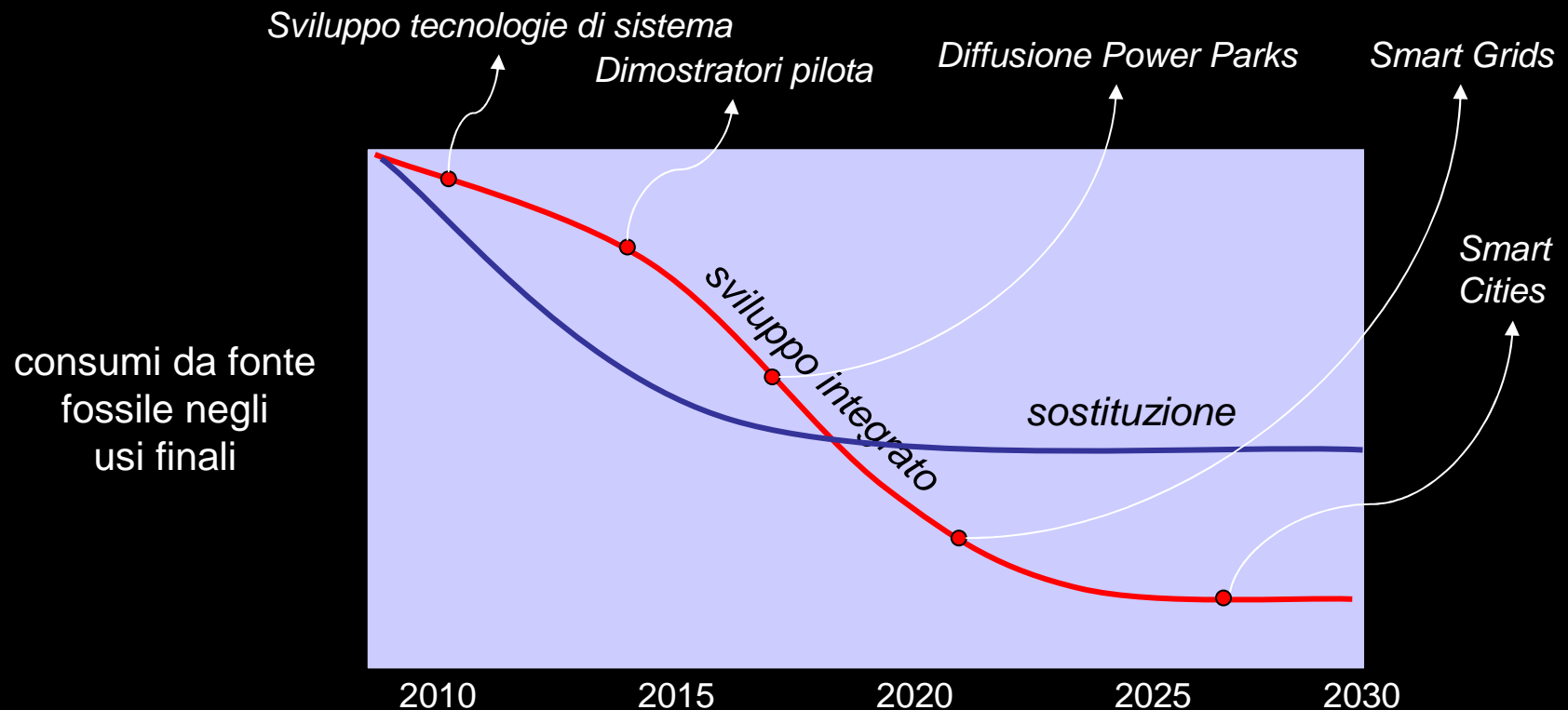
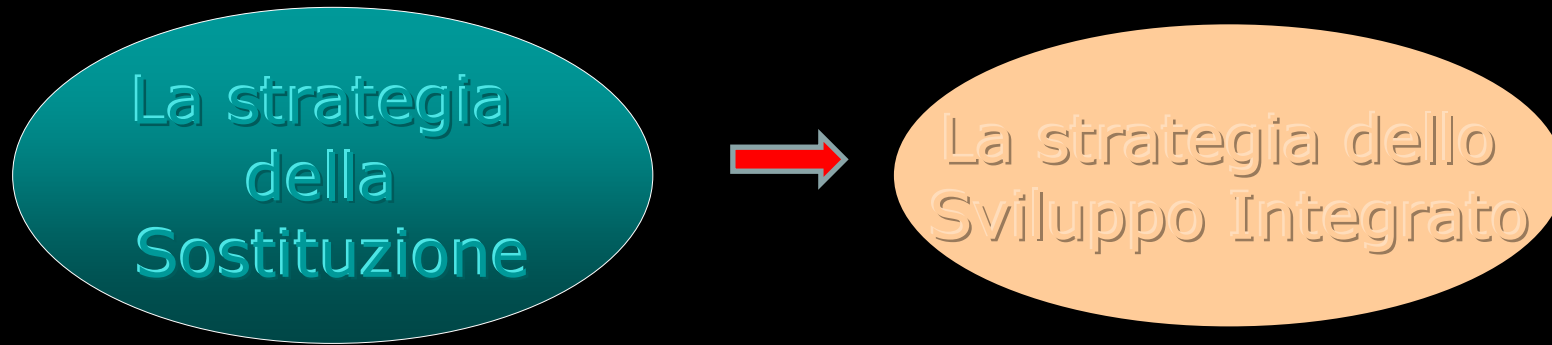




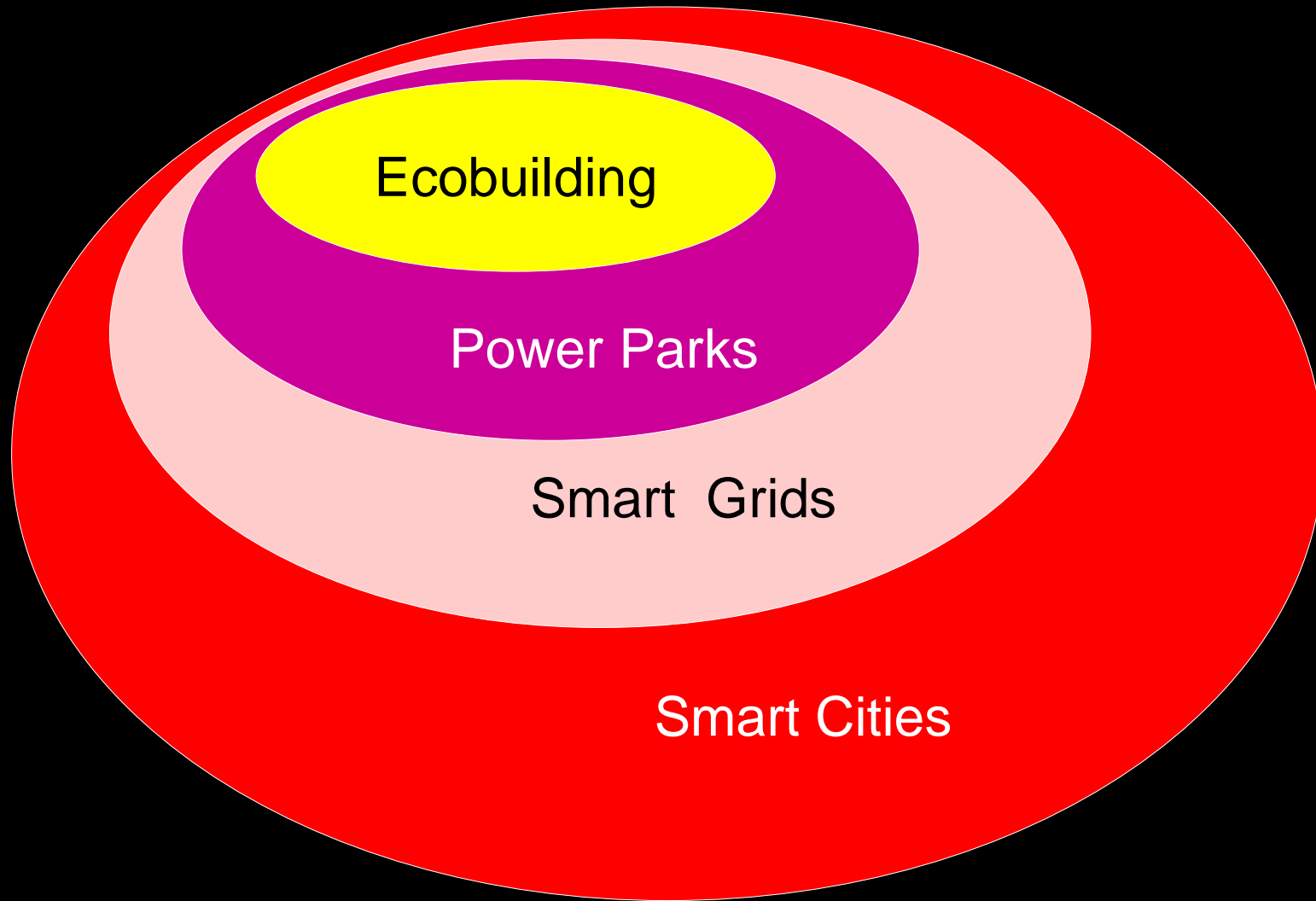
Smart Cities
la roadmap per le città sostenibili

Mauro Annunziato
Sub-coordinatore European
Joint Programme Smart Cities - EERA

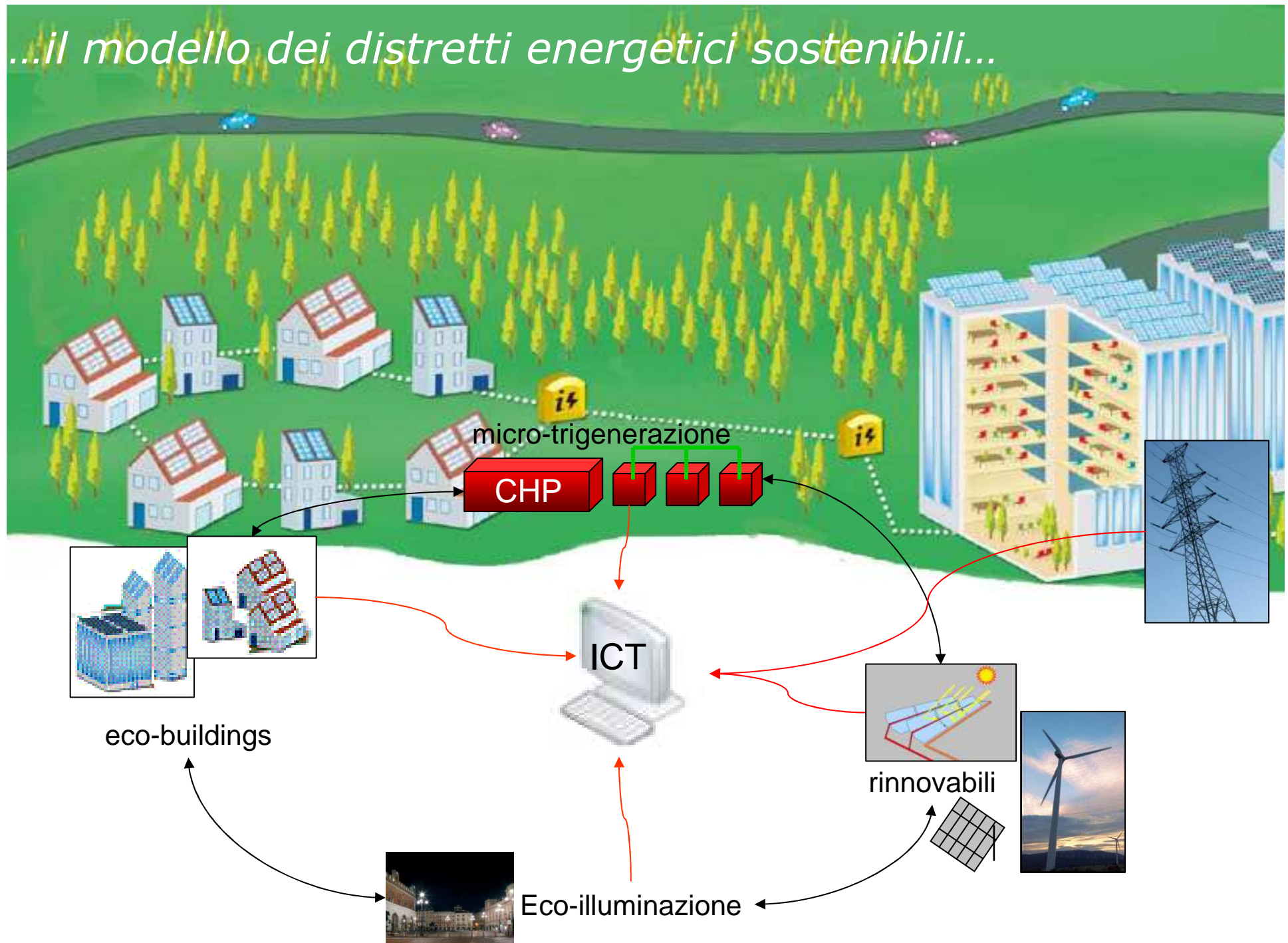
La roadmap dello sviluppo integrato dell'efficienza



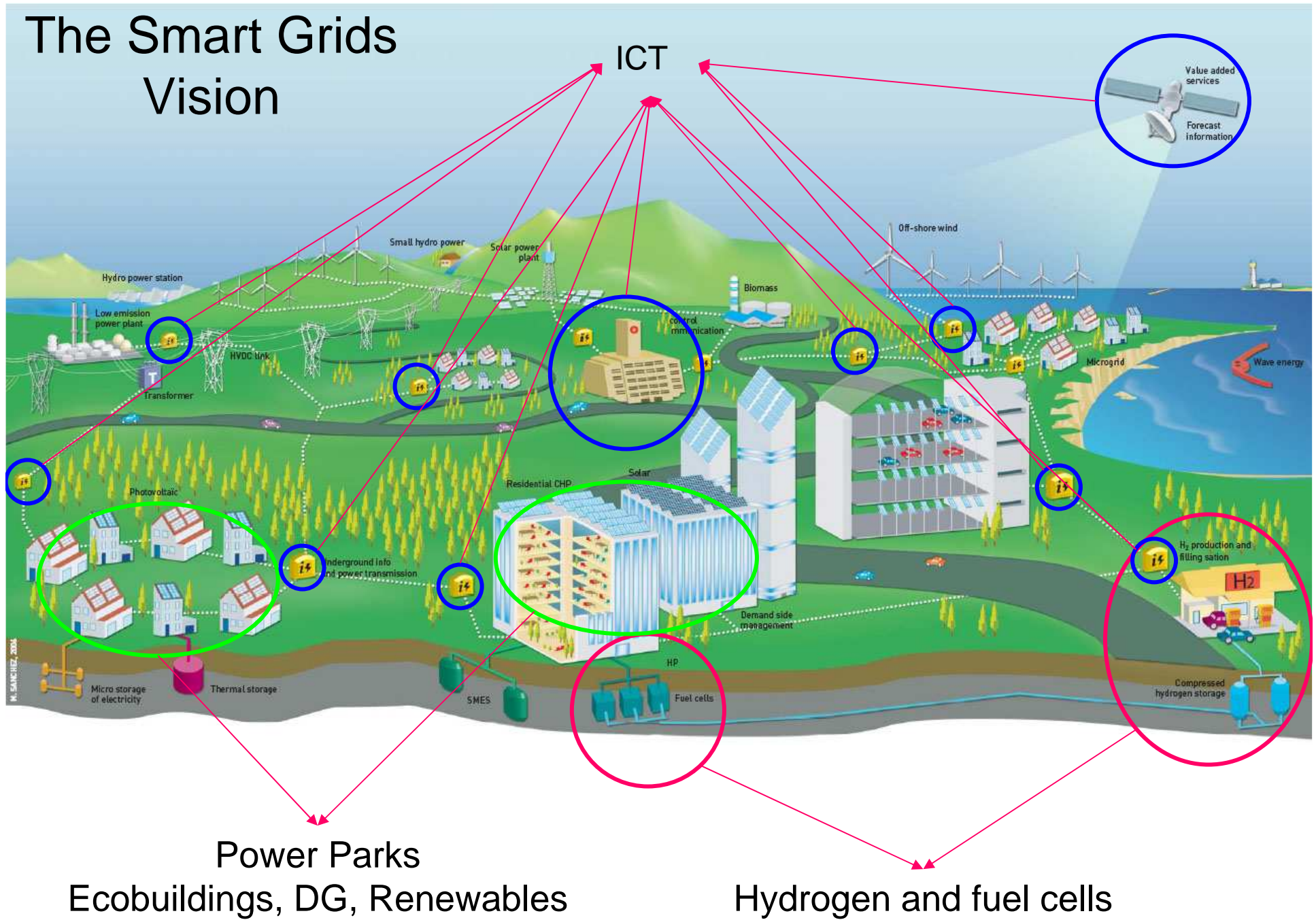
Cambiare il paradigma: i modelli dell'approccio sistemico



...il modello dei distretti energetici sostenibili...



The Smart Grids Vision



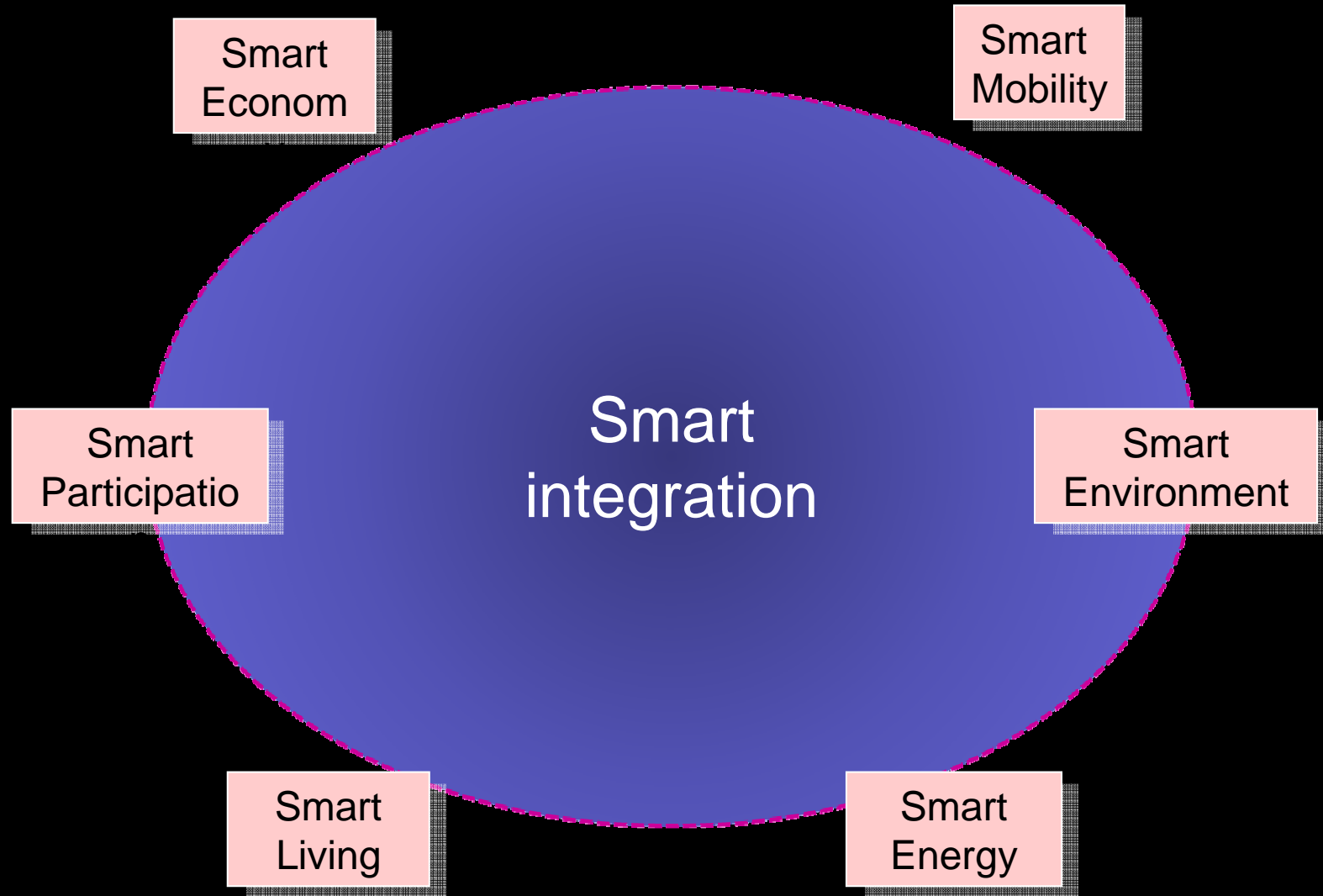
Power Parks

Ecobuildings, DG, Renewables

Hydrogen and fuel cells

Smart City

l'approccio sistemico alla sostenibilità della città



Le iniziative europee orientate alle Smart Cities



UE 2020
Innovazione
Agenda digitale
Sviluppo sostenibile

Smart City EERA Joint Programme

(approvato nov. 2011, time: 2012-2015, 200 au/a)

Smart City Stakeholders Platform

(in fase di avvio: prima conferenza giugno 2012)

Smart City Member State Initiative

(avviata dic. 2012)

Research & Dev

Industry

Government



Covenant of Mayors

(avviata 2009)

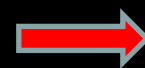
Municipalities



Urban Europe

(in fase di avvio)

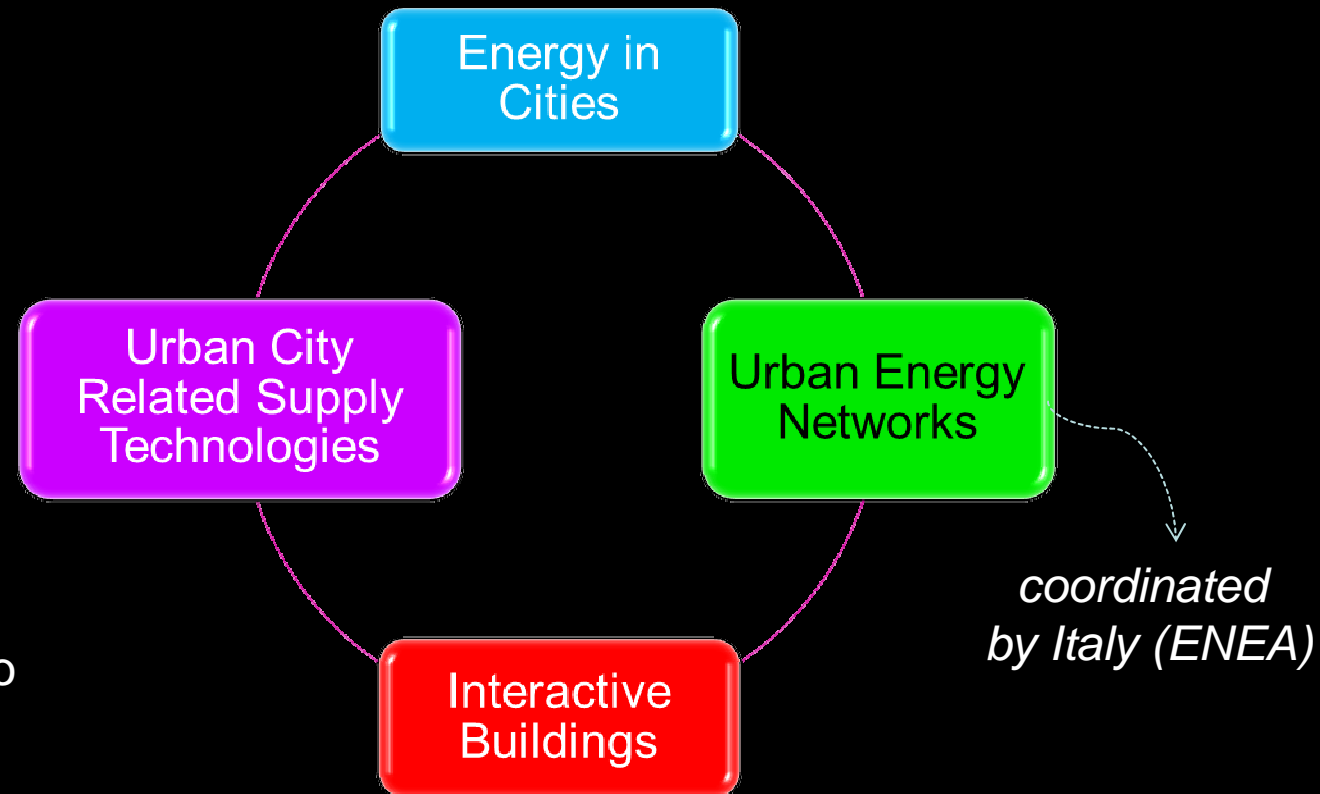
Government +
R&D



Horizon 2020



Joint Programme Smart City



27 countries
2012-2015
196 anni uomo/anno

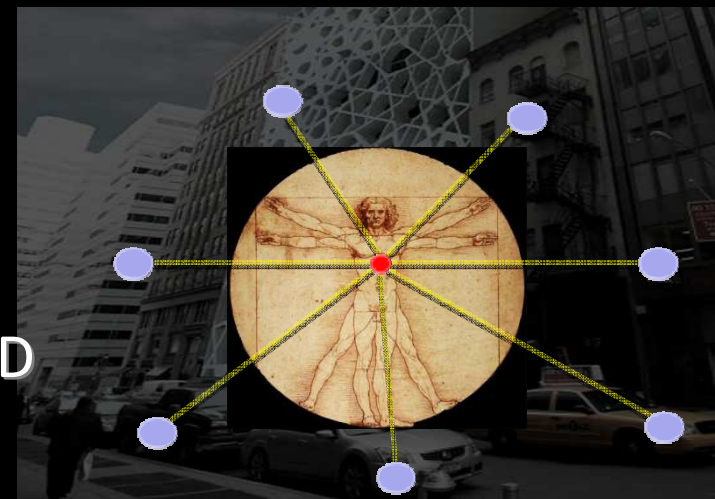
- CITY 2.0 - THE USER-PRODUCED CITY

plasmare la città sulle persone



resource on demand

THE HUMAN ORIENTED
TECHNOLOGY

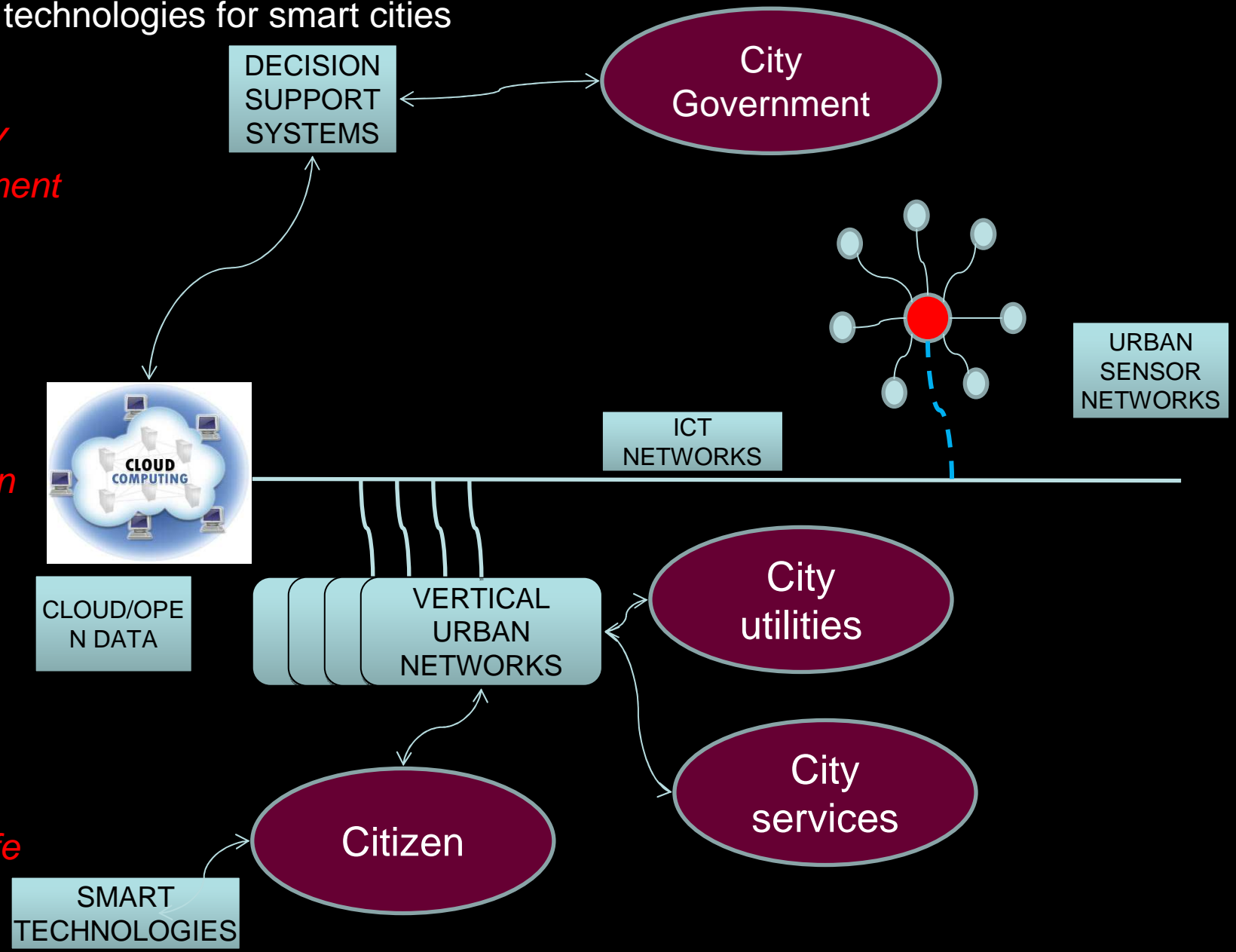


Actors & technologies for smart cities

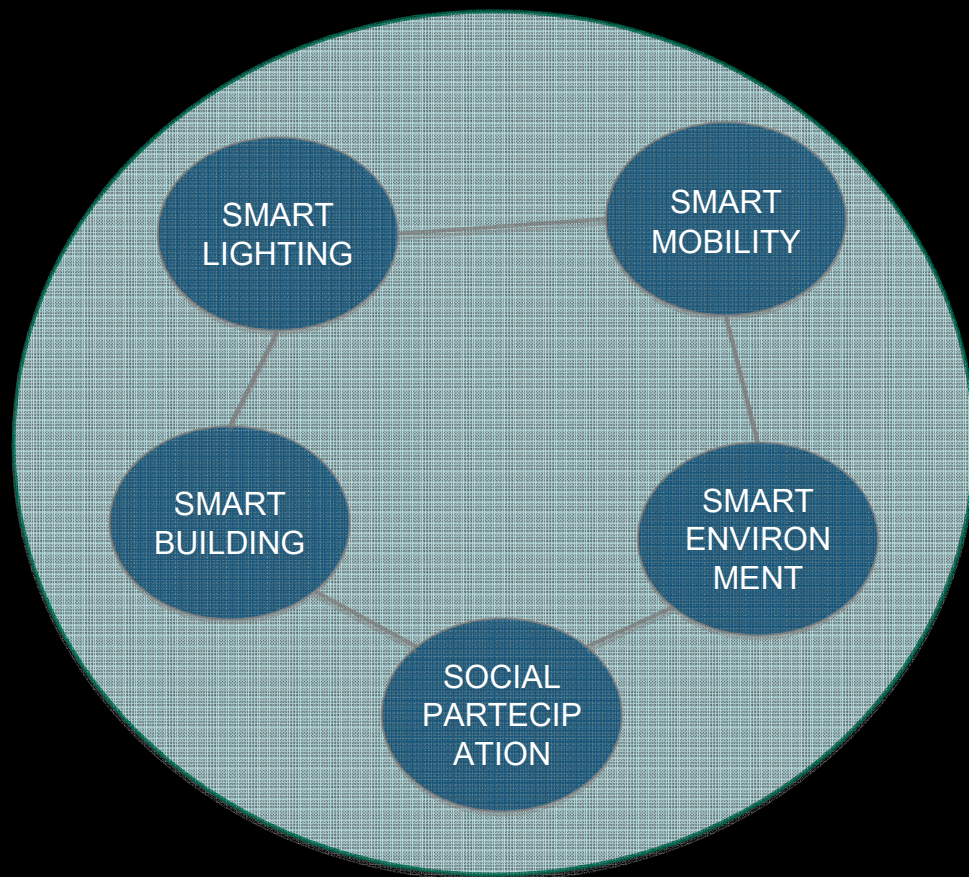
CITY government

CITY operation

CITY life



Il progetto CITY 2.0 dell'ENEA



Sviluppo di un modello di *smart town*

LO SMART RING A L'AQUILA: L'OCCASIONE DELLA RICOSTRUZIONE

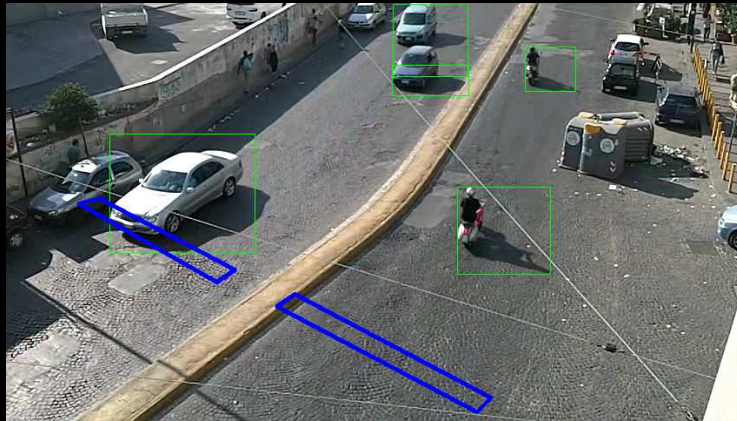


→ Rinascere dalla smart city...



SMART LIGHTING & MOBILITY

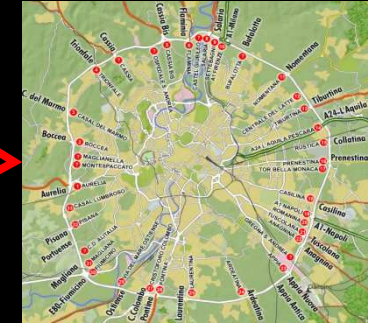
TRAFFIC AND PEOPLE MONITORING



CITY CONTROL ROOM



INFOMOBILITY



Interactive Building Network

*dall'edificio
passivo/attivo ...*

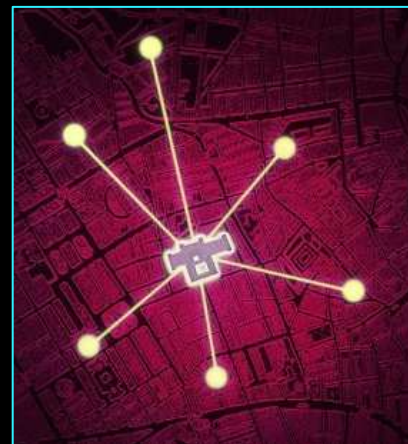
Passive Building



*Nearly Zero Energy
Building*



*alla rete di smart
buildings interattivi...*



Creare una infrastruttura urbana per la interazione tra edifici e rete

Building Network Management




DIAGNOSTICS

MANAGEMENT
OPTIMIZATION




REMOTE
MONITORING

City Digital Infrastructure

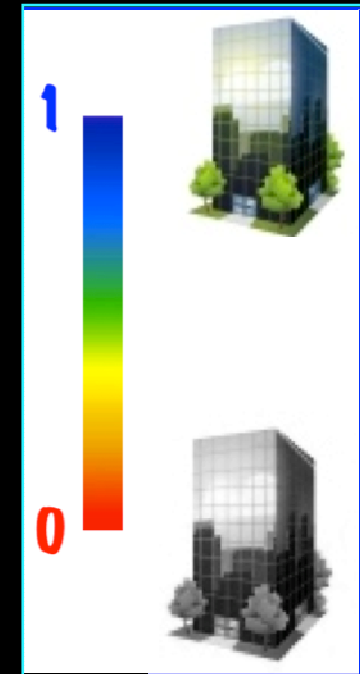
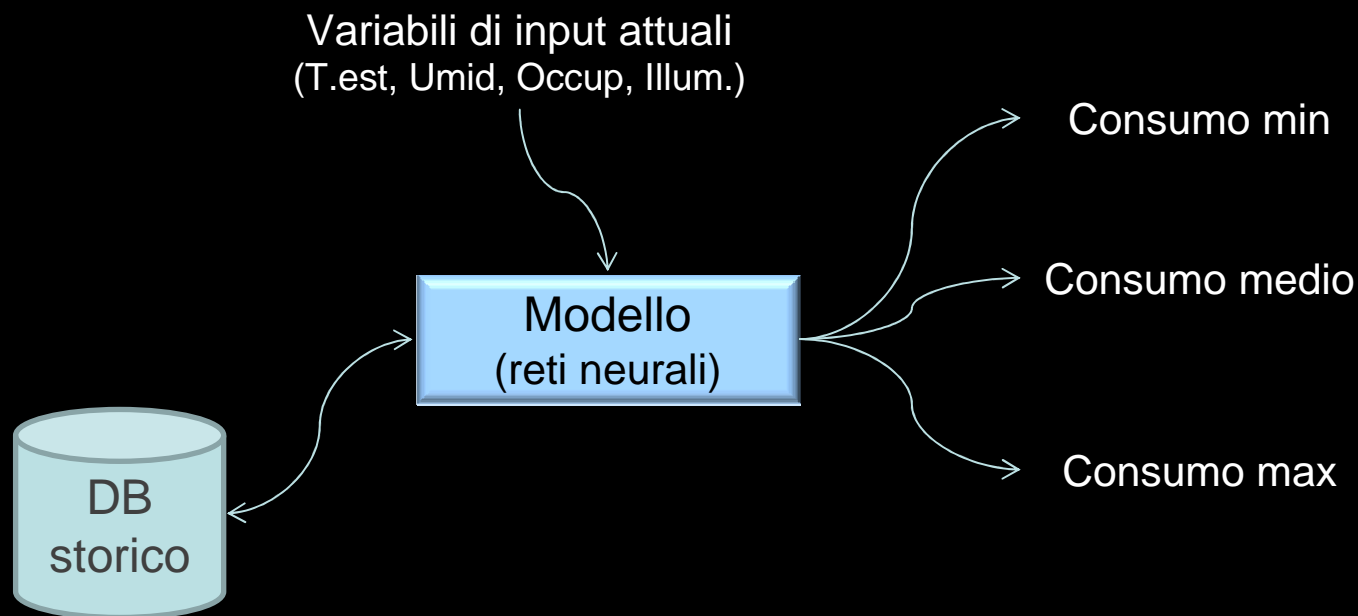


Diagnostics intelligence

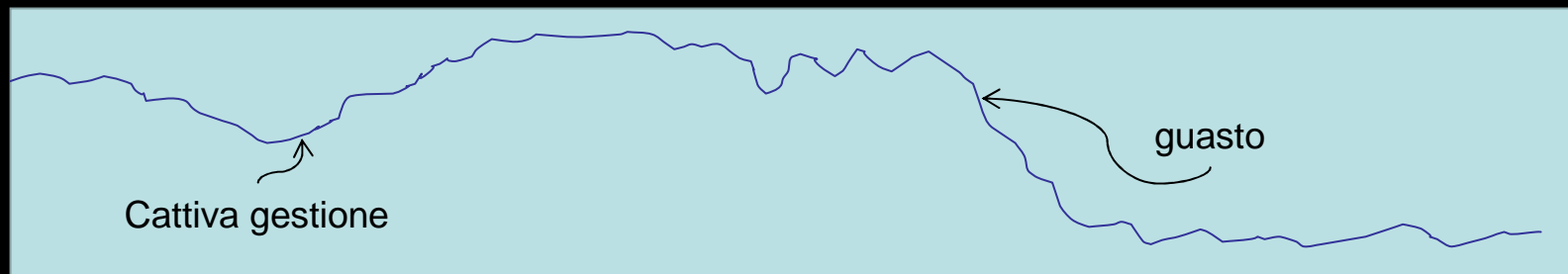


Urban hub

Indicatore dinamico per la descrizione della qualità istantanea di gestione

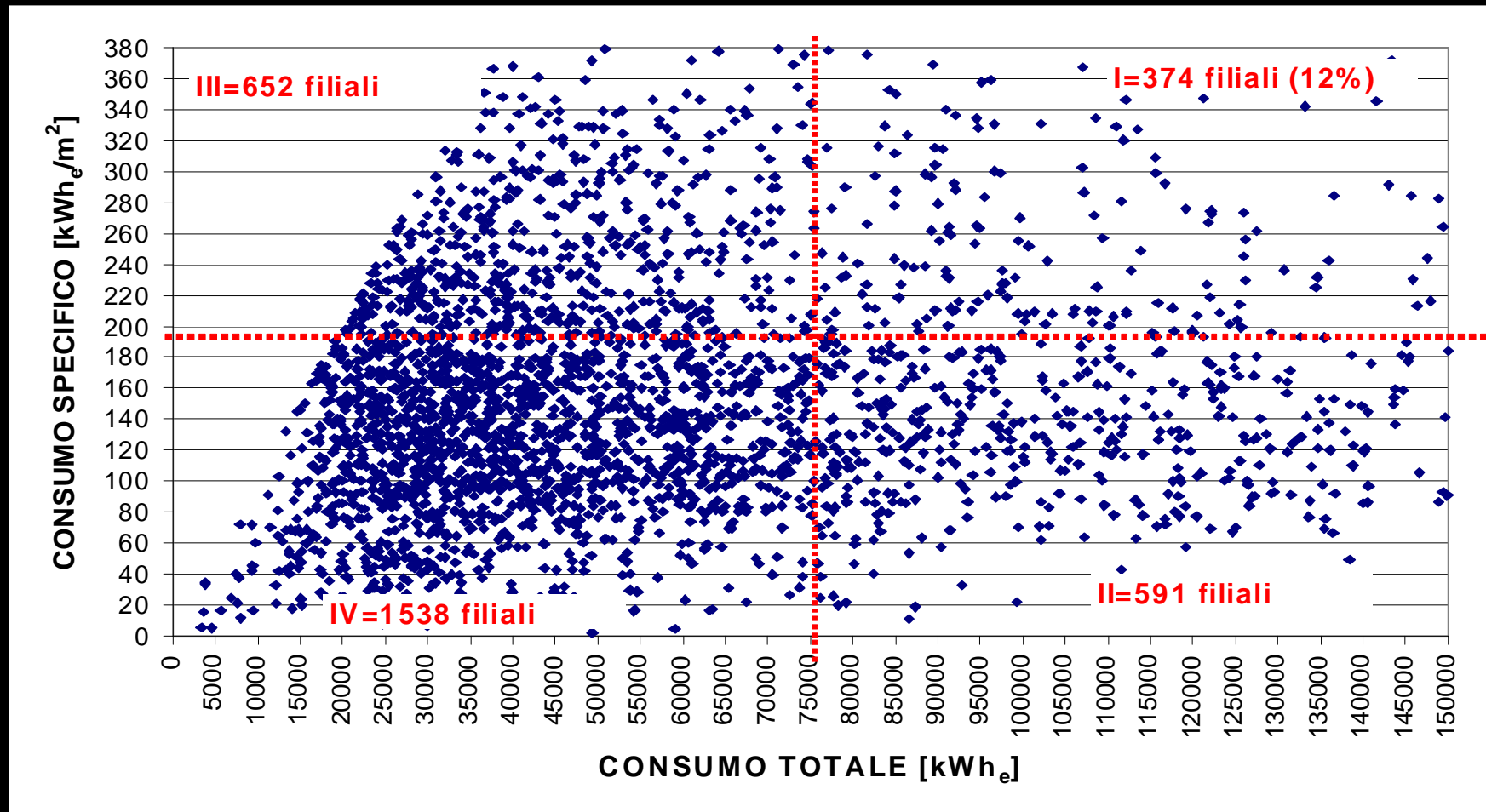


Indice qualità gestione



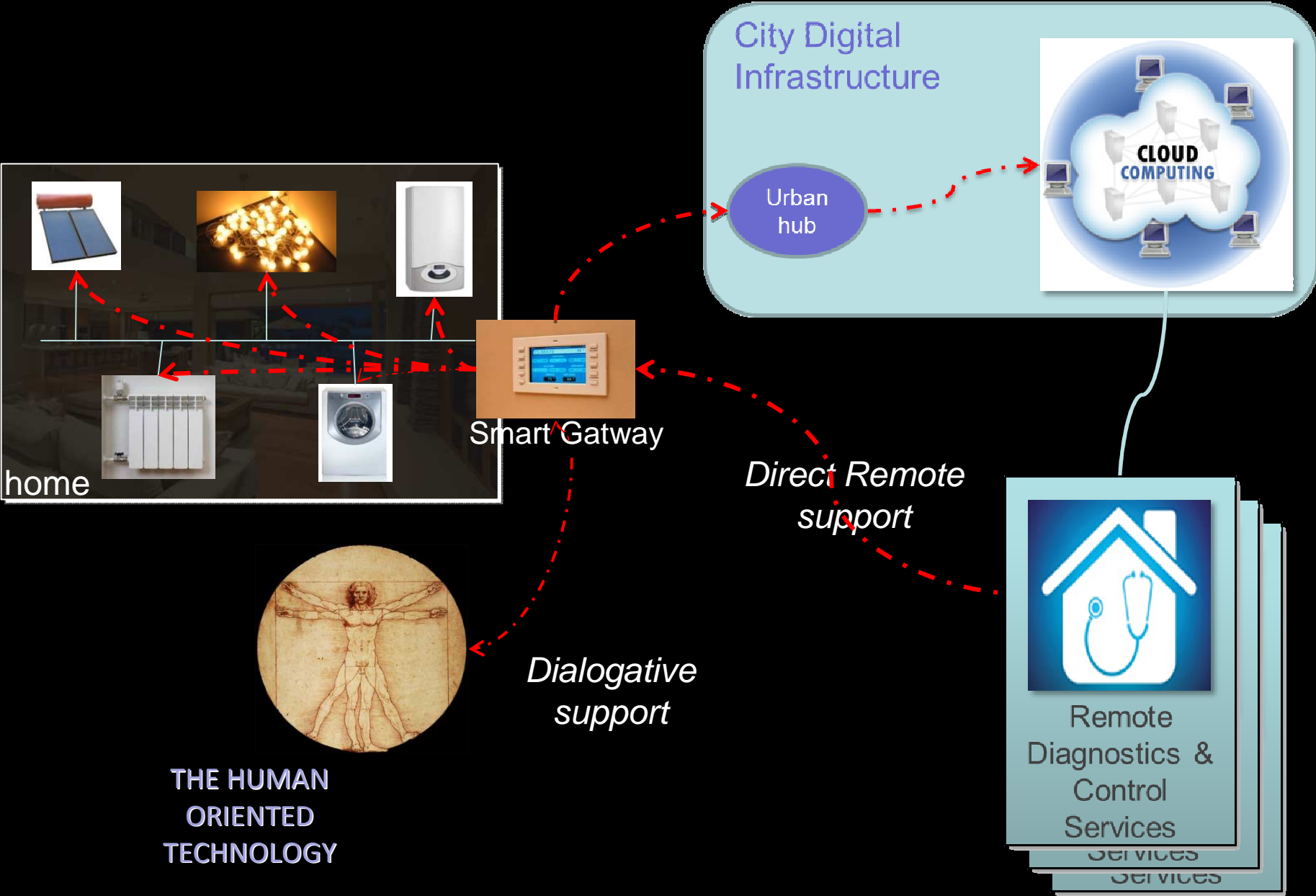
Diagnostica remota

Dispersioni edifici tali da determinare forti margini di intervento
Guasti nei sensori che conducono a forti sprechi di energia
Non ottimale impostazione del sistema di gestione automatica
Errati comportamenti umani



*Esempio di una rete di edifici
(studio su 3155 filiali bancarie, Politecnico Torino)*

Smart Home Network





Grazie per l'attenzione

mauro.annunziato@enea.it