



Smart City Expo World Congress 2016 Barcelona, 15-17 November 2016

Governing tHe smart city: a gOvernance-centred approach to SmarT urbanism (GHOST) (23/09/2015 - 23/09/2018)

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Under the padronage of the Municipality of Cagliari













There are many ways to know, act, manage and govern a City

Is it possible to merge many perspectives, many perceptions and go beyond them?

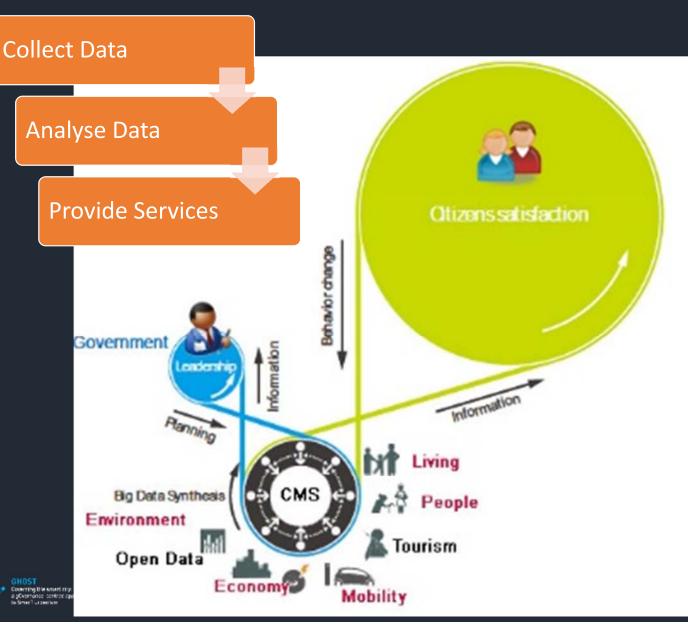






Main Goal

Valorize different perceptions, points of view, behaviours to enhance the institutional base of smart city initiatives











Data related to citizens behaviours

Mobility Tourism

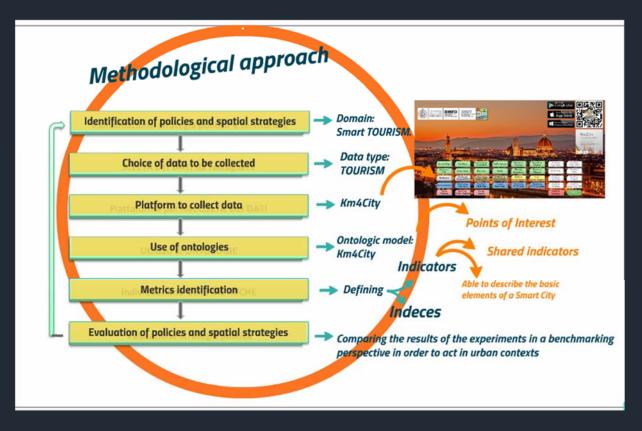






Why Tourism?

The Tourist is an active sensor for responding on general city services Tourism helps to define shared strategies for sustainable and competitive development of the city, through the measurement of the main phenomena related to tourism sector and through the participation of all actors involved in the city.









Km4City Dashboard

A monitoring system of the factors that contribute to forming the quality of the destination consists of an analysis of:

Impact of transport Quality of life of residents Quality of work

Active conservation of cultural heritage

Active conservation of the Environmental Heritage

Identity of the active protection of the destinations

Decreasing / optimizing the use of natural resources

Reduction and optimization of energy consumption

Decrease and waste management



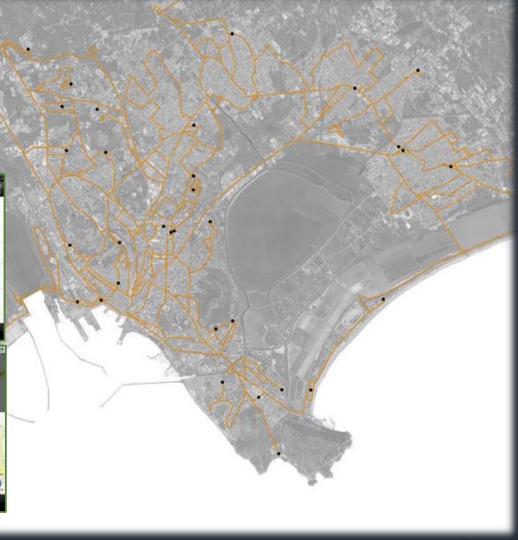






Why Mobility?











Variables	Indicators	Specif	
Public transport	I _{PT}	I _{BND} I _{DP1} I _{TLC}	Bus network density Demand for public t Traffic lights centre
Cycle lanes	I _{CL}	I _{CLD} I _{CLI}	Cycle lanes density Cycle lanes for ten t
Bike sharing	I_{BS}	I _{BSD} I _{BPI}	Bicycle station dens Bicycle per thousan
Car sharing	I _{CS}	I _{C1} I _{SI}	Car for ten thousand Station for ten thou
Private mobility support system	I _{PMSS}	I _{VMS} I _{STA} I _{EPPS} I _{AMD}	Variable message si SMS service for trat Electronic payment Applications for me
Public transport support system	I _{PTSS}	I_{EBSS} I_{ETPS} I_{RSWT} I_{TPC} I_{TTO}	Electronic bus stop: Electronic ticket pay Information on rout Travel planner for t Travel tickets online

Cagliari			
Public Transport Bus network density (I _{BND})		Bus network	120 km
Das network density (IBND)	\rightarrow	Area	86.05 km ²
Demand for public transport (I _{DPT})	\longrightarrow	Passengers per year	43.800.000
	\longrightarrow	Inhabitants	385.000
Traffic lights centralized (I _{TLC})	\rightarrow	N° Total	65 65
· Cycle lanes		lotal	65
Cycle lanes density (I _{CLD})	\longrightarrow	Cycle network	70 km
	\longrightarrow	Area	86.05 km ²
Cycle lanes per ten thousand inhabitants (I _{DPT})	\rightarrow	Cycle network	70 km
		Inhabitants	154.019
Bike Sharing			
Bicycle station density (I _{BSD})	\rightarrow	N° station	10
Bicycle per thousand inhabitants (I _{BPI})	\longrightarrow	Area N° bicycle	86.05 km ² 105
Diegoto por triododira inirabitante (IBPI)	\longrightarrow	Inhabitants	154.019
Can Sharing			
· Car Sharing			
Car for ten thousand inhabitants(I _{CI})	\longrightarrow	N° station	10
Station per thousand inhabitants (I _{Si})	\rightarrow	Inhabitants N° station	154.019 5
otation por triododria minabitanto (15)	\longrightarrow	Inhabitants	154.019
mie nevices IVes=1 DD: no=0 DD	D.		
Cagliari - Private mobility support system			
Variable message sign (I _{VMS})			
SMS service for traffic alerts (I _{STA})			
Electronic payment park systems (I _{EPPS})			
Applications for mobile devices (I _{AMD})			

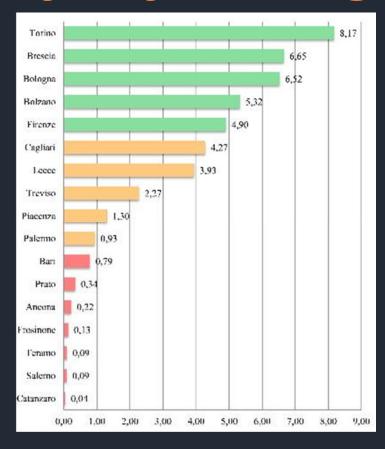
Cagliari - Public transport support system	
Electronic bus stop signs (I _{EBSS})	©
Electronic ticket payment system (I _{ETPS})	©
Information on routes, schedules and waiting times (I _{RSWT})	©
Travel planner for the route calculation (I _{TPC})	8
Travel tickets online (I _{TTO})	©







Mobility city ranking











What data sources?

Sensors **Twitter Vigilance Open Data Mobile App** Wi-Fi









GHOST Road Map

First Year Second Year Third Year REASSESSING THE SMART CITY Identifying a "new" set of indicators The ranking assumes the characteristics of "learning organization policies" through a continuous and systematic method for identification, learning and implementation of more effective policies The matrix of weights indicators will be also constructed through the opinions of city users. This approach will relativise the system of indicators with reference to the subjective dimension of the analyzed context. Generation of an implementable Urban Atlan It will identify classes of cities, through types of governance and context (cultural, social, urban, residential, dimensional) and in terms of meeting citizens' needs. **DEFINING AN ENABLING TECHNOLOGY** Identifying an application field (smart tourism) Creating a replicable model for other smart communities and other governance contexts The testing of this model in a specific field will allow public administrations to optimize bureaucratic timing, acquiring methodology, indicators, planning support systems, types of processing, operational guidelines of governance. DEFINING STRATEGIES FOR GOOD SMART GOVERNANCE Definition of a system that shows the impact of an action in relation to the indicato Construction of the action-indicator matrix (comparison between the "smartness value" of the "current state scenario" and the "value" of the city, based on the performance of the actions). This will be pursued through the construction of a multicriteria system, that will combine: Analysis of 1) technical and economic feasibility; 2) environmental impact; 3) social acceptance; 4) Feasibility study management, etc. Creating and implementing an assessment toolkit in order to build a long-term vision of smarturbanism pathways Providing information so as to evaluate the decision-making processes and reorient and relocus them Creating an "Observatory" for smart urbanism monitoring and the produced results

smart city expo

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Research group

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