



MAKING WATER AND WASTE SMART



A PROJECT FUNDED BY THE EUROPEAN COMMISSION AS PART OF THE EU FRAMEWORK FOR RESEARCH AND INNOVATION





Smart cities can only provide local solutions to global issues when cities develop a coherent long-term integrated strategy and implementation plan on transport, energy, ICT, solid waste, climate adaptation (heat islands, urban flooding and water scarcity), water supply and waste water treatment. People in urban environments need green and blue space. Healthy, attractive and livable cities should become the long-term goal for municipal stakeholders in Europe.





The BlueSCities consortium believes that there have been excellent actions where the involvement of local stakeholders coordinated by municipal and regional administrations has resulted in a positive local influence on international issues whilst enhancing science and evidence-based decision making in the field of water. This is the essence of the bottom-up approach.

“Technology is important to implement an intelligent city concept, to create new business opportunities, to attract investments and to generate employment. But technology alone would not bring about any wonders. Good governance and the active involvement of citizens in the development of new organization models for a new generation of services and a greener and healthier lifestyle are also important.”

Hahn, former EU Commissioner for Regional Policy



BlueSCities is a Horizon 2020 project that is developing the methodology for a coordinated approach to the integration of the water and waste sectors within the 'Smart Cities and Communities' EIP.

BlueSCities is identifying synergies in accordance with the Smart City concept and complements other priority areas such as energy, transport and ICT.

Placing emphasis on local solutions for global issues, BlueSCities seeks improved public engagement and enhanced decision-making processes at all political levels based on scientific knowledge and adequate social and economic awareness.

In order to firmly establish water and waste as important factors within the concept of the sustainable community, the necessary socio-technological tools are being produced.





These tools will improve exchange synergies between researchers and users, decision-makers and consumers, industry, SMEs and national and international authorities.

The project, in order to achieve this, has already reviewed the current situation in 45 cities employing its unique methods of analysis: The City Blueprint and the Trends and Pressures Framework which as part of the project have fully revised their indicators, together with and for the first time, in eight specially selected cities, the new City Amberprint.

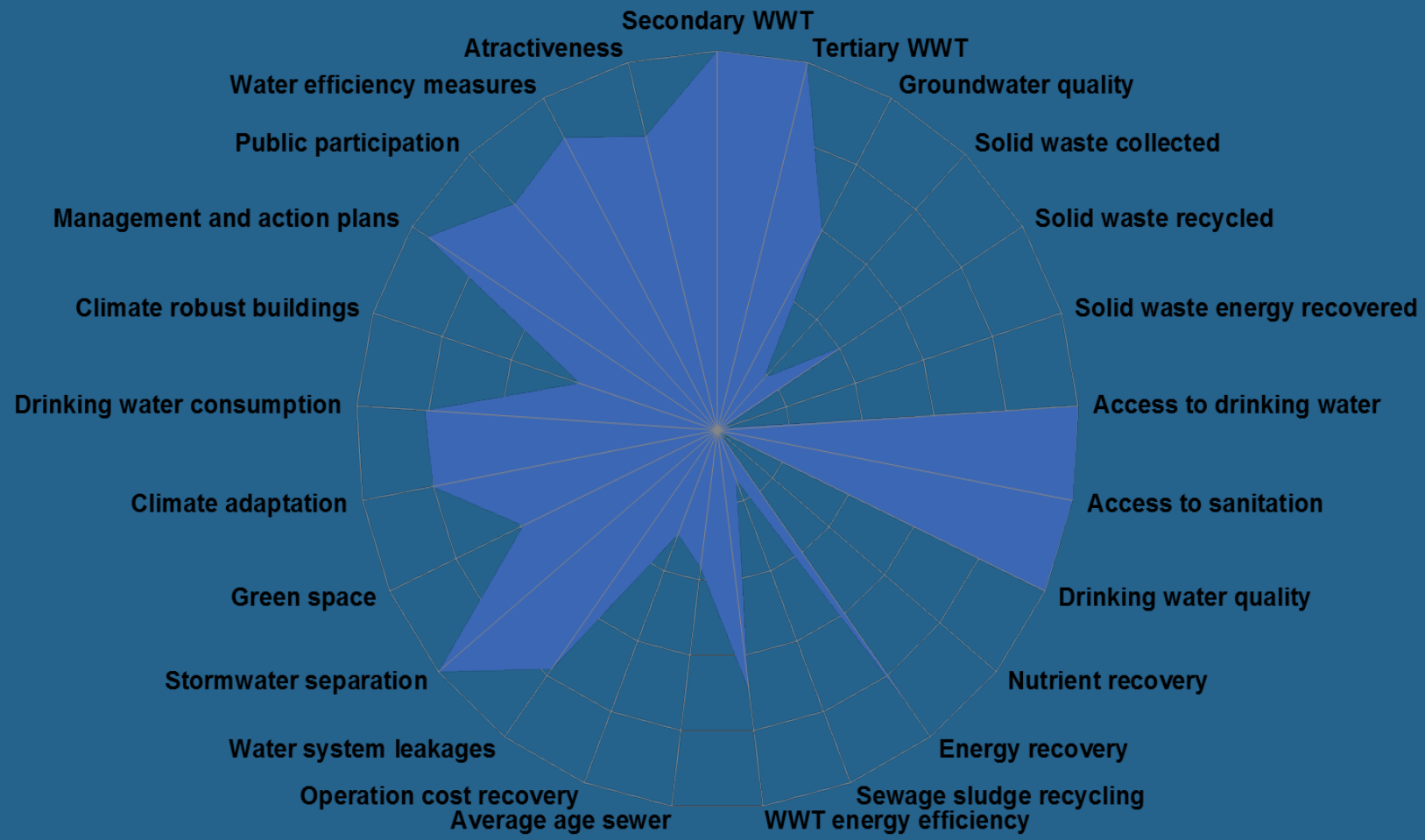


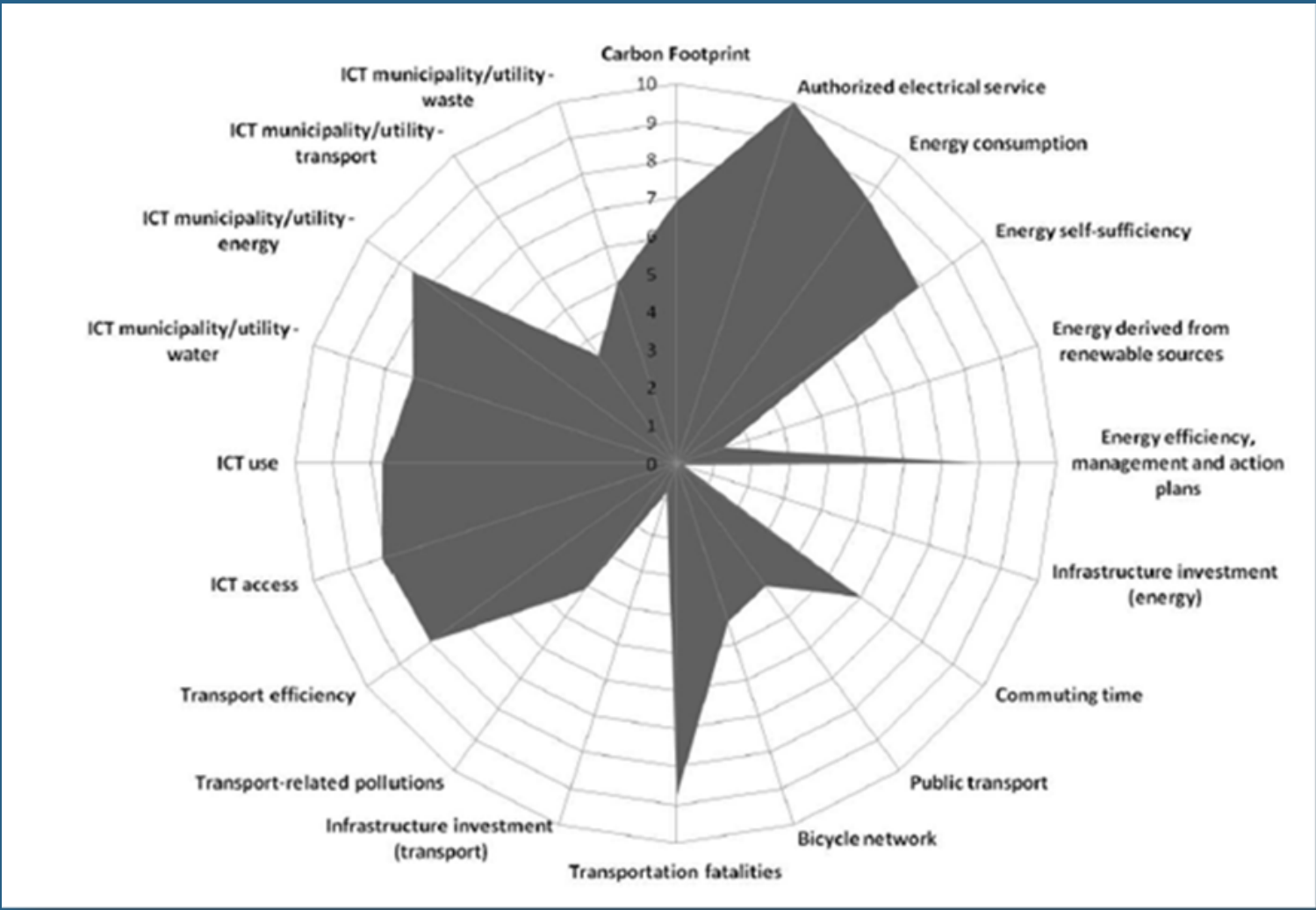
City Blueprint	Social	1 Urbanization rate
		2 Burden of disease
		3 Education rate
		4 Political stability
	Environmental	5 Flood risk
		6 Water scarcity
		7 Water pollution
		8 Heat risk
	Financial	9 Economic pressure
		10 Unemployment rate
		11 Poverty rate
		12 Inflation rate

5 Flood risks	Urban drainage flood
	River peak discharges
	Sea level rise
	Land subsidence
6 Water scarcity	Freshwater scarcity
	Groundwater scarcity
	Salinization and seawater intrusion
7 Water pollution	Surface water quality
	Biodiversity
8 Heat risk	Heat island effect

0	No concern	1	Low concern	2	Medium concern	3	Concern	4	Great concern
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BlueSCities is formulating recommendations in order to produce an administrative methodology capable of eliminating cross sector barriers between water, waste and Smart City sectors.

The City Blueprint, the City Amberprint and the development of an Independent Analysis Software combine to create an effective methodology so that water, waste and Smart City concepts come together in order to work towards the sustainable society of the future. These mechanisms will be accompanied by a Practical Guidance Document for the use of all relevant stakeholders.

All the activities are supported by a programme of dissemination that is seeking to ensure a wider public understanding of the nature of water and waste systems within the structures of European Municipalities, regions and countries.

BlueSCities

Blueprints for Smart Cities: Developing the methodology for a coordinated approach to the integration of the water and waste sectors within the EIP Smart Cities and Communities. It will identify synergies in accordance with the Smart City context and complement other priority areas such as energy, transport and ICT.

It will seek to contribute to the achievements of the 20-20-20 objectives. Placing emphasis on local solutions for global issues, the proposal seeks improved public engagement and enhanced decision-making processes at all political levels based on scientific knowledge and adequate social and economic awareness. BlueSCities will build on the hitherto successful implementation of the EIP Water Action Group, CITY BLUEPRINTS, which will provide the data required for a practicable planning cycle.

Water footprint

- Public participation
- Management and action plans
- Attractiveness
- Biodiversity
- Climate resilient buildings
- Adaptation measures
- Climate commitments
- Infrastructure separation
- Average age sewer system
- Nutrient recovery
- Energy recovery
- Energy efficiency
- Water scarcity
- Water self-sufficiency
- Surface water quality
- Groundwater quality
- Sufficient to drink
- Water system leakage
- Water efficiency
- Drinking water consumption
- Drinking water quality
- Safe sanitation
- Waste management

BlueSCities will aim to improve exchange synergies between researchers and users, decision-makers and consumers, industry, SMEs and national and international authorities. It will further review the current situation in 50 European cities employing its unique methods of analysis, produce detailed case studies of four specifically chosen municipalities/cities, and demonstrate a self-assessment baseline assessment tool for water and waste in cities, which will enhance the implementation of European Smart City activities, to be published in the Blue City Atlas.

Logos of partner organizations: Horizon, Digital, Energy, Smart, Urban, Water, etc.

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- Focus on the need to integrate water and waste into the Smart City approach, as defined by the Strategic Implementation Plan of the EIP Smart Cities and Communities.
- Ensure improved exchange synergies between researchers and users, decision-makers and consumers, industry, SMEs and national and international authorities.
- Assess the current situation, produce case studies of Genoa, Athens, Istanbul and Helsinki, provide tools for integration and implementation, stakeholder engagement and international networking whilst emphasizing the dialogue between different levels of public administration and the different sectors engaged directly or indirectly in the EIP Smart Cities and Communities.



- Produce a Pan European Atlas on Urban Water Management and a self-assessment baseline assessment tool for water and waste in cities in order to enhance the implementation of European Smart City activities.



City of Iceland Reykjavik

Water Basics

Drinking Water

Waste Water

Environmental Quality

City Key Features

City Water Desk

Category	Value
Population	123,000
Area (km²)	100
Water supply (liters per person per day)	150
Wastewater treatment capacity (liters per person per day)	150
Number of water treatment plants	1
Number of wastewater treatment plants	1
Number of public toilets	100
Number of public showers	100
Number of public showers per 1000 inhabitants	100

Drinking Water Desk

Category	Value
Population	123,000
Area (km²)	100
Water supply (liters per person per day)	150
Wastewater treatment capacity (liters per person per day)	150
Number of water treatment plants	1
Number of wastewater treatment plants	1
Number of public toilets	100
Number of public showers	100
Number of public showers per 1000 inhabitants	100





- Provide data and formulate sufficient recommendations in order to produce a Practical Guidance Document which will be developed and distributed to relevant stakeholders emphasizing how to support integration between water and waste within the concepts of the EIP Smart Cities and Communities SIP.
- Provide recommendations for further research and technological work in a complementary publication and organise practical training courses which will be employed to further demonstrate the need to involve strategic sectors at distinct European Political levels.
- Establish the issues of water and waste within the consciousness of citizens and city governors as a critical Smart City component fostering consensus in the participating cities on developing further the policy orientation of the project, likely to influence the Smart City agenda in the years to come with relation to water and waste.





In order to enhance public awareness and increase the dissemination of our work we are at present organising Science Cafés related to water and waste governance, where research and scientific information are put into a local context and prizes for school pupils participating in activities about water are organised. Science cafés are an informal and an adaptable format to bring people together (usually at the end of the day in a café) where one or more scientists or experts give an introduction to a given topic, opening then the floor to debate and questions.

The second activity planned to further enhance a dialogue at local level between water experts or managers and citizens or grass roots associations is the organisation of Prizes for School Pupils.

Guidelines on how to structure local or regional competitions have been provided through the intervention of the municipal authorities.

It is expected that out of the City Blueprint network, between 4 and 8 cities will organise science cafés and between 3 and 6 will organise schools competitions.





This activity has been further extended by the creation of the Dubrovnik Declaration of Intent.

As part of the BlueSCities workshop, 'Winning by Twinning' with experts from the UN, the European Commission, and academic representatives from Europe and the USA, city representatives from the Balkans, Eastern Europe, the United Kingdom, Turkey and the Middle East created the Dubrovnik Declaration of Intent in which they state their willingness to work together in future actions so that citizen awareness and citizen engagement at a municipal level becomes a major factor in the war on drought and other water-based crisis.

Joint Research Centre
The European Commission's in-house science service

JRC Mission
As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle. Working in close cooperation with policy Directorate-Generals, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

Supporters of the event
The event is co-organised by the European Commission DG JRC and NETWERCH2O in the context of their collaboration within the European Innovation Partnership on Water. Financial support is secured through the JRC's Engagement and Integration Action (EIA) as well as funding stemming from the HORIZON 2020 Project BLUECITIES. The underlying concept of the CityBlueCities Assessment has been developed and made available by KWR, the Watercycle Research Institute.

The organisers explicitly acknowledge in-kind support and assistance of the University of Dubrovnik as well as the Dubrovnik Neretva Region and DUNEIA, its regional development agency. Special thanks are due to colleagues of DUNEIA's representation in Brussels, Ingrid Čučer-Hrenko Karižević and Hrvoje Buljević, whose support made the event possible.

netwerch₂o

Best-practices in urban water management - winning by twinning -
A practical hands-on workshop

AGENDA

University of Dubrovnik
24-25 September 2015

DINEA **KWR** **BlueSCities**





The Dubrovnik Declaration of Intent

Municipalities from all over The World are now being invited to adhere to the Declaration and participate in the initial steps of an alliance which seeks to become an effective instrument on the international stage of environmental and science diplomacy policy.

The Declaration of Dubrovnik has received an excellent public response and has been communicated to the Urban Water Innovation Network in the USA, the Union for the Mediterranean and the Organisation of Economic Cooperation and Development (OECD).

Successful school actions are being undertaken in BlueSCities' partner cities such as Istanbul and other non-project municipalities such as London, Amman, Leicester, Manresa, Sf Gheorghe, Jerusalem, Dubrovnik, Larissa, Poznan and Budapest.







BlueSCities looks to have a profound and lasting impact on overcoming the barriers to a more widespread implementation of the objectives of both the EIP on Smart Cities and the EIP Water.

BlueSCities will promote European regulatory innovation and solutions to other strategic partners and countries by linking together Cities in emerging economic areas.

BlueSCities will have a strong impact on technological, academic, economic, environmental and above all social dimensions.

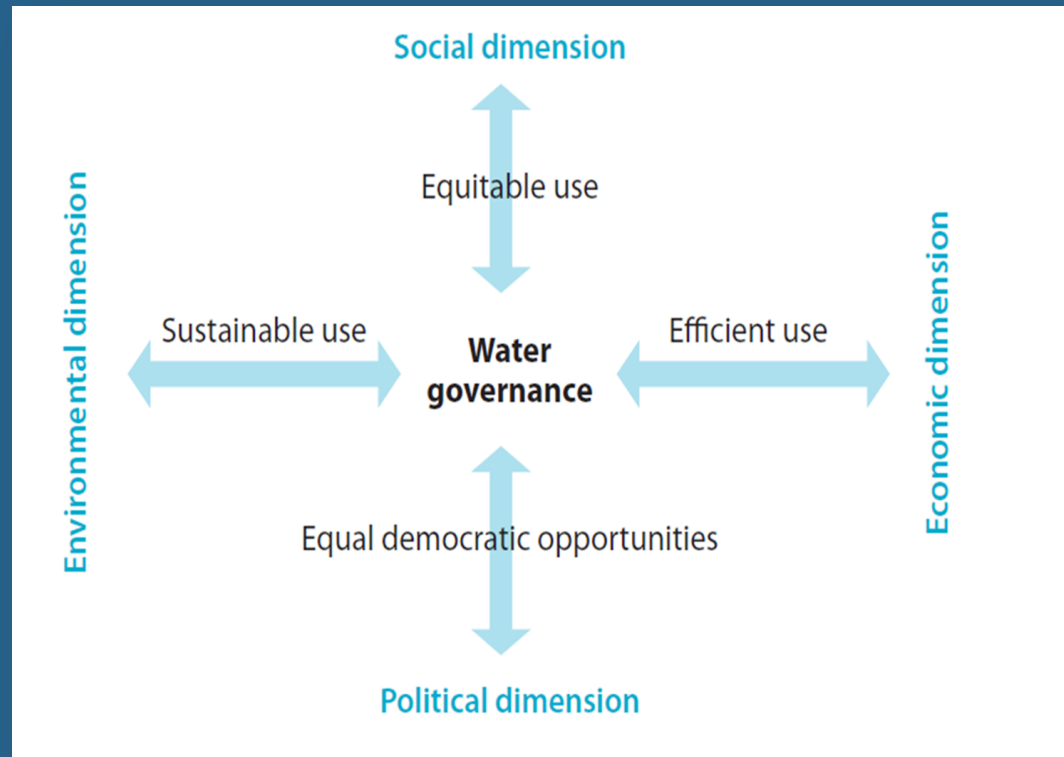
BlueSCities will ensure increased market opportunities for the water related industry, specifically SMEs, which will in turn promote innovation, growth and job creation in cities.

BlueSCities will increase public awareness in numerous cities and regions in Europe and beyond.





BlueSCities seeks a strong impact on technological, academic, economic, environmental and above all social stakeholders.



- FUNDACIÓ CTM CENTRE TECNOLÒGIC (Coordinator) – SPAIN
- KWR WATER B.V. – THE NETHERLANDS
- THE JOINT RESEARCH CENTRE - EU
- TEKNOLOGIAN TUTKIMUSKESKUS VTT – FINLAND
- REDINN SRL – ITALY
- DE MONTFORT UNIVERSITY – THE UNITED KINGDOM
- ISTANBUL UNIVERSITESI - TURKEY
- IREN ACQUA GAS SPA - ITALY
- STRANE INNOVATION SAS - FRANCE
- EASTON CONSULT – BELGIUM
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