

SCE 2013

People Centered Smart Territories: Design, Learning and Analytics

THE ITALIAN NEED MAP.

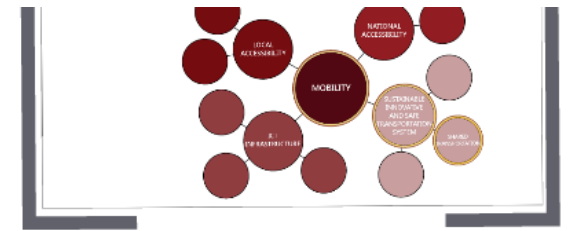
A Participatory Open Citizens - Oriented Tool for a Qualitative Development Planning Process in Smart Territories

Valentina Volpi (1), Antonio Opromolla (1), Carlo Maria Medaglia (2), Andrea Ingrosso (3), Mauro Palatucci (1)

(1) ISIA Roma Design; (2) DIAG, Sapienza University of Rome; (3) CORIS, Sapienza University of Rome

From...

**CITY-CENTERED
approach**

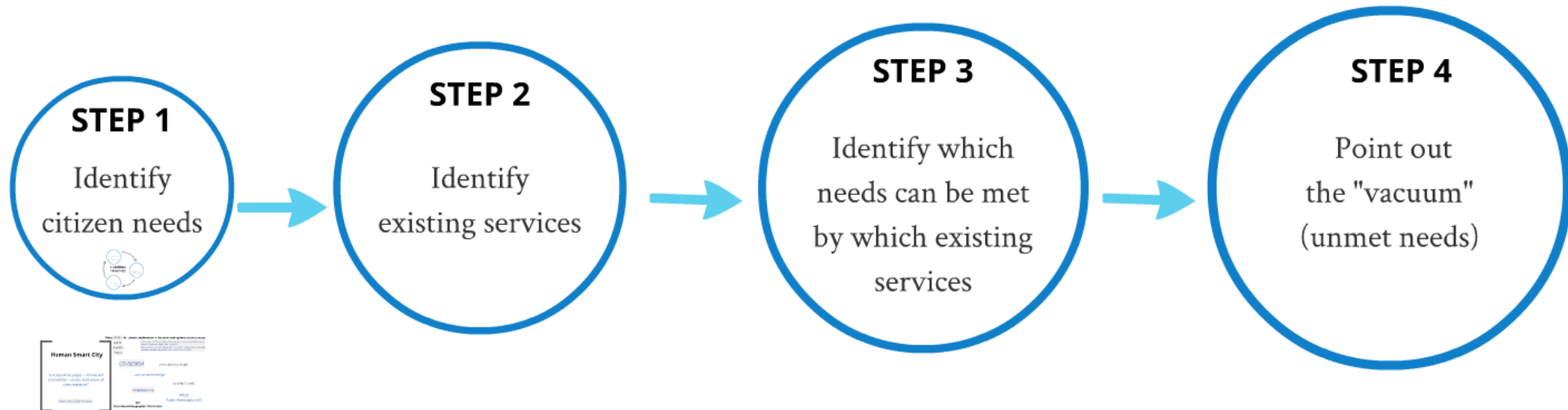


From...

CITY-CENTERED approach

... to ...

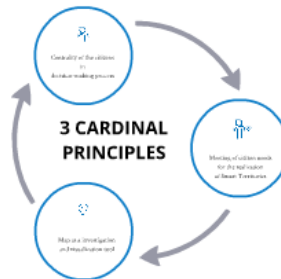
CITIZEN-CENTERED approach



An analysis on indicators in Smart Cities studies

STEP 1

Identify citizen needs





STEP 2

Identify
existing services

STEP 3

Identify which
needs can be met
by which existing
services

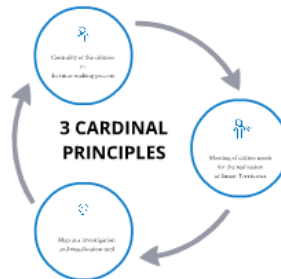
STEP 4

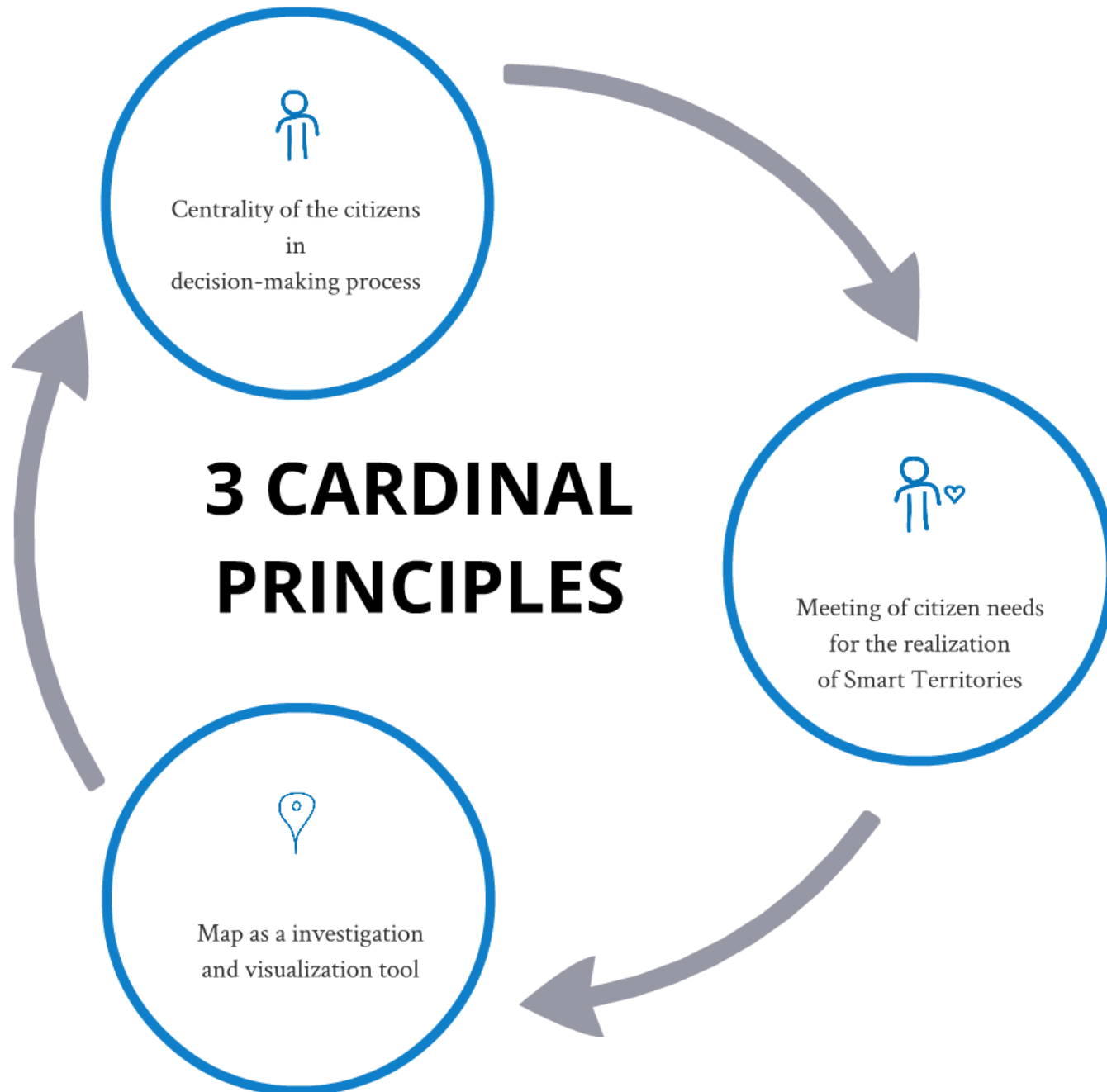
Point out
the "vacuum"
(unmet needs)



STEP 1

Identify citizen needs







Centrality of the citizens
in
decision-making process



Meeting of citizen needs
for the realization
of Smart Territories



Map as a investigation
and visualization tool

Human Smart City

"is a city where people – citizens and communities – are the main actors of urban smartness".

"Human Smart Cities Manifesto"

ROLES

MODELS

TOOLS

CO

Volunte

Human Smart City

"is a city where people – citizens and communities – are the main actors of urban smartness".

"Human Smart Cities Manifesto"

Many LEVELS for citizen involvement in decision-making/innovation process

ROLES

Koch G. et al., "Identifying Participants' Roles in Open Government Platforms and its Impact on Community Growth", 46th HICSS, 2013

MODELS

Schuurman D. et al., "User characteristics for customer involvement in innovation processes: deconstructing the Lead User concept", ISPIM XXII, 2011

TOOLS

CO-DESIGN

participatory design

user-centered design

LIVING LABS

crowdsourcing

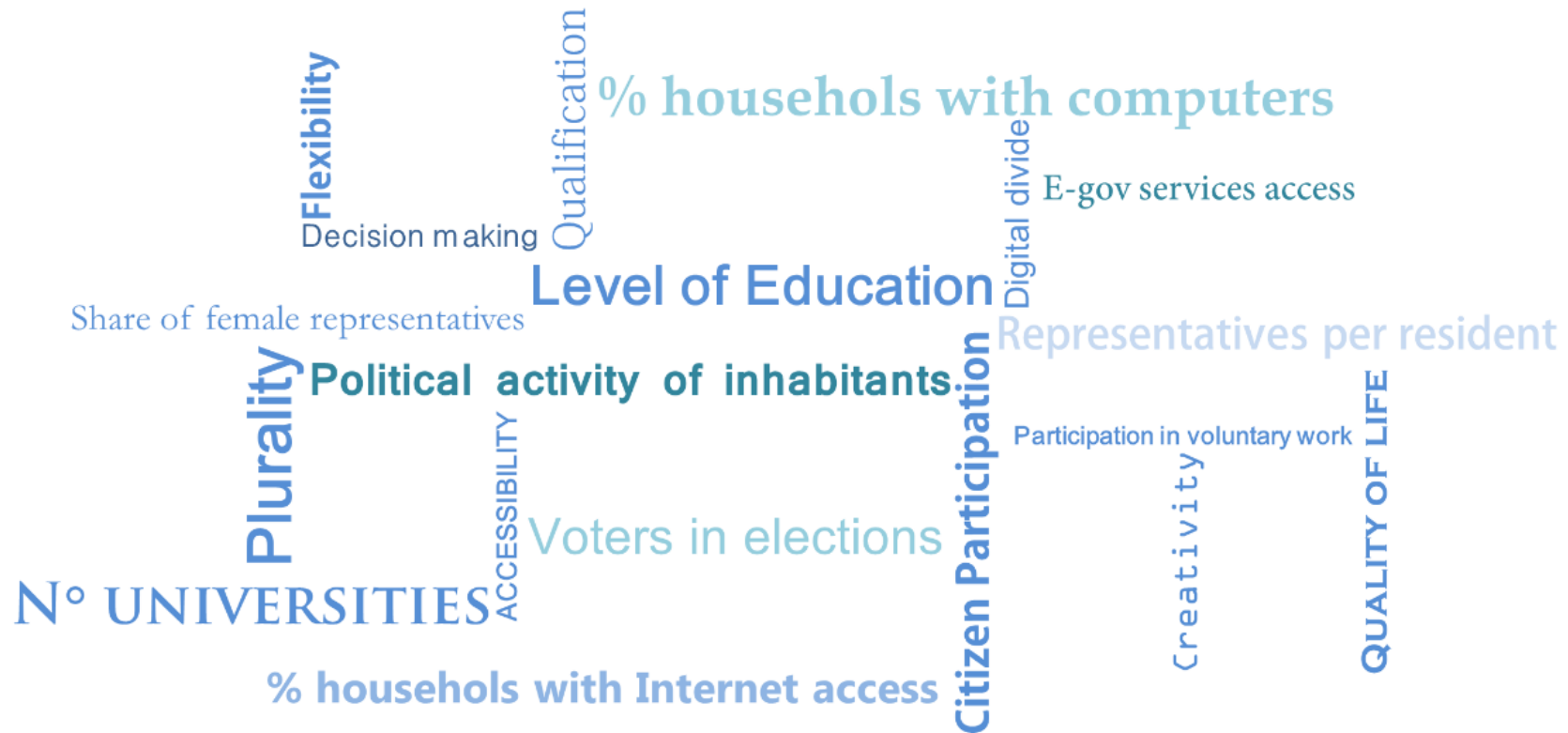
PPGIS

Public Participation GIS

VGI

Volunteered Geographic Information

An analysis on indicators in Smart Cities studies



Giffinger R. et al., "Smart Cities: Ranking of European Medium-Sized Cities", Centre of Regional Science (SRF) Vienna University of Technology, 2007

Lombardi P. et al., "An Analytic Network Model for Smart Cities", XI Symposium ISAHP, 2011

Dirks S. et al., "A vision of smarter cities", IBM Global services, 2009

"SMART CITY INDEX. Confrontarsi per diventare smart", Report 2013

ICity Rate, "La classifica delle città intelligenti italiane", 2012

Il Sole 24 ore, "Province a confronto sulla qualità della vita", 2012

CITIZEN NEEDS ANALYSIS IS NOT CONSIDERED
AS A KEY ELEMENT FOR MEASURING THE
SMARTNESS OF A CITY

CITIZEN NEED MAP

A **CITIZEN NEED MAP** is a spatial representation of one or more needs perceived by people in a specific area.

On the map we represent only **COLLECTIVE NEEDS**, i.e. needs perceived by the user as member of a community. Personal needs are excluded.



Some need maps in the Italian context. Features

PURPOSE

- Research works carried out by Municipalities
- Oriented towards the realization of specific purposes or strategies
- Main topics: Health and Disadvantaged

METHODOLOGY

- Key position of research analysis experts
- Use of traditional tools as interview, focus group, participant observation
- Citizens propose solutions

MAP

- Carthographic and abstract oriented tools
- Static pictures



ITALIAN NEED MAP

It is a **DYNAMIC MAP**, with real time update data entered directly by users and a usable interface. The citizens can express their "common needs", which will produce an immediate output on the map.

The map is not intended to be a public consultation tool. It allows a **CONTINUOUS DIALOGUE** between citizens and the public administration.

CITIZEN NEED MAP



**IDENTIFICATION
OF NEEDS**

and

**INTERACTION
MODES**

ITALIAN NEED MAP

IDENTIFICATION OF NEEDS



INTERACTION

SMART ECONOMY

SMART PEOPLE

SMART GOVERNANCE

SMART MOBILITY

SMART ENVIRONMENT

SMART LIVING

We consider the 6 "categories", the 31 "factors" and the 74 "indicators" of this study as basis for the elaboration of **CITIZEN NEEDS CATEGORIES.**

example

CATEGORY: Smart Mobility

FACTOR: Sustainable, Innovative and Safe Transport Systems

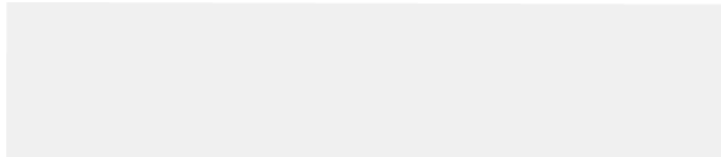
INDICATOR: Green Mobility Share -> NEED: Transportation Shared.

Giffinger R. et al., "Smart Cities: Ranking of European Medium-Sized Cities", Centre of Regional Science (SRF) Vienna University of Technology, 2007

UI NEEDS

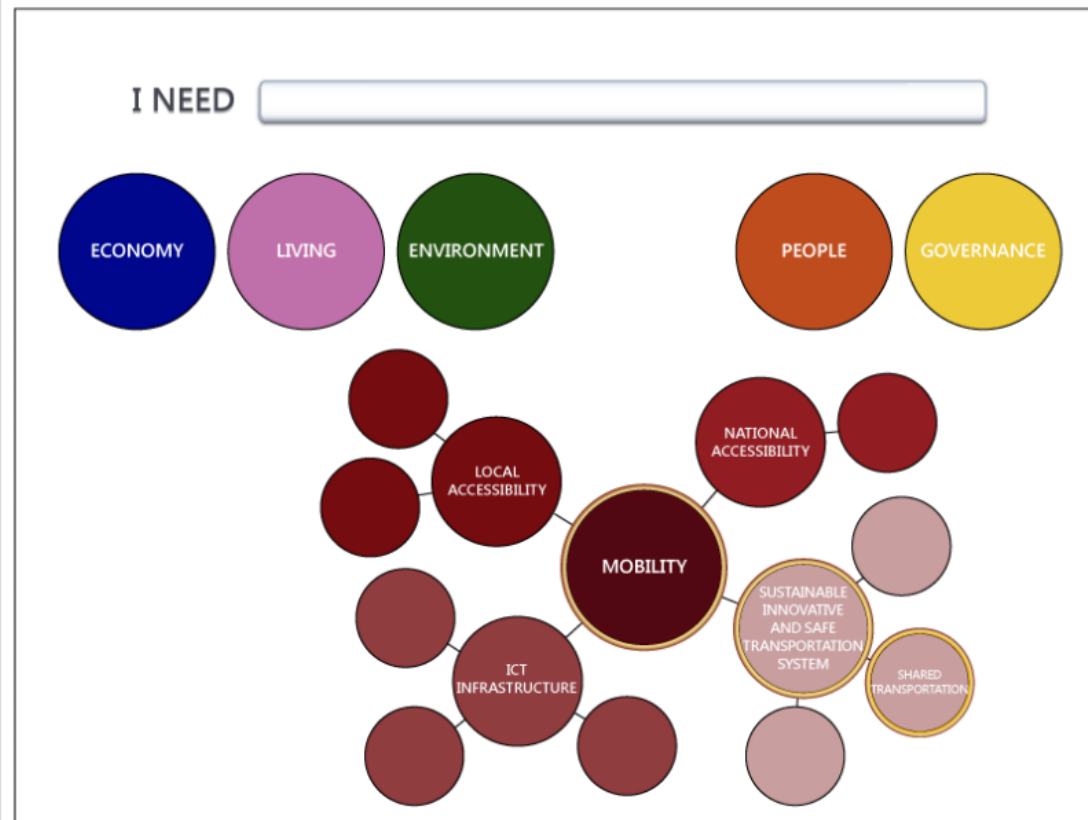
INTERACTION MODES

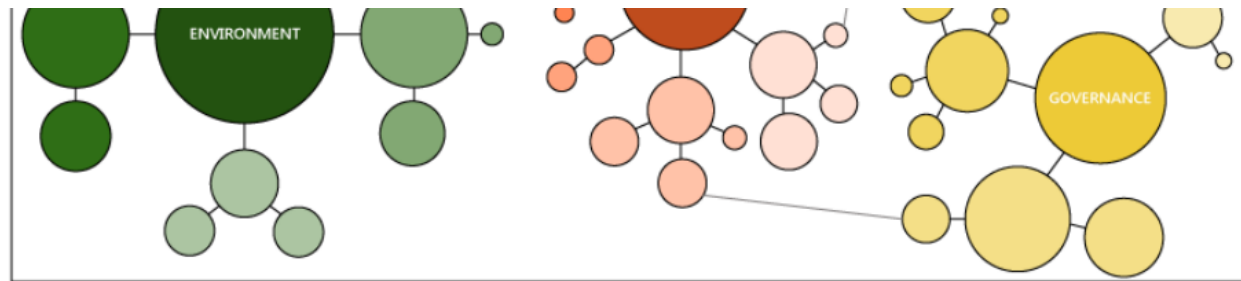
We propose **2 MAPS** • *MENTAL MAP*
• *GEOGRAPHIC MAP*
with **2 AIMS** • *ANALYSIS*
• *VISUALIZATION*



MENTAL MAP AS ANALYSIS TOOL

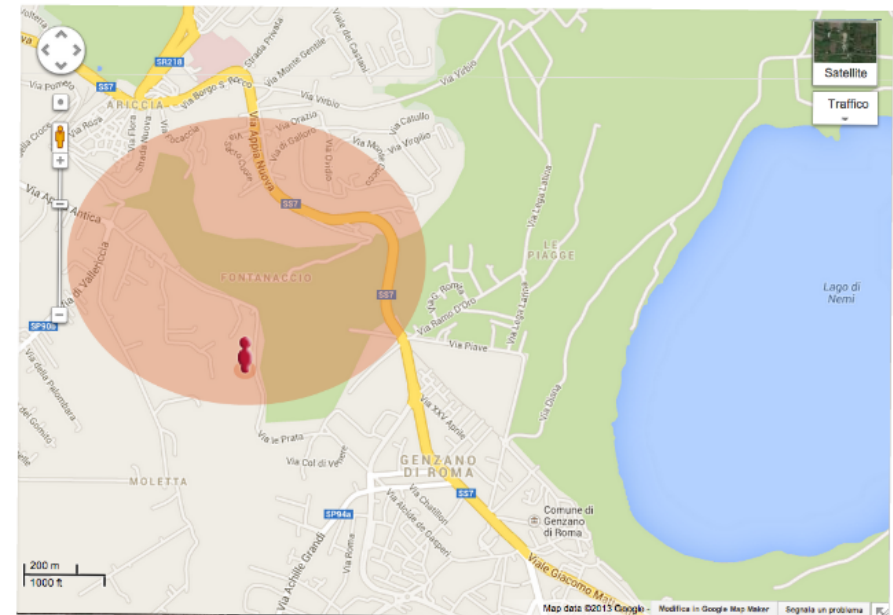
Citizen can express his need writing a sentence ("I need...") and choosing one or more **MAIN TAGS** (the 6 "categories") and, for each of these, one or more **SECONDARY TAGS** (the 31 "factors" and the 74 indicators/needs), that define the expressed need.





GEOGRAPHIC MAP AS ANALYSIS TOOL

Citizen can indicate the geographic coordinates of the expressed need and signal if it is a need related to a specific place or to a more extensive area.



MENTAL MAP AS ANALYSIS TOOL

Citizen can express his need writing a sentence ("I need...") and choosing one or more **MAIN TAGS** (the 6 "categories") and, for each of these, one or more

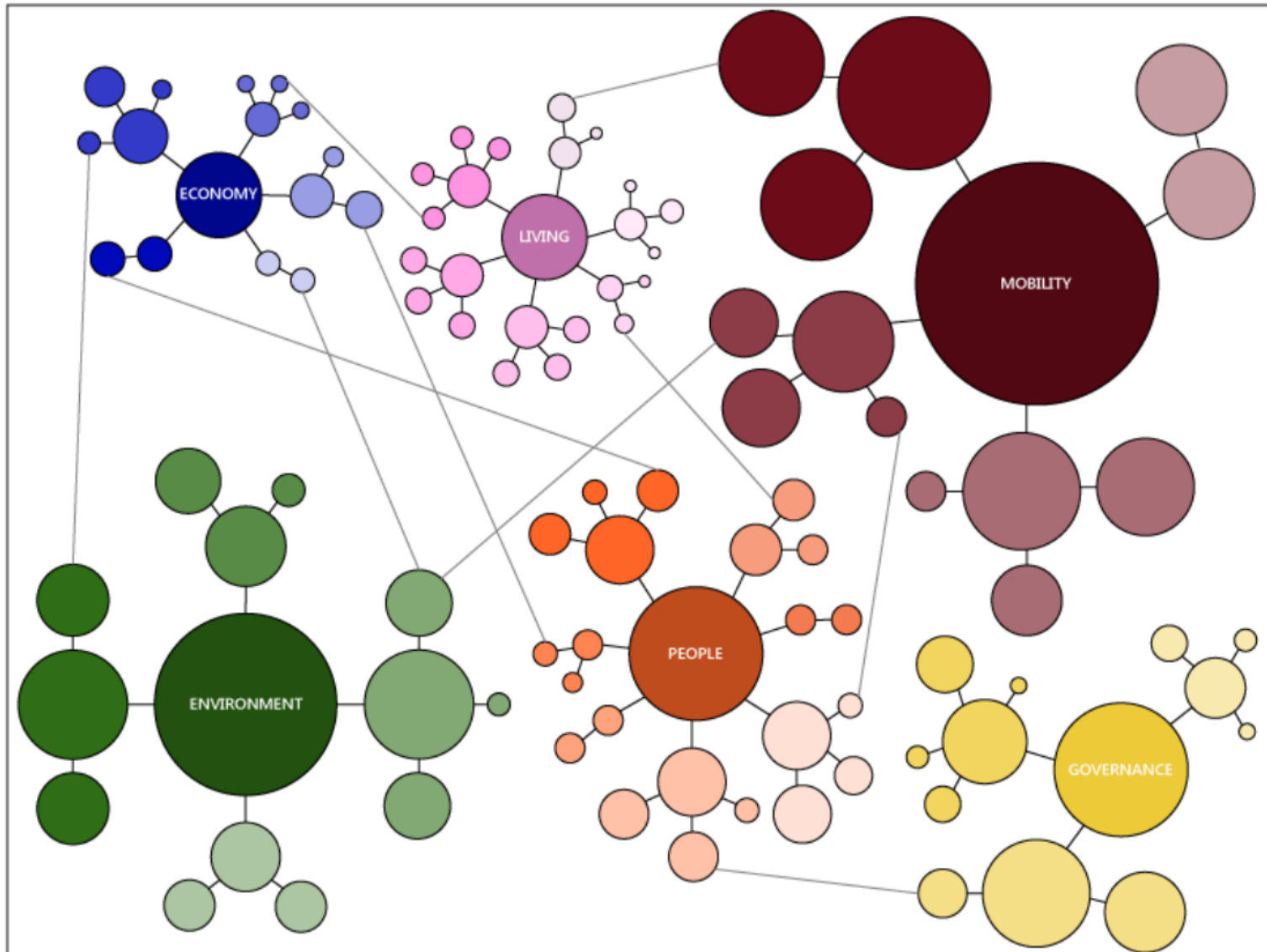
MENTAL MAP AS VISUALIZATION TOOL

Citizen and PA can visualize the more expressed categories of needs.

HUE COLOR: identifies the six different categories

SATURATION COLOR: for each category, it identifies needs typology

SIZE OF GRAPHIC ELEMENTS: identifies the number of citizens who expressed that specific need



GEOGRAPHIC MAP AS VISUALIZATION TOOL

Citizen and PA can visualize the more expressed categories of needs on a geographic map.



STEP 2

Identify
existing services

STEP 3

Identify which
needs can be met
by which existing
services

STEP 4

Point out
the "vacuum"
(unmet needs)



*Thank you for
your attention!*

Antonio Opromolla

anto.opro@gmail.com

Valentina Volpi

valentina.volpi84@gmail.com

Carlo Maria Medaglia

carlomaria.medaglia@uniroma1.it

Andrea Ingrosso

andrea.ingrosso@uniroma1.it

Mauro Palatucci

mauro.palatucci@gmail.com