Smart Village Project in the European Union

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1. Introduction

In recent years, rural areas have experienced shrinking economies as their resident populations have declined due to low birth rates and outflows of young people. Consequently, both public and private enterprises including shops, entertainment, education, healthcare, welfare, and transport struggle to continue operating, and as these operations cease, the loss of employment in these areas pushes even more people away from them, triggering a negative feedback loop. In addition, the aging of residents leads to a decline in traditional and cultural activities, abandoned cultivated land, and an increase in damages caused by birds and animals. This is tied to stagnation of local economic activities in rural areas utilizing local resources.

In response to these problems, in 2021 the government released its Vision for a Digital Garden City Nation. This seeks to increase public and private digital investments in rural areas, resolve problems facing these areas through digitalization, and create satisfying lifestyles in which all people can enjoy the benefits (Digital Agency, Government of Japan, 2021). Presently, residents are often forced to leave rural areas for education, work, healthcare, or aged care. By resolving these issues through the power of digital technologies, residents receive the highest quality services while remaining in rural areas.

The European Union faces similar social challenges in its rural areas and is making efforts to resolve these challenges through digitalization. These efforts are being carried out under the EU Smart Village Project, which is discussed below as a model for similar efforts in Japan.

2. What is a Smart Village?

The "Smart Village" concept emerged in EU policy-making circles in 2017, and it refers to rural areas and communities that utilize their existing strengths and resources to create new opportunities through digital infrastructure. In Smart Villages, conventional and new-generation networks and services are expanded through the effective use of digital technologies, innovation, and various types of knowledge for both residents and businesses. Furthermore, the utilization of digital technologies and innovations aims to improve quality and standard of life, and standard of public services for residents, reduce environmental burdens by more efficient use of resources, create new opportunities for growth in the value chains of local products, and brings improvements to production processes. Notwithstanding, the concept does not offer a panacea to solve all kinds of problems but rather is grounded in strategies that are unique to each local area and respond to local conditions, needs, and opportunities (EC, 2017).

3. The formation and results of the Smart Village concept

Similarly to Japan, the digital infrastructure in Europe's rural areas is fragile compared to that of its cities, resulting in a widening digital divide between the two (ENRD, 2017). In 2016, the European Conference on Rural Development (ECRD), comprising various stakeholders of EU country representatives and EU organizations engaged in rural development, adopted the "Cork Declaration 2.0," which stated that economic growth and sustainability in rural areas will be achieved by digitalization and the innovations that follow from it.

In 2017, the European Commission (EC) adopted the "EU Action for SMART VILLAGES" (EU Action). While the Cork Declaration was an announcement regarding the improvement of quality of life in rural areas, it also took up several rural issues unrelated to digitalization. Of the issues raised by the Cork Declaration, the EU Action specifically calls on policymakers to overcome the digital divide between rural and urban areas and to expand opportunities for rural development through enhancing Internet access and digitalization. It also emphasizes that the roles of rural and urban areas are complementary and that to expand their roles, policies related to quality of life, industry, and the environment should be implemented from a unified perspective.

Subsequently, in 2018, the European Economic and Social Committee (EESC) released an opinion paper on "Villages and small towns as catalysts for rural development—challenges and opportunities," which argued for comprehensive support for Smart Villages and the necessity of building fixed and mobile high-speed broadband networks in rural areas.

In the same year in 2018, the ECRD newly adopted the "BLED Declaration". Unlike the Cork Declaration, the BLED Declaration adopted statement that was specifically aimed at promoting the Smart Village concept. The declaration argues the need to further invest in rural communities and infrastructure, specifically citing measures to foster innovators, create policies that will generate synergies between various fields, attract public and private funding, and invite ideas. According to the declaration, these

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measures will create vast digital rural regions connected by the Internet, creating employment in the service industries, agriculture and biotechnology fields, thereby creating high living standards in rural areas.

Through these declarations and action plans, several ICT hardware and software demonstration projects have been carried out in EU countries using significant funding from the Common Agricultural Policy (CAP) budget, the research and innovation development fund "Horizon 2020," the European Fund for Strategic Investments (EFSI), the European Structural and Investment Funds (ESIF), as well as the European Regional Development Fund (ERDF), which is part of the ESIF and the European Agricultural Fund for Regional Development (EAFRD), a rural development fund that utilizes the CAP budget. The results of these projects have been published such as the project outcome reports of the Enhancing Rural and Urban Digital Innovation Territories (ERUDITE) funded by the ERDF and the European Network for Rural Development (ENRD) funded by the CAP. One example of demonstration projects is the establishment of regional telework centers, including the classification of existing telework centers in each region, and a summary table to serve as a reference for other regions planning to establish telework centers (Table). Other outcomes include a region that has commenced installation of high-speed broadband lines, a country that holds online and offline marketing seminars for farmers, and suburban areas that have received large numbers of residents from urban areas, thanks to the building of telework centers. They also include a region that has opened all-in-one support services offering amenities such as dry cleaning and dentistry that can be used by rural residents, and a public ride-sharing application that can be used by junior and senior high school students living in rural areas (ENRD, 2018).

4. Conclusion

Most EU countries have a lower percentage of areas with high-speed broadband coverage than Japan (ENRD, 2017; Ministry of Internal Affairs and Communications, 2018). In this context, various EU countries are rapidly working on Smart Village initiatives using a range of budgets and funds. While there are many advanced case studies in Japan, in rural areas of the EU, digital technologies are being used across generations, from young to old, for a variety of purposes, and many of these may serve as models for Japan.

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Table. Outline of Regional Telework Centers (Smart Working Centers, SWCs) by Type

Economic Promotion SWCs **Locations**: Usually found in accessible rural areas but also in remote areas. **Business Users**: Targets a of variety users, including remote workers, entrepreneurs, and the public and Praivate sectors. **Business services**: Offers a range of services to business users, including business support, and provides dedicated support/ administration staff. **Community services**: Provides no or only limited services to the local community.	**Social and Economic Hub SWCs** **Locations**: Smaller in size and often in remote rural districts. **Business Users**: Targets a variety of users from entrepreneurs to remote workers in the private and public sectors. **Business services**: Offers different services provided by staff specialized in business support and SWC management. **Community services**: Acts as a hub for a wide range of non-business services to the wider community, including employment services, information services, and a range of other public and community services.
Startup SWC **Locations**: Often located in accessible rural areas. **Business Users:** Primarily targets private entrepreneurs, self-employed workers, start-up businesses, and micro and small business operators. **Business services**: Provides a range of services to industry focused mainly on business support and has dedicated staff to manage and support the SWC. **Community services**: Offers limited services, and, if available, these are focused on helping unemployed residents to find employment or to become self-employed.	**Remote Work SWCs** **Locations**: Often located countryside areas and are used mainly by people working remotely. **Business Users**: Mainly targets users employed by companies headquartered in urban areas. **Business services**: Offers specialist support to businesses and individual users with staff dedicated to the management and support of the SWC. **Community services**: Rarely offers services for the local community, but if available, these are focused on helping unemployed residents find opportunities for remote work.

Source: EU et al. (2015: 9, fig 2.2), Japanese translation by the author.
Note: Telework centers in rural areas are called Smart Working Centers (SWCs).

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