

27/10/2020

SUSTAINABLE PLACES VIRTUAL, 27-29 OCTOBER, 2020 Smart Cities and Communities as Innovation Hubs

Matthieu Grosjean (Steinbeis-Europa-Zentrum)



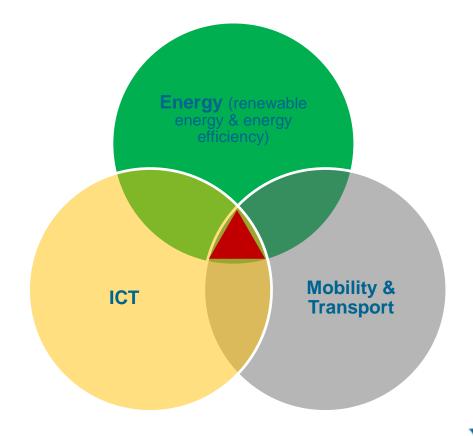


Introduction

Introduction

Consortium:

- >20 partners
- From several countries in the EU
- Different stakeholers:
 - · Local/regional authorities,
 - Citizen Associations,
 - industry (SMEs and large industry),
 - University, R&D...
- Different expertise



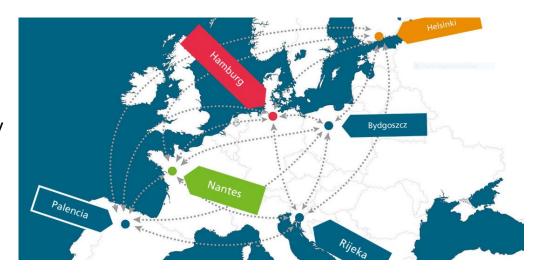


Introduction: mySMARTLife making sustainable cities with smart people and a smart economy a reality

- Project Duration: 5 years (12/2016 11/2021)
- Budget: 21.2 Mio EUR
- making sustainable cities with smart people and a smart economy a reality
- 27 partners from: Germany, Finland, Spain, France, Croatia, Poland

Contact: http://www.mysmartlife.eu/

SEZ: Matthieu Grosjean, matthieu.grosjean@steinbeis-europa.de



- · Districts/Buildings: Domotics, smart control, RES, retrofitting, new Building
- Mobility solutions: E-vehicles, charging stations, vehicle to grid systems, multi-modality solutions
- City infrastructures: Smart grids, district heating, public lighting, thermal and electrical Storage
- Enabling factors for urban sustainability: Policy improvement, innovative business, urban planning, and citizen engagement



Introduction: REMOURBAN REgeneration MOdel for accelerating the smart URBAN transformation

- Project Duration: 5,5 years (01.2015-06.2020)
- Budget: 23.8 Mio EUR
- Development and validation of a sustainable urban regeneration model
- 22 Partners from: Germany, Spain, Turkey, UK, Belgium, Hungary, Italy

Contact: http://www.remourban.eu/

SEZ: Matthieu Grosjean, matthieu.grosjean@steinbeis-europa.de

- Low Energy Districts: Energy reduction 34%, and CO₂ emission reduction 50% Retrofitting, renewable heating and cooling, energy efficiency tools, EMBS
- Sustainable Mobility: Energy reduction of 5,1%, and CO₂ emission reduction 5% Clean energy vehicles, infrastructures and plans for energy and CO₂ reduction
- Integrated infrastructures: Smart grid connectivity, city information platform, optimized traffic flows, multi-modal transport and collaborative information transfer
- Enabling factors for urban sustainability: Identification of non-technical barriers to improve urban sustainability and transition to smarter cities, optimized regulatory frameworks and engaged citizens

3 lighthouse cities:







Valladolid (Es), 50% Energy 80% CO₂ Emis. 5700 citizens

Nottingham (UK), 50% Energy 26% CO₂ Emis. 8100 citizens

Tepebasi/Eskisehir (Tk) 50% Energy savings 63% CO₂ Emis. avoided 6000 citizens involved

2 follower cities:





Seraing (Be),

Miskolc (Hu)



Plan

1 -				_ •	•
ın	1 T P	\cap	4 I I		ın
	ILI	U	I U	ししし	ion

Innovation criteria

Related methodology

Generated results

Conclusion





Innovation criteria

Innovation criteria: Innovation types and level or degree

Innovation types:

PROFIT MODEL

The way in which you make money

NETWORK

Connections with others to create value

PRODUCT PERFORMANCE

Distinguishing features and functionality

SERVICE

Support and enhancements that surround your offerings

CHANNEL.

How your offerings are delivered to customers and users

STRUCTURE

Alignment of your talents and assets

PROCESS

Signature or superior methods for doing your work

PRODUCT SYSTEM

Complimentary products and services

BRAND

Representation of your offerings and business

CUSTOMER ENGAGEMENT

Distinctive interactions you foster

CONFIGURATION

OFFERING

EXPERIENCE

Source: Keeley et al., 2013

Level or degree of innovation:

- Incremental innovation is an innovation base on a series of small upgrades.
- Lateral innovation is an innovation based on lateral thinking, which provides solutions to problems using unconventional methods, coming at the problem from new directions. They are usually game-changers.
- Disruptive innovation is an innovation that represents a change of paradigm, breaking with the preestablished situation

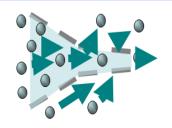


Innovation criteria: Closed or open innovation



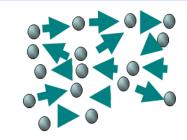
Centralized inward looking innovation

Closed Innovation



Externally focused, collaborative innovation

Open Innovation

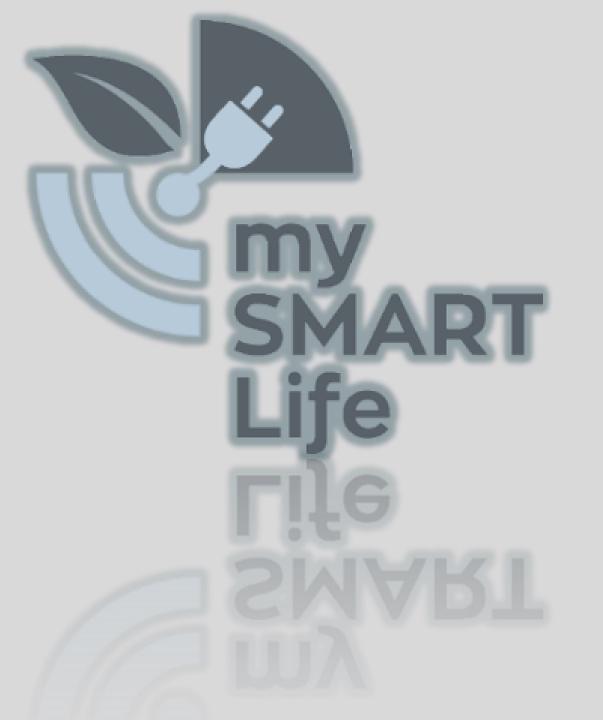


Ecosystem centric, crossorganizational innovation

Innovation Networks

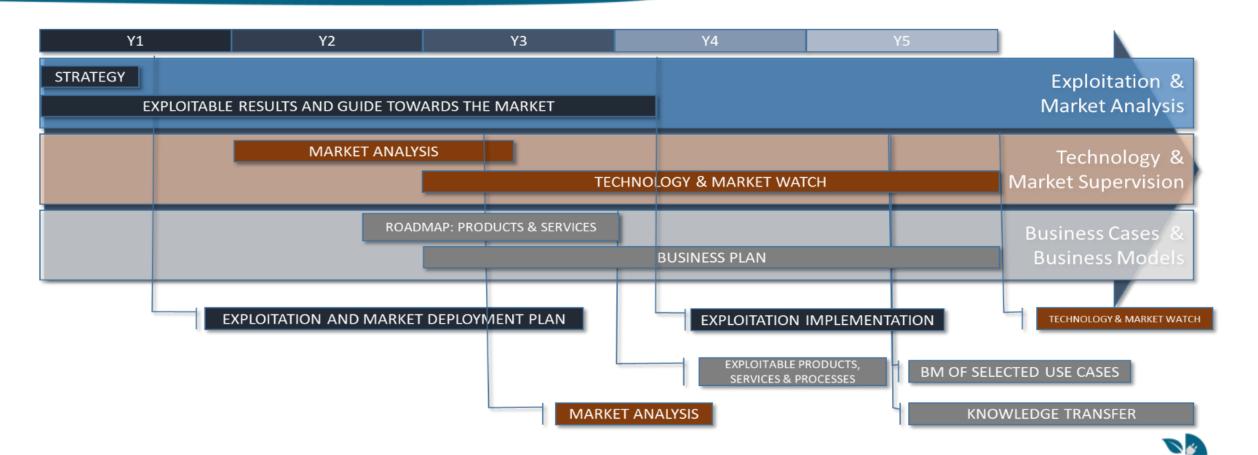


Sources: From a presentation by Bror Salmelin 2013 based on Chesbrough 2003, Forrester 2004, von Hippel 2005



Related methodology

Related methodology: From market analysis, through business model development to sustainbale roadmap

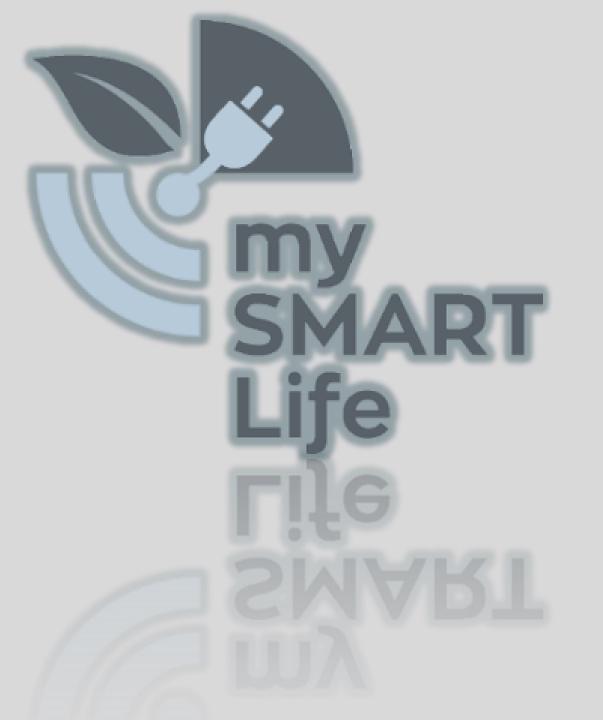




Related methodology: Dissemination of the results (example from REMOURBAN)

<u>Dissemination activities:</u>	<u>number</u>
Information Packages to present in a visual and summarised way the main characteristics of a selection of solutions generated within the project.	21
Web seminars to communicate how the different solutions demonstrated during the project have been implemented in each Lighthouse City, which had a total of 108 live attendants and were viewed 242 times in the <u>YouTube Channel</u> of the project.	
Web seminars to market the KERs of the project which gathered a total of 49 attendees and which were viewed 113 times in the <u>YouTube Channel</u> of project.	3
Cooperation Profiles have been prepared together with those project partners willing to have their solutions uploaded to the Partnership Opportunity Database (POD) of the Enterprise Europe Network (EEN) which has a worldwide reach. Among them we count: 7 Technology Offers, 3 Technology Requests and 1 Business Offer.	11
Issues of our bi-annual report for project partners "Exploiting opportunities through Enterprise Europe Network" which summarizes the most interesting EEN Cooperation Profiles uploaded by other companies, public organisations, universities and/or research centres.	7





Generated results

NANTES

heat pumps

(2,000kWh/yr)

storage batt.

HAMBURG

HELSINKI

charger

															• • —				
chargi bu (12 pc	rtunity ng for e- uses pints + 5 pations)	PV p (citizer	KWp blant n solar int)	17,5 kWh Solar Tl (Le Str	n/yr hermal	Heat I	Isands	Char infras e-bu 48 po	tr. for uses	10 VW 15 Sma four elec	art EQ four	chargi (PV P	oike ing st. anels kWh)	oppor char statio e-b	tunity ging ns for	e-bus of in real to	1 comous operating traffic 2 iods	50 e-bu runni	
	District (84% RE Bat B, O Iles,	ction to Heating ES) Bat A, iseau des Pierre dais	sm	000 nart eters	autono e-b operat real tr	us ing in	16 e-l	ouses	792 batt sotr	tery		MW I park	bench Wp ea	nr panel nes (250 ach) & 1 e charger	Districe elect. s	torage	Heati Cooling 22 MW 15 MV	pumps V heat	
Cha	75 rging tions	24m	units 1 XXL uses	Build Oiseau Iles with Boi	ux des n Digital	with	nppost LED ting	200 S meter in-ho visuali	s with	2,000 s mete projec	ers in	IT-bac prot	t grid) ck end cocol v1.6			batt: 6 V2G ch	lahti 00 kWh narger: kW	Electri storag Viikki (45	ge at
	Nante Bat A, Val de	dings es Paris , Bat B, Loire, Le ogoff	indiv	32 vidual uses	80 sn lampp		sup	ices	1 Build retro	lings	constru buildin	ew ction: 34 ngs (547 tments)		i office control	Meriha Vilhor 167 a Salus solu	nvuori p. 50 sfin's	Kalasa 182,00 10,00 monit	00 m2, 0 m2	
new o	ration constr. amme	Build Pie Land (pendir Boil	rre dais ng Dig.	1 Hy solar _l		Constr Am Sc ar	ew ruction: hifpark rea 70 app.)	Berge Sü 18,80		PV roofs kV	: 260	camp	Energy OUS for control	Merihal Vilhon 10,000 monit	vuori 0 m2	D optimi Tali a	zation:	600 kV solar pla Messuke Convention Expo Cer	ant in eskus
	•	/ panel h/yr) +) Wh	ro	solar oad	Digital (Oiseau	ux des	opera	Np to ate ice age +		ar ring	sta	arging Ition		ric truck ofitted		rging ons at rminal	Sm persor	nal EV	

Generated Results: Business model innovations in mySMARTLife

D1.9 Innovative business models. Making things happen

		INCREMENTAL	LATERAL	DISRUPTIVE
CONFIGURATION	Profit model	Smart Homes Assistant		
	Network		PV on Roof and Home Battery Storage	
IFIGU	Structure			
CON	Process	Citizens Solar Project Community Car Sharing		
OFFERING	Product Performance			
	Product system	Retrofitting in individual houses Digital Boilers Lighting Optimization System Community Car Sharing	PV on Roof and Home Battery Storage	
EXPERIENCE	Service	Smart Homes Assistant	PV on Roof and Home Battery Storage HTM control concept	Demand management (EV charging points, Solar Plant and Storage) RES as a Service
	Chanel			
	Brand			
	Customer engagement	Community Car Sharing		RES as a Service



Generated Results: Impact generated (Example from REMOURBAN)

Impact generated:	<u>Number</u>
Multipliers or enablers from all over Europe sent us their agreement to distribute the Information Packages that best fit the interests of their stakeholders among their communication channels. Like this, the 21 solutions presented in each Information Package had a greater outreach, which, in turn, increases their chances of a successful market deployment.	72
Expressions of Interest were received by the project partners who presented their solutions through our Information Packages, EEN Cooperation Profiles and Webinars.	208
Exploitation Claims expressed before the end of the project showing the interest of one project partner to exploit the exploitable result (ER) owned by another project partner.	92
Access Rights Requests sent by one project partner to another.	9
Contracts signed following the project.	3





Conclusions

Conclusion

- Novelty of this Smart Cities and Communities (SCC) topic, the solutions implemented and the cross-sectorial work bring these projects in the innovative category.
- However they need to be supported by a structured exploitation methodology:
 - Monitoring IP flows
 - Increasing synergies between the participants with interactive activities to generate further innovations
 - Planning and Disseminating the results to ensure and accelerate their sustainable market uptake
- These projects are not only about implementing foreseen solutions but to generate innovative once in this favourable cradle related to such SCC-projects.
- Thus enriching not only the city or the companies from the implementation but the developed promising innovations.





