



Design for water: wise cities – Performance contract cases in Brazil

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# Cities are facing increasingly challenging environments



**50%** of global population lived in cities in 2007

**66%** will live in cities in 2050



**Competing** to attract visitors, residents, businesses & investments

**Globalization** has internationalized the competition



**Budget** constraints due to the economic & financial crisis

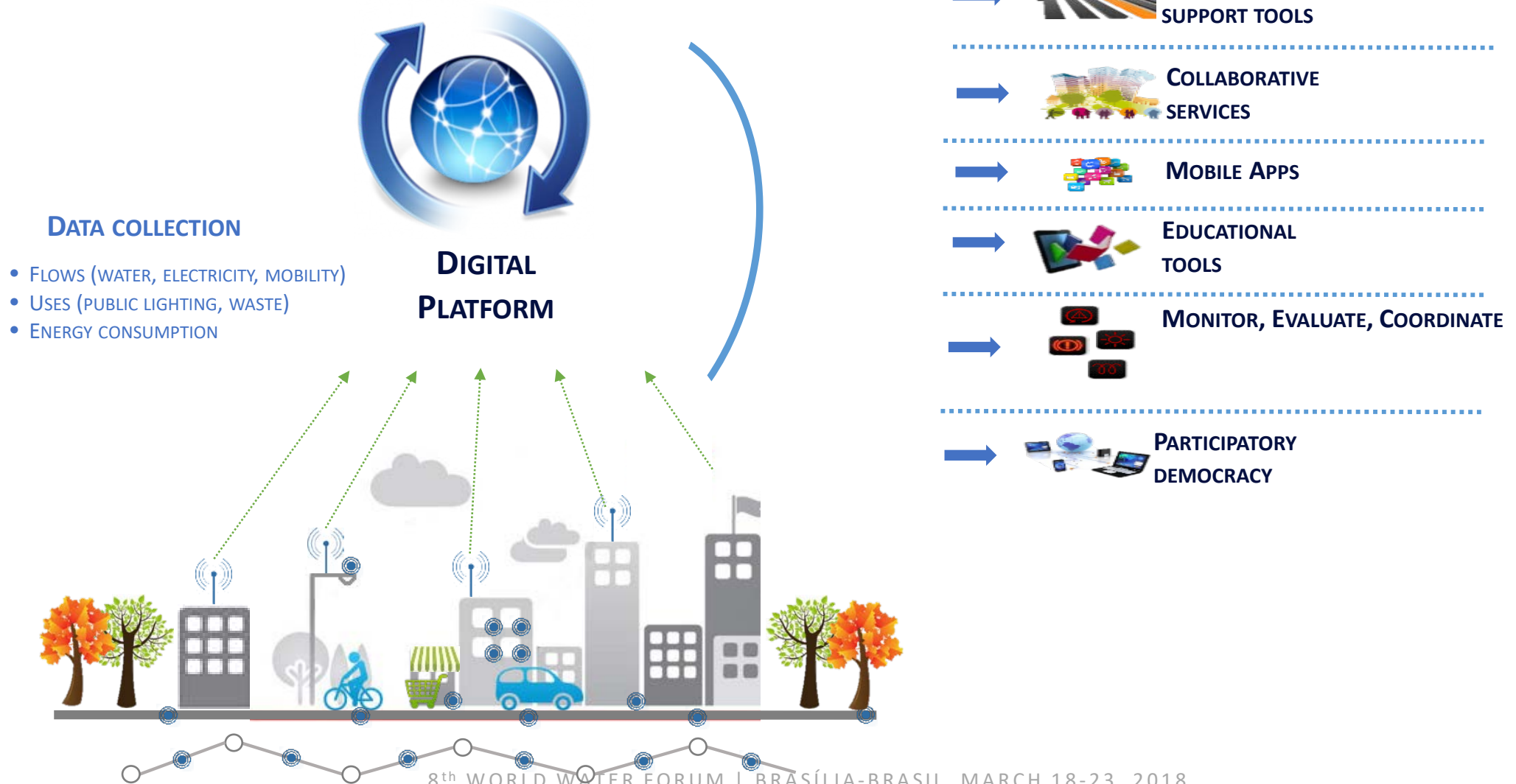
**Higher expectations** of the population in terms of budget management and governance / transparency



Citizens expect real **improvements** in their quality of life

**Urban space** as a place for personal development and entertainment

# Towards smart cities



# Context – Water loss

Today non revenue water represent:



**35%** Of drinkable water in the world

**9 Bilion** M<sup>3</sup>/ year of water

**US\$ 14 Bilions** In financial loss per year



**37%** Of drinkable water is lost in Brazil, equivalent to

**6** Cantareira systems with all the water loss every year

**R\$ 8 Bilions** In financial loss per year

# Benefits of performance contracts

1

## Smaller deadlines—conventional contracts require 3 steps:

Audit and project; Implementation of Infrastructure; Implementation of the Loss Reduction Program.

2

## Innovative solutions for services contracts

Long term benefits

3

## Success stories in for all contracts

Attractive for the market

4

## Optimized management processes

Management of a single contract with infrastructure deployment, pressure control, leak detection and repair, etc.

# Performance contract

Two different phases to certify the success with performance option

## Phase 1

### Study

- Ensures an appropriate response to the needs and characteristics of each specific case through:
  - Definition of the minimum scope and steps to be followed
  - Estimating cost of services for the minimum scope
  - Estimation of the potential for recovery of losses in water volume and reduction of maintenance costs with the system



## Phase 2

### Implementation of the contract

- Phase pre operation
  - Implementation of Minimum Scope Interventions
  - Complementary studies
  - Settings
- Performance score
  - System Monitoring
  - Variable remuneration
- Contract remuneration
  - Fix remuneration

## 8 performance contracts (loss management)



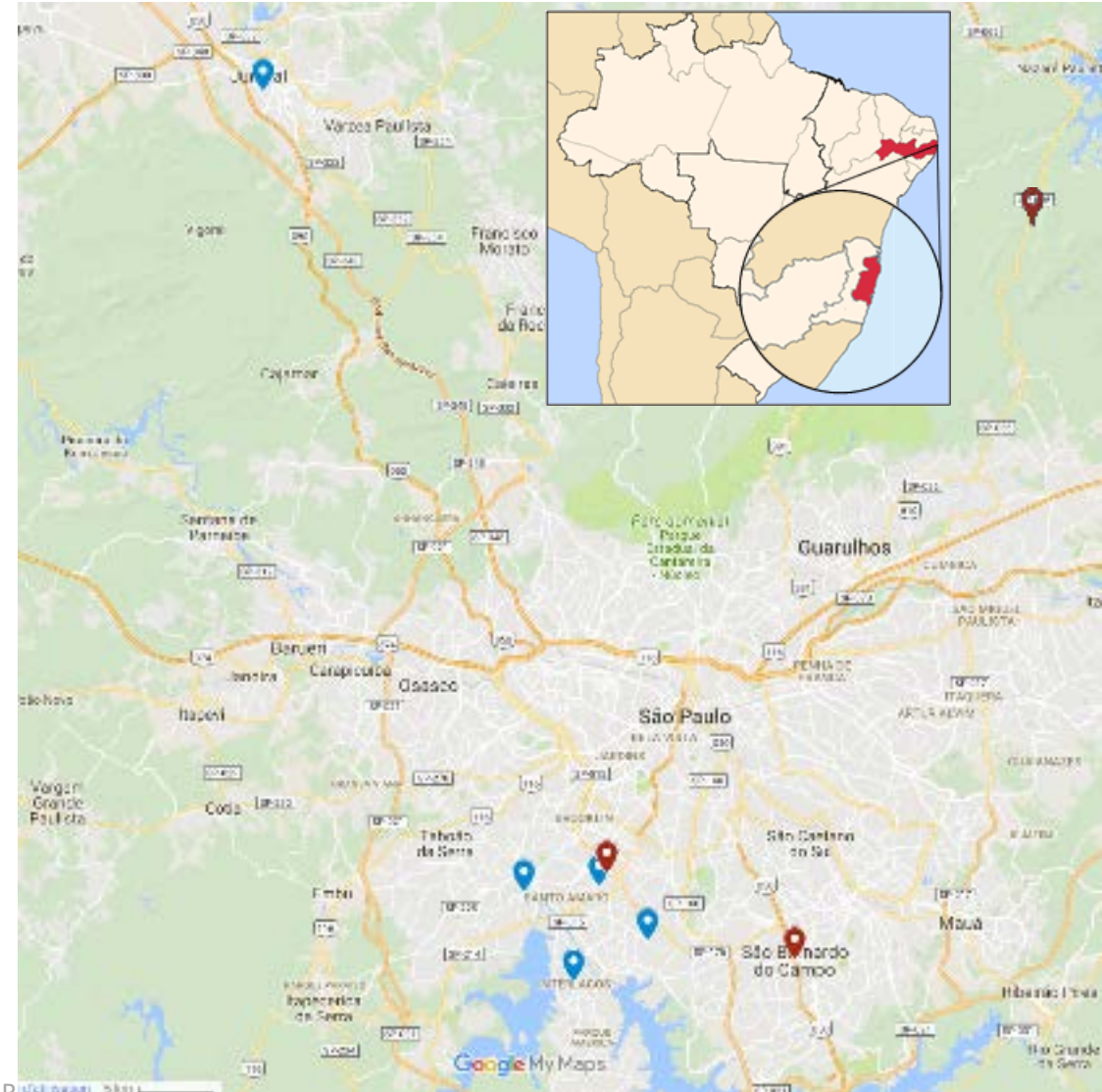
### On going contracts:

1. Chácara Flora 2, São Paulo
2. São Bernadro dos Campos, São Paulo
3. Olinda, Pernambuco



### Sucessful contracts

4. Chácara Flora, São Paulo
5. Vila Cacilda, São Paulo
6. Americanopolis, São Paulo
7. Jardim São Luís, São Paulo
8. Interlagos, São Paulo





# Emblematics Case studies

## JARDIM SAO LUIZ – SAO PAULO (BRAZIL)



### Water loss reduction

Optimization of the water supply in Jardim São Luiz in the South and West sectors.

- Number of conexions ~ 164.000
- Approximate population ~ 500.000
- Network extension ~ 1.000 km

### Water economy

- Target: 680.035 m<sup>3</sup>/mês
- Obtained: 1.029.998 m<sup>3</sup>/mês

## OLINDA (BRAZIL)



### Water loss reduction

Renew and recover assets, implement DMA's with telemetry in Olinda city

- Number of conexions ~ 74.000
- Approximate population ~ 245.000
- Network extension ~ 426 km

### Remuneration

- Goods and services + Bonus; recovered water
- An expected reduction of 48.500.000 m<sup>3</sup> in 4 years

# Thank You very much



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