

Practice abstract 07

Author: PoliRural consortium

Design: SPI



Future Oriented Collaborative Policy
Development for Rural Areas and People

 www.polirural.eu

Exploring rural attractiveness in 12 PoliRural pilot regions

PoliRural's foresight methodology is being piloted in 12 locations covering Europe plus Israel. One of the aims of the project is to capture the concept of rural attractiveness and how it varies from one place to another. In the first year, PoliRural pilots explored the current state of rural attractiveness in their region. The pilots defined an overall mission, ambition, priority issues and expected results with the help of 350 stakeholders - comprising policy actors, rural communities, newcomers and experts - who have pledged support to the project.

The needs gathering exercise sought to identify regional needs related to rural attractiveness, and proceeded in several stages. First, pilots reviewed the literature. Next, a large-scale online survey (n=1296) was conducted followed by a SWOT analysis. The SWOT results were then discussed with members of the stakeholder panels to validate regional needs and factors of rural attractiveness. More than 80 needs were identified in the process, covering themes such as digitization, employment, public services and environment.

The findings made it possible to cluster pilots based on common needs rather than geography. Specifically, four different categories were created: quality of life, social capital, cultural appeal, and natural capital. In the final step, each pilot selected 5-10 most relevant needs for a policy mapping exercise, during which a total of 115 needs were matched against about 180 policy measures.



This project has received funding from European Union's Horizon H2020 research and innovation programme under grant agreement No 818496.

Practice abstract 08

Author: PoliRural consortium

Design: SPI



POLIRURAL

Future Oriented Collaborative Policy
Development for Rural Areas and People



www.polirural.eu

System Dynamics technical specifications recommended for PoliRural

System Dynamic Modelling (SDM) applied to rural spatial and societal development and planning is one of the main focuses of PoliRural project. In this context, PoliRural analyzed and evaluated candidate System Dynamics (SD) solutions in terms of how well they fit into existing processes and workflows in order to choose a tool chain that provides the best return on investments regarding a low learning threshold, low costs and minimized change management.

Experts in authoring of SD models field predominantly realize their models within one of the mainstream commercial simulation software packages with *Stella* and *Vensim* having the widest user communities for our application area. Interoperability in SD is achieved through the *XMILE* format that to differing degrees is supported by several SD software packages. Thus, PoliRural will rely on this format both for exchange between subject matter experts in different software silos - as well as between professional authoring environments. Embedded *Python* based execution environments also work with *XMILE* format and can pose SD functionality in third party *apps*.

The critical step of translating *XMILE* SD models to executable code could be realized through either *SDEverywhere* or *Pysd*. The choice falling on *Pysd* is not exclusive and there are scenarios where *SDEverywhere* might be a suitable candidate. However, the target language of *Python* offers a much wider development community and thus a greater chance of establishing a critical mass of developers to form an interest community.

In addition, a key factor for the successful implementation of these SD solutions is the effective interest community mobilization, allowing to incorporate feedback from it to tweak the solution during the lifespan of the project.



This project has received funding from European Union's Horizon H2020 research and innovation programme under grant agreement No 818496.

Practice abstract 09

Author: PoliRural consortium

Design: SPI



Future Oriented Collaborative Policy
Development for Rural Areas and People

 www.polirural.eu

PoliRural final Text Mining solution

One of the objectives of PoliRural is to bring solutions to policymakers in order to support rural areas in responding to contemporary challenges. In this context, a Semantic Explorer (Semex.io) tool was designed for the project, with the objective of providing support to researches involved in Foresight, System Dynamics Modelling and Policy Evaluation.

The product created is a powerful tool able to extract knowledge from unstructured data and communicate the results in the most effective way. The development of the tool started with the creation of the Regional Library where all the partners provided links to relevant documents. For research projects such as PoliRural, it is especially important to manually create the initial library by collecting relevant documents that can then be text mined. Following inputs from Pilots and different Work Packages, the Semantic Explorer started to take shape.

The functionalities that work the best as a support to policy related activities are Topic extraction, Named Entity Recognition (NER), Geo-location, noun chunks/tokens and, last but not least, Sentiment Analysis/Polarity. Through these processes the user is able to extract insights regarding a chapter such as the main topic, short summary of long texts, the geo-location, text related to organizations or places and whether the text contains positive or negative sentiments. Two main sections have been developed through feedbacks from users: analytics (possibility of visualizing data through a semantic tree - *Topic Explorer*) and curated reading list (possibility to create collections of articles and extract aggregated data results such as overall summary, most recurrent topics, keywords and named entities).



This project has received funding from European Union's Horizon H2020 research and innovation programme under grant agreement No 818496.