

Paola Clerici Maestosi,

Coordinator for Scientific and Editorial Board of European Energy Research Alliance Joint Programme

on Smart Cities, ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development

paola.clerici@enea.it

A time of challenges, great societal challenges

programmes, all Member States' activities, all RD&I programmes developed by leading countries.

To address these challenges, it is crucial to invest not only in Research and Innovation, but also in Development - with a focus on human capacity building and on international research networks. Therefore, the Joint Programme on Smart Cities and all the researchers and research institutes involved are themselves a challenge, though on a smaller scale and with well-defined timelines and contents, yet an opportunity of strategic importance, as we will try to show in this special issue.

The Joint Programme on Smart Cities is a network of researchers, experts and stakeholders, with their own approach, their own perspective, their own heart; each of them has been trying to address the major societal challenges that research is currently facing as outlined in H2020 Framework Programme.

What did it mean for us to be involved in a research network?

To use a sports metaphor, it was like being part of indoor group cycling as opposed to outdoor cycling¹.

Taking part in an indoor group cycling session means having a common objective with the group and trying to achieve it, each rider with their own strength, their own resources, their own heart, sharing a common experience at the same time and in the same place.

Likewise, our research network - set up to support Human Capacity Building - can be described as a combination of training and discussion on a common goal, i.e. Smart Cities, where each of us contributed in different manners, according to their scientific background, experience, cultural heritage, endurance, and guided by their heart.

This is the meaning and significance of this special issue.

Other special issues will follow, one every year for the next two years.

The scientific-editorial plan is the following:

- this first issue is focused on the *European pathways for the Smart Cities to come*; it has been conceived and organized along a common pathway that each of us, perhaps unconsciously, has followed over the years;
- the second issue, which will be probably published in 2019, is dedicated to technologies, systems and tools, i.e. those technologies and enablers that were delivered by RD&I over a time horizon that matches, both symbolically and concretely, the H2020 programme's time frame;
- the third issue, which will be hopefully published 2020 - early months, is focused on Smart Cities as fundamental building blocks of tomorrow's low-carbon energy system.

It's a matter of fact that Smart Cities have already entered a critical stage: after many theoretical discussions, it is now necessary to develop a sustainable path of applications.

What is likely to change is the way we look at pilot projects: they will not only need to prove that they are technologically effective in reaching the desired results, they must also be able to help develop competitive and repeatable business models to be shared by the society, the citizens, the market as well as the industrial, political and financial sectors.

This is the next challenge for Smart Cities, and this is the challenge we would like to deal with in our third and last special issue: a much more difficult and complex, but no less concrete and realistic challenge. At this stage, the purpose is no longer to design solutions, but to make a strict selection of the ideas and proposals that - after the conceptual expansion phase of the previous years - will lead to the future of Smart Cities.

NOTES

¹ Cycling is as much of a group sport as it is an individual sport. When tackling long distances, you can ride farther and longer with more people by drafting (or breaking the wind resistance) off one another to preserve energy. Indoor group cycling is a great activity for a crew, since you can have all different ability levels pedaling together, and no one gets dropped. Even if you didn't know the person on the bike next to you, you feel bonded together by the effort of the tribe.