

**SMARTCITY**  
EXPO WORLD CONGRESS



# **SMART AND SUSTAINABLE CITIES – INFRAVIA® SYSTEM**

**Dr. ALOISIO PEREIRA DA SILVA**

# REALLY, WHAT IS A SMART CITY?

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MOBILITY

EFFICIENCY

ITERATIVITY

URBAN PLANNING

ACCESSIBILITY

SUSTAINABILITY

INTEGRATION

QUALITY OF LIFE

CONNECTIVITY

TECHNOLOGY

CREATIVITY

INNOVATION

IS NOT ONLY TO THE CONCEPT OF “CONNECTED CITY”

BUT TODAY,

## IS OUR INFRASTRUCTURE FIT FOR A SMART CITY?



- No coordination with urban planning
- Without standardization of underground space
- No coordination between utility concessionaires
- Unknown and unsafe underground
- Installations located mainly under the street
- **Only in the UK: 4 million holes / 7 billion pounds per year** in direct and indirect costs



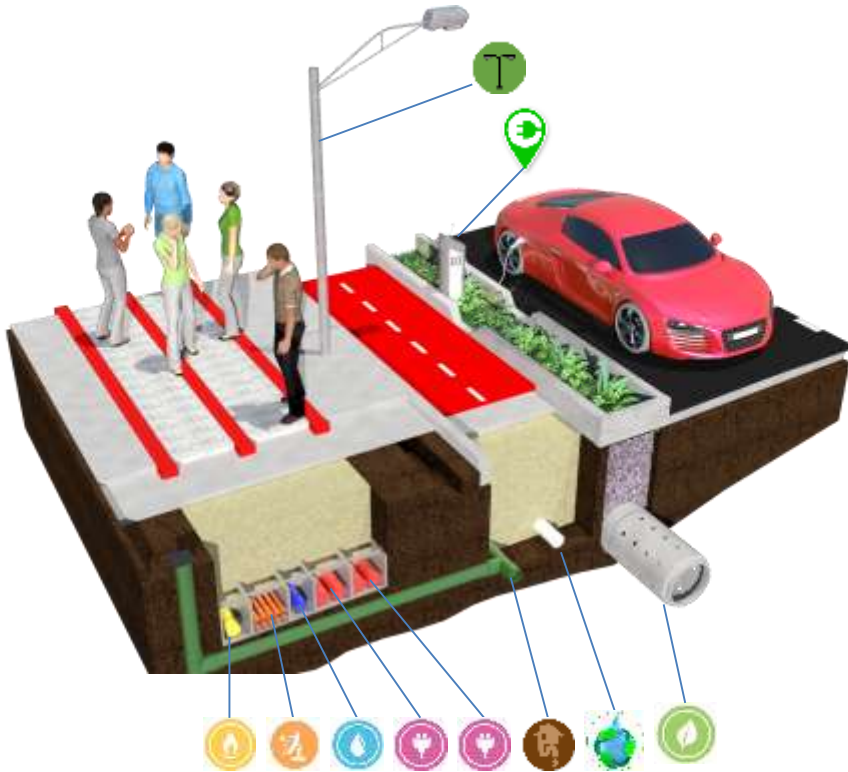
# INFRAVIA® SYSTEM

## Next Generation Infrastructure and Sustainable Mobility for Smart Cities



Pilot project built at Technologic Park  
"Sapiens Park" - 2016

**"Simplicity is the ultimate sophistication"**  
Leonardo da Vinci



- Integrates urban planning with networks
- No more networks under the streets
- All networks in an orderly and secure place
- Structure of recycled plastic produced through urban waste
- “Zero waste” concept
- Construction of accessible sidewalks and bike lanes
- Green infrastructure for drainage
- Integrated and efficient management

## Research and projects : Started in 2007

Location: Technologic Park "Sapiens Parque" - Brazil

Production of the components: 2015 / Construction: 2016



### **Pilot results:**

Reduces construction costs by **30%** and maintenance and operation costs by **70%**

Tests: 2016 and 2017



# HIGH-LEVEL TECHNICAL DEVELOPMENT

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## Brazilian standard about the theme



## Highlight in specialized magazines and international awards



## Companies and institutions that participated or participate in the research of the INFRAVIA® System





# GOVERNANCE AND MANAGEMENT MODEL

- Creation of an “entity” for the centralized management
- Private partners and government (PPP)
- May have the participation of the concessionaires
- “New concessionaire”: construction and maintenance
- Current infrastructure concessionaires: rent structure and operation



AREA OF OPERATION OF THE  
“NEW CONCESSIONAIRE”



## CONCESSIONAIRES

-  NATURAL GAS
-  TELECOM / TV / DATA
-  WATER / SEWER
-  ELECTRICITY / STREET LIGHTING /
-  DRAINAGE



# EVERYONE WINS!

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## Municipality:

- Reduced costs - No holes in the streets
- Use of urban waste as raw material - Revenue
- Percentage of revenue from the integrated system

## Dealers / Concessionaries:

- Reduction in construction and operation costs
- Focus on business and consumers
- No more initial investments.

## Investors:

- New Business and Opportunities
- Modular and scalable business
- Circular Economy
- INFRAVIA® System can be used in ANY CITY in the world. (standard)



## Society:

- Transparency in resource management
- Accessible sidewalks and bike lanes
- Sustainability

# WHY IS NOT INFRAVIA® SYSTEM EVERYWHERE?

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- **Fear of innovation.**
- **Lack of planning culture.**
- **Lack of transparency in information.**
- **Lack of communication between government and concessionaires.**

**So, let's start to innovate with responsibility?**

**We can help!**

# Thank you

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