

Matthieu Grosjean, Dilay Kesten Erhart, Fernando Barrientos, Valerie Bahr

# "Smart Cities and Communities" as Innovation Hubs

Success Stories & Best Practices from the European Project REMOURBAN













Matthieu Grosjean, Dilay Kesten Erhart, Fernando Barrientos, Valerie Bahr "Smart Cities and Communities" as Innovation Hubs





This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 646511.

**Steinbeis Innovation gGmbH (SIG)** is a not-for-profit research organisation within the Steinbeis Foundation for Technology Transfer. **Steinbeis-Europa-Zentrum (SEZ)** is an enterprising unit within the SIG, operating since 1990 as a not-for profit unit supporting innovation of SMEs, cross-border technology transfer, building innovation capacities in SME, and supporting SME's participation in EU research projects.



Matthieu Grosjean, Dilay Kesten Erhart, Fernando Barrientos, Valerie Bahr

# "Smart Cities and Communities" as Innovation Hubs

Success Stories & Best Practices from the European Project REMOURBAN



#### **Imprint**

#### © 2020 Steinbeis-Edition

All rights reserved. No part of this book may be reprinted, reproduced, or utilised in any form by any electronic, mechanical, or other means now known or hereafter invented, including photocopying, microfilming, and recording or in any information storage or retrieval system without written permission from the publisher.

Matthieu Grosjean, Dilay Kesten Erhart, Fernando Barrientos, Valerie Bahr "Smart Cities and Communities" as Innovation Hubs Success Stories & Best Practices from the European Project REMOURBAN

1st edition, 2020 | Steinbeis-Edition, Stuttgart ISBN 978-3-95663-198-6 This book is also available as printed version. 978-3-95663-197-9.

Layout: Steinbeis-Edition

Cover picture: elenabsl/shutterstock.com | Four Icons: YOURIS

The platform provided by Steinbeis makes us a reliable partner for company startups and projects. We provide support to people and organizations, not only in science and academia, but also in business. Our aim is to leverage the know-how derived from research, development, consulting, and training projects and to transfer this knowledge into application – with a clear focus on entrepreneurial practice. Over 2,000 business enterprises have already been founded on the back of the Steinbeis platform. The outcome? A network spanning over 6,000 experts in approximately 1,100 business enterprises – working on projects with more than 10,000 clients every year. Our network provides professional support to enterprises and employees in acquiring competence, thus securing success in the face of competition. Steinbeis-Edition publishes selected works mirroring the scope of the Steinbeis Network expertise.

213206-2020-07 | www.steinbeis-edition.de

## Acknowledgement

This publication was supported by the REMOURBAN project partners, which have received funding from the European Union's Horizon 2020 Framework Programme for Research, Technological Development and Demonstration under Grant Agreement No. 646511.

We are grateful to Ksenia Polonski for assistance, Gabi Kaiser and Bettina Remmele for proofreading this paper.

We would like to express our thanks to Miguel Ángel García Fuentes (CAR-TIF Technology Centre) and his team for the successful coordination of REMOURBAN and for creating synergies during the implementation of the exploitation activities.

We are also grateful to Roberto Vidal (Xeridia), Murat Karabatur (Ölcsan), Prof. Anton Ianakiev and Jia Cui (Nottingham Trent University), Philip Angus (Nottingham Energy Partnership), Faith Blakemore and Owen Harvey (Nottingham City Council), Alfonso Gordaliza Pastor, José Ramón Martín-Sanz García and Carmen Muñoz Rodríguez (Veolia Group) for their contributions to the exploitation process, their suggestions and their feedback.

The Authors

## **Table of content**

Pı	etac	e	••••••	9
1	Inti	roduct	ion	10
	1.1	Gene	ral Introduction	10
	1.2	REM	OURBAN – The Project	11
2	The	Steinl	beis-Europa-Zentrum Exploitation Methodology	13
3	RE	MOU	RBAN Success Stories & Best Practices	18
	3.1	Gains	and Pains of Stakeholders Regarding Exploitation and	
		Disse	mination in Smart Cities and Communities Projects	19
		3.1.1	Small and Medium-sized Enterprises (SMEs)	20
		3.1.2	Large Enterprises	
		3.1.3	Research and Technology Organisations (RTOs)	24
			Local Authorities	
	3.2	REM	OURBAN Exploitable Results – Case Studies	28
		3.2.1	Urban Regeneration Model	28
		3.2.2	Low Temperature District Heating Model	30
		3.2.3	ICT Platform	34
4	Co	nclusio	on	36
5	Appendix			
Αι	utho	rs		40
R	elate	d Link	s	43

# **Table of figures**

Figure 2: Figure 3:	Urban Regeneration Model	30 31				
List of tables						
Table 1:	Main Exploitable Results in REMOURBAN and related organisation per type	18				
Table 2:	Main pains and gains related to exploitation and dissemination per type of project partner organisation during SCC projects					

### **Preface**



Source: private

Innovation is vital to European competitiveness in the global economy<sup>1</sup>. Therefore, the European Commission stimulates and strengthens the innovation capacity of Europe, expecting the projects funded under the Framework Programme for Research and Innovation "Horizon 2020" to not only develop, test and validate but also ensure market deployment. This finally leads to the market uptake of project results such as new solutions, products, services, processes or business models. "Smart Cities and Communities (SCC)" projects

funded under Horizon 2020 are great examples for a successful market deployment of exploitable results. Projects under this smart city theme provide practices for a cross sectoral approach focusing on the smart integration of energy, mobility and Information and Communication Technologies and for a multi-stakeholder approach, bringing together small and medium enterprises, large enterprises, research and technology organisations as well as local authorities. Experience has shown that Smart Cities and Communities are excellent innovation hubs for involved stakeholders as well as for the region they are located in.

If your organisation – let it be a small and medium enterprise, a large enterprise, a municipality or a research organisation – seeks innovation and market entry, this booklet aims at helping you to understand the possibilities that EC-funded projects can offer. Best practices and success stories identified and shaped by Steinbeis-Europa-Zentrum in the framework of the Smart Cities and Communities project REMOURBAN, funded under the Framework Programme for Research and Innovation "Horizon 2020", are presented following the customer journey approach.

Jens Bartholmes
Policy Officer DG ENERGY European Commission

<sup>1</sup> https://ec.europa.eu/growth/industry/innovation\_en

### 1 Introduction

"The secret of change is to focus all of your energy, not on fighting the old, but on building the new." Socrates

#### 1.1 General Introduction

The European Framework Programme for Research and Innovation "Horizon 2020" (H2020) supports and focuses on research and development as well as on innovation covering a multitude of topics at the forefront. A great number of these topics deepen the research, engaging Research and Technology Organisations (RTOs), universities and businesses. There are also considerable opportunities for funding the implementation of new business ideas and for their introduction to the market, thus directly targeting businesses. One of the shared goals of all projects funded under H2020 is to ensure a deep and sustainable impact in Europe and beyond.

Experience has shown that SCC projects have a great innovation potential that benefits a large set of SCC stakeholders coming from businesses, science or society and from various sectors. Therefore, SCC projects can be considered as an innovation hub for cities and regions. REMOURBAN, one of many projects funded under H2020, is a case study presenting best practices for any smart city project, irrespective of its funding.

To reach this goal, a profound innovation management is needed, which is called "exploitation" in European projects. Exploitation stands for the repeated and optimised use of the results generated in a project (for further research, commercial purposes, new developments, upscaling...). The main goals of exploitation in these projects are:

Smart Cities and Communities projects are innovation hubs for Enterprises, Research and Technology Organisation and Local Authorities they gather. REMOURBAN is one of the "Smart Cities and Communities" projects funded under the European Framework Programme for Research and Innovation Horizon 2020 and can be considered as case study and best practice for any smart city project independently of its funding.

This booklet presents the outcome of the exploitation activities in the "Smart Cities and Communities" project REMOURBAN, having applied the Steinbeis-Europa-Zentrum exploitation methodology and market deployment strategy. It also describes to which extent Enterprises, Research and Technology Organisations and Local Authorities can benefit from such a methodology.