  
Final Report; May 2015

## Purpose:

- To summarize and evaluate the status of standardization in the field of smart cities (inside and outside IEC and ISO), and work out plans for new standardization activities to be taken in IEC.

IEC, ISO, ISO/IEC JTC1, ITU, IEEE, SSCC-CG...



# SEG Smart Cities - SCOPE

IEC SEG on Smart Cities evaluates relevant works and proposes to establish an SyC with regard to Smart Cities including the SyCs' scope, general use cases, a possible reference architecture model, a standardization roadmap\*, a collection of to be defined terms and definitions, and a mapping of closely related activities in cooperation with ISO and other organizations, fora and consortia.

\*including gap analysis

- Note: The works defined above should be conducted by a goal oriented back-casting approach. All works are to prove possible, potential or hypothetical areas for SyC.



# Approved SEG1-WGs

8 SEG1 WGs are approved in the second SEG1 plenary meeting in February 2014

	<b>Title of NWGP</b>	<b>Proposer / Leader</b>
1	City Service Continuity	Hirohisa Aki
2	Urban planning and simulation system	Biyu WAN
3	City Facility Management (CFM)	Biyu WAN
4	Use Case Smart Home	Weihua ZHANG
5	Use Case Smart Education	Weihua ZHANG
6	Smart Cities Assessment	Yuan YUAN Tangli LIU
7	Standards development for smart cities using the City of Johannesburg- in a rapidly emerging country- as a piloting benchmark for smart cities implementation.	Sicelo XULU
<b>8</b>	<b>Mobility and Logistics</b>	<b>Joachim Lonien</b>

# SEG1-Task Groups

## 6.4.3 Work allocation (See. ToR Clause 6.4)

- SEG1 has three SEG1-TGs and their works and leaders are shown in Fig.6.4.

	<b>Works to be done</b>	<b>Leader</b>
TG1	<ul style="list-style-type: none"> <li>- Inventory of relevant existing standards</li> <li>- Survey and collection of existing and to-be-defined evaluation, metrics and Terms &amp; Definitions</li> <li>- Survey of smart city strategies</li> </ul>	CN
TG2	<ul style="list-style-type: none"> <li>- Reference architecture</li> <li>- Generic use cases</li> <li>- Supplemental research</li> </ul>	DE
TG3	<ul style="list-style-type: none"> <li>- Roadmap</li> <li>- Mapping of closely related activities</li> <li>- Definition of terms to be shared in SEG</li> </ul>	JP

## Collaboration with ISO and other SDO is essential

- -IEC shall be a part of the standard developing activities in the field of smart cities, however most of the IEC experts are obviously from electrotechnical field. Therefore close collaboration with ISO TCs/SCs is essential to involve necessary expertise including city authorities, city planners, citizens and infrastructure operators.
- -Since cities will continue to evolve, the structure for coordinating SDOs in the field of smart cities should be flexible.

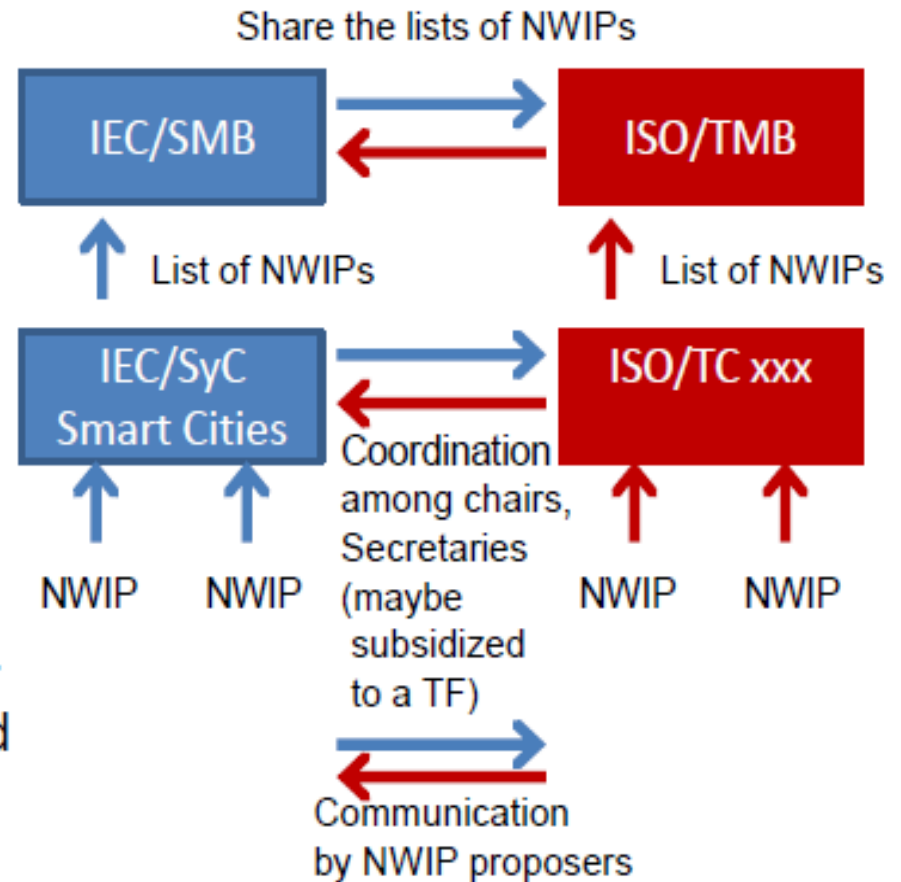
# Possible solutions for resource scarcity

- a) Coordination of IEC and ISO activities on Smart cities; Sharing NWIPs with ISO (after SyC establishment)
- b) Joint working group (after SyC establishment)
- c) Coordination of TC/WG meetings in conjunction with other relevant groups - These ideas can be proposed in the final SEG1 report to SMB and also be proposed to ISO/TMB/SAG.

# ● Possible solutions for resource scarcity.

## a) Sharing NWIPs with ISO (after SyC establishment)

- Currently, the NWIPs submitted to all IEC/TCs and ISO/TCs are reported to IEC/SMB and ISO/TMB respectively then shared. SyC will be a part of this existing mechanism.
- Also, the chairperson and secretary of future SyC Smart cities and those of relevant ISO/TC or SC can coordinate their works together. The coordination work maybe subsidized to a task force composed of members from both sides.
- The proposers of NWIP are encouraged to communicate both SyC smart cities and relevant ISO TC or SC in advance.

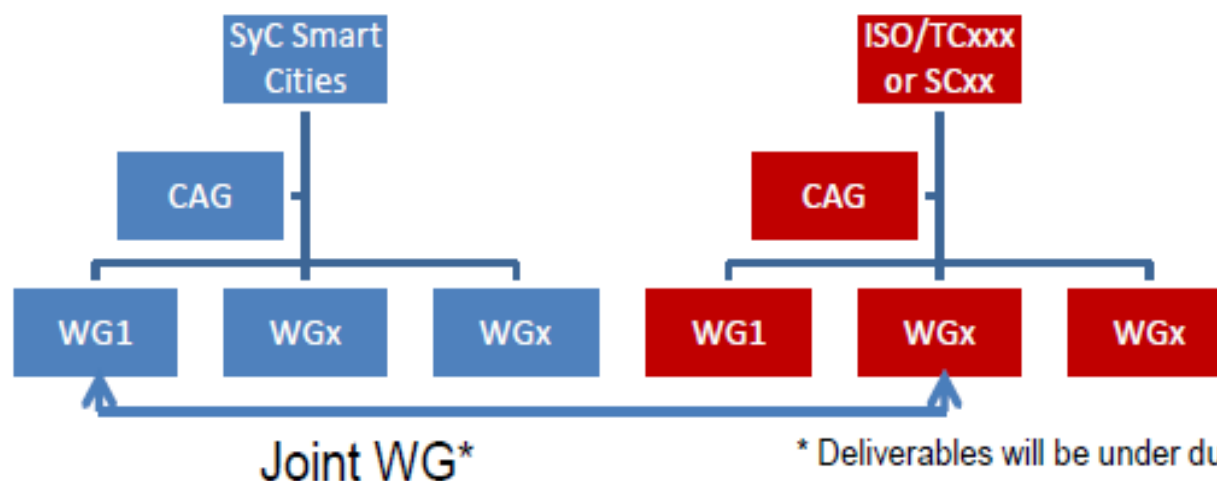




## ● Possible solutions for resource scarcity.

### b) Joint working group (after SyC establishment)

- Whenever a close relevance is identified between a work item of a WG under SyC on Smart Cities and that of a WG under ISO/TC or SC, the establishment of a joint WG should be considered.
- This mechanism is defined in ISO/IEC directives.



\* Deliverables will be under dual logo marks.

\* Substantially consists of same members

## ● Possible solutions for resource scarcity.

### c) Hold meetings in conjunction with other groups

- IEC/SEG1 strives to have its meetings, including plenary, CAG, TG meetings, in conjunction with the meetings of other relevant groups, e.g. ISO/TMB/AG Smart Cities.
- For example, the next CAG meeting can be held in the same week and the same place with ISO/TMB/AG meeting to be held in Barcelona (to be confirmed).
- Even after the establishment of SyC smart cities, it could be a nice idea to hold a meeting in conjunction with the meetings of relevant ISO TCs or SCs.



Thank you for your kind attention!