

[Purpose] Based on the cloud-by-default principle, we list the practical issues that administrative agencies will face in promoting the utilization of public clouds from now on, organize and analyze them, and present solutions.

[Method] (1) Interviews with foreign governments on practical operations, (2) Survey of public documents on procurement and contracting schemes in other countries, (3) Examination by a study group comprised of the government and member companies of issues and solutions, (4) Expert interviews

[Results] The **actual utilization** of public clouds in other countries, the development of **procurement and contracting schemes** in other countries, and the following **issues and solutions** present and future utilization of public clouds in Japan are presented.

1. Public Cloud Utilization in Practice (Interviews with the UK, US, and Canada) **2. Development of procurement and contracting schemes (survey of overseas literature in the UK, US, Canada, Australia, and New Zealand)**

Procurement	<ul style="list-style-type: none"> There were few examples of direct orders to CSPs*, most were indirect contracts through Slers and resellers Administrative agencies do not expect CSPs to respond individually (accept non-discrimination and automatic processing) Many countries are devising ways to increase the efficiency and agility of procurement by using a two-stage approach: a pre-framework agreement that sets out the basic delivery conditions and a separate order
Payment	<ul style="list-style-type: none"> Diverse forms of payment have been developed. Some institutions are oriented towards shorter payment spans, while others are devising mechanisms such as fixed annual prepayments In addition to Slers, resellers are playing an increasingly important role. Measures such as diversification of payment methods and utilization of volume discounts are enabling cheaper and more convenient procurement
Audit	<ul style="list-style-type: none"> System audits utilize third party certification, etc., and administrative staff do not enter the DCs themselves; however, business audits such as payment calculation are carried out, and entry authority is not restricted
Education Training	<ul style="list-style-type: none"> Offer a diverse human resource development menu to staff. There is also a wealth of content that is useful for indirect contracts Also offer training to use consoles and experience the cloud with the help of vendors

*CSP: Cloud Service Provider. Here we assume a service provider that mainly specializes in the cloud.

- In order to promote efficiency of IT procurement and respond to technological innovation, **countries are developing marketplaces that allow users to search for a variety of goods, including cloud services and human resources as well as small value goods.**
- The **simple ordering** of goods and services is possible, subject to an umbrella agreement
- Mechanisms for technical dialog are being utilized to accurately respond to new technologies (Japan is putting similar mechanisms in place)

[Relationship between umbrella agreements and the digital marketplace]

フレームワーク
G-Cloud フレームワーク | デジタルアウトカム & スペシャリスト フレームワーク | ホスティングデータセンター フレームワーク

デジタルマーケットプレイス (発注の仕組)

個別契約 (コールオフ契約)

Patterns of technical dialog

両フェーズにまたがる対話 (Contracting by Negotiation (米))

仕様を確定させるための対話 (Competitive Dialogue (英・加・豪・NZ))

仕様確定後、提案の改善のための対話 (Competitive Procedure with Negotiations (英・加) Negotiation during an Evaluation (豪))

仕様確定

最終提案

3. Issues and Solutions for Cloud Utilization (Administrative Cloud/Agile Study Group: Two meetings were held with Cabinet Secretariat, Ministry of Internal Affairs and Communications, and six member companies; interviews with CIO aides and other experts)

No.	Process	Issue	Approaches for Solution
1	Service and business planning	Concerns about cloud migration, failures, and security risks, psychological resistance to unknown technologies and lack of understanding of the cloud	Take steps such as providing ICT training, security education, and hands-on opportunities, guiding the transition process, and sharing reference case studies to promote staff understanding and reduce administrative coordination burden, and disseminate information to eliminate misunderstandings
2	Requirement definition	Fear of managing data outside of the intranet, difficult to determine the form of migration	Introduce case studies from other countries, such as data security level setting , accumulate and share case studies
3	Budget request	Difficulty in making estimates for budget requests	Accumulate and share case studies and methods to improve estimate accuracy , and risk reduction through dialog and requests for information
4.1	Procurement	Gap in payment cycle/scheme between administrative agencies and CSP	For now , seek payment methods that can take advantage of the benefits of the cloud, assuming an indirect contract
4.2		Do not know the appropriate procurement categories , contracting methods (direct/indirect), and segregation of responsibilities	Share best practice on procurement categories, contracting methods, and problem prevention measures, etc. that are appropriate for public clouds
4.3		General concerns about the possibility of vendor lock-in in procurement	Ensure data portability at the time of procurement, request proposals for migration measures
5	Audit and on-site inspection	The method to prescribe system audits and on-site inspections of CSPs is not clear	Training and education on how to audit cloud services and use of third-party certifications
6	IT governance	Lack of knowledge about the use of the cloud on the part of administrative employees	Education on basic understanding, procurement and contracting points to note, estimates, console experience, and security, etc.

[Conclusion] Public clouds have **already become a practical option**. However, in order to benefit from the advantages of public clouds and reduce risks, it is important to (1) **Use procurement and payment methods that assume indirect contracts**, (2) **Accumulate and share case studies and know-how**, (3) Create **cross-organizational support** systems, and (4) Eliminate prejudice and lack of understanding about the cloud, and **train** employees to acquire specific practical skills