

Chapter 16

Developing Smart Regions: Proposal and Application of a Model for Island Territories

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ABSTRACT

Transforming a city into a smart city is a long and complex process. If the aim is to modify large areas (regions/territories), the problem becomes significantly harder. Contrary to what might be expected, combining N smart cities within the same territory will not necessarily lead to a smart region. Although there are several smart-region experiments of an international nature, there is still no benchmark to facilitate this task. In the case of island territories, this task is made less complex due to the common problems that characterize them. This paper analyzes these characteristics, seeks common patterns and proposes a model for the smart development of island territories in an effort to harmonize and optimize the available resources by providing for smart planning that is more orderly, uniform and efficient. To compare the model, we used as a reference the Smart Island proposal designed by the government of Spain as part of its National Plan for Smart Cities (Ministry of Industry, Energy and Tourism, 2015a).

INTRODUCTION

Regional governments have focused their development on strategic planning, identifying and promoting those areas of most interest to society (healthcare, education, business, industry, etc.). This approach could change once the Smart effect arrives on a global level. It is cities that are now spearheading various activities as they each seek to optimize and boost their efficiency. Regional development should

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Developing Smart Regions

take this effect into consideration, regulating it or channeling it such that every city in a given region or territory is able to leverage common initiatives and generate suitable synergies.

The benefits of being smart should translate into optimization of the available resources, into how initiatives are carried out and implemented and into an efficient way to manage public stewardship. In the case of island territories, the proximity, the large number of small and medium cities per island, as well as the various levels of government present (regional, island and local) mean that the planning and deployment of smart solutions requires the highest coordination. Two key questions to address are: Does the sum of smart cities on one island combine to make a smart island? Does the sum of smart island projects result in a smart region? The authors do not think so. In highly fragmented areas in particular, the need for coordination is essential. The levels of government in place and their purviews existed long before the arrival of the smart movement; as a result, the mechanisms for the orderly development of any regionally integrated smart project either do not exist or are not yet established.

Determining a region's smartness, or lack thereof, is complicated by the many factors that affect this transformation. The authors can see examples of this problem in cases of smart governments faced with introducing technology and innovation (Gil-Garcia, Helbig, & Ojo, 2014) or in the development of smart cities from the point of view of research and/or practice (Gil-Garcia, Pardo, & Nam, 2015).

Depending on the city and the project in question, a region's smartness is subject to different interpretations. Because of this, the researchers need to consider a region's problem as one of territories with common denominators, thus allowing for a more precise analysis.

A goal of this paper is to help improve planning of smart projects not on an isolated scale (city), but for a region or territory. For this reason, the authors propose an initial model based on common denominators/factors that provides a reference for the different levels of government (local/insular/regional) when planning and making decisions.

This paper is divided into six sections. The first (Analysis) reflects on the possibility of extrapolating smart city projects to other projects that are larger in scope. It also includes an international analysis of successful smart region projects. The second section (Island Territories) covers the unique characteristics that define these types of regions in the European Union (specifically Macaronesia and the Outermost Regions), as well as the common problems they face. The third section (Model) proposes a model for the smart development of island areas that leverages their common denominators and highlights the importance of coordination. The fourth section (Results) shows the application of the model to the Canary Islands. The fifth section (Application of the Model) compares the model put forth with the Smart Islands development proposal (Ministry of Industry, Energy and Tourism, 2015a) endorsed by the Spanish government in 2015. The final section (Conclusions) summarizes the contributions of this project and lays out future areas of research.

RELATED WORK

The field of research on Smart Regions/Territories is still being developed. While the topic of Smart Cities is more familiar and extensive, in the case of Smart Regions it is rather technical reports, pilot projects and the experiences from a limited number of cities on the international stage that prevail and that can be used as a reference. That is why this paper offers a new approach by using a model to extrapolate conditions in cities to territories, while insisting that it is not a question of simply combining smart features, but rather of adapting them to make them more effective. The complexity is greater since

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