

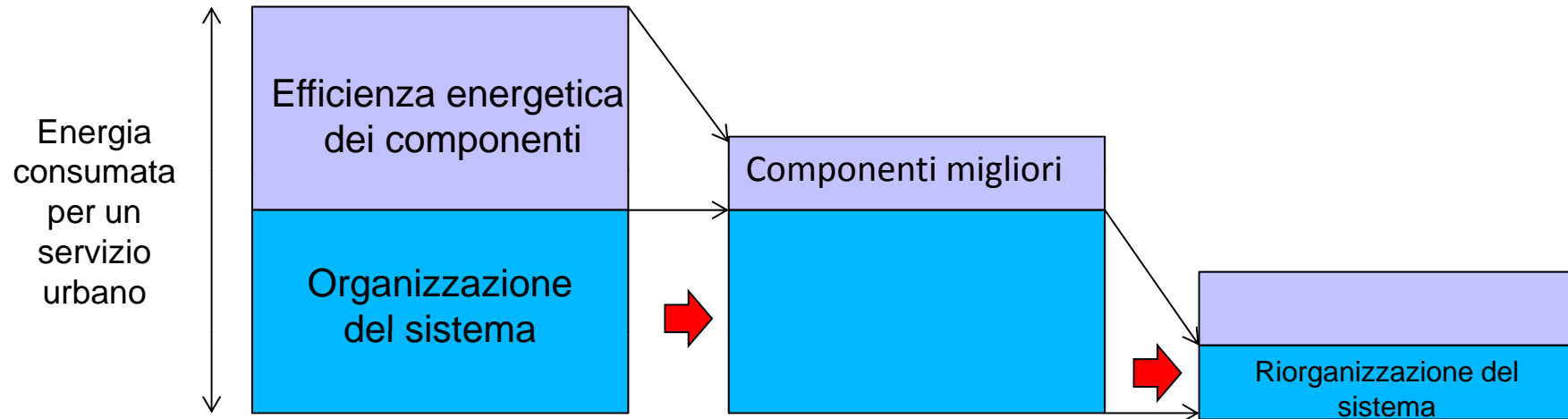
# Rigenerazione urbana intelligente e sostenibile

Mauro Annunziato

ENEA  
Dir. Divisione Smart Energy



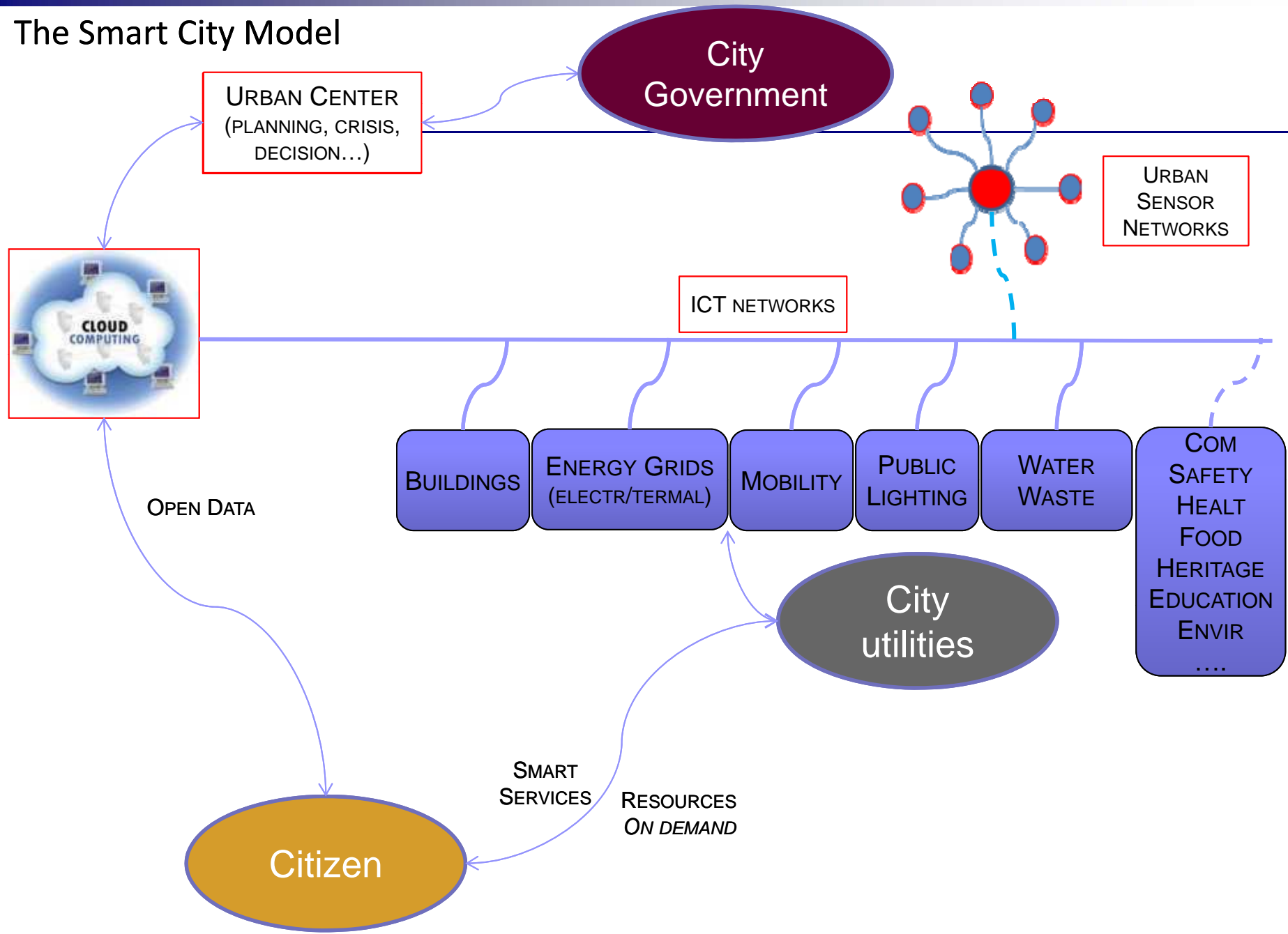
# dalla efficienza energetica ...alla Smart City



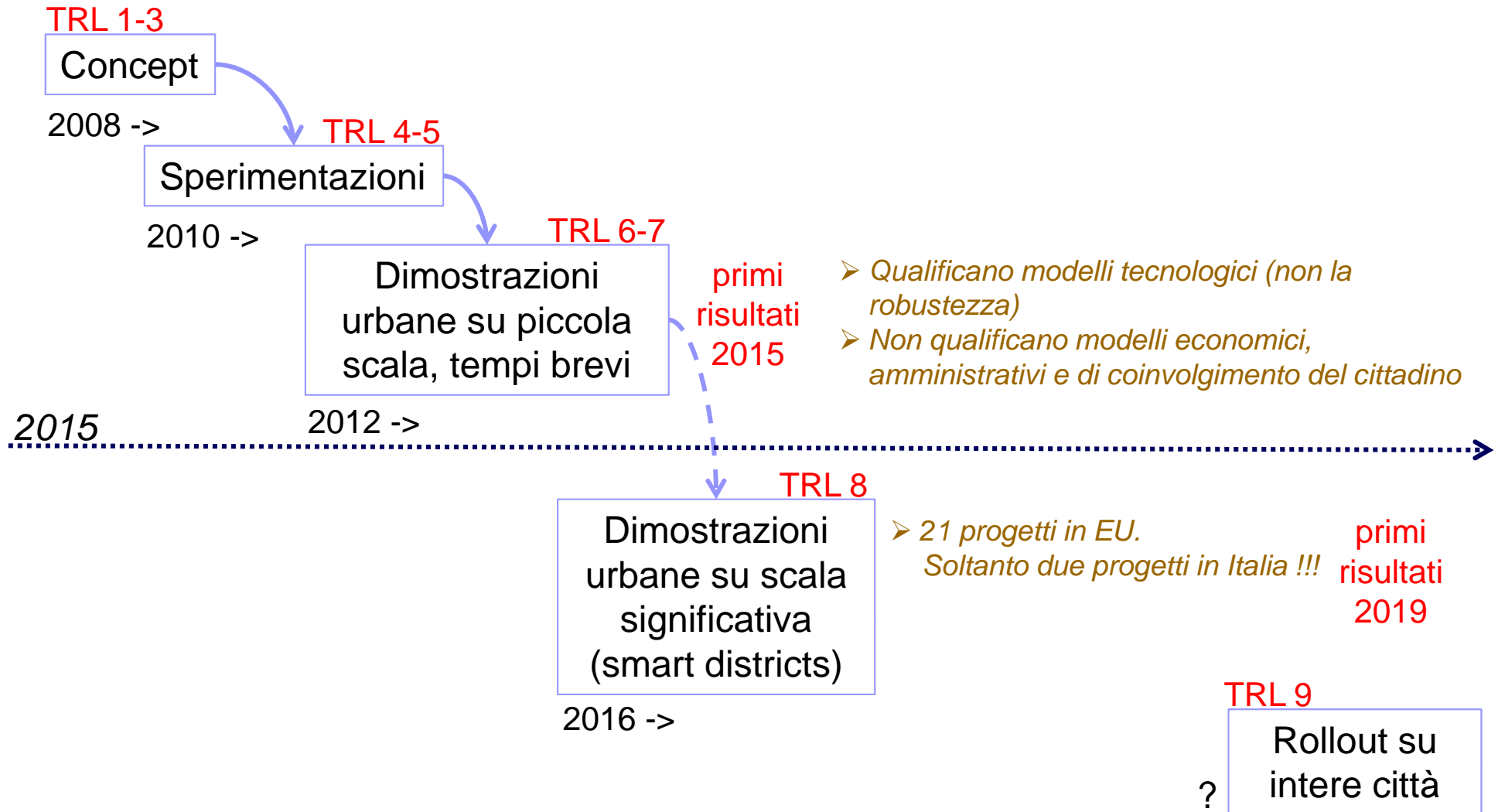
*Energy on demand*



# The Smart City Model



# La roadmap – dove siamo ora ?



# In Italia ?

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## Running

Ossevatorio Smart City ANCI: 1400 progetti

➤ *Scarsa integrazione, perlopiù settoriali*

Lighthouse cities:

➤ *Due soli progetti integrati di smart district (Milano, Firenze)*

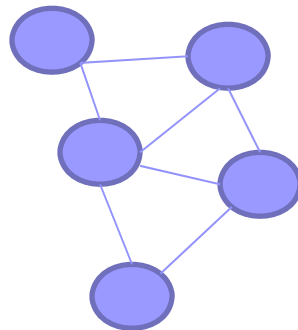
## Programmi in avvio

PON Metro

Programma Smart  
Cities MiSE

Programma Agenzia  
per L'Italia Digitale

Fondi Strutturali

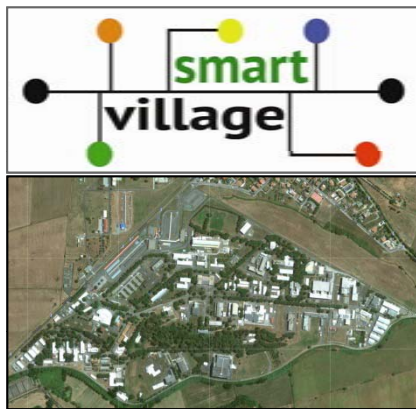


Arcipelago di isole o  
reti di progetti replicabili ?

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# The map of Smart Cities projects of ENEA

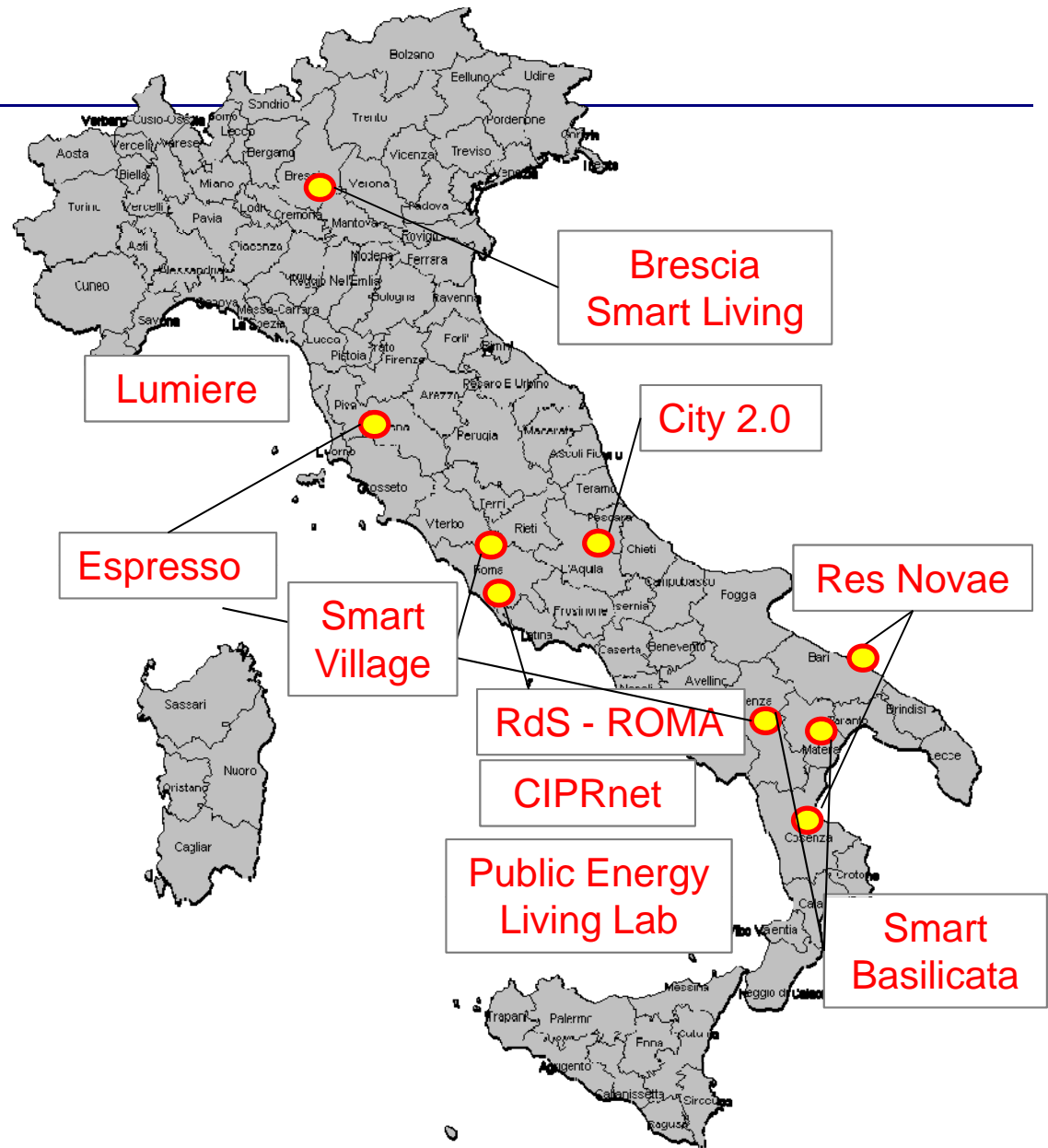


from Smart Village...



to the cities

...





# Smart Cities & Communities

## Ricerca di Sistema

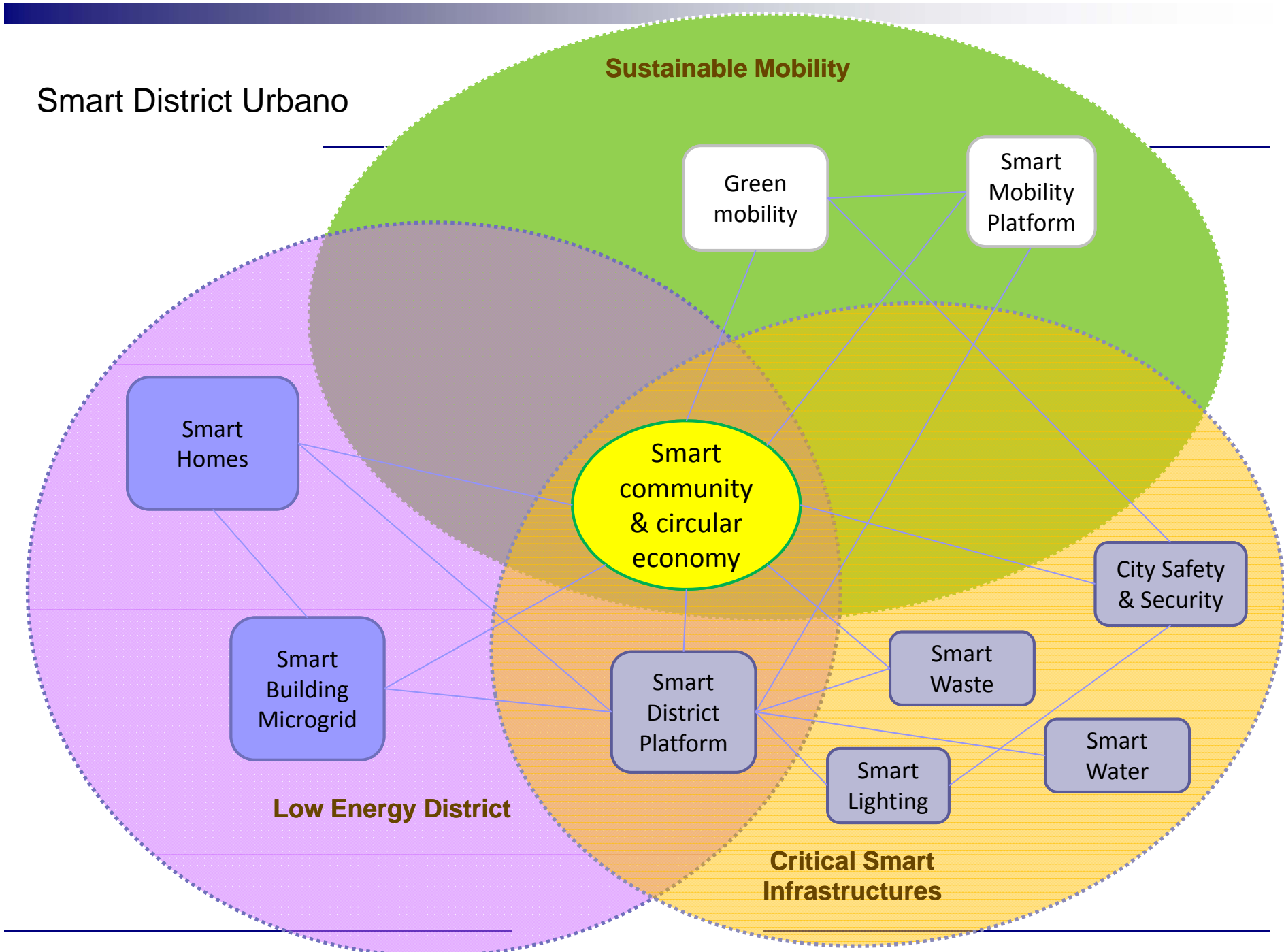
Budget: 8.7 ML euro + 5 ML euro(mobility)

Duration: 15 – 18

Coordination: ENEA

Partners: companies, universities, municipalities

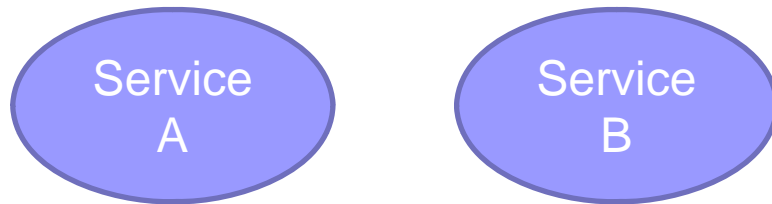
# Smart District Urbano





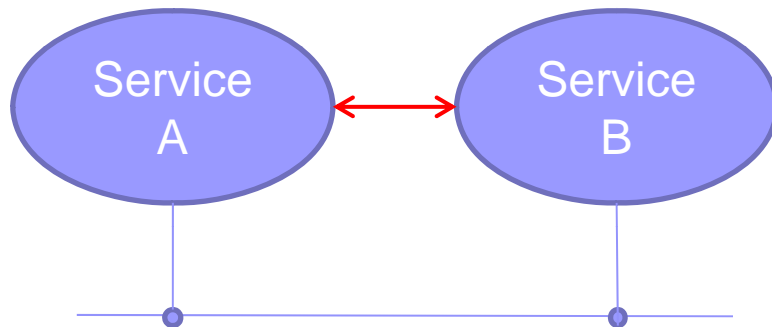
# Inter-operability and integration

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1. Separated Services

*Non smart*

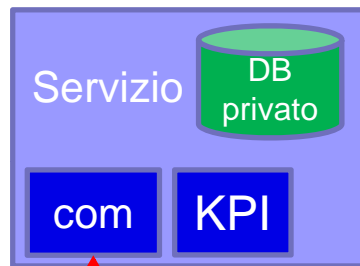


2. **Integrated** services:  
Through data exchange they  
offer better performances and  
new services

*Smart*

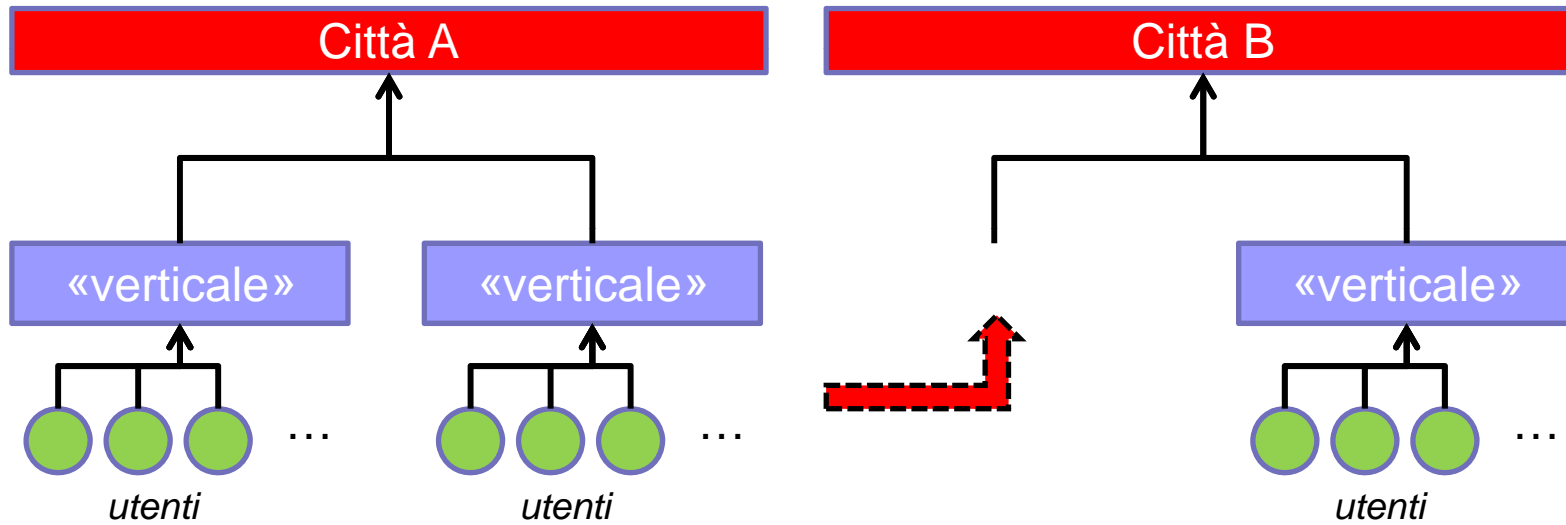
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# L'ecosistema smart, la piattaforma integrata ed aperta



- Condivisione architettura generale
- Piattaforma di integrazione standard
- Interfacce comunicazione standard
- Generazione e comunicazione di KPI (Key Performance Indicators pubblici garantiti)

# Modularità, Intercambiabilità, Riutilizzo



- Abbattimento dei costi
- Benchmarking
- Evitare il LOCK-IN

# La convergenza sugli Standards

PIATTAFORMA APERTA -> STANDARDS !

Esistono degli standards creati appositamente per lo sviluppo delle smart cities  
Convergenza internazionale ed europea.

-> occorre creare una convergenza italiana !

## Smart Cities Framework

**Goal:** A reference framework for the development of architectures for incremental and composable Smart Cities





# The Smart Building Network

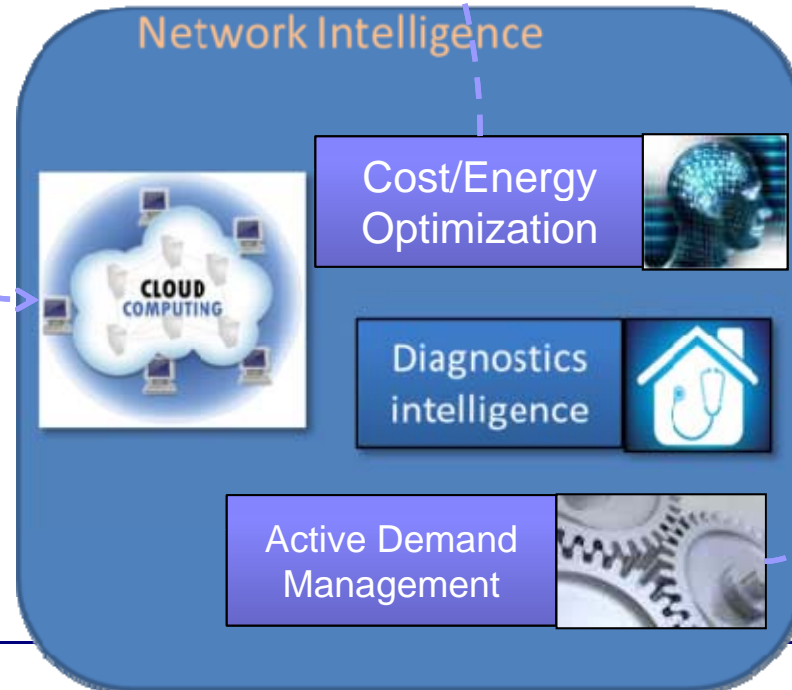


REMOTE MONITORING

MANAGEMENT OPTIMIZATION

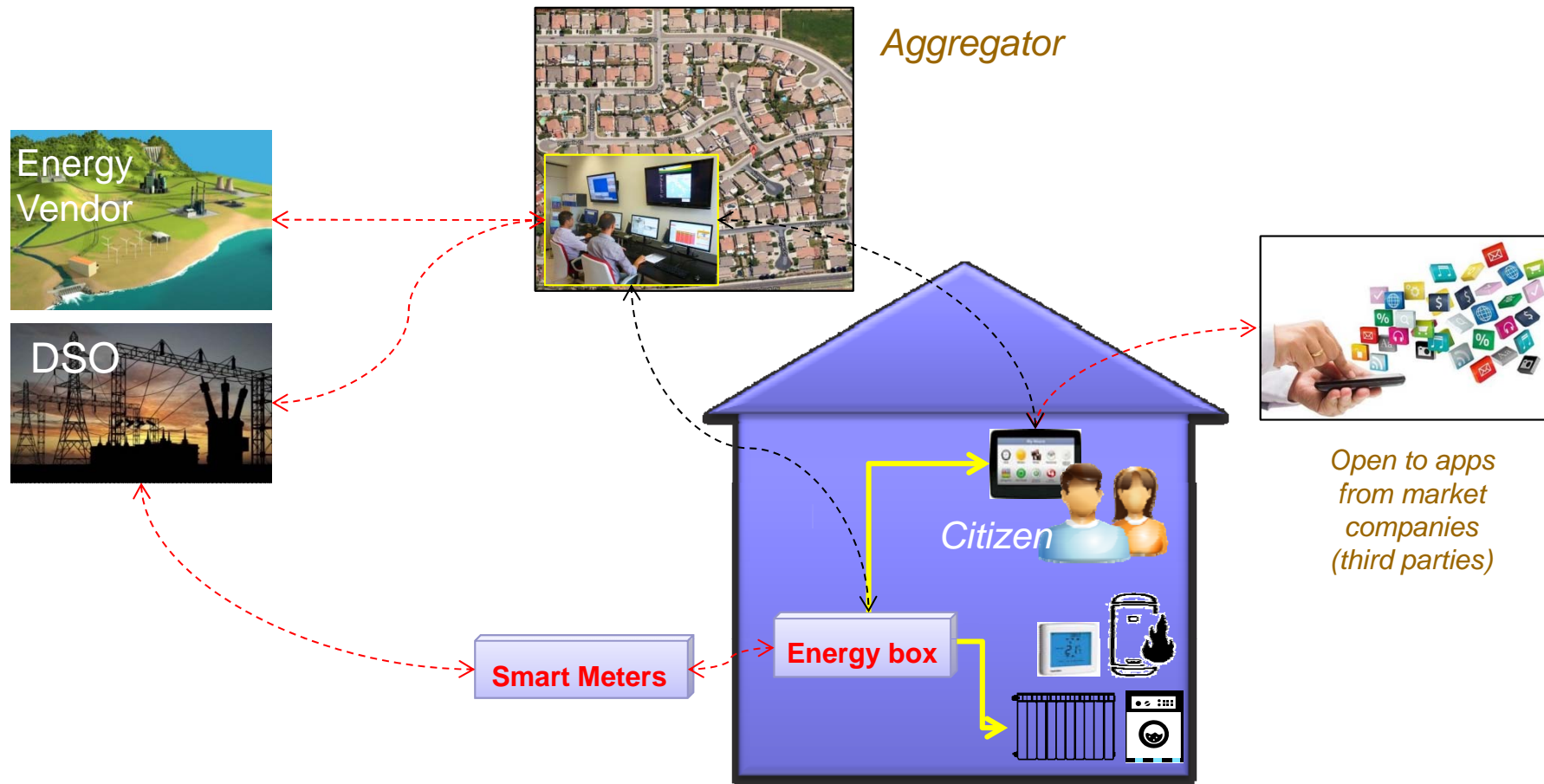


NETWORK SUPERVISORS



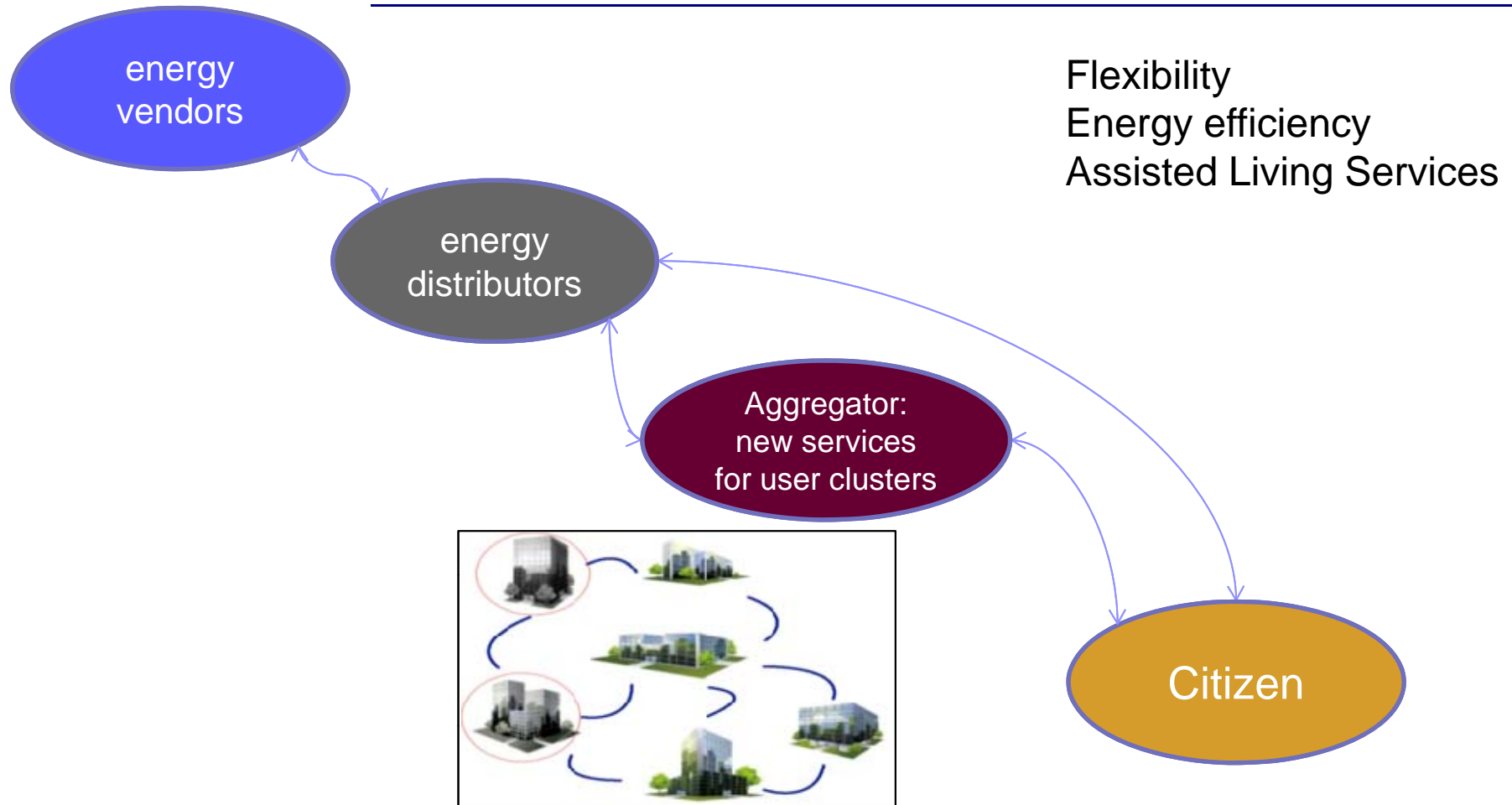
GRID DISTRIBUTOR

# Connettere il mondo delle smart grids con il dominio delle smart homes per aprire nuovi mercati



# New market actors: aggregators & citizen services

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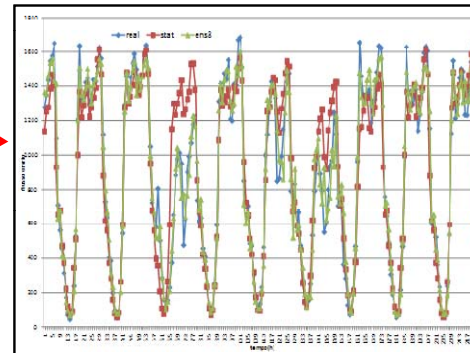


# SMART Lighting

TRAFFIC AND PEOPLE  
MONITORING



MODELLING &  
HOURLY PREDICTION



LIGHT CONTROL  
- ENERGY ON DEMAND -



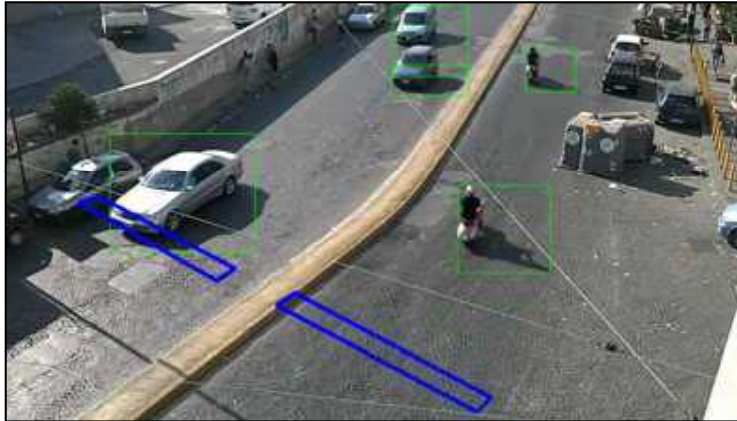
SMART  
POLES





# SMART SERVICES – SMART STREET

TRAFFIC/PEOPLE/SAFETY MONITORING



CITY CONTROL ROOM



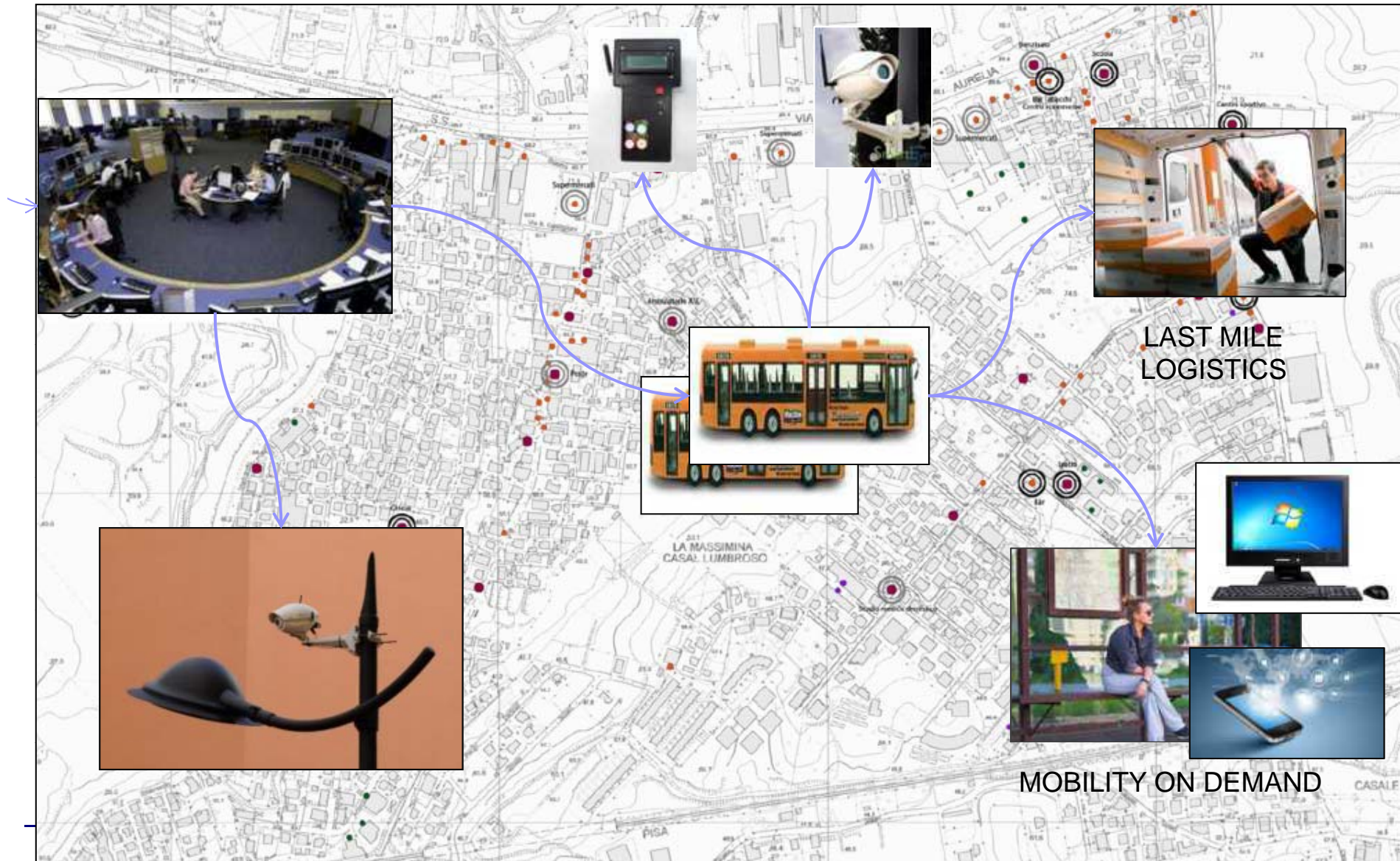
INFOMOBILITY  
AIR QUALITY



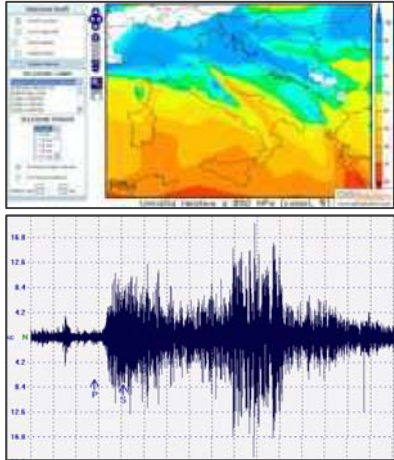
SMART PUBLIC BUSES AS A - CITY MOBILE SENSOR NETWORK -



# Smart Local Transport Services on Demand



# Urban Security Framework



Nowcasting



Scenario Evolution



Utilities Early Warning



Damage Monitoring



Black out



Flooding



T-Jam  
Thin Dust



Extreme Wind



Snow



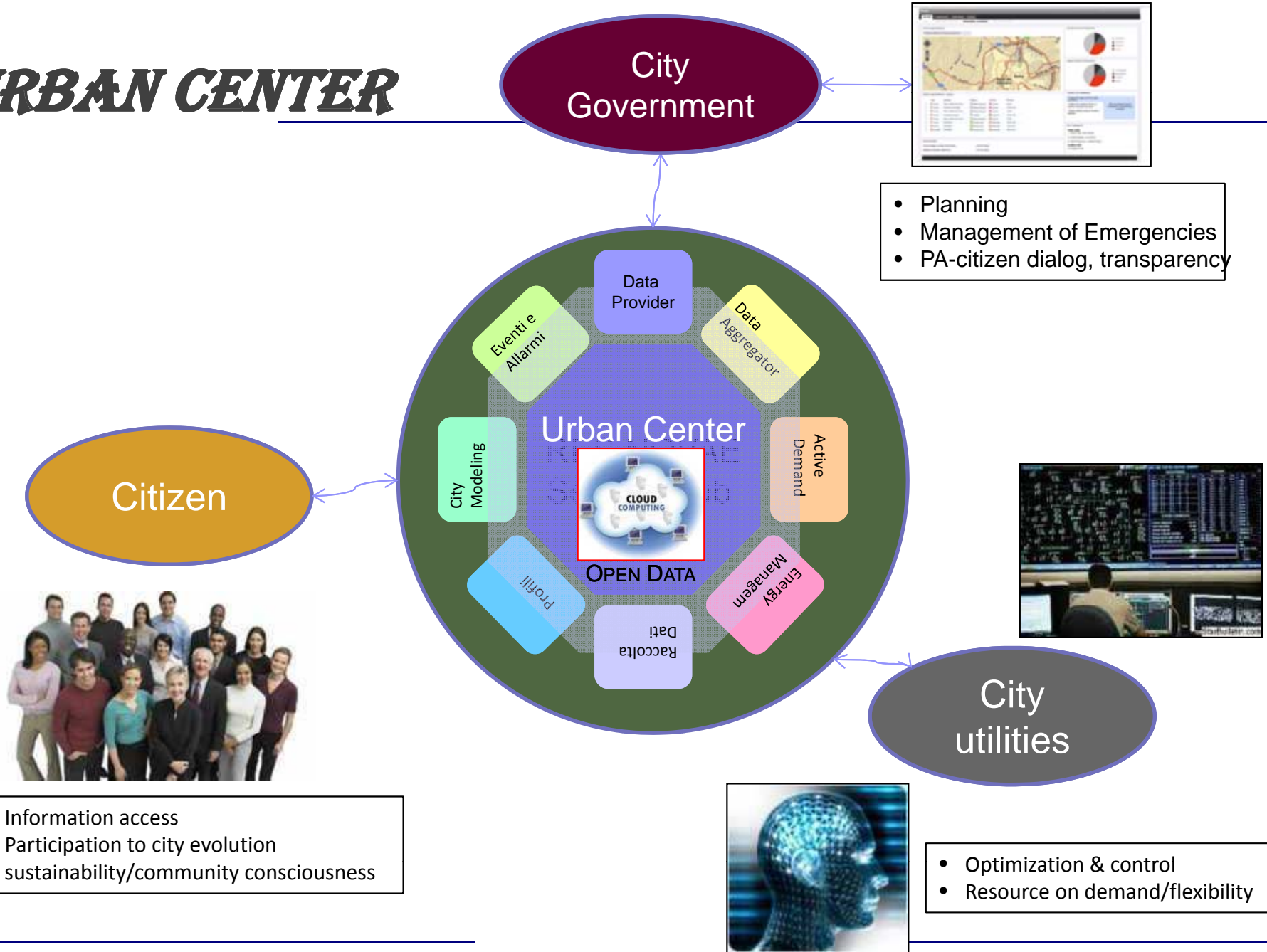
Earthquake



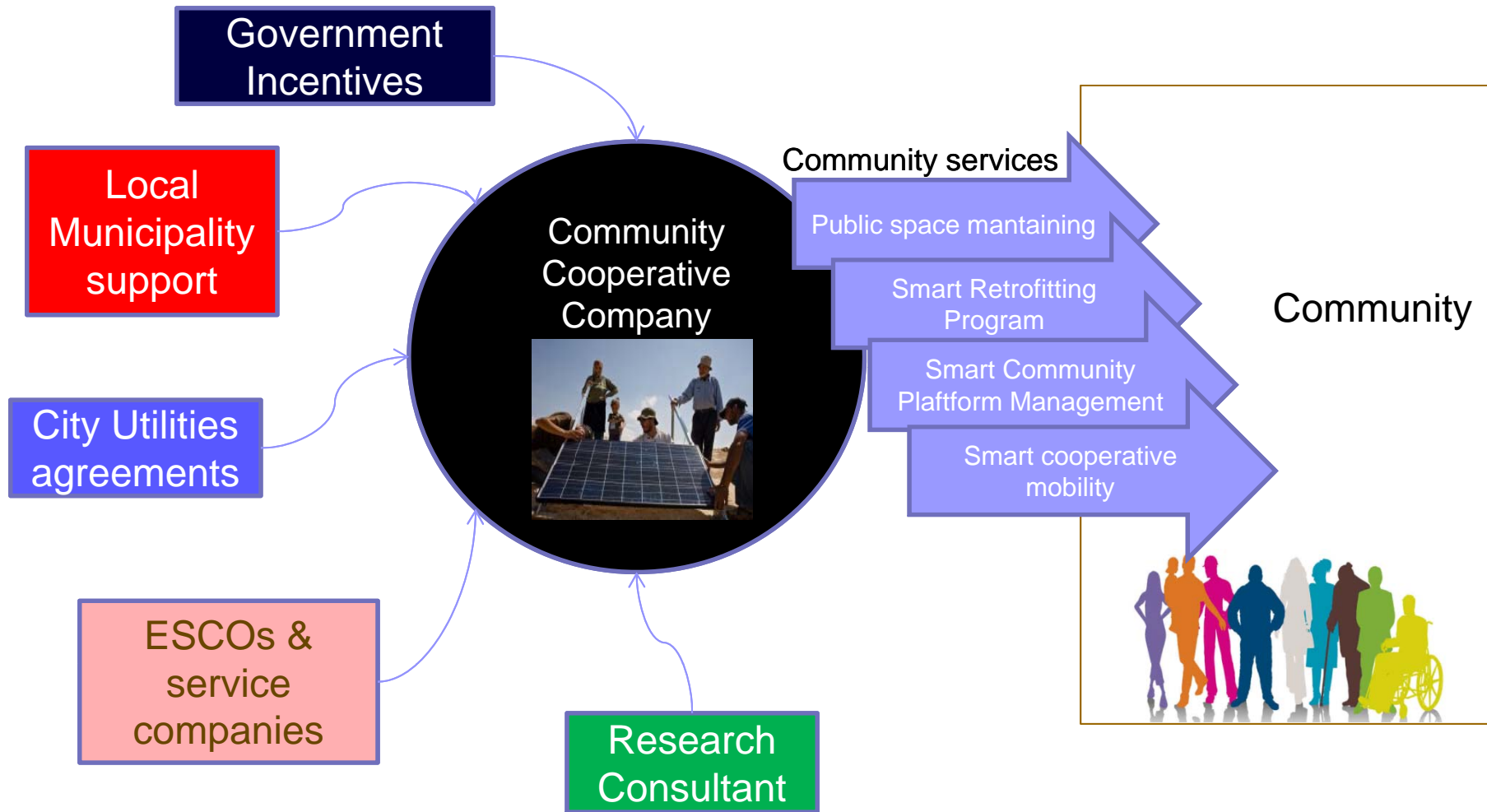
Com B-out



# URBAN CENTER



# The smart community collaborative governance



# Conclusioni:

## Ipotesi per un percorso nazionale per le smart cities

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### **Obiettivi strategici: tavoli ricerca-aziende-PA per la condivisione di**

- Architetture e standard per l'integrazione dei servizi urbani
- Soluzioni tecnologiche replicabili, info tecnico-economiche
- Soluzioni di finanziamento

### **Obiettivi di ricerca**

- Identificazione, selezione e test di architetture e standard
- Convergenza e sviluppo di una soluzione «italiana» agganciata agli standard europei ed internazionali

### **Prodotti concreti per le città**

- Linee guida e formazione
- Allegati tecnici per bandi di gare
- Advisory scientifica nelle scelte delle soluzioni

### **Ruolo delle financing agencies**

- Spingere i bandi alla adozione di tali direzioni aperte e replicabili
  - Creare programmi forzando la cooperazione tra città, ricerca, aziende
-