

# Smarter Buildings



Canais de Tradução  
**Translation Headset Channels**  
Canal de Traducción

Canal 1: Português

Channel 2: English

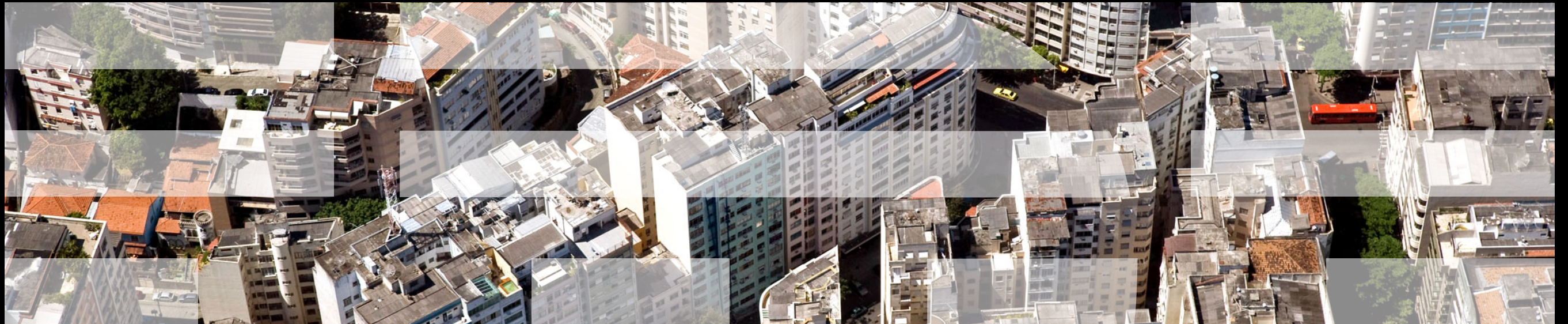
Canal 3: Español

# Smarter Buildings



**David Bartlett**  
Vice President, Industry Solutions, *IBM*

# Smarter Buildings Building Blocks to a Smarter City



# The Need for Progress Is Clear

42 percent

Worldwide, buildings consume 42% of all electricity – up to 50% of which is wasted

1

Buildings are the number 1 contributor to global Co2 emissions

2/3

65% of building occupants are willing to help redesign their workplace to make it more environmentally responsible

1/2

Buildings lose as much as 1/2 of the water that flows into them

30 percent

Energy costs alone represent about 30% of an office building's total operating costs

2025

By 2025, buildings worldwide will become the top energy consumers



# The Benefits are Real

40%  
savings

Smarter buildings can reduce energy usage by 40% and reduce building maintenance cost 10-30%

30%  
less water

Also save up to 30% of water usage along with lower energy costs resulting from reductions in the amount of energy used to pump and heat water

91%  
occupancy rate

LEED and Energy Star green buildings have consistently higher occupancy rates with reduced churn, quicker lease up, and higher re-up rates

Up to 18%  
productivity

A variety of studies have demonstrated productivity benefits in commercial settings. Office worker productivity increased up to 18% on average in smarter buildings



# What Is a Smarter Building?

Smarter Buildings are well managed, integrated physical and digital infrastructures that provide optimal occupancy services in a reliable, cost effective, and sustainable manner



## Smarter Buildings...

- Are more cost effective by reducing energy and operating costs
- Use active and designed-in techniques to achieve efficiency and environmental responsibility
- Have the ability to interact with occupants inside them as well as the environment around them
- Maintain a safer and more secure workplace
- Communicate in real-time to the supporting infrastructure (i.e. smart grid, broadband, etc.)

# What Kinds of Buildings Can Be Made Smarter?

## Smarter Hospital



Sensor instrumentation used in real-time for asset location and patient location, with automated workflows such as medical equipment maintenance and patient safety management. Enhance operational efficiency and client/patient experience

## Smarter Hotel



Integration of all the guest subsystems of hotel that welcome guest according to their preferences and adds to convenience during stay

## Smarter Campus



Intelligent infrastructure platform and tools to manage plug-in electric vehicle stations, buildings, badging, central utility plant

## Smarter Data Center



Integrated facilities and IT insight to energy efficiency of datacenter and the correlation of IT and facilities information

Plus airports, office complexes, stadiums, new construction, older buildings – and more



# What are You Listening to: Data Storms or Actionable Insight?

Smarter Buildings represent a very real and present opportunity



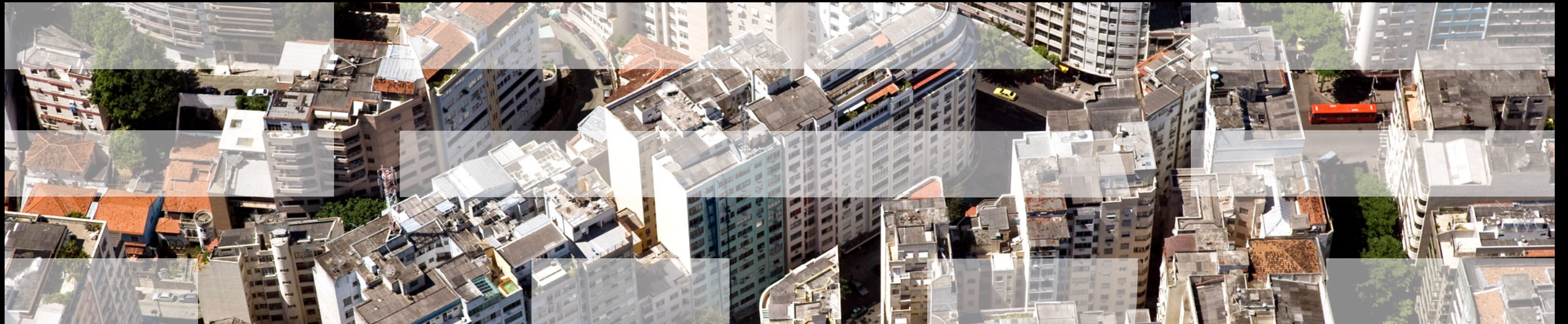
## Smarter Buildings...

- Are more cost effective. They reduce energy and operating costs
- Use active and designed-in techniques to achieve efficiency and environmental responsibility
- Have the ability to interact with occupants inside them as well as the environment around them
- Maintain a safer and more secure workplace
- Communicate in real-time to supporting infrastructure ( i.e. smart grid, broadband, etc.)

# Our Buildings are Talking to Us Now Is the Time to Listen and Act



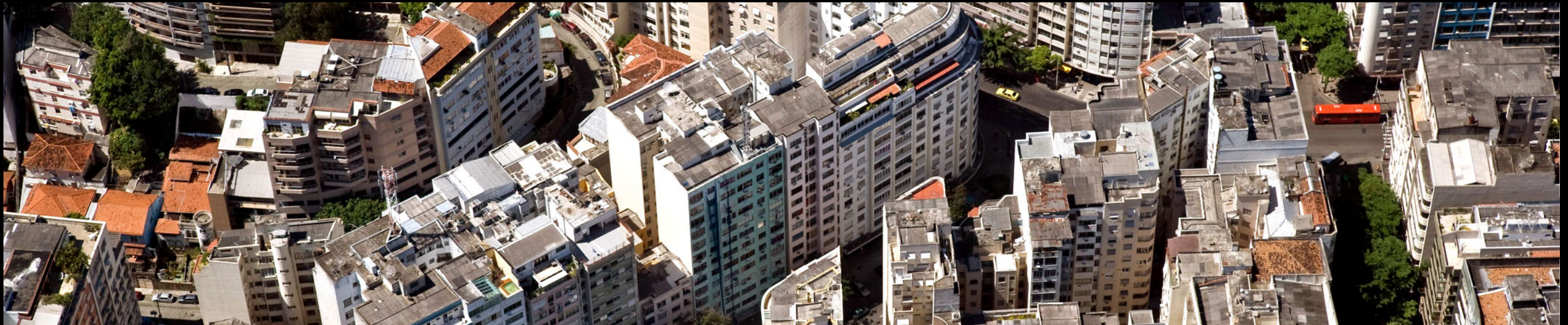
# Smarter Buildings



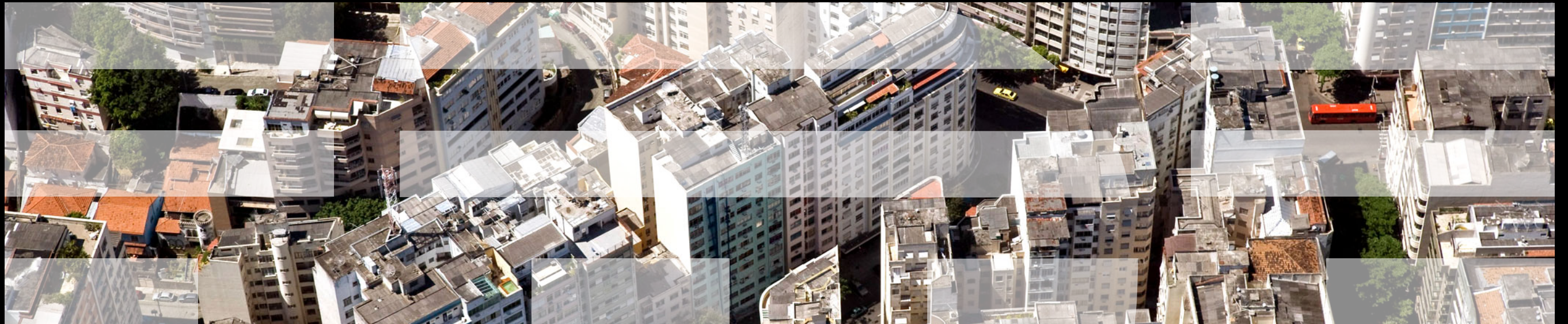
**Wagner Bittencourt de Oliveira**

Minister of Civil Aviation Secretariat, Office of the President,  
*Federative Republic of Brazil*

# Secretaria de Aviação Civil da Presidência da República: SmarterCities



# Smarter Buildings

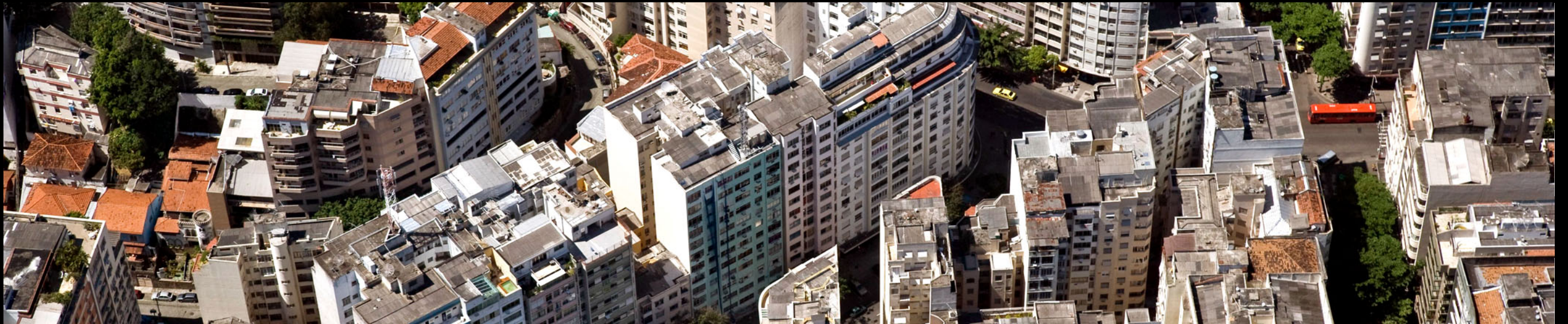




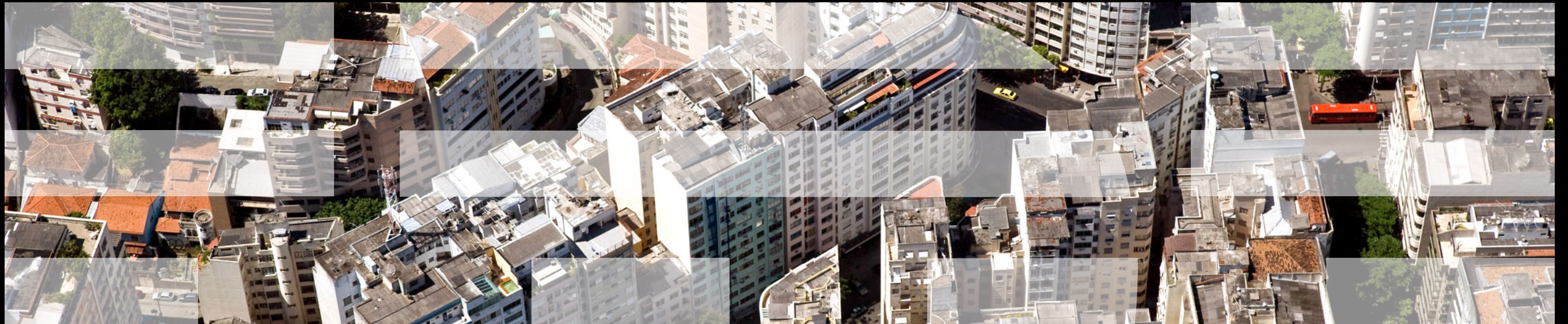
**Kenneth Schwartz**

Favrot Professor and Dean, Tulane School of Architecture, *Tulane University*

# Tulane School of Architecture Sustainable Strategies



# Smarter Buildings

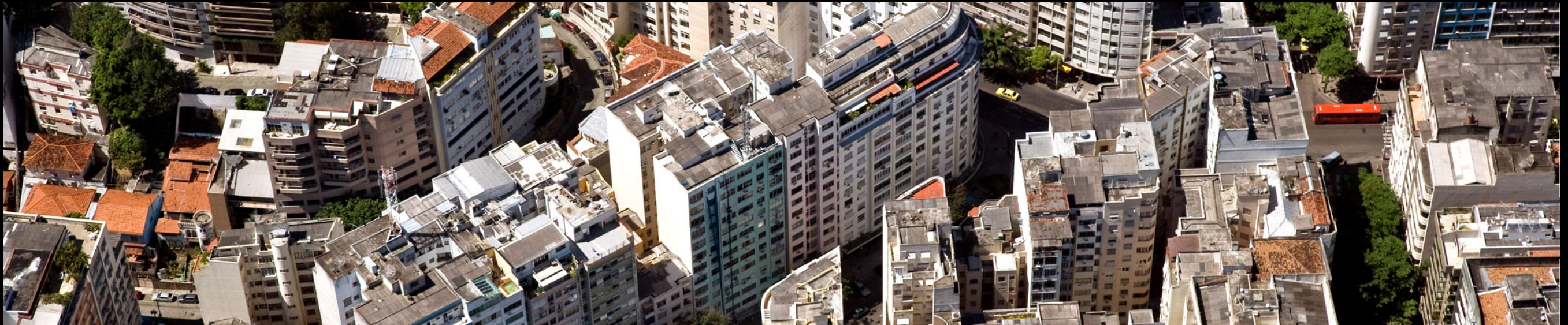




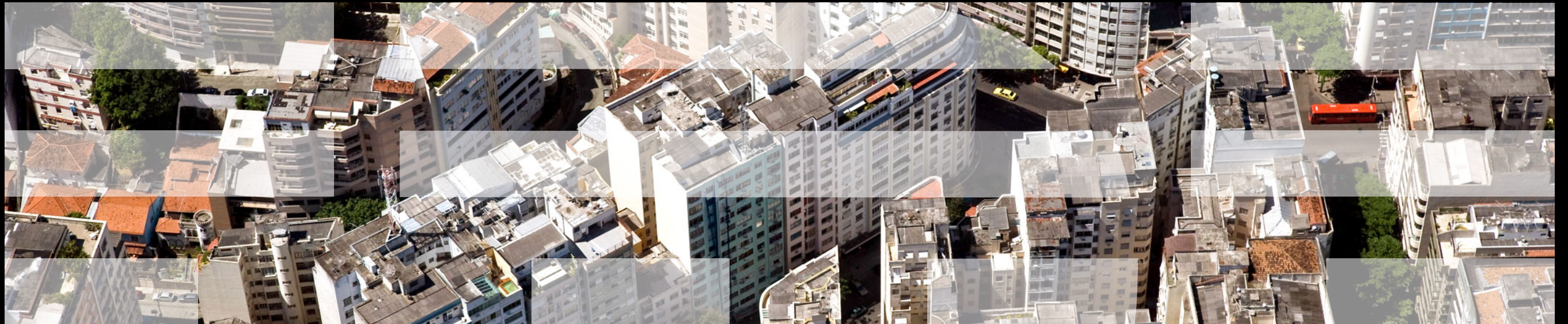
**Marcos Maran**

President, *Brazilian Association of Facilities (ABRAFAC)*

# Construções Mais Inteligentes



# Smarter Buildings



# Smarter Buildings Panel Discussion

## David Bartlett

Vice President, Industry Solutions, *IBM*  
davebart@us.ibm.com  
Twitter: davebart

## Wagner Bittencourt de Oliveira

Minister of Civil Aviation Secretariat,  
Office of the President,  
*Federative Republic of Brazil*  
gabinete@aviacaocivil.gov.br  
faleconosco@aviacaocivil.gov.br

## Marcos Maran

President, *Brazilian Association  
of Facilities (ABRAFAC)*  
maran@centroempresarialsp.com.br  
presidente@abrafac.org.br

## Kenneth Schwartz

Favrot Professor and Dean,  
Tulane School of Architecture,  
*Tulane University*  
kschwartz@tulane.edu

Por favor dirija-se ao 5º andar para a sessão de encerramento

Please make your way to the 5<sup>th</sup> floor for the closing session

# Smarter Buildings

