Indo-European dialogue on ICT standards & Emerging Technologies
(Growth, Profitability & Nation Building)
13-14th March 2014 • New Delhi, INDIA

ETSI World Class Standards

IN THE FRAMEWORK OF
Project **SESEI**
http://eustandards.in/

Smart cities and communities
The scenario and a smart broadband network

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Alcatel·Lucent

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❖ EU Commission: smart cities and communities

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SMART CITIES AND SMART COMMUNITIES CONCEPTS

Smart City

❖ There is no unique defintion but can be described as
  - ❖ A developed urban area that creates sustainable economic development and high quality of life by excelling in multiple key areas; economy, mobility, environment, people, living, and government.
❖ Smart cities are based on strong human capital, social capital, and/or ICT infrastructure.
❖ Smart Cities are driven by
  - ❖ Citizen needs
  - ❖ Emerging business models
  - ❖ Social policy
  - ❖ Regulations

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Smart Community

❖ How can be defined?

   ❖ A community that has made a conscious effort to use information technology to transform life and work within its region in significant and fundamental, rather than incremental, ways. (*)

   (*) California Institute for Smart Communities, 2001 (http://www.smartcommunities.org/library_10steps.htm)

❖ "Smart communities" same as "Smart cities"?

   ❖ Not limited to a "unit of government"

Smart Communities

Smart Cities

Smart growth

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EU COMMISSION
SMART CITIES AND COMMUNITIES

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European Innovation Partnership on Smart Cities and Communities (EIP-SCC)

❖ It brings together cities, industry and citizens to improve urban life through more sustainable integrated solutions:

    ❖ Innovation

    ❖ Better planning

    ❖ More participatory approach

    ❖ Higher energy efficiency

    ❖ Better transport solutions

    ❖ Intelligent use of Information and Communication Technologies (ICT)

http://ec.europa.eu/eip/smartcities

SMART CITIES AND COMMUNITIES

European Commission > Eip > Smart Cities and Communities

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European Innovation Partnership on Smart Cities and Communities (EIP-SCC), objective

❖ Objective

    ❖ Coming up with scalable and transferable solutions to contribute to the EU's 20-20-20 climate action goals (#) to reduce:

        ❖ high energy consumption

        ❖ green-house-gas emissions

        ❖ bad air quality

        ❖ congestion of roads.

    ❖ Establish strategic partnerships between industry and European cities to develop the urban systems and infrastructures of tomorrow.

(#) "20-20-20" targets, three key objectives for 2020:
- 20% reduction in EU greenhouse gas emissions from 1990 levels;
- Raising the share of EU energy consumption produced from renewable resources to 20%;
- 20% improvement in the EU's energy efficiency.

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Horizon 20-20, funding Work Programme 2014-2015 (*)

❖ **Twelve focus areas have been identified**
- ❖ Personalising health and care (2014 budget: €549 million)
- ❖ Sustainable food security (2014 budget: €138 million)
- ❖ Blue growth: unlocking the potential of seas and oceans (2014 budget: €100 million)
- ❖ Digital security (2014 budget: €47 million)
- ❖ Smart cities and communities (2014 budget: €92 million)
- ❖ Competitive low-carbon energy (2014 budget: €359 million)
- ❖ Energy Efficiency (2014 budget: €98 million)
- ❖ Mobility for growth (2014 budget: €375 million)
- ❖ Waste: a resource to recycle, reuse and recover raw materials (2014 budget: €73 million)
- ❖ Water innovation: boosting its value for Europe (2014 budget: €67 million)
- ❖ Overcoming the crisis: new ideas, strategies and governance structures for Europe (2014 budget: €35 million)
- ❖ Disaster-resilience: safeguarding and securing society, including adapting to climate change (2014 budget: €72 million)

❖ **Smart cities and communities (2014 budget: €92 million)**

Two thirds of the EU population lives in urban areas, using 70% of the energy. Research carried out under "Smart cities and communities" will aim at finding solutions with high market potential in fields such as energy efficiency in neighbourhoods, providing digital services and information for citizens or smart mobility services. So-called lighthouse projects will create strong partnerships between industries, academics and cities while empowering citizens to take an active part in improving quality of life in cites. The projects will demonstrate and validate attractive business plans that will attract funding and allow large scale replication. For example, EU funding could help develop nearly-zero energy districts, through better management of local resources, sustainable refurbishment of residential buildings and the application of cross-cutting ICT solutions.

(*) http://europa.eu/rapid/press-release_MEMO-13-1122_en.htm

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EU STANDARDIZATION INITIATIVES FOR SMART CITIES AND COMMUNITIES

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CEN/CENELEC/ETSI initiative

❖ Smart and Sustainable Cities and Communities Coordination Group (SSCC-CG)
  ❖ Board decision of 13 December 2012 meeting
  ❖ Members:
    ❖ CEN and CENELEC members
    ❖ Liaison organizations: Eurocities, ICLEI, Orgalime, Age Platform, ...
    ❖ Liaison members representing ISO/TC 268 "Sustainable develoment in communities", ITU SSC FG, IEC/System Evaluation Group "Smart cities" ..
  ❖ ETSI board decided to join this group (to become CEN/CENELEC/ETSI CG)
  ❖ 2 meetings since now
    ❖ 11 June 2013
    ❖ 16 October 2013
  ❖ 3 tasks groups:
    ❖ TG 1: Mapping of relevant International, European and national standardization initiatives
    ❖ TG 2: Mapping of stakeholders and interested parties in Europe
    ❖ TG 3: Mapping of topics and issues to be dealt with under the scope SSCC
  ❖ First progress report published in December 2013

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CEN/CENELEC/ETSI SSCC CG deliverables

❖ The SSCC CG Deliverables (Terms of Reference):

  ❖ Progress report on a quarterly basis

  ❖ By end of 2014 at the latest and if possible by 30 June 2014 a report including:

    ❖ Mapping of initiatives ….

    ❖ Mapping of stakeholders …

    ❖ Mapping of topics and issues …

    ❖ Draft road map …

    ❖ Draft recommendations

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CEN/CENELEC/ETSI SSCC-CG report

❖ SSCC-CG report structure

1. Sustainable, smart cities and communities: general background, definition and European specificities

2. Objectives of Sustainable and smart cities and communities to be considered

3. Stake holders and interested parties involved in the development of smart and sustainable cities

4. Ongoing major international initiatives and European ones

5. Issues to be considered developing a set of European standards

6. Expectation and cost / benefits from a European standardization

7. Success and failure factors for a CEN standardization program and for its further implementation

8. Communication/strategic plan

9. Recommendation and proposed roadmap

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ETSI on Smart Sustainable Cities and Communities

- ❖ ETSI roadmap for 2014
  - ❖ Q1:   How to engage ETSI in SSCC
    - ❖ Scoping of work, clarification of participation to SSCC-CG,
    - ❖ Contribution to EIP on SCC (Operational Implementation Plan)
    - ❖ Inventory of available ETSI resources (standards, TBs, etc.)
  - ❖ Q2:   Understanding the role of ICT in SSCC
    - ❖ Definition of a high-level reference model for ICT in Smart Cities
    - ❖ Identifying benefits, typical use cases and services for ICT in SC
    - ❖ A High-Level Architecture for ICT in SC could be addressed
    - ❖ Identification of partners; input to the SSCC-CG
  - ❖ Q3:   Understanding what should be done
    - ❖ The ETSI Smart Cities work plan
  - ❖ Q4:
    - ❖ ETSI Smart Cities workshop
    - ❖ Recommendation to the Board on continuation in 2015

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ETSI contributing for EIP on SCC

❖ Open (non-proprietary) Standards for Smart Cities & Communities solutions are needed

❖ Open Standards should cover platforms for:

    ❖ Data transport information

    ❖ Energy management

    ❖ Building construction

    ❖ Exchanging location information

❖ Standards also needed for metrics and indicators:

    ❖ To help compare different cities

    ❖ To measure improvements made in a city over time

❖ Build on standardization initiatives of ETSI-CEN-CENELEC in Smart Grids and extend to City level

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ADVANCED ULTRA-BROADBAND AND IP NETWORKS FOR SMART CITIES & COMMUNITIES

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Smart Cities and Communities to enrich lifestyle

SMART GOVERNANCE

- Interconnecting governmental organizations and administrations
- Improving community access to services

SMART PEOPLE

- Delivering a more consistent educational experience in both urban and rural areas
- e-education solutions (remote learning and collaboration) to have citizens better
- informed

SMART ENVIRONMENT

- Environmental sustainability policies
- Reducing energy consumption through novel technology innovations
- Promoting energy conservation and material re-use

SMART MOBILITY

- More efficient and intelligent transportation systems
- Leveraging networks for efficient movement of vehicles, people, and good
- New social attitudes such as car sharing, car pooling, and car-bike combinations
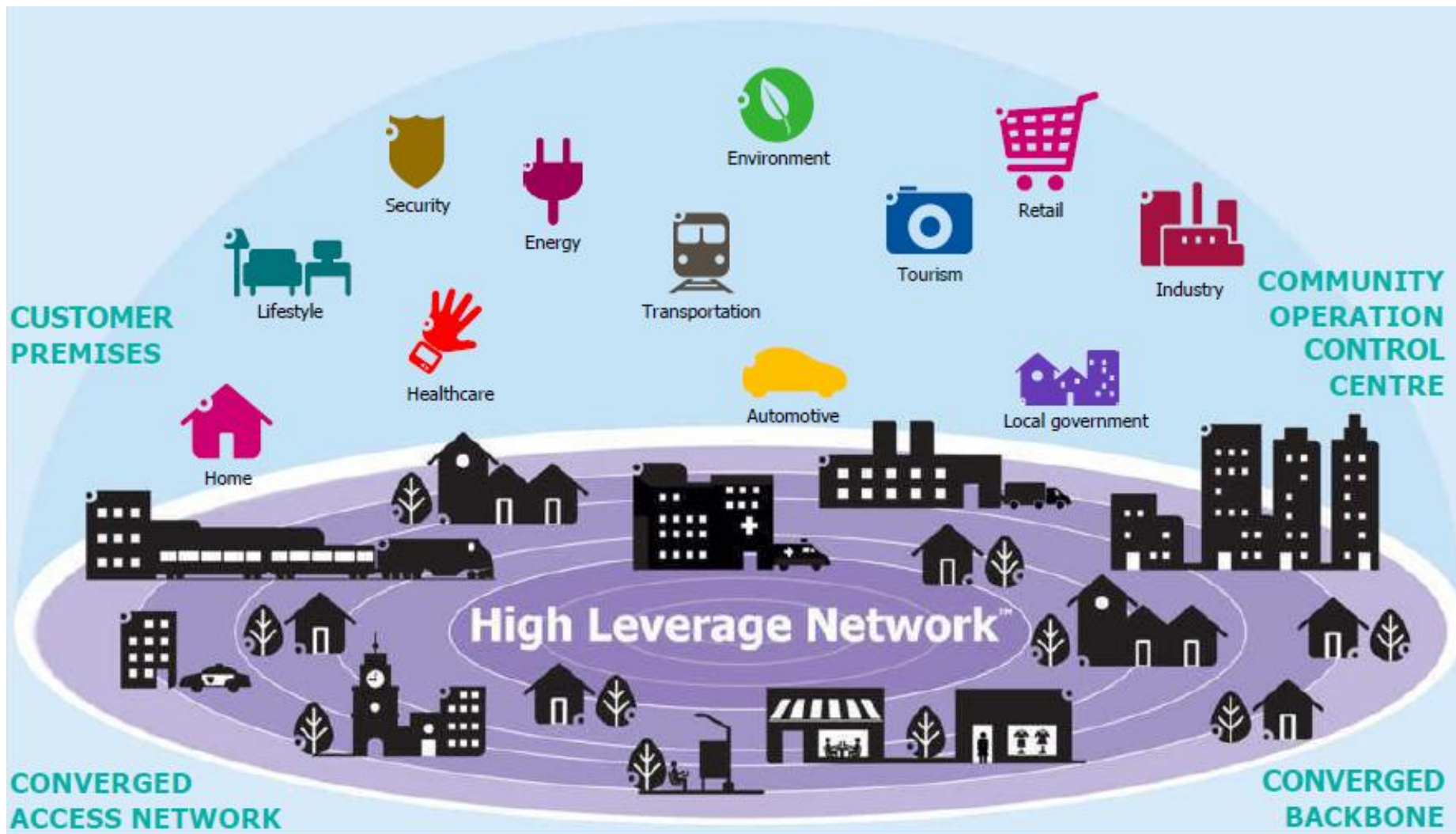
SMART ECONOMY

- Broadband access for all citizens, businesses and administrations for regional/global competitiveness

SMART LIVING

- Access to private and public eServices
- Smart home and smart building services
- Increased security

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Sustainable infrastructures in Smart Cities and Smart Communities are essential

Ultra-Broadband networks are essential

❖ ICT is an important enabler of a more sustainable approach to designing, building and operating cities.

❖ Broadband network becomes a critical urban infrastructure, no different from electricity, water and roadways.

❖ Smart Communities leverage broadband networks by connecting devices and citizens to:

  ❖ improve public and administration operations,

  ❖ optimize public security operations,

  ❖ develop local economy,

  ❖ provide eGovernment platform and services,

  ❖ improve citizen's engagement, lifestyle and environment

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Broadband concept in Alcatel-Lucent

❖ **Alcatel-Lucent's Smart Community solution** for urban areas, cities and regions enriches life with more intelligent connections among devices and people

  ❖ Broadband Networks to drive economic and social development of cities and regions and improve urban areas' efficiency and effectiveness

  ❖ IT Platform and eServices (eGov solution) for Citizen's and Public Administration's

  ❖ Security for urban areas and cities

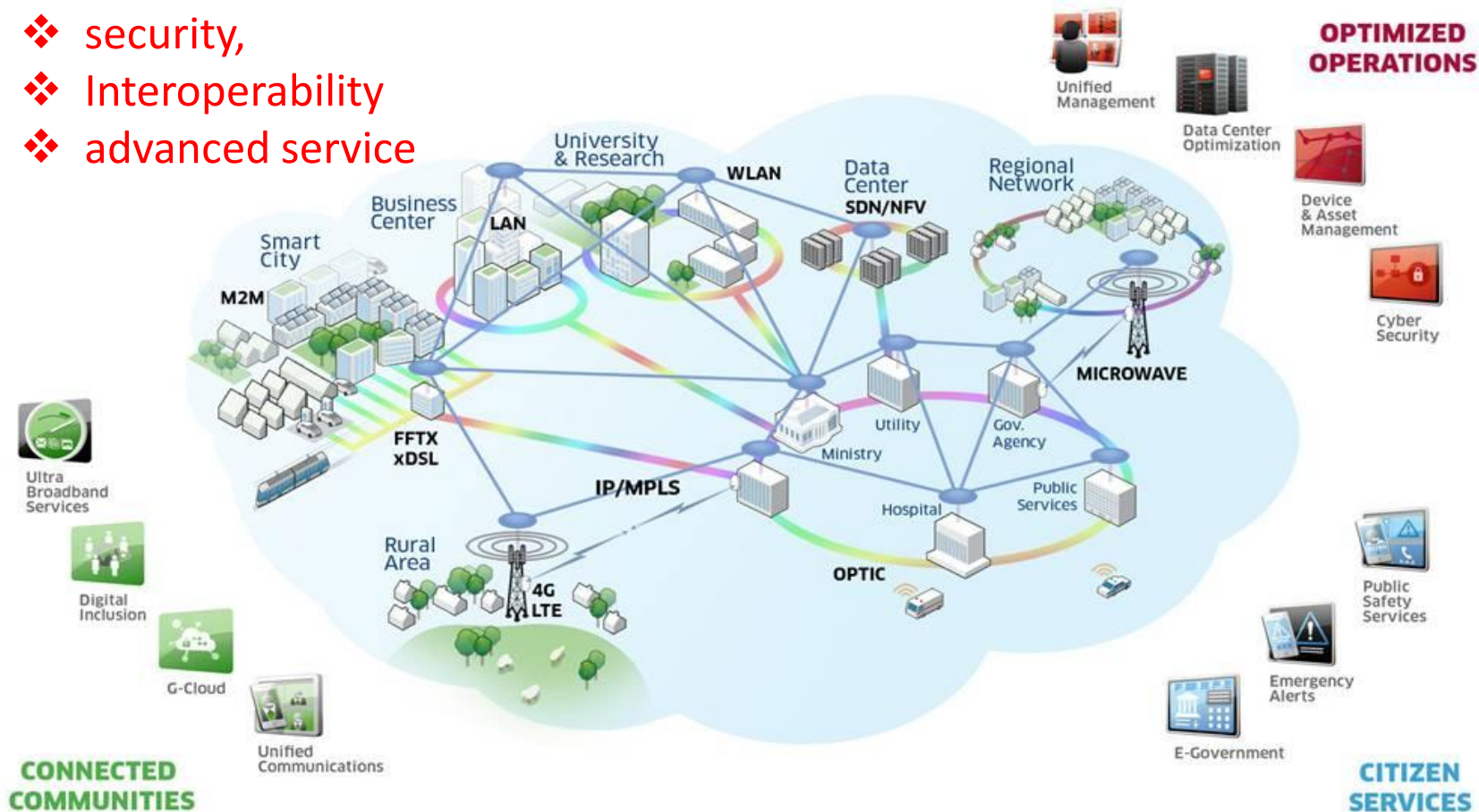| SMART ECONOMY	SMART GOVERNANCE	SMART LIVING
• Broadband access for all citizens, businesses and administrations for regional/global competitiveness	• Interconnecting governmental organizations and administrations • improving community access to services	• Access to private and public eServices • Smart home and smart building services • Increased security

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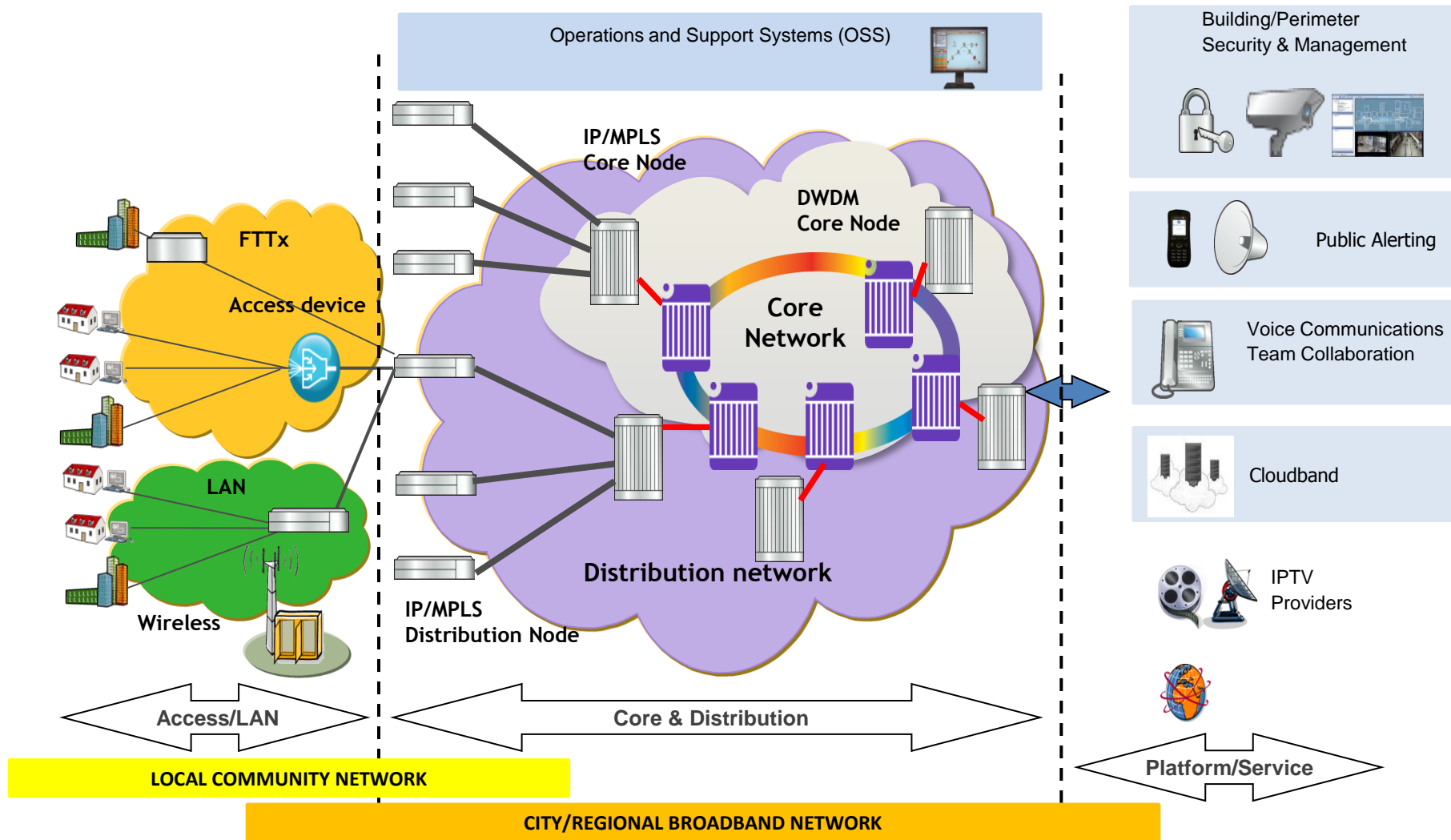# Alcatel-Lucent's "SMART COMMUNITY"

❖ A network architecture designed for:
  ❖ high efficiency,
  ❖ carrier-grid reliability,
  ❖ security,
  ❖ Interoperability
  ❖ advanced service

Alcatel-Lucent's "SMART COMMUNITY"
A converged, scalable, intelligent, efficient all-IP network that delivers bandwidth at the lowest cost per bit.

THANK YOU!

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