



# Intelligent Operations Centre for Smarter Cities

**Mr Tsepo May**

Software Client Architect  
IBM Software Group

**Dr Mweene Monze**

Executive Architect  
IBM Software Group

**DMISA Annual Conference**

14-15 September 2011

Lord Charles Hotel

Somerset West



# Agenda



- Progress Report on CityForward
- IOC Solution Genesis
- Case Studies:
  - City of Rio de Janeiro, Brazil
  - Sonoma County Water Authority, USA
- IOC Business Value
- IOC Demonstration



The screenshot shows the CityForward web application interface. At the top, there is a navigation bar with the CityForward logo and user options like 'Welcome, Jts/va', 'Sign Out', 'Edit Profile', 'Display Settings', and 'Help'. Below this is a secondary navigation bar with links for 'Home', 'Explorations', 'Analyses', 'Data', 'Discussions', and 'My City Forward'. The main content area is divided into several sections:

- Analyses:** A section titled 'Exploring Analyses' featuring a 3D area chart titled 'Crime rates from 1990-2006 in cities with populations'. The chart shows data for four cities: San Francisco (green), London (blue), Sydney (light blue), and New York (yellow). The Y-axis represents crime rates from 0 to 30,000, and the X-axis represents years from 1990 to 2008. A legend at the bottom of the chart identifies the cities by color.
- Discussions:** A section titled 'Discussions' with a 'New Topics' button and a 'View All >' link. It lists several discussion topics with author names and timestamps.
- Analyses List:** A section titled 'Analyses' with tabs for 'All Analyses' and 'My Analyses'. It displays a list of analyses with columns for 'Title', 'Author', 'Views', and 'Rating'. Two analyses are visible: one by Sheila McCarthy with 3 views and a 5-star rating, and another by Cynthia Dale with 18 views and a 5-star rating.

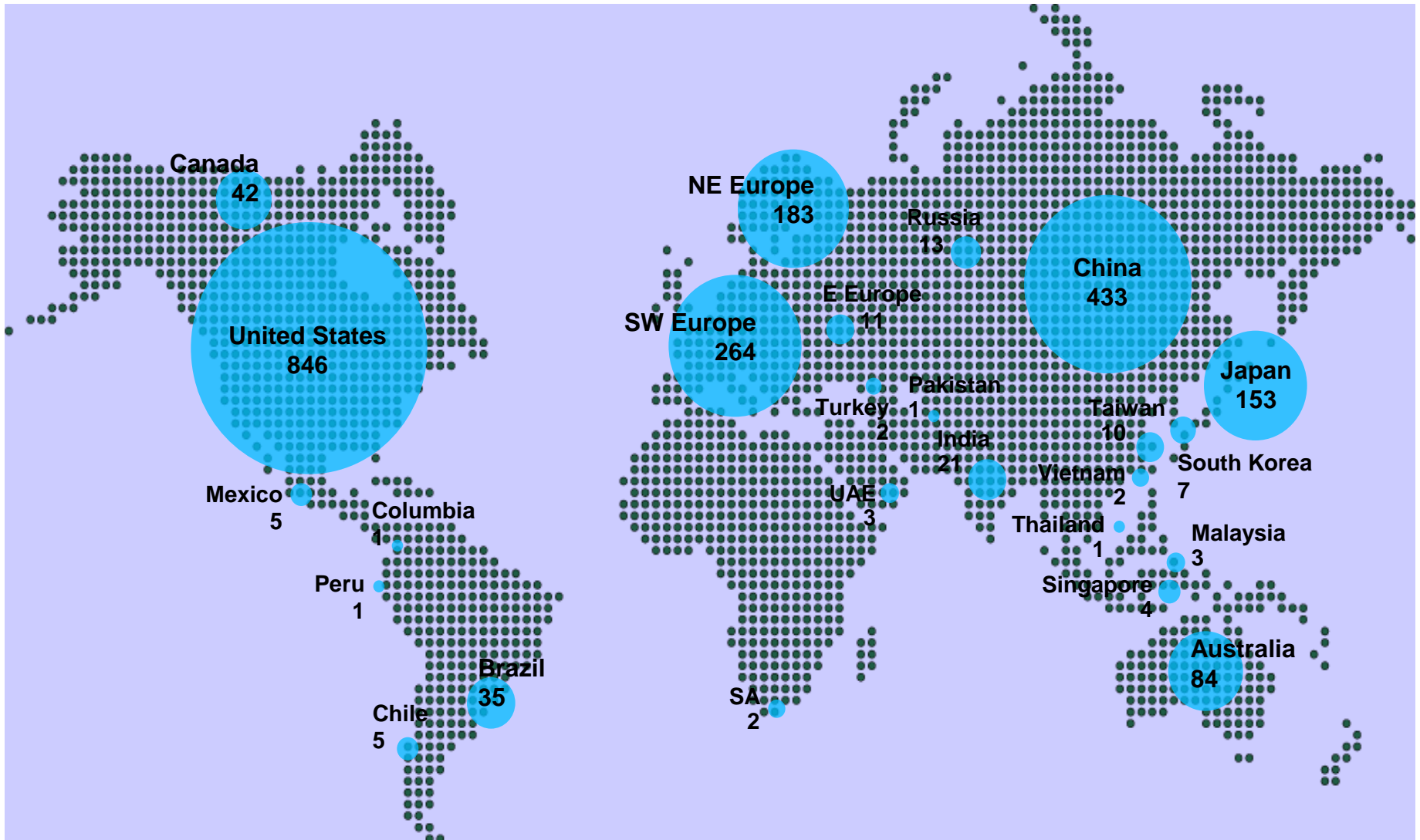
## Making Cities Smarter and More Resilient to Disasters

**Dr. Mweene Monze**  
Executive IT Architect  
IBM South Africa

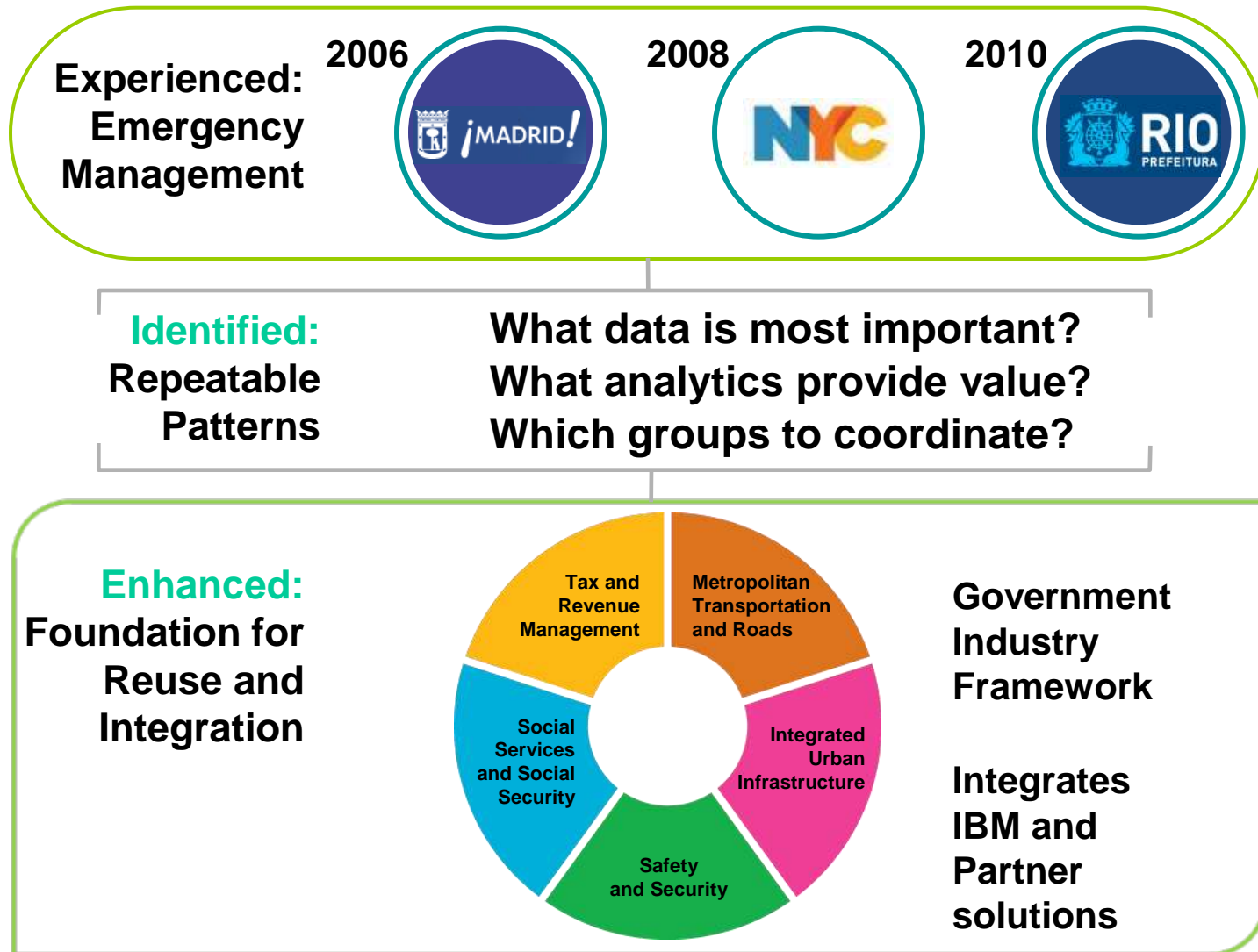


© 2010 IBM Corporation

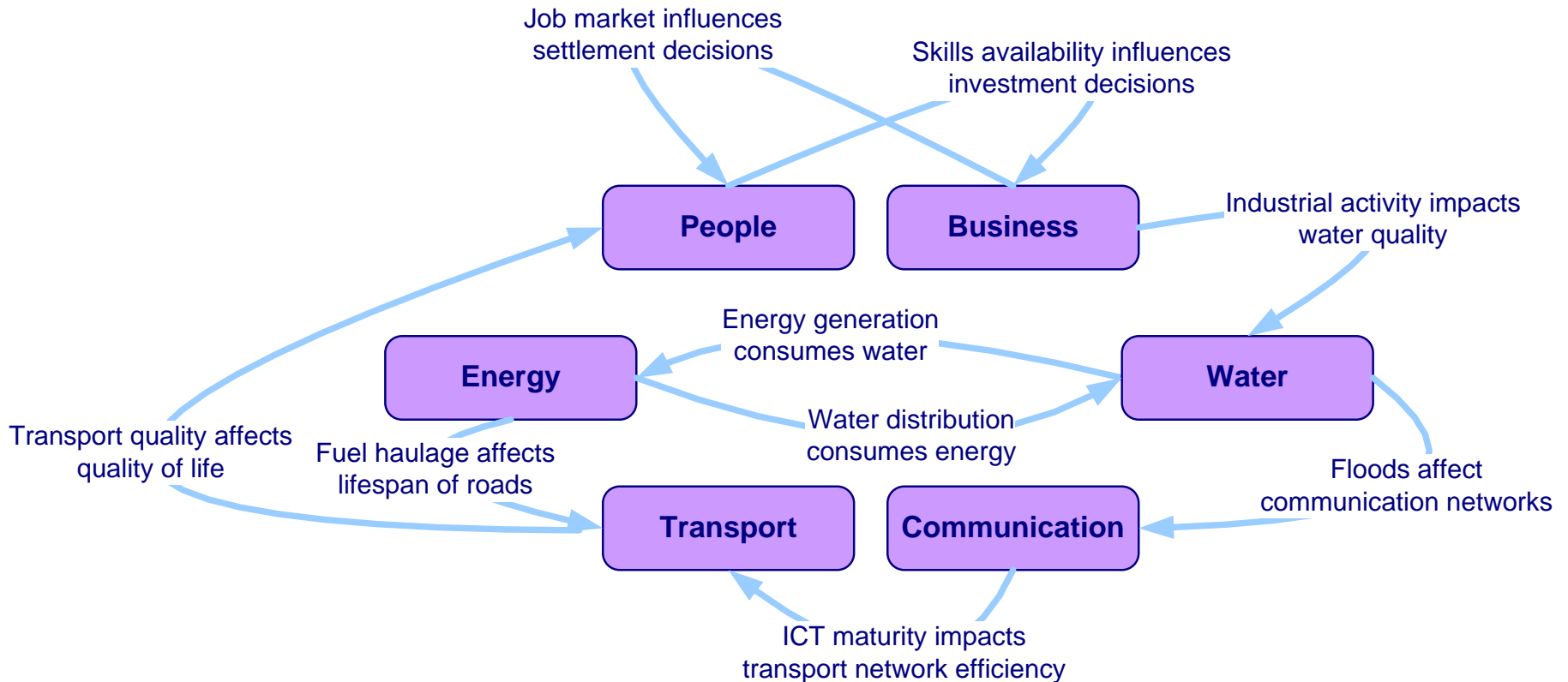
# We have learned from over 2,000 engagements



# With increasing experience **best practice patterns** become visible



# With increasing experience domain interrelationships become visible



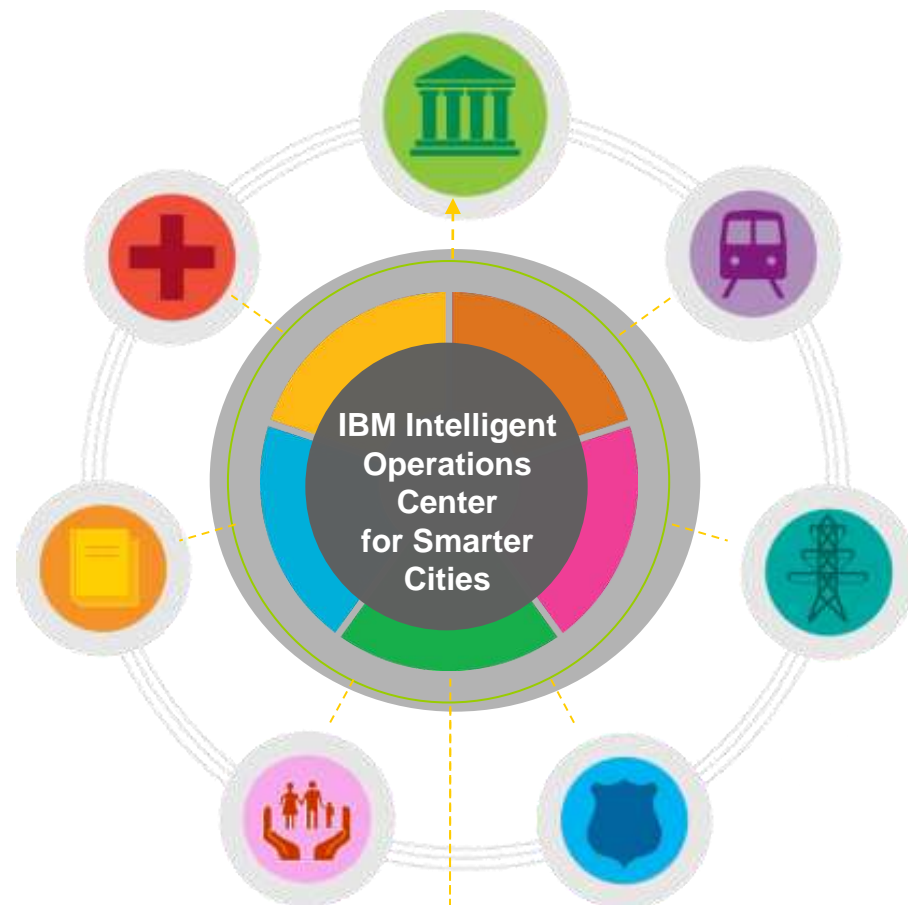
Apply global best practices in your city



## IBM Intelligent Operations Center for Smarter Cities

Integrating the **most repeatable best practice patterns** to allow leaders to:

- **Leverage information** across all city agencies and departments
- **Anticipate problems** and minimize the impact of disruptions
- **Coordinate resources** to respond to issues rapidly and effectively



*Integrates with IBM partners*

### Sample Partner Ecosystem



## Coordinate resources to respond to issues rapidly and effectively

Inspired by:

- Facilitate cross agency decision making and collaboration in order to enhance citizen service delivery
- Optimize intra agency resource and task scheduling to maximize efficiency and improve service levels
- Automatically flag event conflicts between city agencies
- Efficient control and utilization of cross agency resources to reduce the time to resolution of emergency and crisis situations

### Rio de Janeiro

#### The Need:

To **improve city safety and responsiveness** to various types of incidents, such as flash floods and landslides.

#### IBM Solution:

The emergency management solution **integrates information** from across agencies and systems. Provides a dashboard to **manage and visualize workflows while facilitating collaboration**

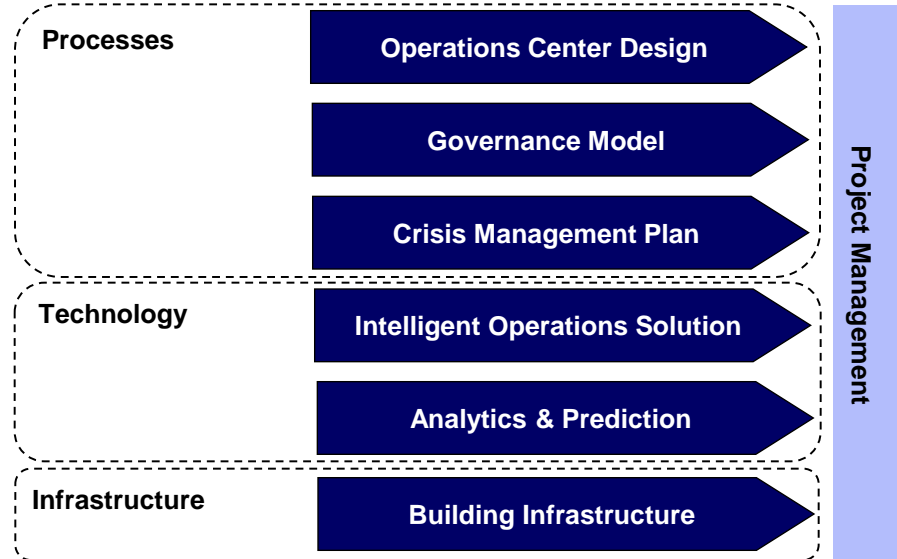
**“With our emergency response system, we can react and respond to disasters faster and more efficiently. It’s helping us save lives.”**

Eduardo Paes, Mayor, City of Rio de Janeiro



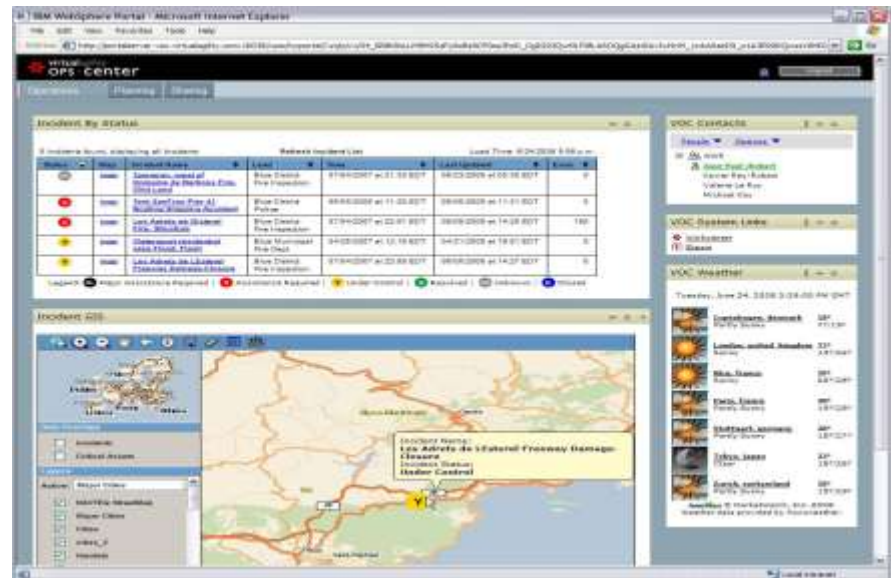


# Example Engagement: IBM delivered a successful Operations Center for the City of Rio de Janeiro in record time



## Rio Operations Center Technology Solution

- **Dashboard view** for information and action about incidents, accessible from multiple channels
- **Information integration** from different agencies and systems: AlertaRio, Traffic Monitoring System
- **Process management** panel to execute and monitor crisis management plans
- **Real-time communication** with teams through instant messaging, radio, mobile devices, etc.
- **Predictive Weather and Flood modelling** in high-resolution to provide alerts for preventive actions



## Leverage information across all city agencies and departments

Inspired by:

Collect data from a multitude of sources

- Sensors
- Citizens
- Video
- Agency and utility databases
- Third parties feeds

Aggregate data and normalize for a common view and use of the information

Filter information to identify relevant and significant occurrences.

### Sonoma County Water Authority

#### The Need:

To **bring together and analyze data** including water usage and quality, weather and climate, and environmental considerations.

#### IBM Solution:

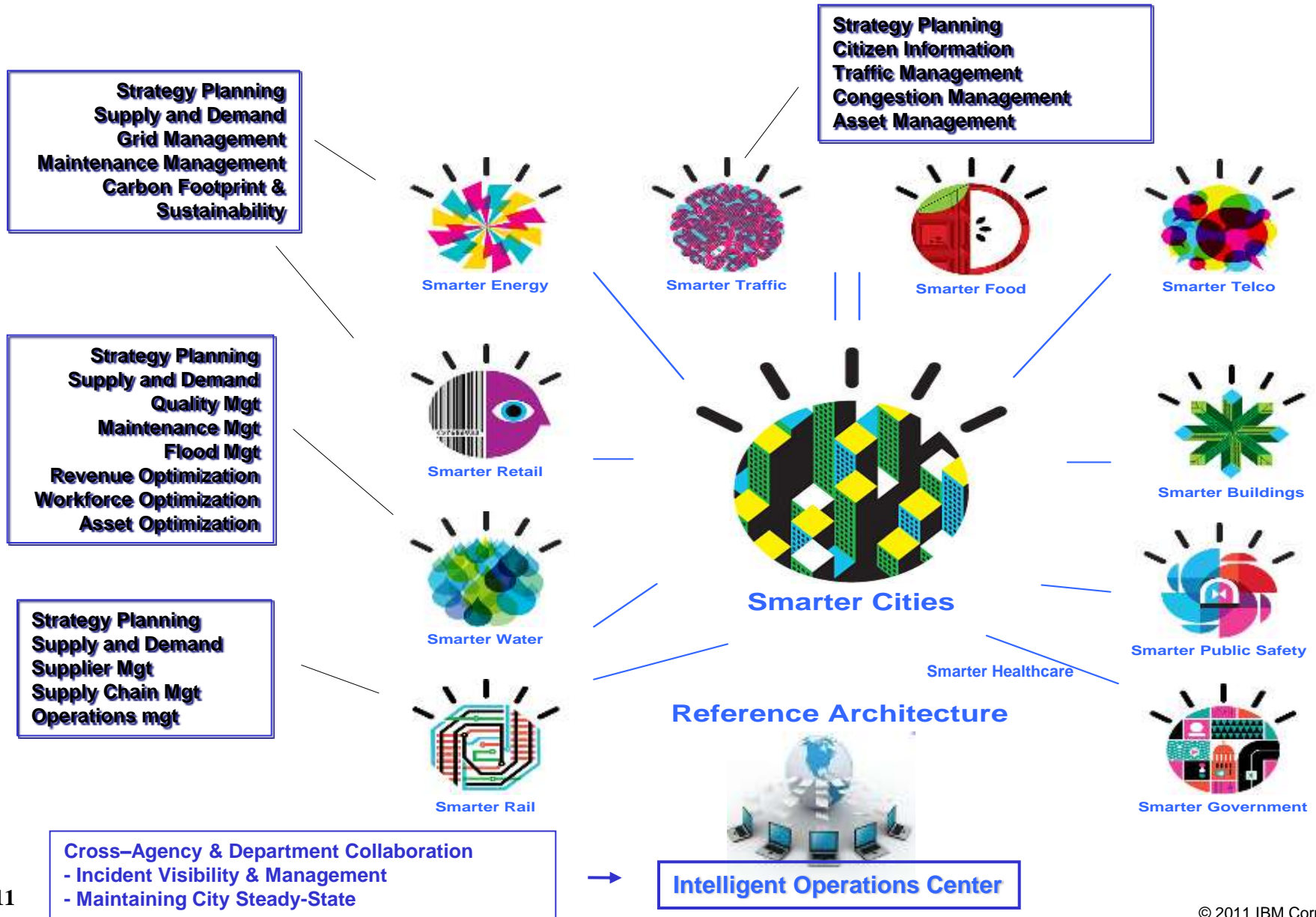
A water management system is helping SCWA **make better decisions about resource allocation** dynamically based on near real-time information.

“By **effectively managing** every drop of water in our system we can ensure that we can meet the needs of people, the environment and the community,”

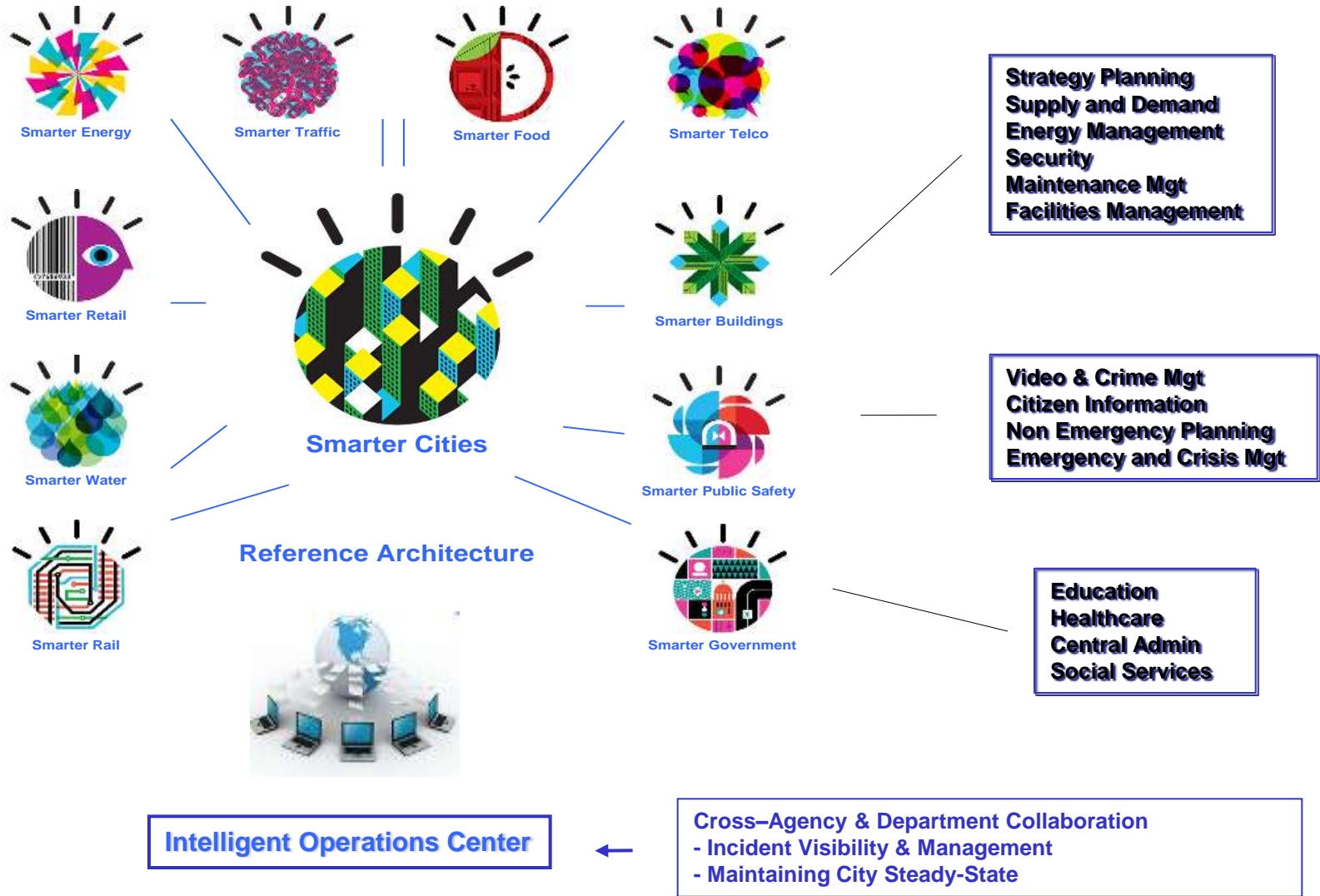
*SCWA chief engineer Jay Jasperse*



# With which Business Issues can the IOC help?



# With which Business Issues can the IOC help?



# IOC Scenario Demonstration



**Citizen Portal** -  
Event reporting, collaboration  
mass notification



**City Event Planner** -  
Event planning  
and management



**City Crisis Commander** -  
Incident management  
and escalation

**Chief Exec / Mayor** - City at a glance



**Incident Centre Operator** -  
Resource co-ordination



**Workflow Management**



Thank  
You