Smart Governance for Smart Cities: Challenges and open issues

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MISSION

- To carry out policy-relevant research
- To translate research findings into relevant policy instruments
- To build capacity and maintain research and policy networks

- To consolidate academic expertise in the area and promote innovative research projects

2016-17 Chair holder: **Prof Gille Barthe** (IMEDEA), focus on security
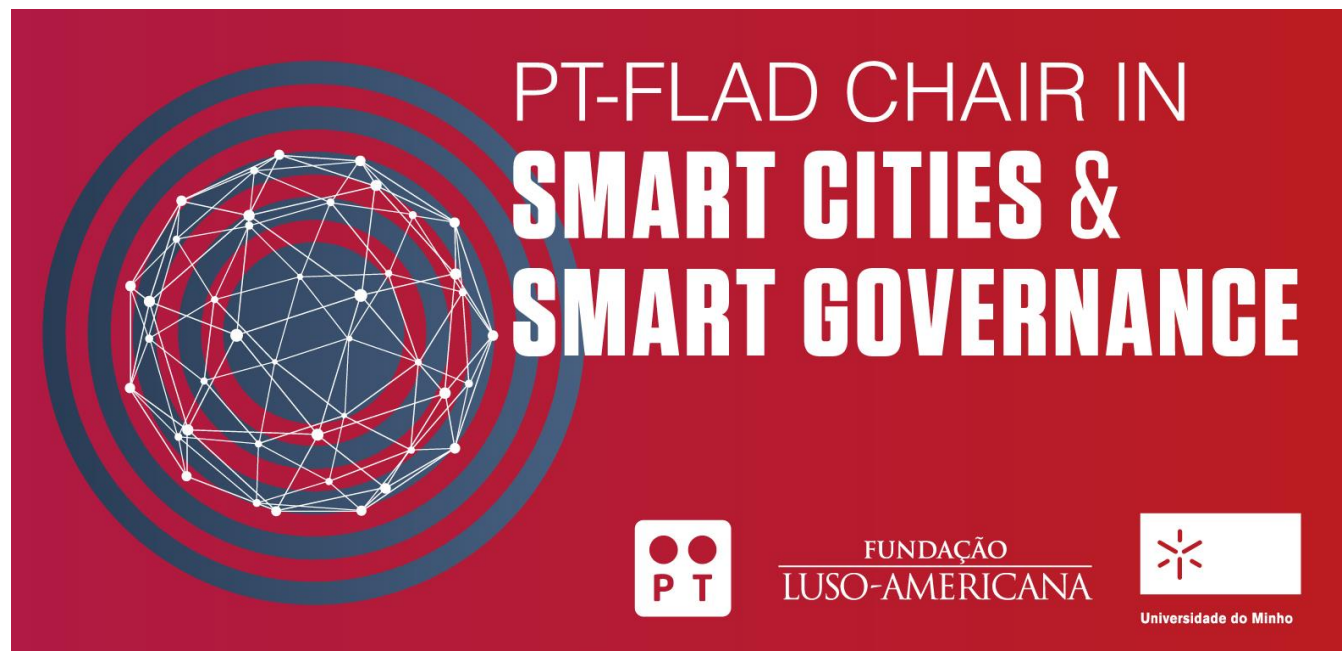
STRUCUTRE

1	**Smart cities**	Urbanization, digitization, sustainability
2	**Impact on Governance**	How does digitization challenge the governance function?
3	**Strengthening e-Governance**	Definition, evolution
4	**Smart Governance for Smart Cities**	Challenges and recommendations

AN EXPRESSION WITH MULTIPLE MEANINGS

- A mechanism to **overcome the limitations of traditional urban development** that tends to manage urban infrastructure systems in silos.

- A **platform to leverage data and services offered by digital technologies to connect city stakeholders**, improve citizen involvement, offer new or enhance existing services, and provide context-aware views on city operations.

- A **city-wide digital infrastructure to integrate different urban infrastructure systems** including energy, water, sewage, or transport, and enable efficient management, control and optimization of such systems.

SMART CITIES

DIGITAL CITY   integrates digital technologies into the city's core infrastructure systems

INTELLIGENT CITY   rely on the Digital City infrastructure to build intelligent buildings, transportation systems, schools, enterprises, public spaces, public services, etc, and integrate them into intelligent urban systems.
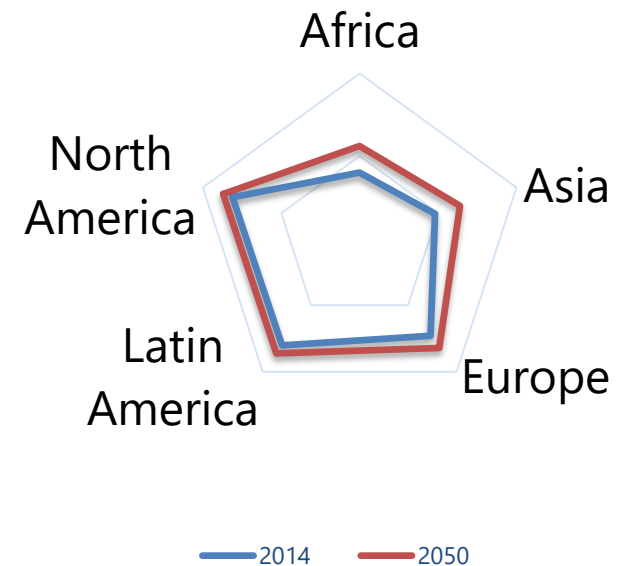
SMART CITY   deploy intelligent urban systems to serve socio-economic, cultural and ecological development, and improve quality of life.

Driving forces: Urbanization and digitization

URBANIZATION

Urban Population	2014	2050
Africa	40%	56%
Asia	48%	64%
Europe	73%	82%
Latin America	80%	86%
North America	81%	87%

2014   2050

Cities occupy approximately **2% of world land**, however…

the high density of cities **can bring efficiency gains and technological innovation while reducing resource and energy consumption**

DIGITIZATION

Societal Impact of digital technologies on the urban landscape

e.g. the **everyware** trend

- **Sharing economy**, through technology-enabled platforms which reduce drastically the transaction and friction costs on sharing an asset or providing a service.

- **Consume**: services vs products; data-enhanced commodities; flexible markets.

- **Employment**, emergence of new, different jobs: talent rather than capital, will become the critical production factor.

- **Nature of work**, based on a human-cloud and the emergence of new types of jobs flexible and inherently transient: every worker has essentially become a contractor.

- Shift from hierarchical to **collaborative organizational models**

SUSTAINABILITY

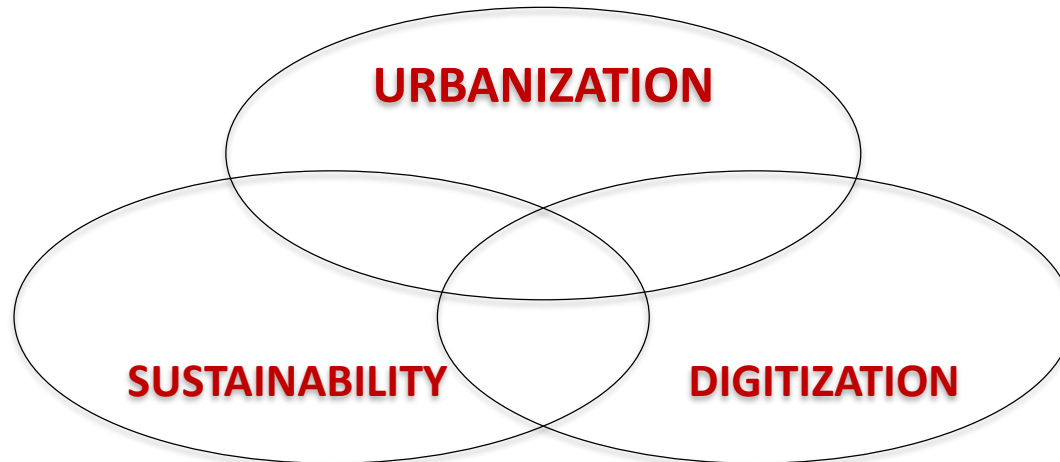## INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE CITIES

EXAMPLE TARGETS

- adequate, safe and affordable housing, transports and basic services
- reduced adverse environmental impact
- safeguard the world's cultural and natural heritage
- positive economic, social and environmental links between urban and rural areas
- integrated policies towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters

11 SUSTAINABLE CITIES AND COMMUNITIES

SMART CITIES

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SUSTAINABLE SMART CITIES

Focuses on a **continuous transformative process**, based on stakeholder engagement and collaboration, and building different types of human, institutional and technical capacities.

Contributes to **improving the quality of life** by pursuing socio-economic development and protecting natural resources among other locally-defined priorities.

Digitization is doing for **services** what machines did for agriculture and industry

- … removing from the State what was once one of of its great sources of power: **the information "monopoly"**

- … and **changing the nature of the relationships with the State**: from a **hierarchical** structure to a **network** that can mobilise the energies and abilities of millions of well informed citizens

Governments as public-service centers that are evaluated on their abilities to deliver through the most **efficient and individualized** channels.

- **Citizens are better informed and increasingly demanding** in their expectations

- Technology will increasingly **empower citizens**, providing new ways to voice their opinions, coordinate efforts, and possibly circumvent governmental supervision.

- … the reverse of the coin: new surveillance technologies giving raise to **all-too-powerful public authorities**.

- **Socio-interaction will grow stronger**: e.g. resort to peer-comparison to entice people into consuming less electricity.

- … but the **digital divide** is there making increasingly difficult for people to involve in new forms of civic engagement without proper internet connection and corresponding literacy.

- When **essential public functions and data migrate to digital platforms**, governments need to create the **rules** to maintain justice, fairness, safety and reliability.

- … However, **new regulatory frameworks** will not emerge linearly, in a top-down process:, they will triggered by the rapid pace of change and the dynamics of societies

- Despite the growing global economy, **data rights and data protection regulations are still heavily fragmented.**

- Strengthening processes for **e-governance to foster greater transparency** and **effective addressing of complex problems**.

Example: while digitally mediated payment systems make transactions more transparent, descentralised payment systems could hinder the ability for public authorities to trace their origin and destination.

STRENGTHENING e-GOVERNANCE

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WHAT DOES EGOV STAND FOR?

✧ **World Bank:** EGOV focuses on "the use of information and communication technologies by government agencies that **have the power to transform** the relations of citizens, businesses and other government sectors."

✧ **European Union:** "EGOV as the use of information and communication technologies in public administrations **combined** with organizational change and new skills to improve public services, democratic processes and increase support for public policy"

✓ Evolved from a **straight use of technology**, to a **multidisciplinary** understanding of governance, and an **integrative**, **holistic** view of administrative processes

STRENGTHENING e-GOVERNANCE

GOALS	
	Increasing the quality and efficiency of internal operations in a specific sector
	Deliver better public services in the specific sector across traditional and electronic channels
	Facilitating administrative and institutional reform in the specific sector
	Engaging citizens, businesses and other non-state actors in specific-related decision-making
	Supporting policy goals that target specific sectors development in specific areas

Technological

Organizational

Socio-economic

Sector-specific
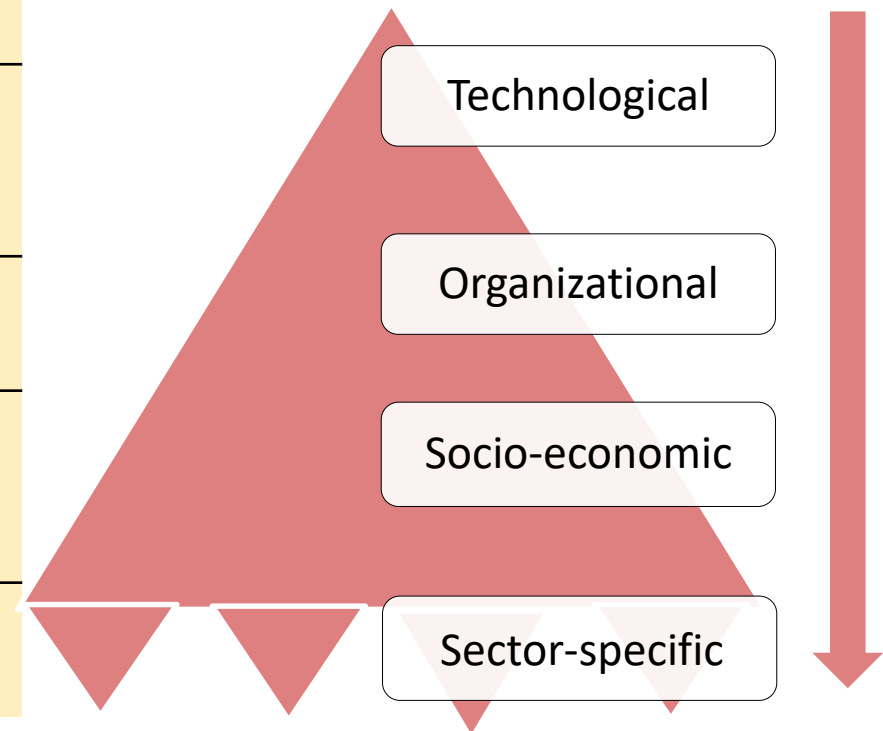
Smart Sustainable Cities

Reconnaissance Study

No off-the-shelf solutions:

Every solution must to be **adapted to and validated** in the **local** context, and

any strategy must be **formulated and owned by the main city stakeholders**.

POLICY RECOMMENDATIONS

- The vision should **not focus merely on technological development**, but also highlight improvements in the economic, social, cultural, ecological, and governance dimensions.

- As cities have **different levels of maturity f**or different dimensions, the strategy should include having **stakeholders agree on priority areas**.

- Strategies should also be informed by the **urban metabolism**, i.e. how the city produces, transforms and consumes materials, energy, capital and other resources.

- Combined approach: **top-down** (**government-led**) to build foundations, **and bottom-up** (**community-driven**) to conduct local sector-specific initiatives, such as delivering innovative services by local SME based on open data

POLICY RECOMMENDATIONS

- Government's responsibility is to **promote and stimulate bottom-up innovation**, e.g. through living labs for co-creation and evaluation of innovative ideas and scenarios, as well as testing technological instruments in various real life usage scenarios.

- Cities can do more than simply change the regulatory environment; but **actively invest in becoming launch pads for digital transformation** so as to **attract entrepreneurs** and investors.

- Open government initiatives to **ensure access to government data**, to increase participation and to leverage innovation through public service co-creation.

- **Knowledge sharing platforms** in place to promote good practices related to governance, transport, water, sewage, electricity, mobility, environment, urban planning, social cohesion, quality of life, citizen participation, digital infrastructure …

- Open minds: from smart cities to **smart regions**

Thanks

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