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Knowledge creation in planning process of joint
administrative information system
——A case study of the A prefecture
“local government cloud” promotion council——

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The Cabinet Secretariat announced the "i-Japan strategy 2015" in 2009 to indicate the promotion of an administrative information system. In this initiative, cloud-based local government services that facilitate the sharing of administrative information among municipalities was focused on. As of January 2017, local government cloud have been promoted and 56 municipalities have implemented the unified system. The participation rate was equal to 20% of Japan's 1,741 municipalities. However, in the private sector, 60% of regional banks utilize sharing systems. This shows that the private sector is progressing much more than the local governments.

Local government cloud are believed to reduce costs by 30% on an average. However, high switching cost, differences in implementation approaches to information policy, and the diversity of interests in each municipality are obstacles to its implementation.

In this study, the author tries to conduct an on-site study of local government cloud in 18 municipalities in A (anonymous) prefecture to clarify the knowledge creation process. The case of A prefecture is famous, with a 44.6% reduction in total cost. Moreover, the role of an expert participating in the process was assessed.

In addition, this research tries to construct a theoretical model of knowledge creation in the implementation of local government cloud to facilitate the future introduction of these services. A case study of A prefecture was conducted to investigate the implementation process of local government cloud. Data were collected and analyzed through on-site interviews of stakeholders and the related written documents and other materials provided by the local government cloud committee that was formed by 18 municipalities were explored as well.

As a result of the research, I proposed a knowledge creation model for the implementation of local government cloud. Firstly, basic technical knowledge is provided at informal places by experts. Additional knowledge is created by experts and participants by repeating the intellectual exploration and editing process. The created knowledge is shared with stakeholders at formal places, such as official committee discussions. This knowledge creation was accelerated by the authority of the secretariat and the experts' expertise, as well as participating institutions' (organizations) confidence in the implementation process. During this process, the "Reduction in complexity" that Luhmann (1990) indicated is seen.

At the same time, the experts, as independent agents, build knowledge independently from the secretariat at informal places, and in formal places, the procedural knowledge of the secretariat and the expertise of the expert unite. It significantly contributes to the approval of created knowledge.

As mentioned, the progress of cloud-based local government services is compared to the system sharing of private regional banks. In order to realize local government cloud, the knowledge creation process, knowledge management, and consensus building among stakeholders is crucial. The lack of these factors is considered to be detrimental to the overall progress of the local government. The proposed knowledge creation model that summarizes the knowledge creation process is considered to be a contribution to the facilitation of cloud-based local government services and it is likely to contribute to solving the problem of the development of these services.