

# Smarter Cities: Building Successful Cities of the Future: Innovation and Studies of Smart City Strategies in Europe and Asia

Tim Greisinger : Vice President, Smarter Cities, Growth Markets, IBM



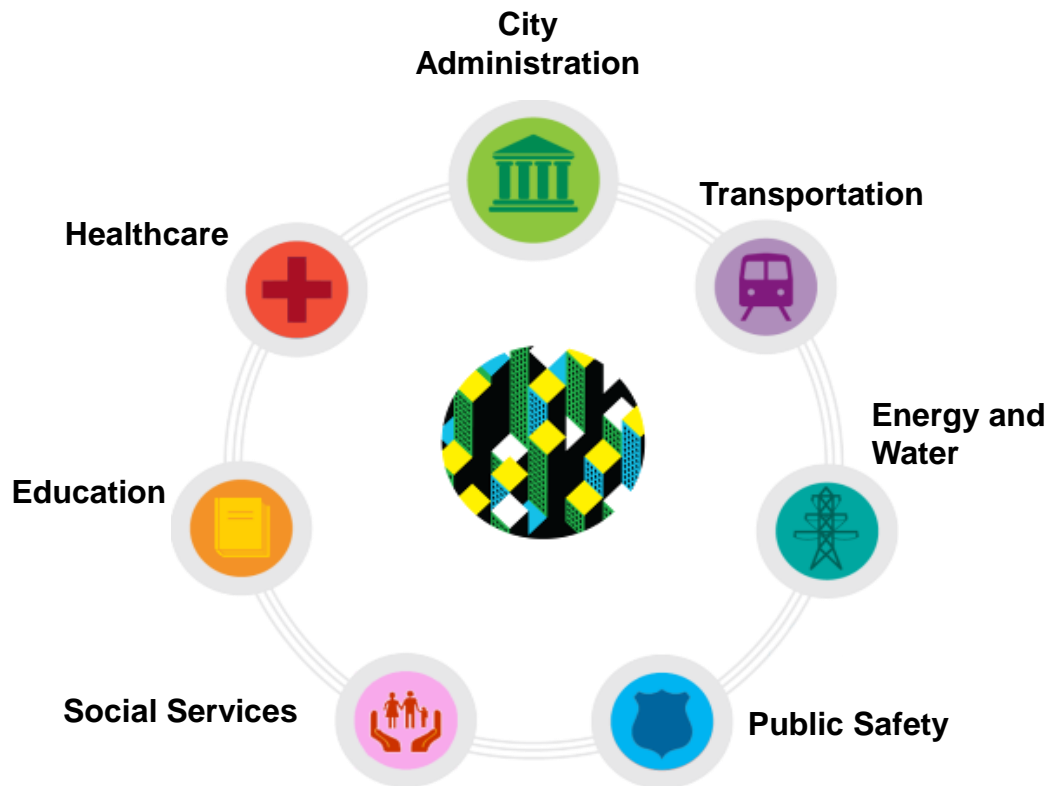
# Smarter Cities are “systems of systems”

## Why Now?

- Aging infrastructures
- Budget constraints
- Continued growth of urban population
- Citizen engagement
- Sustainability and resiliency
- Crime Fighting
- Traffic Congestion

## Technology Drivers

- Explosion of Mobile Devices & Sensors
- Growth of Social Media
- Infrastructure Optimization & Cloud Computing
- Cyber Security
- Advanced Predictive Analytics



# Infusion of intelligence into the way the world works : **Instrumented,** **Interconnected & Intelligent**

**Leveraging** information  
to make better decisions

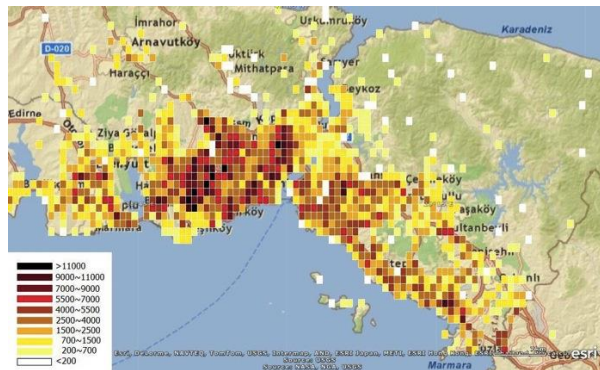
**Anticipating** problems to  
resolve them proactively



**Coordinating** resources  
and processes to  
operate effectively

***Enables leaders to better serve  
citizens and businesses in a  
rapidly changing world***

## Smarter Transportation: City in Motion



### The Problem

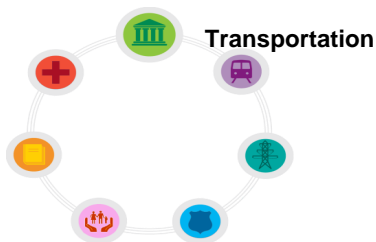
- To optimize & improve existing public transit infrastructures by increasing capacity & decreasing congestion

### What Makes It Smarter

- Aggregated mobile phone location & transit system data create heat maps depicting the density of people during various time periods.
- Scientifically model where & when commuters travel to optimize the bus routes that will connect to a new metro rail line.

### Real Business Results

- Planning maps 7 times more detailed based on 150m events per week
- Synchronize bus routes with the city's new underground lines
- Determine precisely where traffic congestion begins - before commuters even reach the main arterial routes
- IBM & Vodafone partnership



## Smarter Infrastructure: Miami-Dade



### The Problem

- Reduce costs of leaks and water waste due to aging infrastructures

### What Makes It Smarter

- A solution that tracks and monitors water usage by collecting hourly consumption data from 40 smart water meters. The system detects consumption spikes or irregularities, issues alerts so operators can locate leaks, investigate causes, and quickly dispatch repair crews

### Real Business Results

- \$1million (USD) est. savings related to proactive leak detection
- >95% reduced lag time for locating leaks, from weeks to hours



## Smarter Infrastructure: Rio de Janeiro



### The Problem

- To prevent deaths from annual flooding but then to expand to manage all emergency response situations

### What Makes It Smarter

- Creation of a comprehensive city operations center that integrates over 30 city departments and agencies.
- Collect and share information on weather, energy, buildings, transportation, and water in real time.
- Advanced analytics to predict rainfall and its impact down to a single square kilometer of detail.



### Real Business Results

- Increasing efficiency in resource deployment, expanding early warnings to 48 hours, and coordinating all agencies in response
- Nationwide adoption in advance of Olympics and World Cup

## Smarter Public Safety: Vancouver Police Department



### The Problem

- To better fight and prevent crime, the department wanted to enhance crime fighting capabilities using intelligence-driven policing strategies

### What Makes It Smarter

- The usage of analytics dramatically reduces property and violent crime rates via a solution that tracks and maps criminal activity over time, uncovers trends and helps police prevent, deter and solve crimes

### Real Business Results

- Reduced property crime rates citywide per 1,000 residents by 24%
- Reduced violent crime rates citywide per 1,000 residents by 9%
- Decreased data analysis time more than 98%, from weeks to seconds



## Smarter Health Care: City of Bolzano



### The Problem

- Medical advances are helping people live longer, often at home and alone. The city wanted to ensure citizen safety and provide needed services via a cost-effective way to know when its people require help.

### What Makes It Smarter

- A network of in-home sensors enables remote monitoring and interaction with medical professionals, via touch screens or mobile devices, provides healthcare advice, while reducing visits to the doctor.

### Real Business Results

- Provide a new model of social and health services within existing budgets
- Enables social service and health staff to concentrate on people who require face-to-face care
- 30% savings in assistance & care services





**A Smart Leader has to ask... with so much technology, abundantly available, at such low cost ...**

- **What wouldn't you enhance?**
- **What wouldn't you provide a citizen or a community?**
- **What wouldn't you connect?**
- **What information wouldn't you mine for insight?**

**The answer is, you, or another city or nation, will do all this**



**Knowledge is key to Building a Smarter Planet**

# Thank you

**Tim Greisinger**

**Vice President, Smarter Cities, Growth Markets, IBM**

**Mobile: + 86 135 249 64695**

**[twgreis@cn.ibm.com](mailto:twgreis@cn.ibm.com)**