

An Introduction to “Partnership for Smart City Takamatsu” as a Platform to Engage in Local Co-creation Activities

OGA Satoru, KOBAYASHI Keisuke

Abstract

In October 2017, “Partnership for Smart City Takamatsu” was founded in Takamatsu City, Kagawa Prefecture to provide a positive environment for community co-creation. The Council hopes to achieve a “smart city” by utilizing various data inputs to incentivize the movement of people, things, and information throughout the city, encouraging reciprocal cooperation between local communities, generating innovation and promoting synergy effects. In this paper, the Council is regarded as a platform to encourage open innovation, and we describe its role in smoothing the flow of ideas whose emergence, selection, and practice can lead to innovation.



community co-creation, open innovation, data utilization, FIWARE, the Council

1. Introduction

As business models evolve from traditional *monozukuri* (product manufacturing) to *kotozukuri* (customer experience based services, systems creation), NEC has begun to explore various avenues for the development of new business. In regard to the creation of smart cities, we are engaged in initiatives (raising social capital, and social value network) to support innovation through co-creation to help solve their issues and challenges in cities.

In October 2017, we participated in the establishment of Partnership for Smart City Takamatsu in Takamatsu City, Kagawa Prefecture and have subsequently played a leading role in providing the Council’s administrative office with planning and management support.

In this paper, we describe how the Council has created an innovative environment to support co-creation.

2. Utilizing Data to Promote Innovation

According to a study conducted by the Ministry of Internal Affairs and Communications’ Statistics Bureau, Japan’s population has been declining since 2008. In

response, local governments and businesses are seeking to generate innovation by drawing on local skills and characteristics, while accelerating independent economic activity. This has led to increased collaboration and resource sharing between local governments and businesses to create new added value and contribute to community revitalization.

Among these resources, data — or information — in particular, represents a resource that could be much better utilized. By sharing data, we can make it more accessible. Centralizing various data inputs to facilitate cross-referencing makes it possible to discover relevant community issues that might otherwise remain hidden. Moreover, we can also use that same data to solve those issues. Data analysis can be applied to policy making by local governments and can be leveraged by entrepreneurs and businesses to develop new services and applications that support the creation of new businesses.

It is difficult for individual municipalities or businesses to generate solutions to contemporary social issues in isolation. Co-creation provides an opportunity for communities to come together with businesses and solution providers such as NEC in a collaborative environment

where fresh ideas can be generated and embodied, new solutions implemented, and challenges overcome.

3. About Partnership for Smart City Takamatsu

3.1 Overview of the Council

Established on October 25, 2017 in Takamatsu City, the Council is comprised of 14 separate entities, including the municipal government, various enterprises, and NPOs. The goal of this Council is to create a smart city that fosters innovation, reciprocal cooperation between local communities, and promotion of synergy effects,

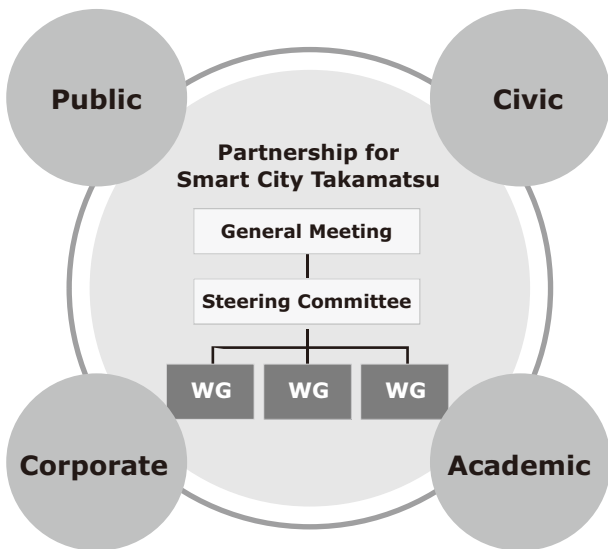


Fig. 1 Structure of the Council.

while utilizing relevant data to revitalize the movement of people, products, and information throughout the city. As a center for community co-creation, the Council itself can be seen as an innovation driver.

To accomplish this goal, a broad range of participants from industrial, academic, public, and private sectors were expected to gather and act autonomously, rather than simply being incorporated into the city’s administrative functions and controlled by the city. Although the Council is chaired by the Mayor of Takamatsu and the city’s ICT promotion department is acting as the Council’s Secretariat, the steering committee is made up of experts from various fields who are entrusted with studying the core issues animating the Council — namely, how to encourage the Council’s members to innovate in ways that will help achieve Smart City Takamatsu, as well as to determine what fields should be selected and what solutions should be taken (Fig. 1).

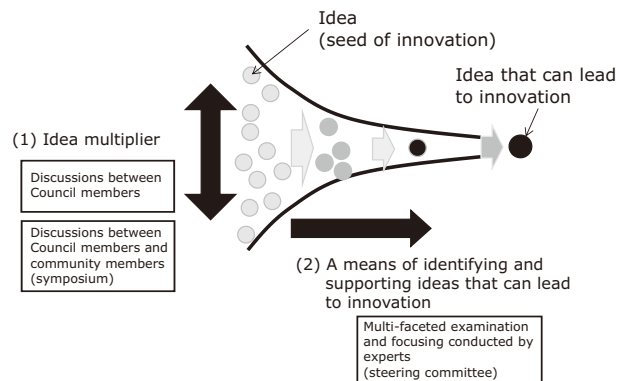
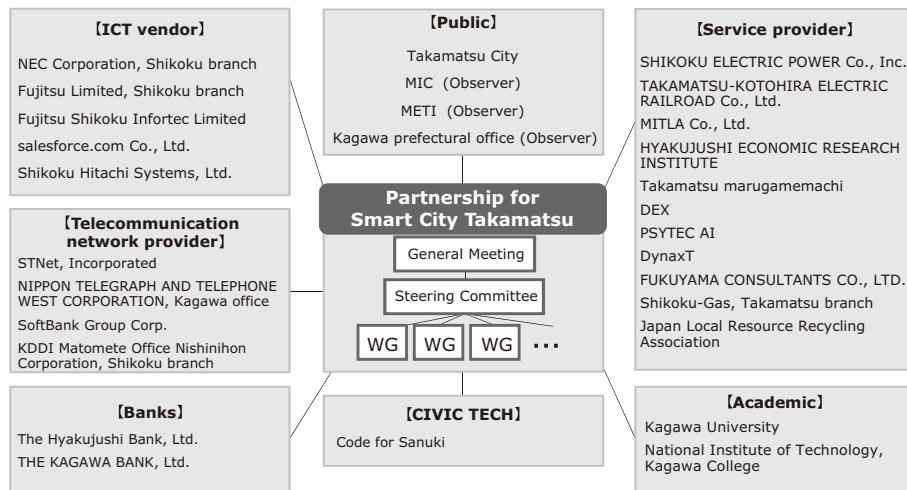


Fig. 2 Conceptual Flow — Transforming Ideas into Innovation.



MIC: Ministry of Internal Affairs and Communications
METI: Ministry of Economy, Trade and Industry

Fig. 3 Composition of the Council (March 2018).

3.2 Two functions of the Council

Now let's look at the activities the Council is conducting from the viewpoint of functions (policies) that can lead to innovation. **Fig. 2** shows the conceptual flow based on the concept of open innovation advocated by Henry Chesbrough, in which a company chooses the idea (or ideas) from a multitude of ideas that exist inside and outside the organization that best corresponds with the company's strategies and thereby connects them to innovation. We adopted the open innovation approach with the following two objectives in mind: 1) the ability to create multiple ideas that can potentially help solve the issues the communities are facing; and 2) examination and selection of ideas attractive to the Council based on the direction the Council, as an organization, is aiming for and application of those ideas to practical use.

Function (1): Idea multiplier

A crucial role of the Council is to serve as an idea multiplier ((2)) making it possible for innovations targeted at the creation of Smart City Takamatsu and more effective data utilization to be generated. The first way to achieve this is to increase the number of Council members — which will lead to more encounters between and among entities, thereby increasing the possibilities for the generation of new ideas. As of the end of March 2018, there were 26 member organizations participating in the Council and that number is on the rise (**Fig. 3**).

The second way to facilitate idea generation is to increase the opportunities for discussion between Council members and members of the community, rather than restricting exchange to a limited group. Consequently, on February 24, 2018, we held an open symposium concerning issues the community was facing where residents, business people, and Council members could participate in a wide open and wide-ranging discussion.

This symposium was promoted as an opportunity for people to express and exchange their opinions regarding the vision of the future set forth by the Council. Nearly a hundred local residents participated in this symposium (**Photo 1**). The discussions, as well as a survey of the participants helped the Council better understand local priorities and highlighted issues the Council had not considered — such as support for child care — that local residents strongly endorsed (**Fig. 4**).

The third measure we took in support of idea multiplication was to create a video to communicate to community residents the concept of Takamatsu's smart city (**Photo 2**). The video was uploaded to YouTube and can be viewed free of charge by anyone. We hope that this

video will stimulate the exchange of new ideas. We asked a local production company to make this video, which had the positive side effect of leading us to the discovery of more fascinating places and businesses in Takamatsu.



Photo 1 Symposium with Community Residents.

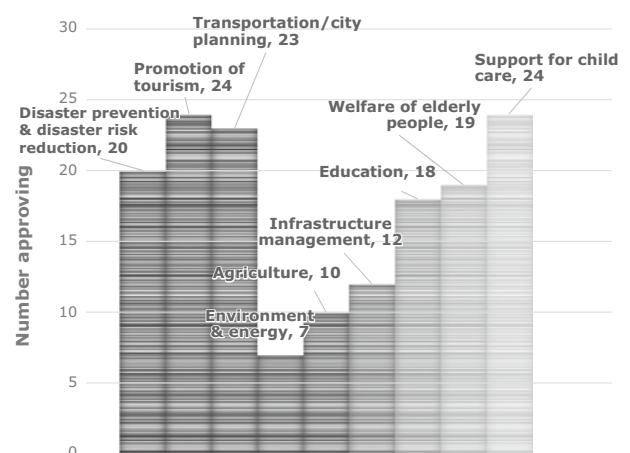


Fig. 4 Symposium Questionnaire Results
(Number of valid respondents: 58).



Photo 2 Smart City Takamatsu Video.

Function (2): Identifying ideas for innovation

Generating ideas as described above is the first step. Finding the right ideas and bringing them to fruition is the next and perhaps most important step. The question is: how best to analyze those ideas and determine which ones are most likely to generate innovation? This is the key function of the operating committee and so the quality of their assessment will determine the success of the entire project.

Let’s look at the basic structure of the steering committee first. The steering committee is composed of elected members from the Council, external experts, and observers. The main responsibilities of the steering committee are as follows:

- 1) Study and establishment of Council policies and procedures
- 2) Establishment of working groups (WGs)

To improve the quality of the committee’s work, we conducted the following activities in FY 2017.

Regarding item 1), one of the primary areas of study is assessing and evaluating the Council’s vision for the future. By having each member of the steering committee evaluate where they think the Council should be headed, we were able to clarify future-oriented policies regarding the fields where the Council should create innovation. The above-mentioned symposium held in February 2018 also played an important role in identifying those fields. With the participation of the members of the steering committee — who are also members of the Council, the symposium helped the committee focus on how to integrate the Council’s vision with the opinions of local residents, thereby contributing to more effective selection of ideas.

Next, concerning item 2), we set up theme-focused WGs. These WGs were intended for planning and study of specific new applications and services that use a common platform (FIWARE) for data utilization. The process of setting up a WG is shown in **Fig. 5**.

The role of the steering committee is to select and assess ideas that have the potential to generate the kind of innovation the Council is trying to create. It is important that the feasibility of ideas proposed by the Council members be examined carefully and thoroughly. And that’s precisely what makes it necessary to set up a WG.

It is important to remember that regardless of the

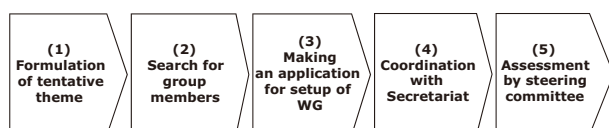


Fig. 5 WG Setup Process.

quality of analysis conducted by the steering committee, any plan is susceptible to obsolescence. There is always the possibility that what is required may change if study and actualization of the plan takes multiple years. Therefore, the activity of a WG must be carried out in as short a time as possible and a decision on whether to implement the plan also needs to be arrived at quickly. For optimal results, the lifetime of a WG should be no more than a year. If further validation of the plan is required, that should be determined as soon as the WG has completed its work.

Several WGs have been operating simultaneously so far this year. For example, one WG is studying distribution and utilization of transportation data with a view to creating a system that can take advantage of data relating to the service conditions of Kotoden Bus — Takamatsu City’s public transportation system. The goal is to put the data out in an easy-to-access, easy-to-use way that will allow anyone who needs the data to effectively utilize it. If this can be achieved, other organizations will be more likely to make their data available. It is also likely to accelerate the solution of other issues confronting stakeholders in the Takamatsu area.

4. Conclusion

This paper has reviewed the new structures in open innovation activities of Partnership for Smart City Takamatsu, which seeks to contribute to the revitalization of the Takamatsu area by promoting open innovation and community co-creation. This is especially significant when NEC creates completely new business models and implements them.

NEC is continuing to support the Council in incentivizing the creation of new businesses, believing that increased data sharing and data utilization under the Council’s aegis will help seed innovation throughout the city.

* YouTube is a registered trademark or trademark of Google Inc. in the U.S. and other countries.

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OGA Satoru

Assistant Manager
Future City Development Division

KOBAYASHI Keisuke

Assistant Manager
Future City Development Division

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