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# SMART CITY OLEXANDRIA

Olexandria,
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# SMART CITY: TECHNOLOGIES

# Smart Cities and IT

- Impossible dream in the 19th century: « a telegraph in each home »
  - Learning Morse code is just too complex and time consuming for the normal user
- We had to wait until the Macintosh was launched to start the process
  - A user-centric view was needed to maximise the user base
- $E=MC^2$: Complexity doesn't disappear, it's just hidden from end users
  - 10 billion connected objects today, 50 billion forecast in 2020
  - The consolidation of efforts and means in a « smart » manner is absolutely critical

**1884**

**Morse**

A century to get there!

**1984**

**Mac GUI**

Ten years to get connected

**1993**

**Public Web***

And the last jump to mobility

**2007**

**iPhone**

We are inexorably moving towards a population and intelligent devices always connected

# Very heterogeneous IT/Telco Standards

European Telecommunications Standards Institute – www.etsi.org

- Air Traffic Management
- Automotive Radar
- Autonomic Systems
- Broadband Wireless Access
- Broadcasting
- Cable Networks
- Cloud Technology
- Cognitive Radio
- DECT
- Digital Mobile Radio
- eHealth
- Electromagnetic Compatibility
- Electronic Signatures
- Emergency Communications
- Energy Saving
- Environmental Aspects
- Fixed-line Access
- Human Factors
- Identity Management
- IMS Network Testing
- Intelligent Transport
- Internet
- Interoperability
- Lawful Interception
- Machine-to-Machine Communications
- Maritime Communications
- Media Content Distribution
- Mobile Communications
- Network Virtualisation
- Next Generation Networks
- Powerline Communications
- Protocols
- Public Safety Systems
- Quality of Service
- Quantum Key Distribution
- Radio
- Radio Regulations
- Radio Systems
- Railway Communications
- Satellite Communications
- Security
- Security Algorithms
- Short-range radio
- Smart Cards
- Smart Grids
- Smart Metering
- Software Defined Radio
- Testing
- Terrestrial Trunked Radio (TETRA)
- Wireless Medical Devices

**Technical consolidation to allow effective IT asset management is absolutely key**

# SMART CITY: « NICE MÉTROPOLE »

# Nice Métropole - Environment

- First (and so far only) “metropolis” in France - 49 communities united on 01/01/12 to created the “Métropole Nice Côte d'Azur”
- Former historical enemies (Nice and St. Laurent du Var) now working together for the well being of the regional population
- Strictly formalised legal framework: Etablissement Public de Coopération Intercommunale (Public Inter-communal Cooperation Body) established by a law passed in 2010.


550.000 inhabitants in the region, 1.08 millions in the Alpes Maritimes department (light blue)

# Nice Métropole - Summary

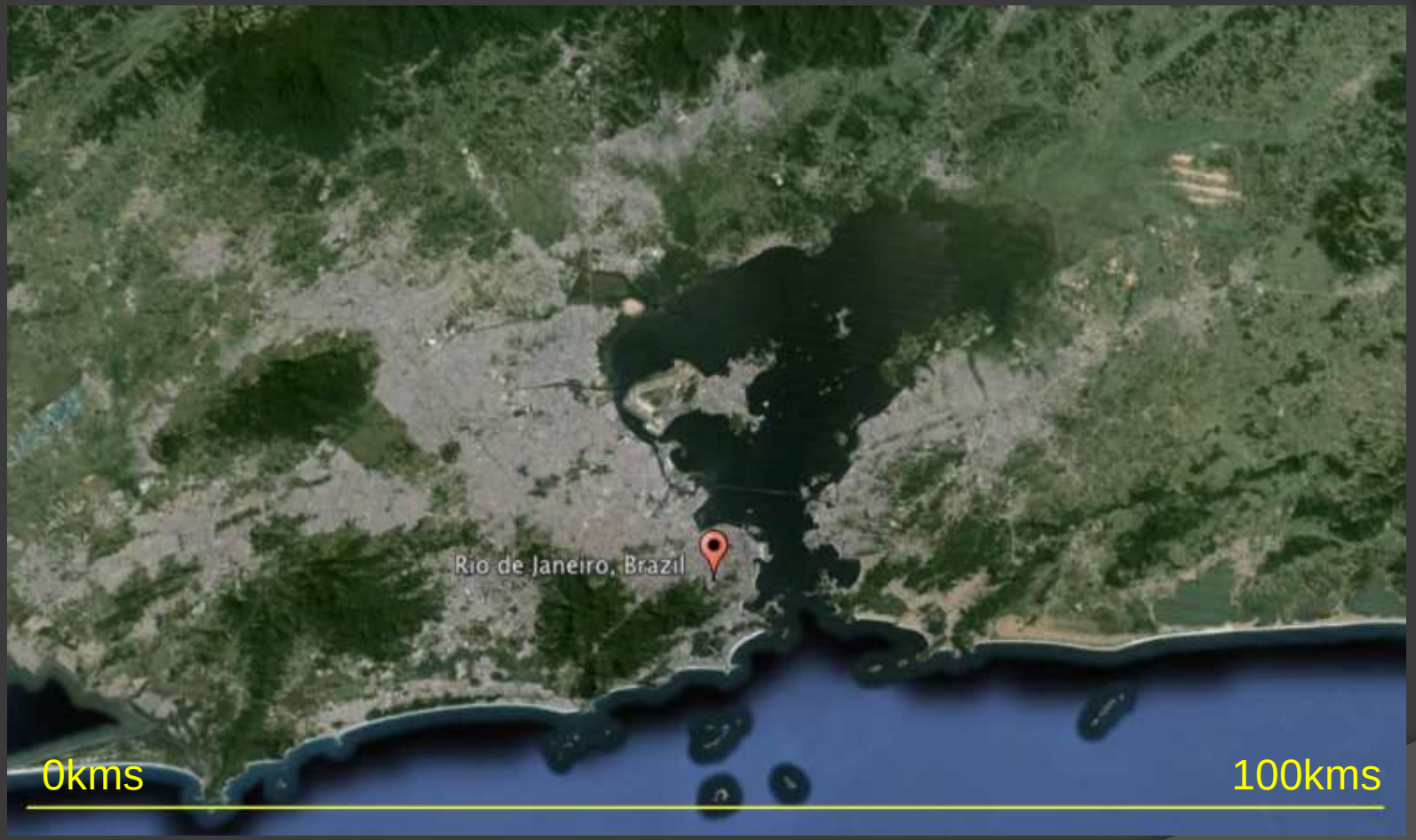
- Chosen in 2011 as one of the first cities in the world awarded IBM's "Challenge Smarter Cities"
  - Only 5 award winners in Europe, 24 worldwide
  - Contract « IBM Intelligent Operations Center » signed in June 2013
- Focus on contribution to solve major urban development challenges using technological innovation
  - Transportation
  - Energy
  - Water Management
  - Education
  - Social Services
  - Security
- Very strong links with corporate entities
  - Infrastructure: Vinci, Suez, EDF, GDF, Veolia, ERDF
  - Telco: Bouygues, Cisco, IBM, Orange Lab, Thalès

NICE MÉTROPOLE "Top Down" Approach

Strategic framework imposed from federal level, with several local adaptations

# SMART CITY: RIO DE JANEIRO

# Rio de Janeiro - Environment




6 million inhabitants in the city of Rio itself, 12 million in the metropolitan area

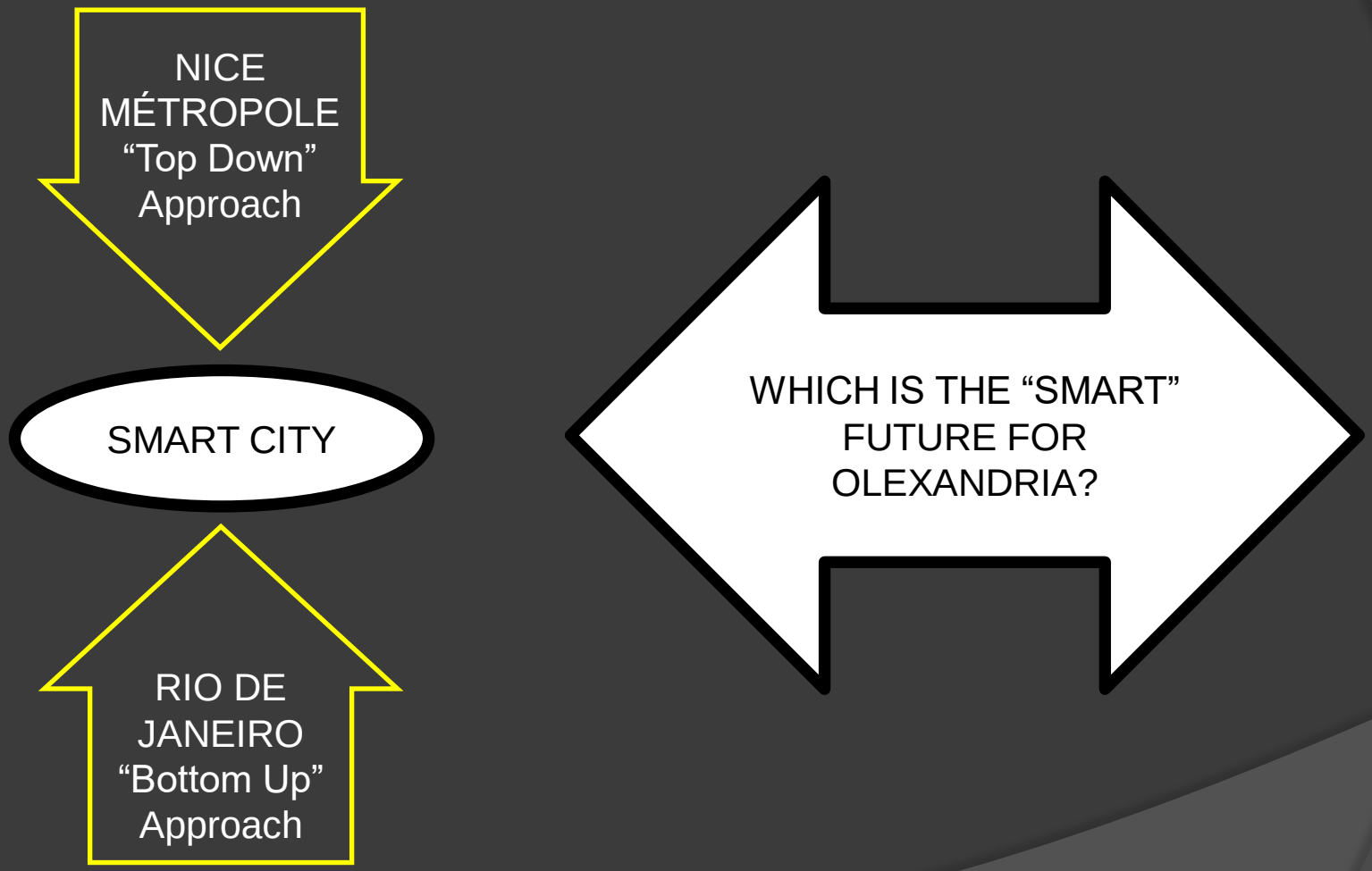
# Rio de Janeiro - Summary

- Rio's Operations Centre was initially established as a reaction to several natural disasters in 2010 and is now used by 30 city departments in a multidisciplinary manner
- Total transparency: the data-sets are fully available through a public portal
- Intensive utilisation of Public Private Partnerships (PPP) to finance the Smart City infrastructure and support the city's economic development
- World Cup in 2014 and Olympic Games in 2016 were catalysts of this major transformation


An emergency solution which evolved organically to better serve the population

# SMART CITY: OLEXANDRIA

# Olexandria - Environment



# Olexandria - Summary

- The path to becoming “smarter” is clear and inevitable, but how to get there? Top Down or Bottom Up?
- Smart Olexandria should be a pioneer to be copied by other Ukrainian cities of similar size and beyond
- There are tremendous efficiencies  to be harvested from a solid strategy to transform Olexandria into a true « Smart City »

A global and uniform solution doesn’t exist, but IT consolidation is essential