

The background of the slide features a large, light blue watermark of the International Telecommunication Union (ITU) logo. The logo consists of a globe with a grid of latitude and longitude lines, and the letters 'ITU' are prominently displayed in the center of the globe.

Strategic Visions on Future IoT Evolution

– Towards a New IoT Paradigm for Business and Society

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Chief of Study Groups Department, Telecommunication
Standardization Bureau
International Telecommunication Union



1 IoT Ecosystem

2 4th Industrial Revolution and IoT

3 ITU-T work on IoT

4 IoT and Sustainable Development Goals

IoT Market Projections



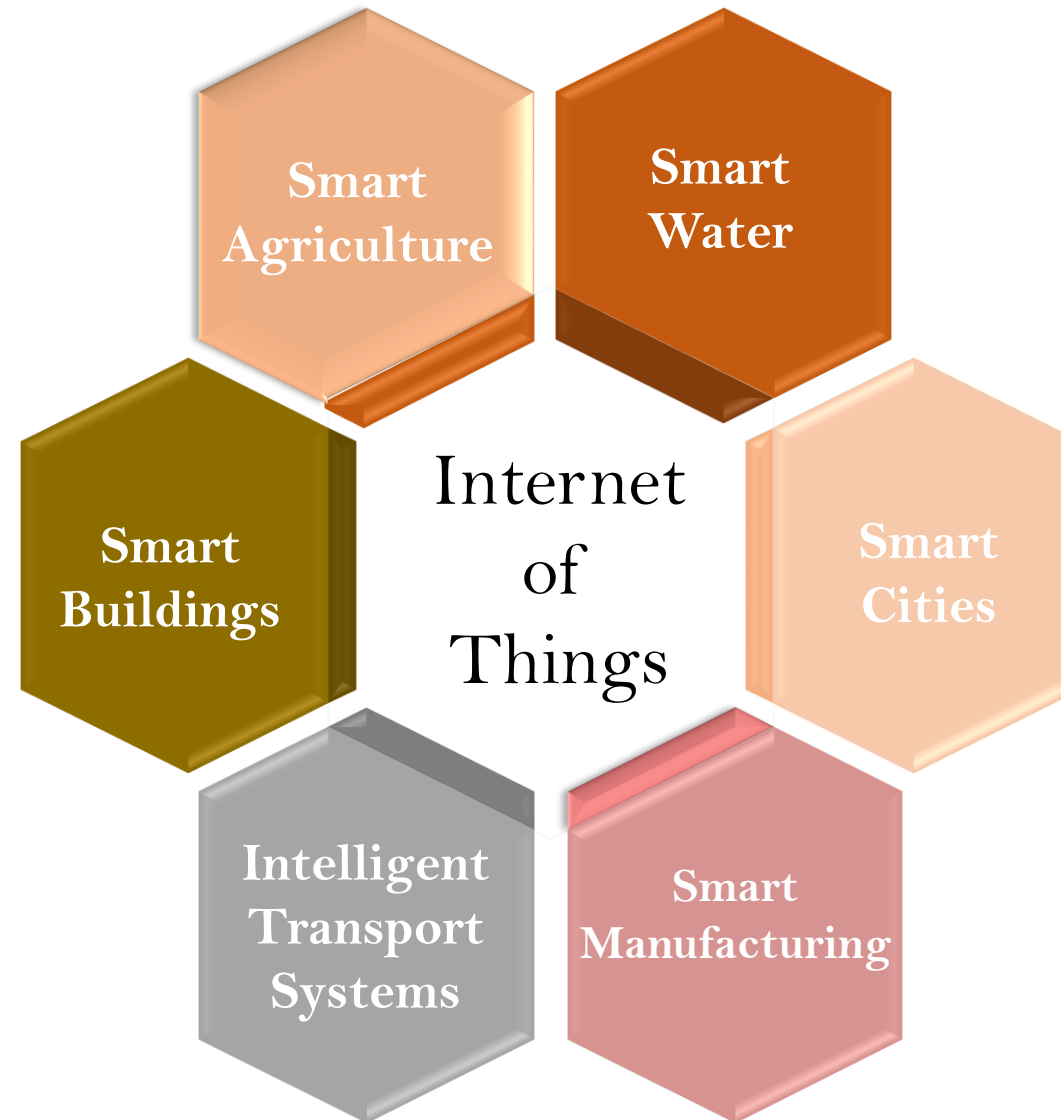
ITU, 2015

GSMA and Machina Research

GSMA

IDC, 2018

Creating value with IoT: A few applications



Creating value with IoT: A few applications

Smart Agriculture



Smart greenhouse



Soil monitoring sensors



Smart irrigation sprinkler controllers

Smart Building



IoT-based smart grid



IoT-enabled security

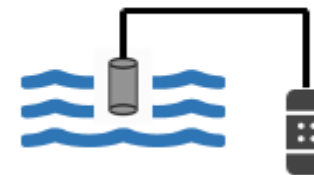


Secure remote health monitoring

Smart Water Management



Smart water meters



Water quality monitoring with IoT sensors



IoT rainwater harvesting systems



Creating value with IoT: A few applications

Smart Cities



IoT for urban and
spatial planning



Smart Learning



Internet of living things

Smart Manufacturing



Smart waste collection and
consumption monitoring

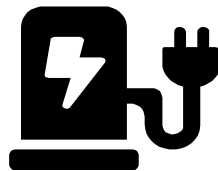


Quality checks and
maintenance using cameras
and sensors



Cloud computing for supply chain
management

Intelligent Transport Systems



Fuel leak wireless
detection systems



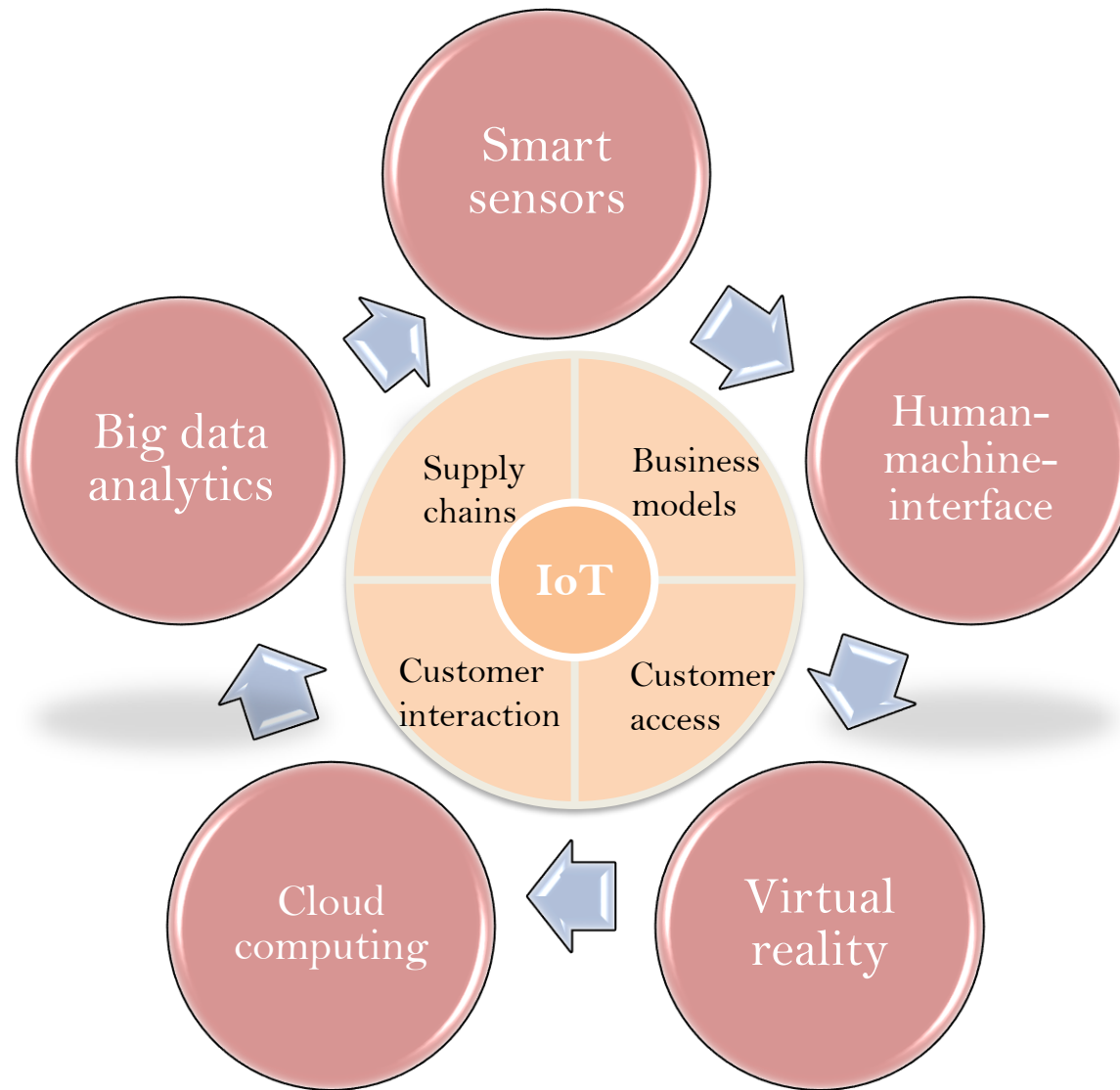
Real-time traffic management



Parking monitoring



4th Industrial Revolution using IoT



IoT Service Ecosystem: Main Players

Provided with information, applications etc. on demand

Users

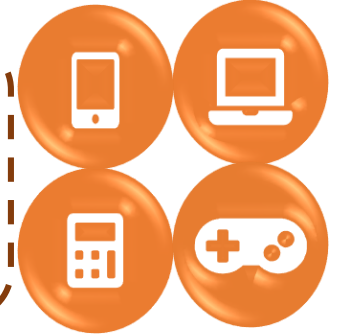


Operating a platform which serves as the filler between device sensors and networks to make sense of the data generated

Platform service providers



Designing and manufacturing of IoT devices and sensors



Device Manufacturers

IoT service providers

Hosting applications using available IT infrastructure and platforms



Connectivity service providers

Providing a range of options including LTE-M, Sigfox, LoRA etc

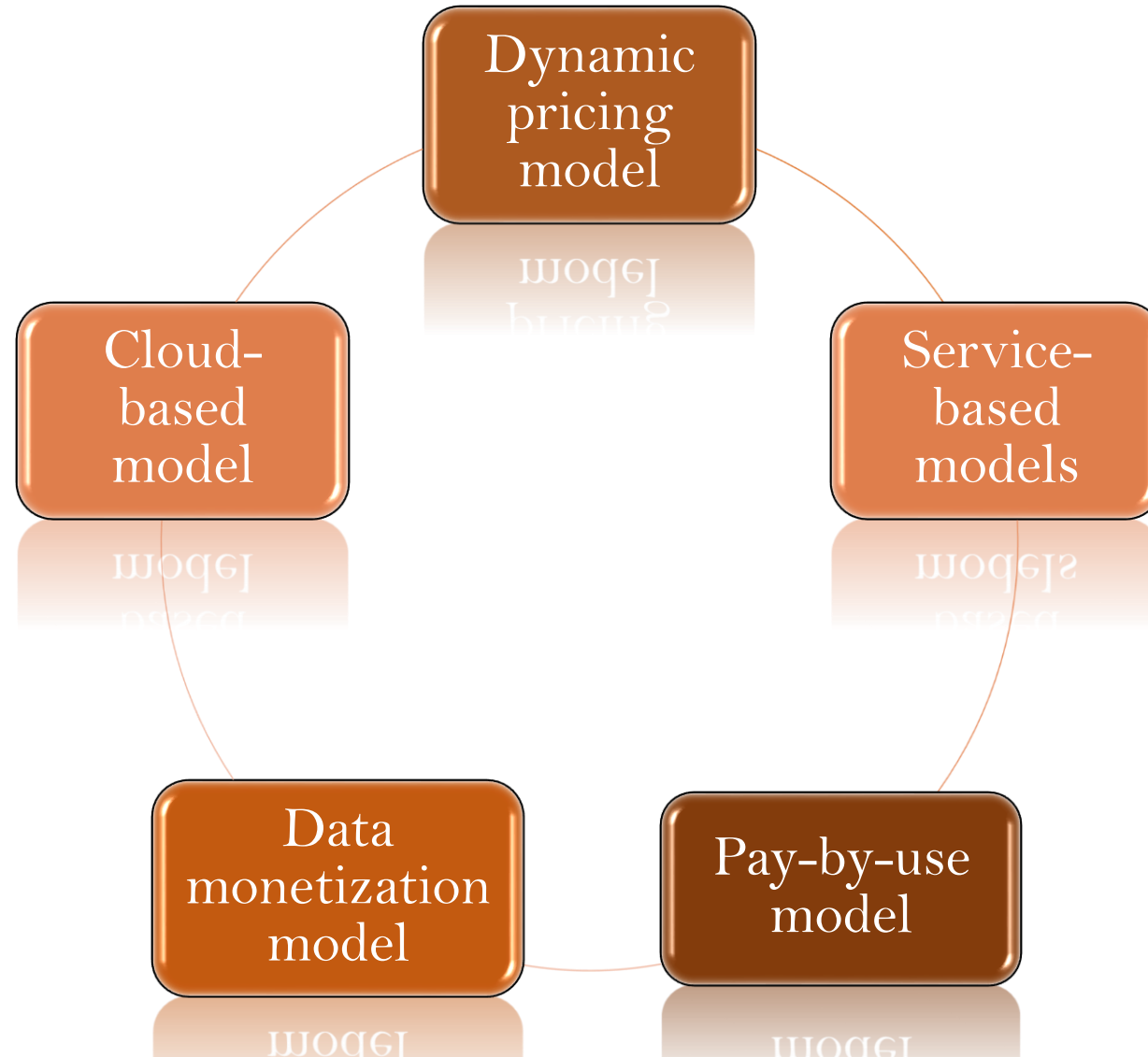


Building and testing applications

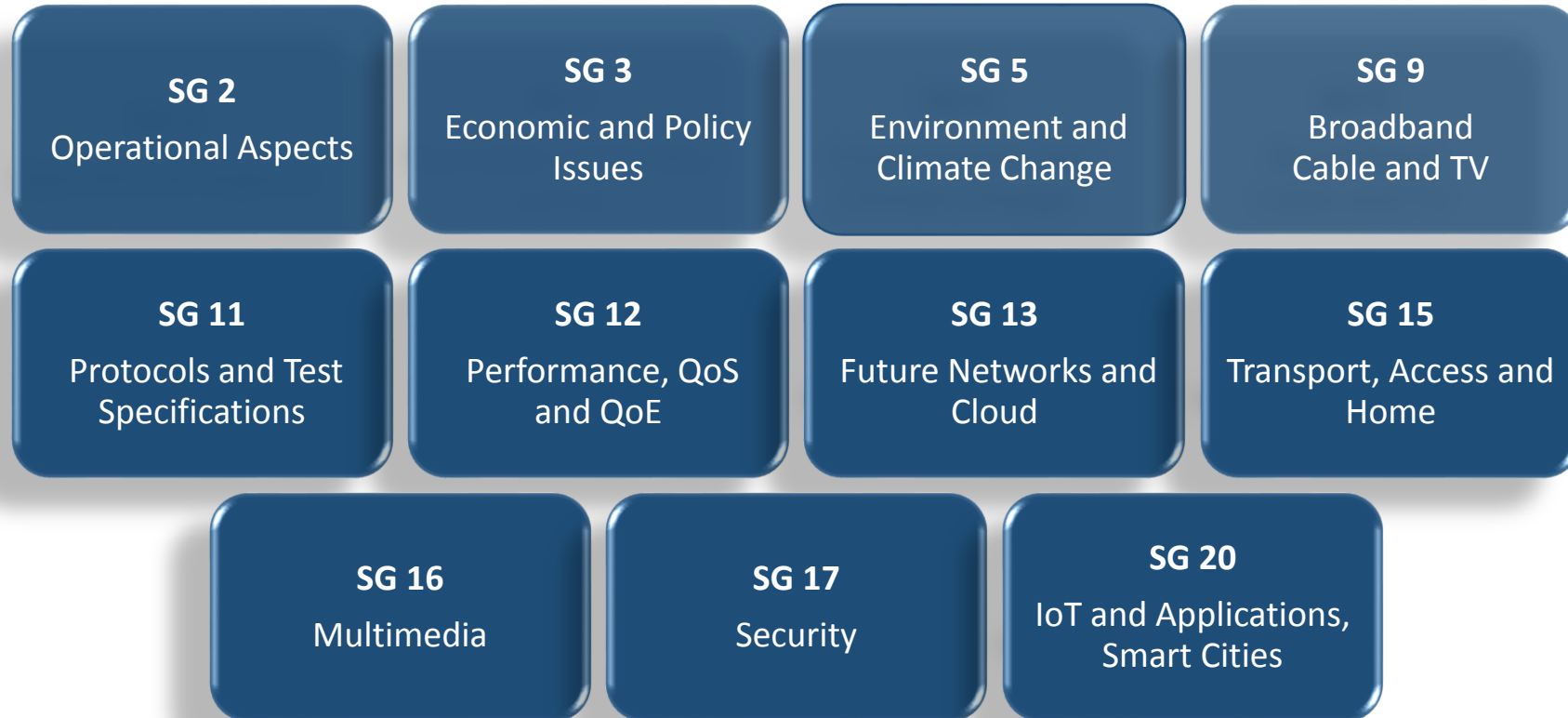
Software Developers



IoT Value creation: Sneak peek



ITU-T Study Groups



Focus Groups

Focus Group on Artificial
Intelligence for Health

Focus Group on Vehicular
Multimedia

Focus Group on Data
Processing and Management

Focus Group on Technologies
for Network 2030

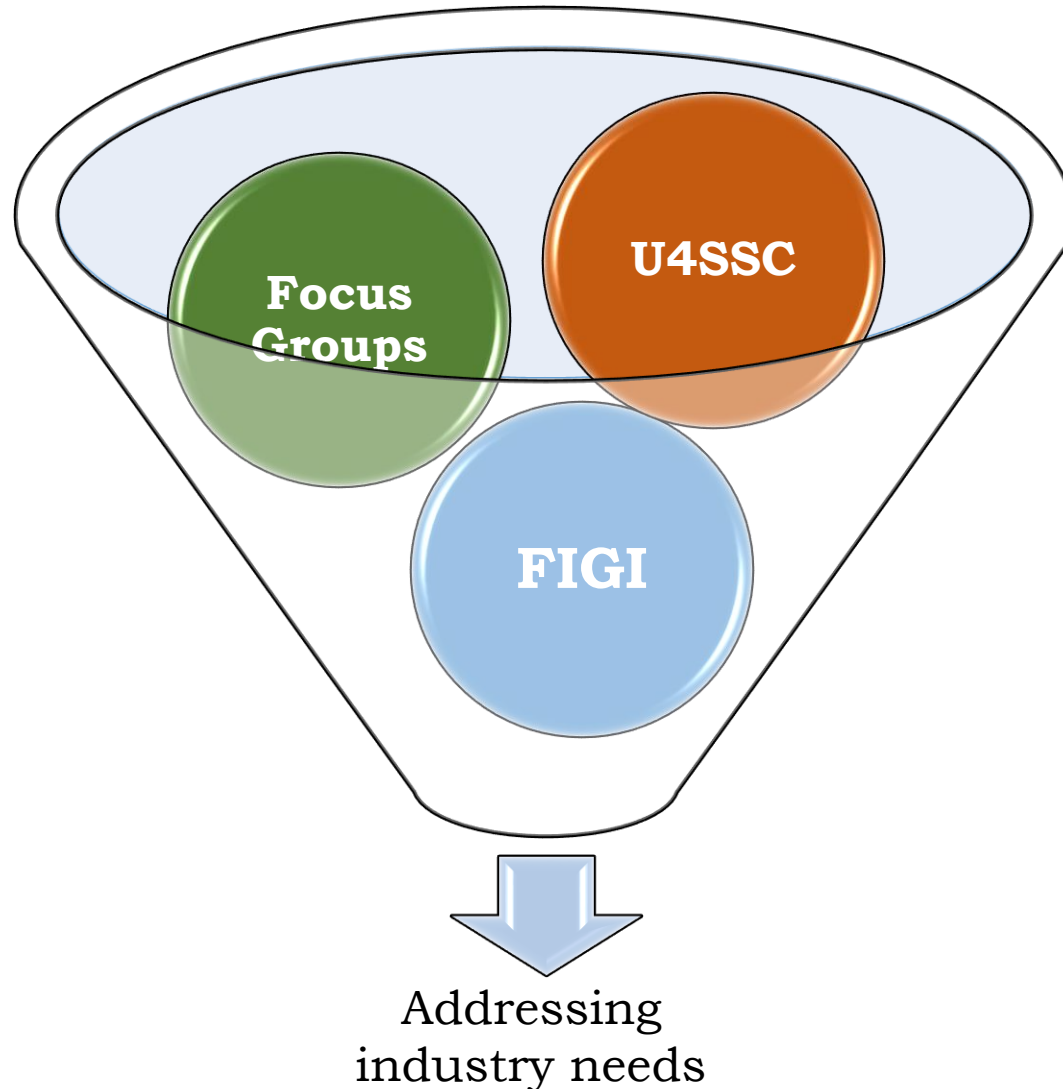
Focus Group on Application of
Digital Ledger Technologies

Focus Group on Machine
learning for future networks
including 5G

Focus Group on Digital
Currency including digital fiat
currency

Focus Group on Environmental
Efficiency for AI and other
emerging technologies

New and Emerging Technologies



- Focus Groups serve as an instrument for the quick development of specifications in defined domains of interest
- Focus Groups aim at providing an alternate working environment for the creation of standards

ITU-T Study Group 20

Q1/20 Interoperability, infrastructures and Big Data for IoT and SC&C

Q2/20 Requirements and use-cases across verticals

Q3/20 Architecture and Quality of Service

Q4/20 E-services and applications

Q5/20 Emerging technologies and terminology

Q6/20 Security, privacy and identification

Q7/20 Evaluation and assessment of SC&C

Lead Study Group on

Internet of Things and its applications

Smart cities and communities

IoT Identification

oneM2M Partnership Project



Almost 200 member organizations in oneM2M

founded¹ July, 24th 2012
TP#1: Sep 24th-29th 2012

Partner Type 1

Partner Type 2



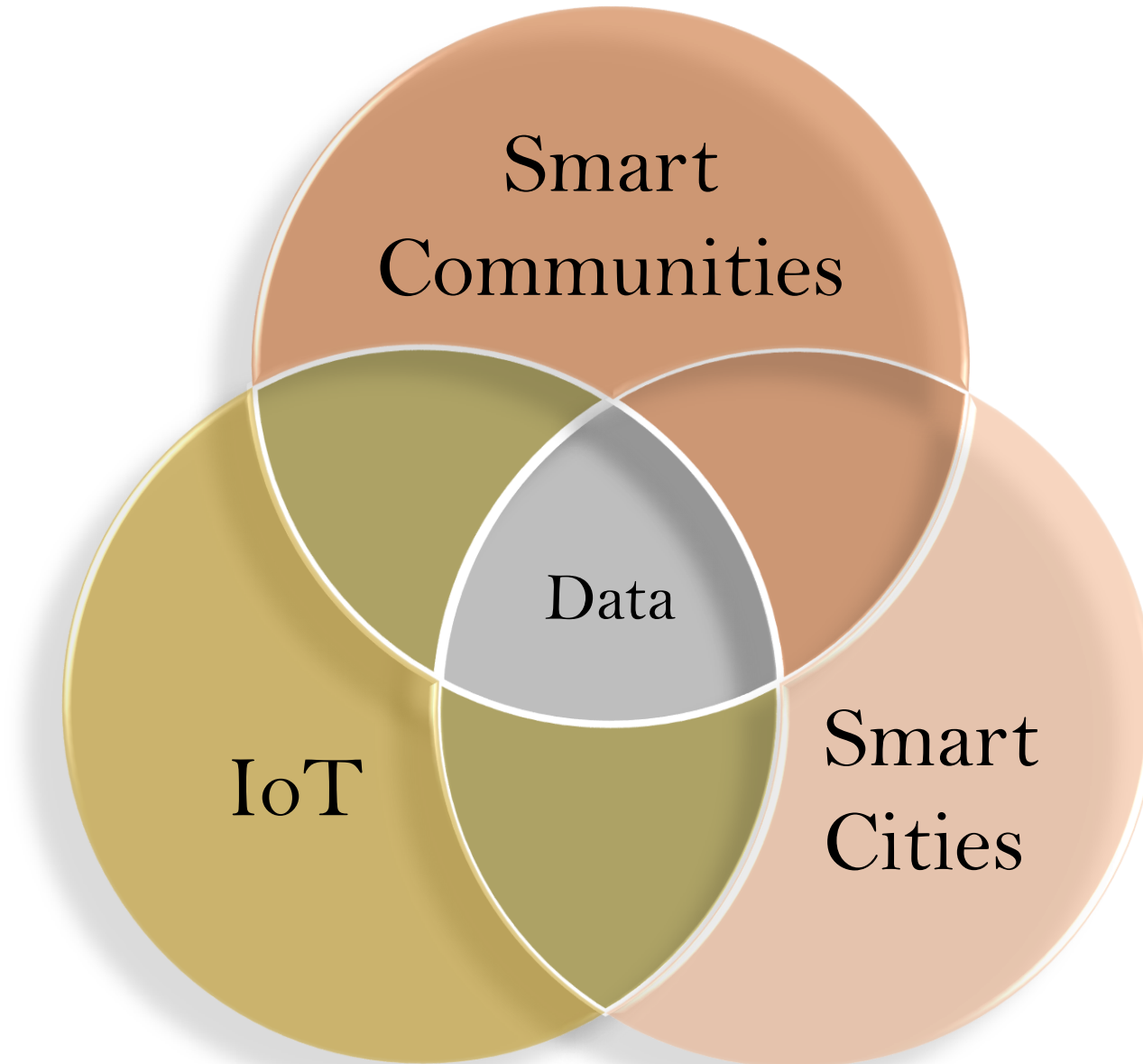
GLOBALPLATFORM®
THE STANDARD FOR SECURE DIGITAL SERVICES AND DEVICES

- 8 regional Standards Development Organizations jointly develop the oneM2M technical specifications.
- oneM2M specifications are then referenced by regional legal and regulatory bodies
- BBF and OMA specifications are re-used
- **oneM2M specifications became also ITU-T recommendations see Y.4500.x series**



[1] [Partnership Agreement](#) V 2.0 (Approved March 2013)

Focus Group on Data Processing and Management



Role of international instruments in the implementation of IoT



THE NEW
URBAN AGENDA

Role of international instruments in the implementation of IoT



Glimpse into our urban future through SDG 11



World Summit on
Information Society



United for Smart
Sustainable Cities



AI for Good
Global Summit
An **ITU** experience



SDG 17: The glue that holds us together!



Thank you

Questions?



Please contact Study
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more information

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