

Title: Smart Work Clusters

Topic: Smart and Sustainable Regions

Author/s: KIESEBERG, Peter (St. Pölten UAS)

Commuting to work is an everyday activity for many fellow citizens, especially in more rural regions, that are less accessible by public transport. Even when Park & Ride facilities are available, have sufficient capacity (which is often not the case) and are used, the environmental balance is negative. On the other hand, many business areas that have emerged in the last 2-3 decades are geographically independent and do not rely on proximity of physical infrastructure, resources or the workforce coming to a central location. Many professions, e.g. in the IT sector, such as software development or data analytics, can be done without a daily physical presence in an office and thus do not require large central offices. For such it would be sufficient to have a certain quality of Internet connection and a well-equipped workplace.

On the other hand, the recent Covid-pandemic demonstrated that while home office does work for a certain part of the workforce, many people are facing problems when working at home, be it small sized apartments, a loud environment, the need for a lot of calls or simply lacking the technological tools required for efficient work like fast internet connection or access to specially secured servers. Furthermore, the permanent isolation from co-workers seems to be problematic for many people.

Taking all this into account, we propose remote work clusters, a novel concept for making rural regions smarter. Instead of commuting for a long time to large cities using multiple modes of public transport or even the car, several small villages are clustered together and form small business parks where people can commute to very fast. The basic issue here is setting up a secure and shared environment, where not only the required technical resources are provided, but also the social aspects of work live have to be emulated. Furthermore, sharing resources is a hard problem with respect to Security which requires permanent maintenance.

In order to make this approach happen a lot of thought has to be put into the actual implementation, still we do believe that the positive effects outweigh the costs, as (i) workers would gain more spare time from reducing time required for commuting, (ii) rural regions would see a surge in employment and income, (iii) the environmental costs of commuting are reduced, (iv) providing the required resources like high-speed Internet connection can be done easily for such clusters compared to home office and (v) companies would require less workspace in the (costly) city centers.