

1st Forum on Artificial Intelligence and Internet of Things in Smart Sustainable Cities in Latin America

29-30 May 2018
Buenos Aires, Argentina



Distributed & Tailored AI/ML for Smart Sustainable Cities

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TSB Director

**What does being
smart mean?**



Essential technical elements for being

Smart

Collaborative Knowledge (Op)

Compatibility (Ser/App)

Integrity (Platform)

Interoperability (Data)

Interconnectivity (Infra)

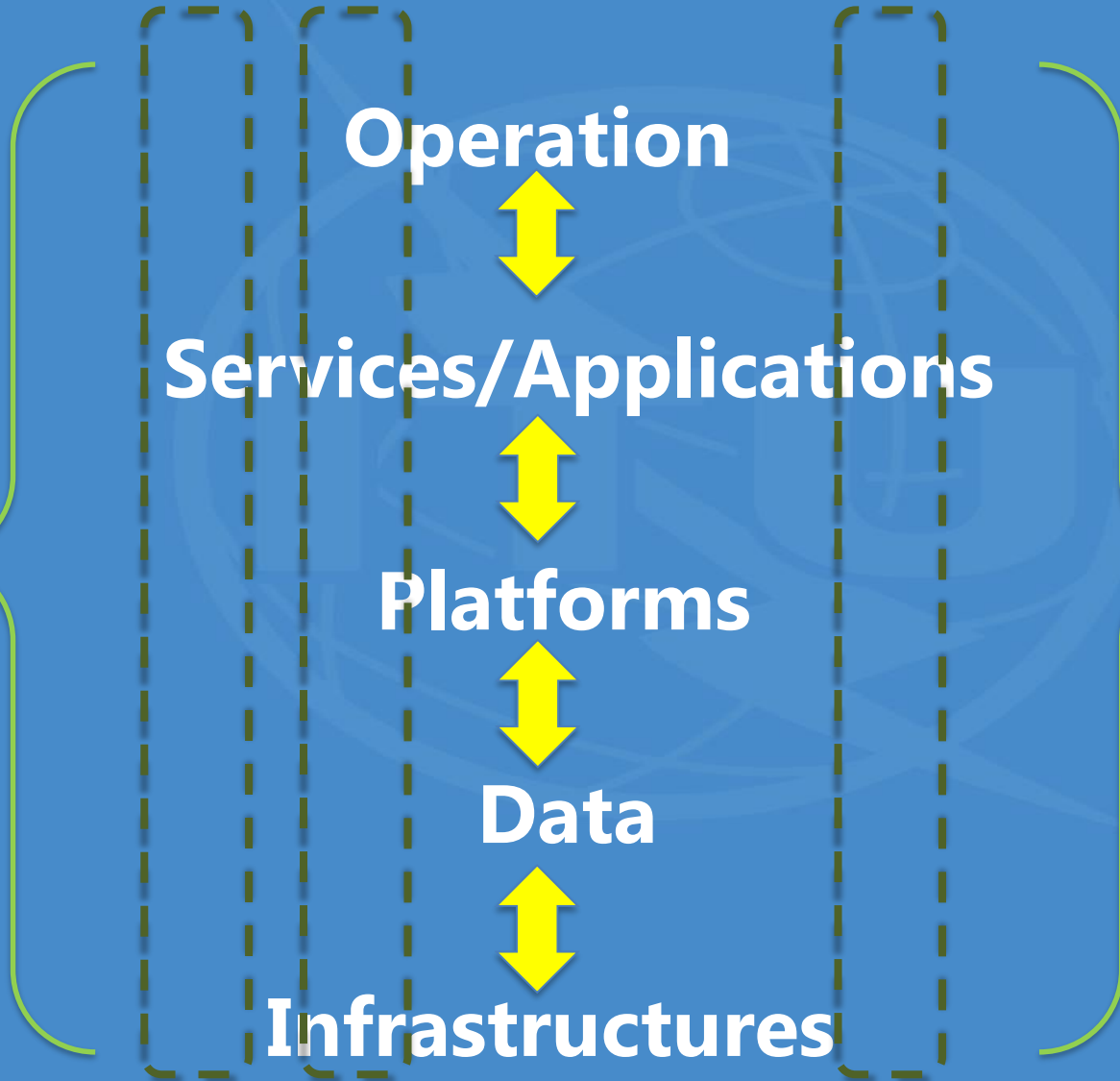
Quality of
Smartness

Quality of
Convenience

Being
Smart

Verticals today (Silo Structures)

ICTs
Today



Fragmented
Restricted Knowledge
In-Efficiency
In-Effectiveness

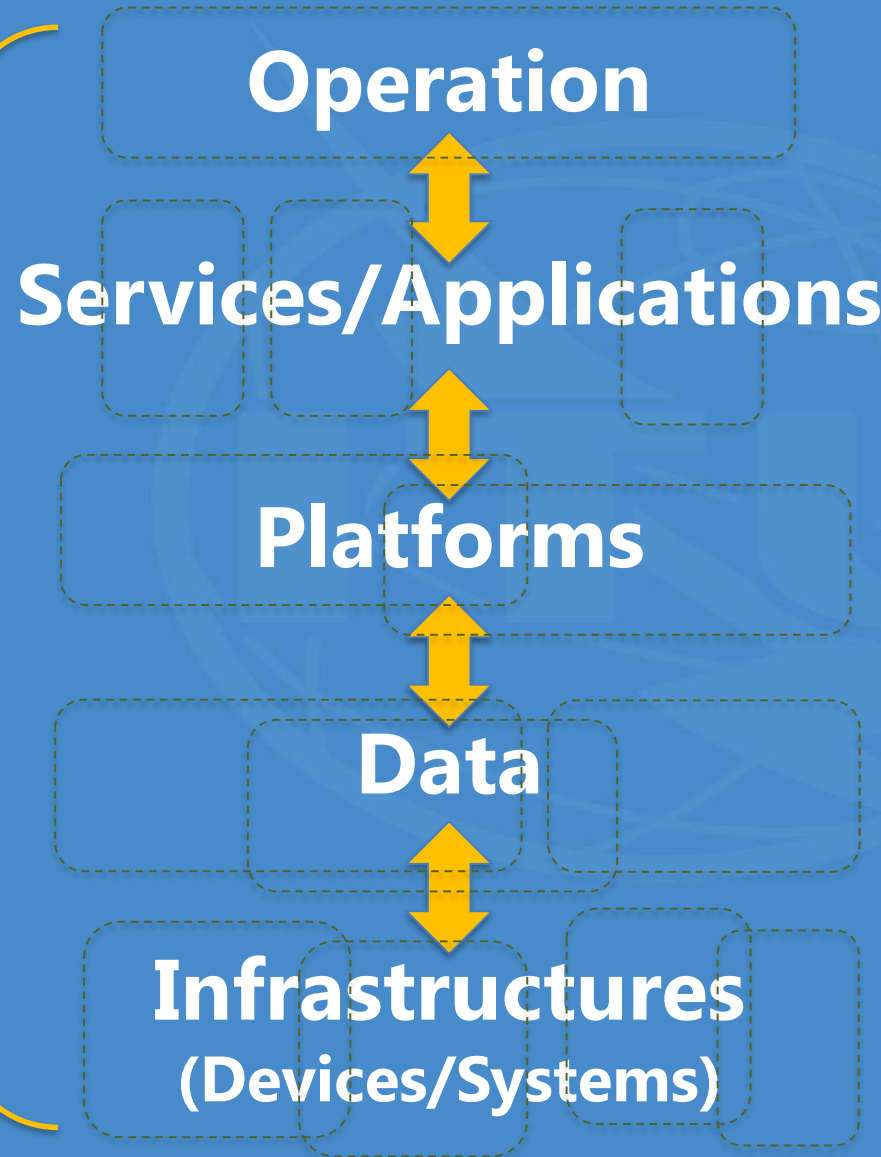


Difficult being
Smart



Role/Value of ICT Innovation

Smart
Verticals
Today
Cities
(Pol/Reg)



Integrity
Orchestrability

Integrity
Interoperability

Integrity
Interoperability

Compatibility
Re-usability

Connectivity
Interoperability





City has been built and has changed:

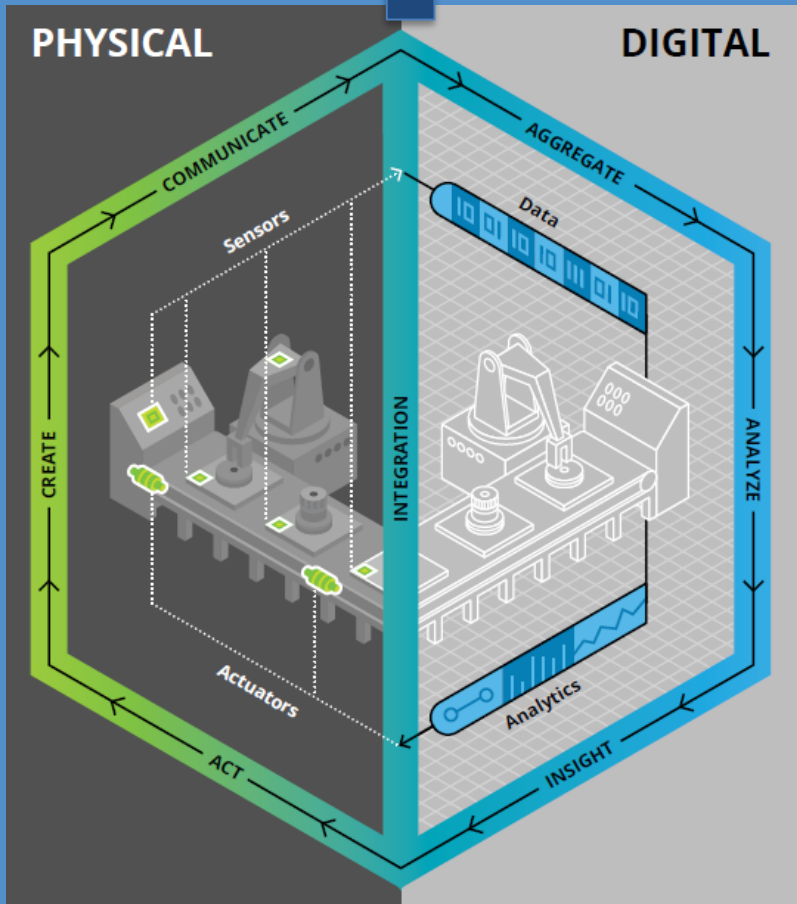
- Physical location
- Local History & Culture
- Citizens' behaviors
- Tons of other reasons
- **No cities are the same**



Smart City, Digital Twin and AI

City Priorities

- Culture, History
- Citizens' behaviors
- Efficiency & Economics



Source: Deloitte University Press

Centralized **AI**

VS

Distributed **AI**

+

Generalized **AI**

VS

Tailored **AI**

ITU-T SG20: IoT and Smart Cities & Communities

Internet of things (IoT) and its applications

Smart cities and communities, including its e-services and smart services

Internet of things identification

Regional Groups

- **SG20RG-LATAM** ▪ SG20RG-AFR
- SG20RG-ARB ▪ SG20RG-EECAT

JCA-IoT and SC&C

FG-DPM

SDOs collaboration

one
M2M



What is SG20 currently working on:

Internet of things (IoT)

- **Drones** for IoT
- IoT requirements for **edge computing**
- **Artificial Intelligence** and IoT
- Smart Manufacturing - **Industrial Internet of things**
- **Blockchain** and IoT
- IoT for **developing countries**
- **Intelligent Transport Systems (ITS)** based on IoT
- **Privacy and trust** of IoT systems
- **Interoperability**

Smart cities and communities

- **Open Data** in Smart Cities
- **Use cases, requirements and architectures** for Smart cities and communities
- **Smart Services in rural communities**
- Requirements and functional architecture for **Smart parking lot in smart city**
- **Disaster notification** of the population in smart cities and communities
- **Smart Tourist** destinations
- *Smart City Infrastructure*

Data management & processing

- Data structure and data transfer protocol for **automotive emergency response system**
- Function description and metadata of Spatio-temporal Information Service for SSC
- *Integrity*

United 4 Smart Sustainable Cities (U4SSC)



U4SSC is a United Nations Initiative coordinated by ITU and UNECE and supported by other 14 UN agencies to respond to the **Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable."**

It advocates for public policy to encourage the use of ICTs to facilitate and ease the transition to smart sustainable cities.

Supported by:



Convention on
Biological Diversity



ECLAC



Empowered lives.
Resilient nations.



UNECE



Montevideo Office
Regional Bureau for Sciences
in Latin America and the Caribbean

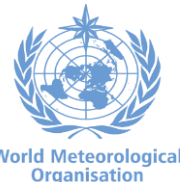


UN HABITAT
FOR A BETTER URBAN FUTURE



UNITED NATIONS
UNIVERSITY
UNU-EGOV
Operating Unit on Policy-Driven
Electronic Governance

UN WOMEN



U4SSC current work



U4SSC is currently working on the following deliverables:

- Guidelines on tools and mechanisms to finance SSC projects
- Guidelines on strategies for circular cities
- City science application framework
- Blockchain 4 cities
- Guiding principles for artificial intelligence in cities - **New**
- The impact of Artificial Intelligence and cognitive computing in Cities - **New**
- The impact of data processing and computation in cities - **New**
- The impact of sensing technologies and IoT in cities - **New**

Join the U4SSC now

KPIs Project for Smart Sustainable Cities to Reach SDGs



- To support cities in the implementation and use of the SSC KPIs
- To test and verify the applicability of SSC-KPIs in several cities in the world.
- To develop a global **Smart Sustainable Cities (SSC) Index**.

More than **50 cities** are participating in the project

Dubai

Maldonado

Singapore

Manizales

Valencia

Pully

Wuxi

Guangshan

Foshan

Moscow

Kairouan

Bizerte

and many others...



KPIs Project for Smart Sustainable Cities to Reach SDGs



The Case of Singapore

87%
of the KPIs verified

Target(s) has (have) been reached

- completely (+/- 5%)
- by more than two thirds
- between one and two thirds
- by one third or less
- no target found (i.e. no score available)

| | Total | % KPIs Verified of Total KPIs |
|------------------------------|-----------|-------------------------------|
| Economy | | |
| Core KPIs | 23 | 100% |
| Advanced KPIs | 22 | 82% |
| Environment | | |
| Core KPIs | 12 | 100% |
| Advanced KPIs | 5 | 60% |
| Society & Culture | | |
| Core KPIs | 20 | 90% |
| Advanced KPIs | 9 | 56% |
| Overall | | |
| Core KPIs | 55 | 96% |
| Advanced KPIs | 36 | 72% |
| Total | 91 | 87% |

2nd AI for Good Global Summit: 15~17 May 2018

GOAL OF 2018 AI SUMMIT

- Identify practical applications of AI to accelerate progress towards the **UN SDGs**
- Identify projects - more than just talk shop





2018 PARTICIPANTS

- +700 attendees
- +60 countries
- 36% women
- 83% Developed countries
- 17% Developing countries

2018 SPEAKERS

- 148 speakers
- +30 countries
- 35% women



3 AI + Satellite projects



AI FOR GOOD
AI + SMART CITIES AND COMMUNITIES

[URBAN SOLUTIONS]
[EMPOWERING CHILDREN]
[STATE OF THE ART]
[SMART GOVERNMENT]

ITU
XPRIZE
acm

The poster features a central image of a diverse group of people (a woman, a child, a woman, a man, and another man) standing on a platform, looking at a large digital display. The background is a world map with network lines. On the left, there are four circular icons representing different themes: Urban Solutions (a busy street), Empowering Children (a group of children), State of the Art (a futuristic cityscape), and Smart Government (a person in a uniform). Logos for ITU, XPRIZE, and acm are at the bottom.

3 AI + Smart city projects



✓ Tailored smart city



✓ Give a voice to the voiceless



✓ Internet of cities



15 AI + Health projects



✓ Mining health trends in realtime



✓ AI Digital Identification



✓ AI for Health Focus Group with WHO

9 Trust in AI projects

TrustFactory.ai

Open-source the challenge of engineering and earning trust for AI for Good

- ✓ Stakeholder communities
- ✓ Across boundaries
- ✓ AI systems



[DEVELOPER COMMUNITIES]

[TRUSTWORTHY SYSTEMS]

[STAKEHOLDER COMMUNITIES]

AI
FOR GOOD
TRUST IN AI

ITU

XPRIZE

acm



Thank you

ITU-T, IoT and smart
cities & communities

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