

Assessing and rating the level of smartness of mountain areas by the use of Electre Tri: the pilot case of the ongoing Alpine Space project SmartVillages

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Abstract:

Several sources, especially at EU policy level, highlight that (rural and) mountain areas are locked in a “circle of decline” by two mutually reinforcing trends: a shortage of attractiveness in terms of jobs and sustainable business activities, and inadequate and declining services, that reinforce depopulation and aging. Alpine Space project SmartVillages (2018-2021) addresses this very topic in six European countries in 12 dedicated Test Areas (1 in Austria, 1 in France, 2 in Germany, 2 in Italy, 5 in Slovenia, 1 in Switzerland), and proposes that a smart transformation of mountain areas can help countering the circle of decline and keep those areas livable and attractive.

‘Smart villages’ have been defined at European level in 2018 as “*communities in rural areas that develop smart solutions to deal with challenges in their local context. They build on existing local strengths and opportunities to engage in a process of sustainable development of their territories. They rely on a participatory approach to develop and implement their strategies to improve their economic, social and environmental conditions, in particular by promoting innovation and mobilizing solutions offered by digital technologies. [...]*” However, no indicator set or rating or ranking method to capture, describe and/or predict ‘smartness’ in mountain areas has been so far proposed.

The Authors propose a methodology to assess and rate ‘smartness’ in mountain areas by means of the creation a specific set of *indicators of smartness for villages*, classified in the six classical *dimensions* of smartness: Economy, Environment, Governance, Living, Mobility and People; the *dimensions* have been derived by literature on the more consolidated concept of ‘Smart City’, and their use for the assessment and rating of smartness in mountain area has been considered as a reasonable working hypothesis.

The methodology proposed consists in the use of ELECTRE Tri multi-criteria-analysis method, aiming to rate the smartness of the SmartVillages’ Test Areas with the direct involvement, via surveys and interviews, of experts and local stakeholders. They, specifically organised in ad-hoc regional stakeholder groups in the 12 Test Areas, are at present responding to surveys aiming to fill in the *indicator of smartness* survey and are providing the binary outranking (including

incomparability) conditions among the dimensions of smartness for villages. Surveys and interviews are ongoing, and will cover the Test Areas by mid-March 2019.

The Authors expect to provide, by mid-April 2019, a first rating of smartness of the Test Areas included in the Alpine Space project SmartVillages, to identify specific reference profiles, and to try and draft first conclusions on whether and to which extent the six classical *dimensions* of smartness, as well as the specifically dedicated set of *indicators of smartness for villages*, are suitable descriptors and predictors of smartness for mountain areas.