

# A recent IT audit case from our audit reports

SAI-JAPAN  
Board of Audit of Japan

Natural Resources & Energy Audit Division  
Masahiro AMITANI, Assistant Auditor

# Contents

1. Cloud Computing applied to the Government of Japan

2. Audit Findings

- ① Progress of Integration
- ② Less Impact on IT budget
- ③ Failed Resource Management
- ④ Others

3. Conclusions

# 1. Cloud Computing applied to the Government of Japan

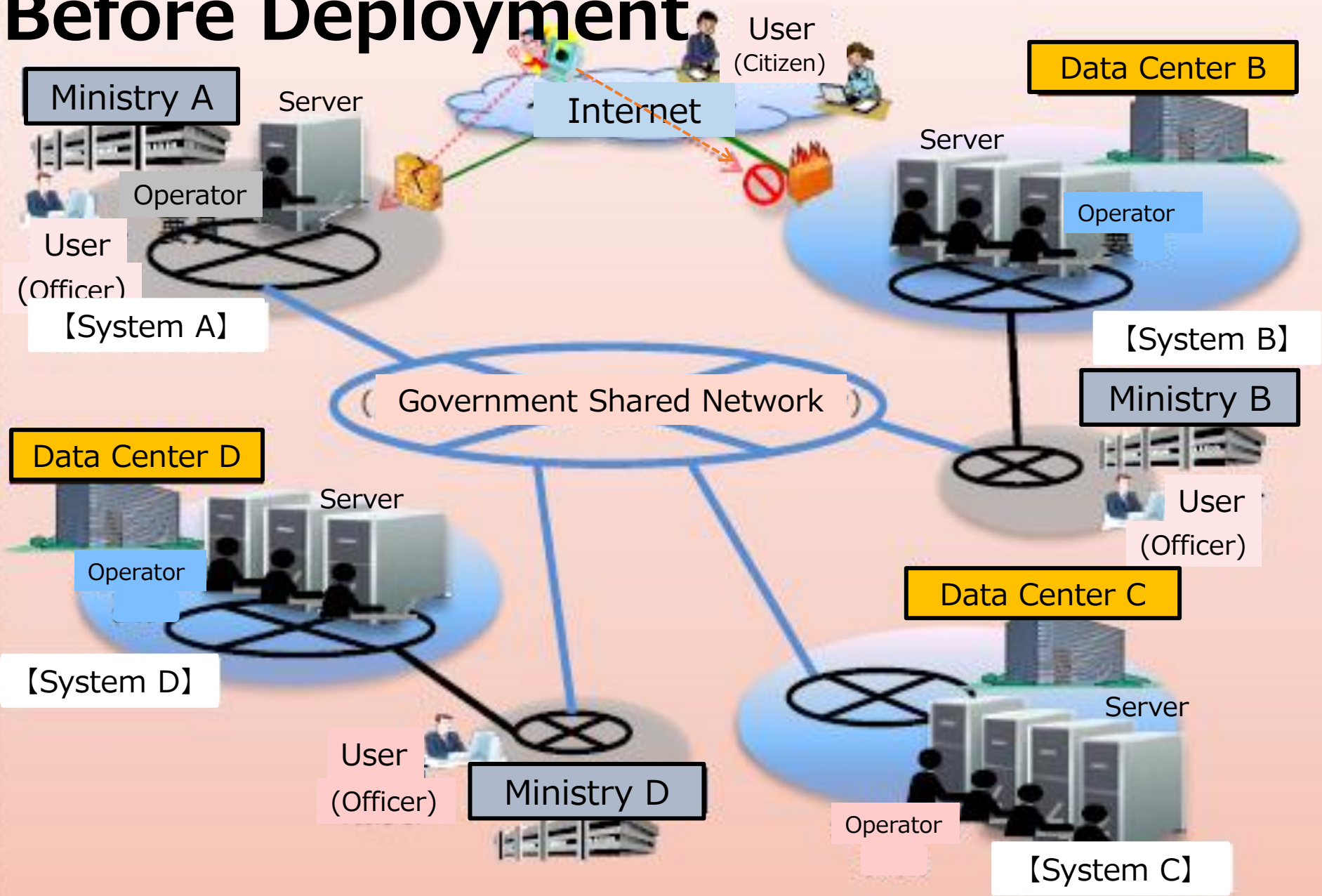
## Deployment models

- public cloud
- private cloud

## Service models

- SaaS (Software as a Service)
- PaaS (Platform as a Service)
- IaaS (Infrastructure as a Service)

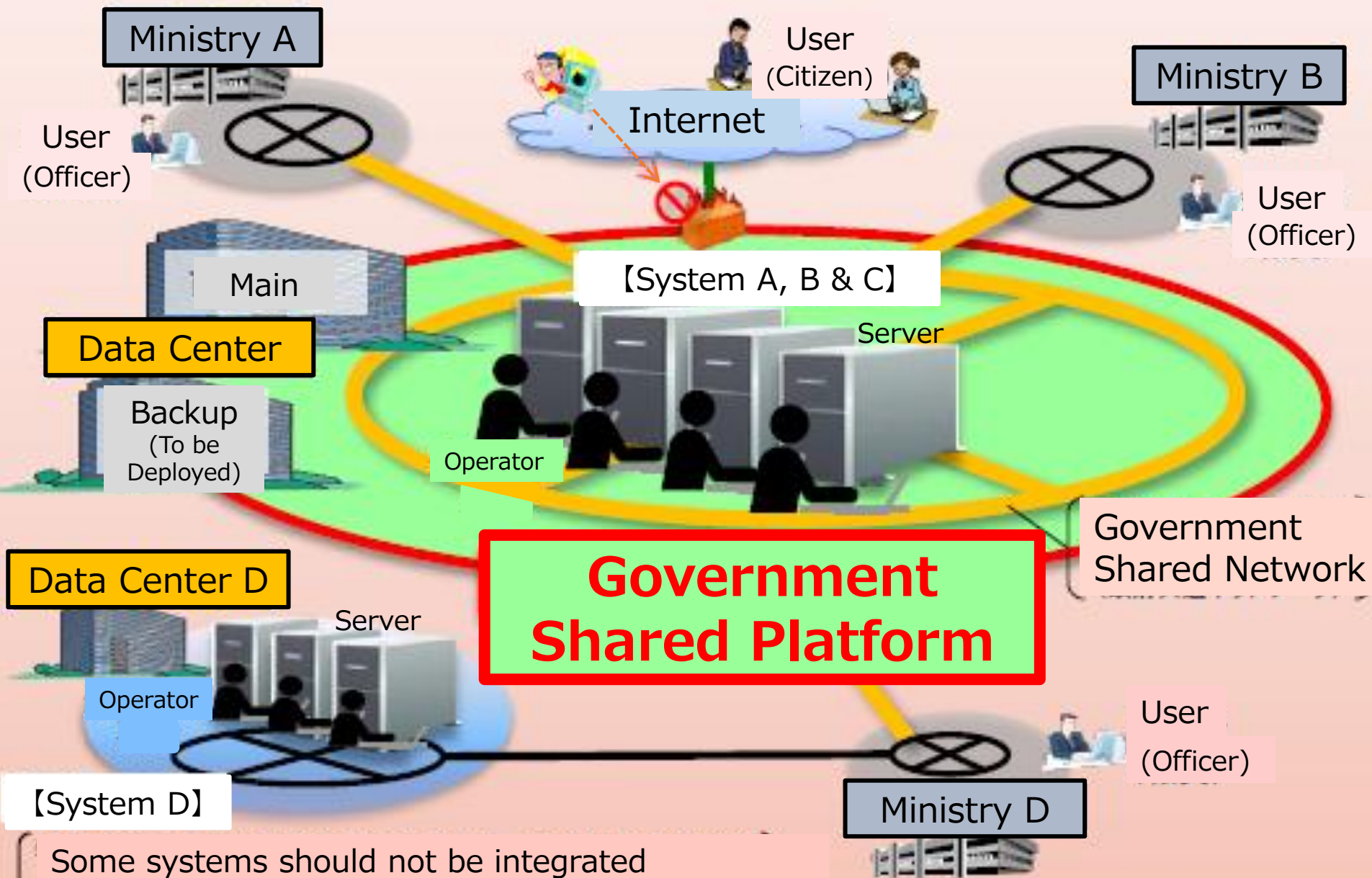
# Before Deployment



# Concept of the “Government Shared Platform”

- incorporate cloud computing technology to integrate the governmental information systems
- establish an inter-agency framework for developing and implementing a common information system

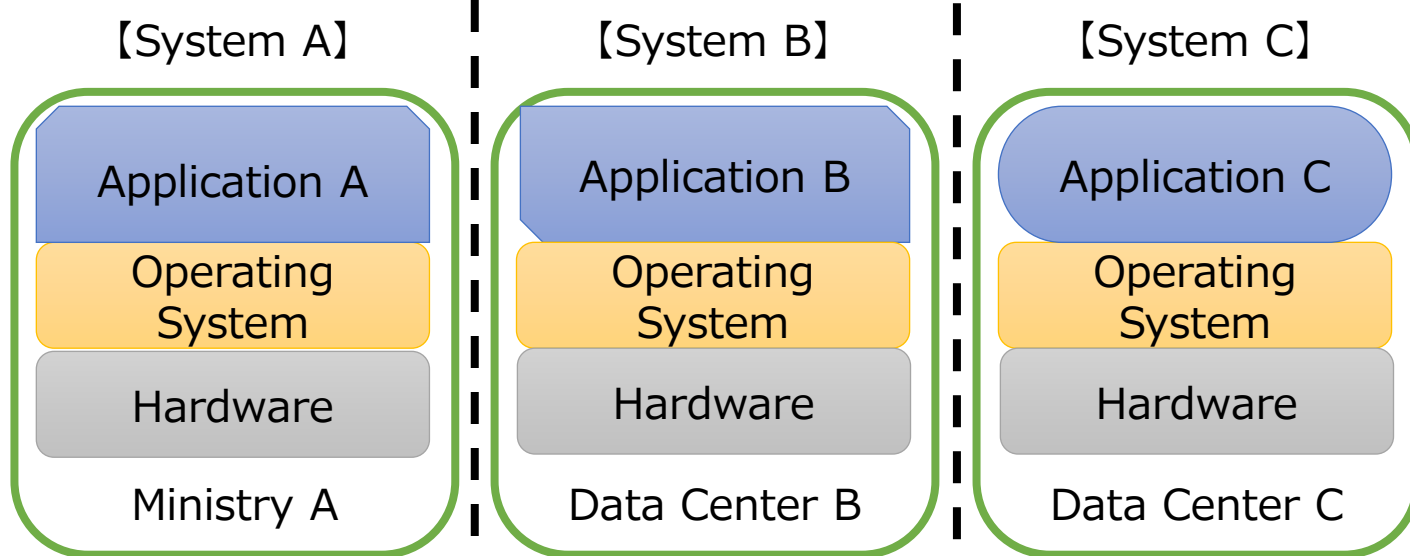
IT Strategic Headquarters (May 2010)



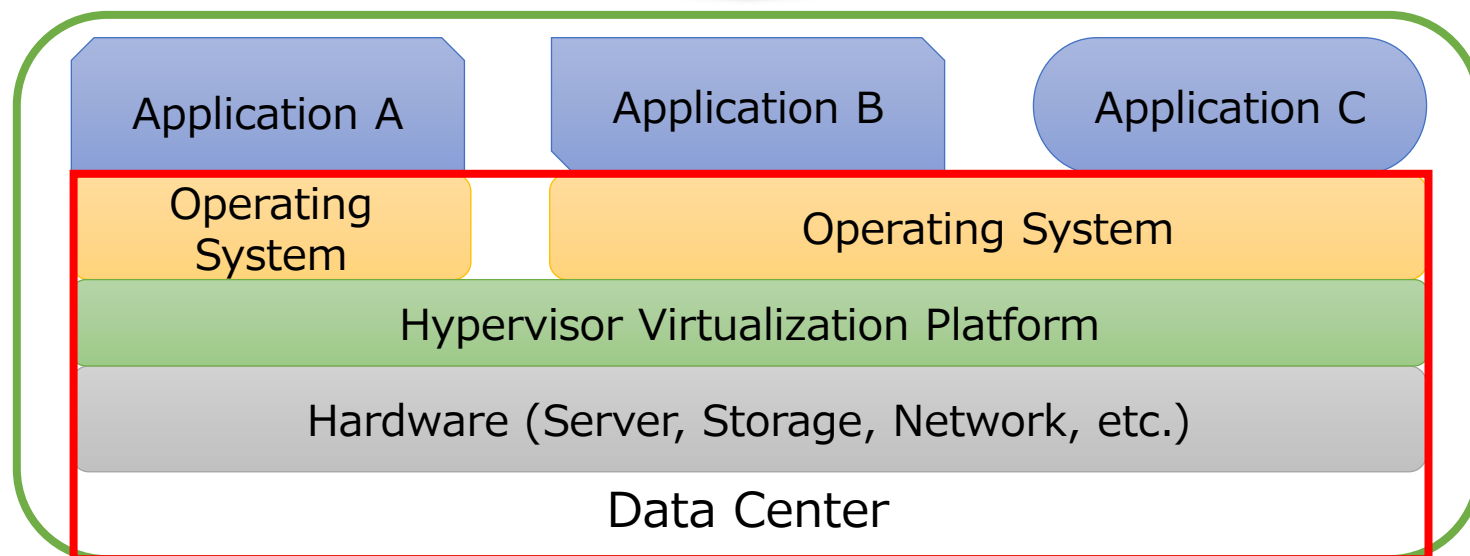
Some systems should not be integrated in case that cost-effectiveness is not realized etc.

# Systems Excluded from Integration

1. Intra-Ministerial Networks (LAN)
2. Communication Network Systems
3. Mainframe Systems
4. Independent Systems which operate information related to criminal investigation, national defense, air traffic control etc.  
(as planned)

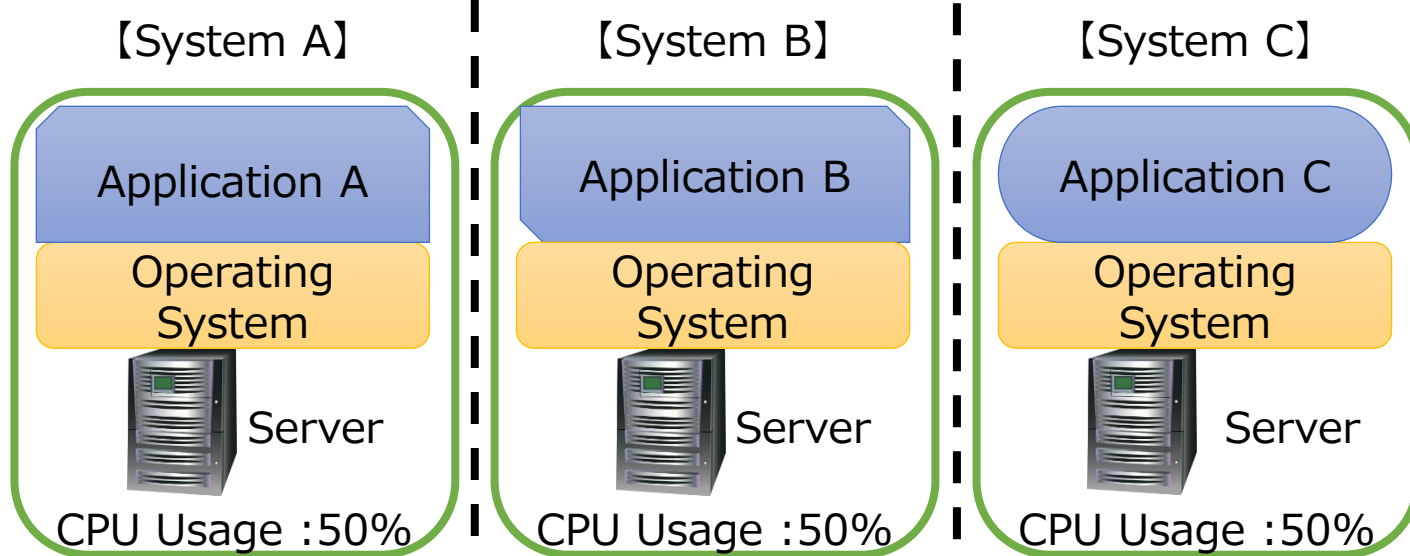


## Cloud Computing

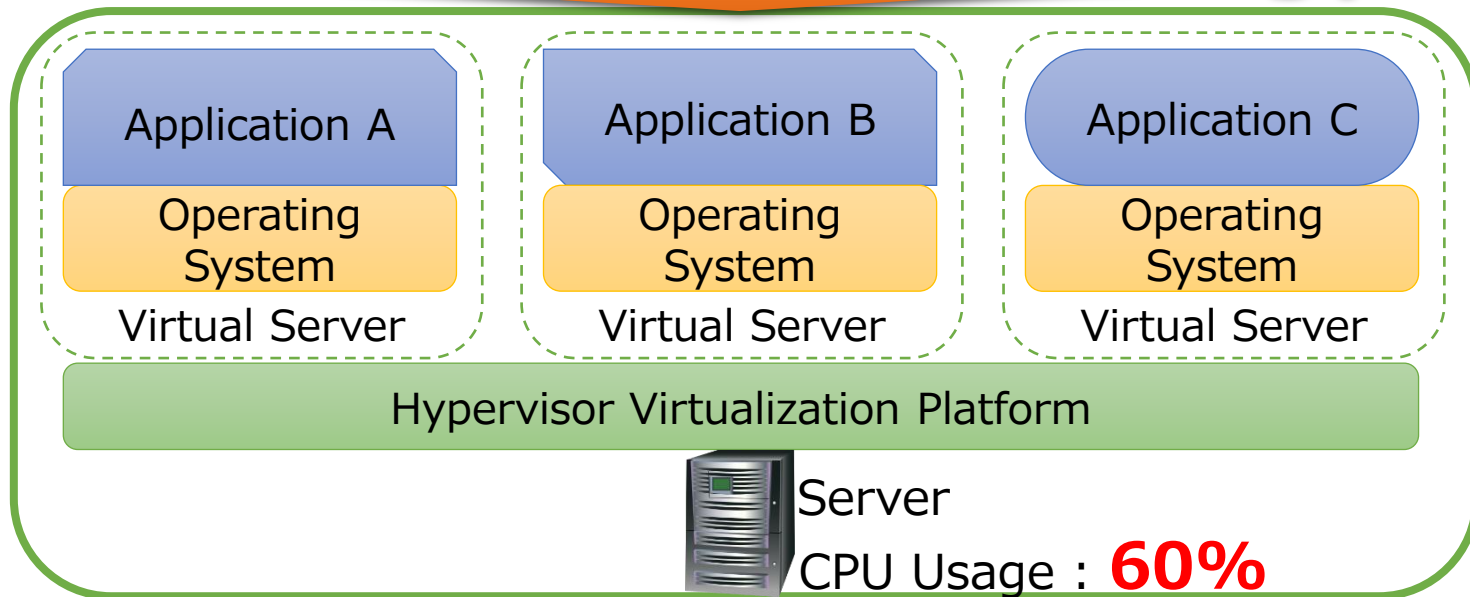


【System A, B & C】 **Government Shared Platform**





# Virtualization Technology



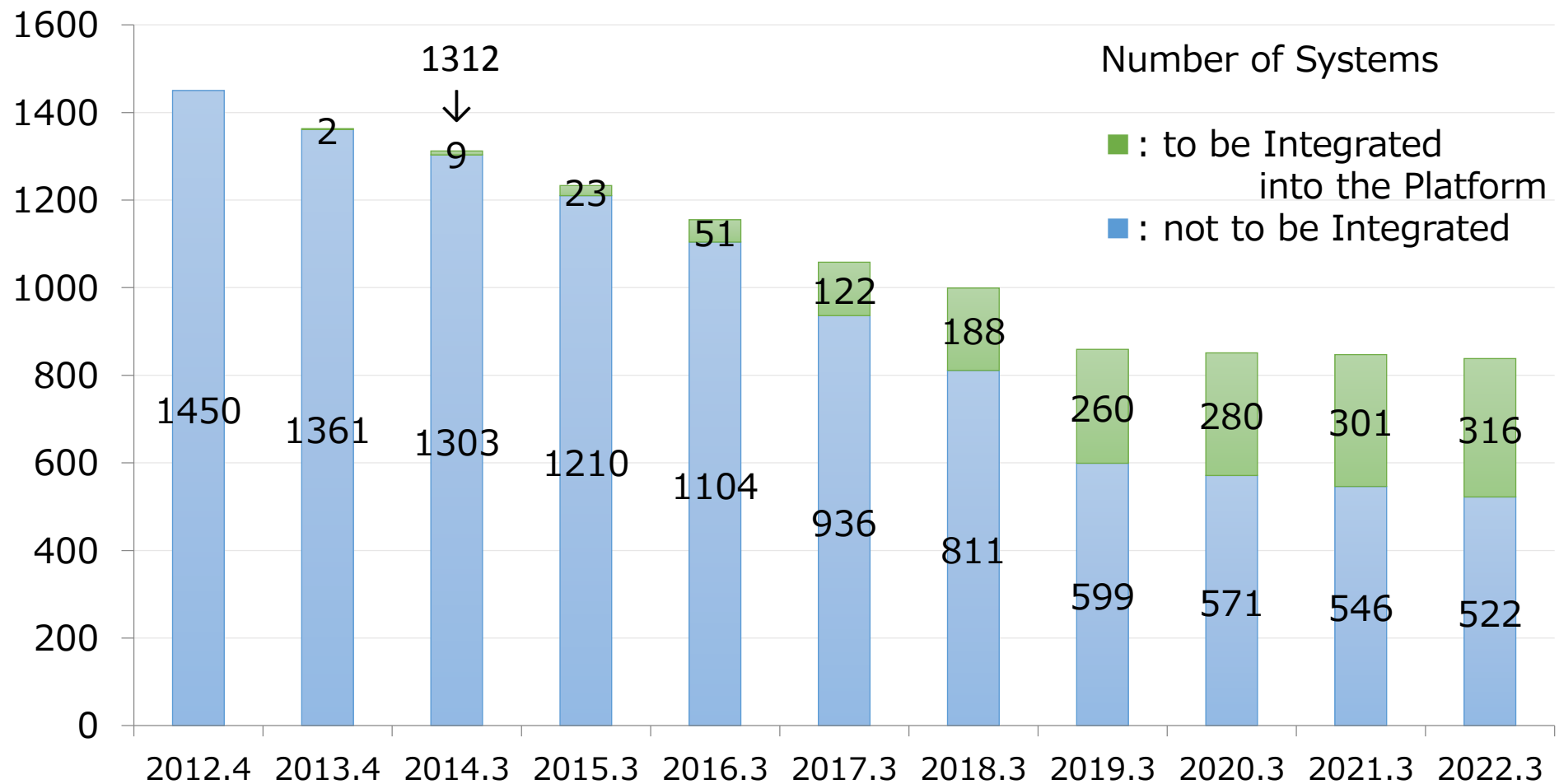
【System A, B & C】

# Expected Outcomes of the “Platform”

- Integrate IT Budget
- Reduce Number of Servers
- Maximize IT Resources
- Improve Availability, Reliability & Security

# 2.Audit Findings

## 2-① Progress of Integration



# Number of Exclusion Increased

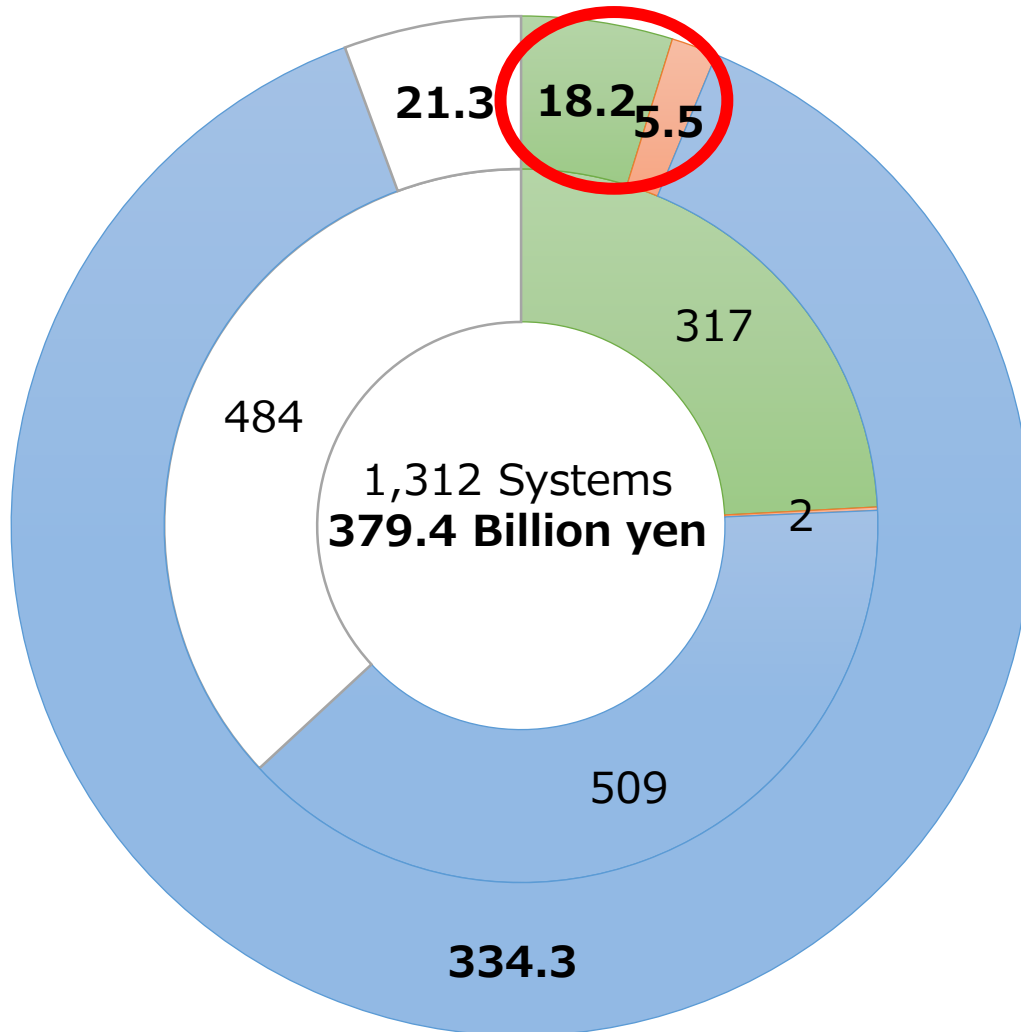
- 5. Requirements for higher level security (e.g. handling high volume of personal information)
- 6. Operational Requirements are higher than those of the “Platform” (e.g. RTO)
- 7. Technical Environment Dependent
- 8. No cost-reduction merits expected

(Cont.)

- 9. Using Cheaper Private Services
- 10. Necessary functions are not provided by the “Platform”
- 11. Interoperability is needed
- 12. To be abolished due to integration
- 13. Not operated by the Government
- 14. Temporary Systems
- 15. Not fully but partially integrated into the “Platform”
- 16. Others

# 2-② Less Impact on IT Budget

IT Budget related to the Platform is only **23.8 Billion yen (6.2%)**

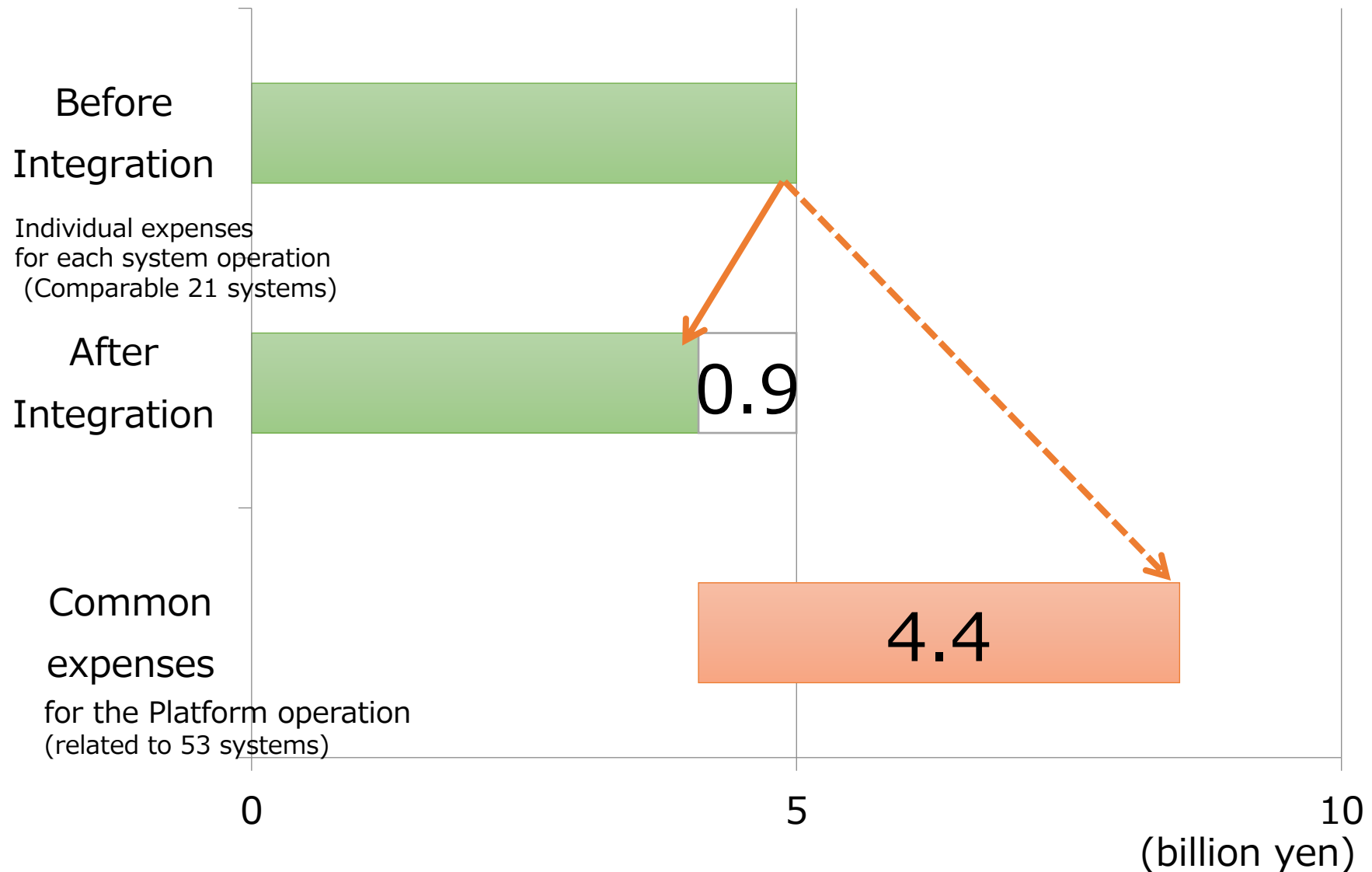


Inner : Number of Systems  
in March 2014

**Outer** : 2014 fiscal year Budget

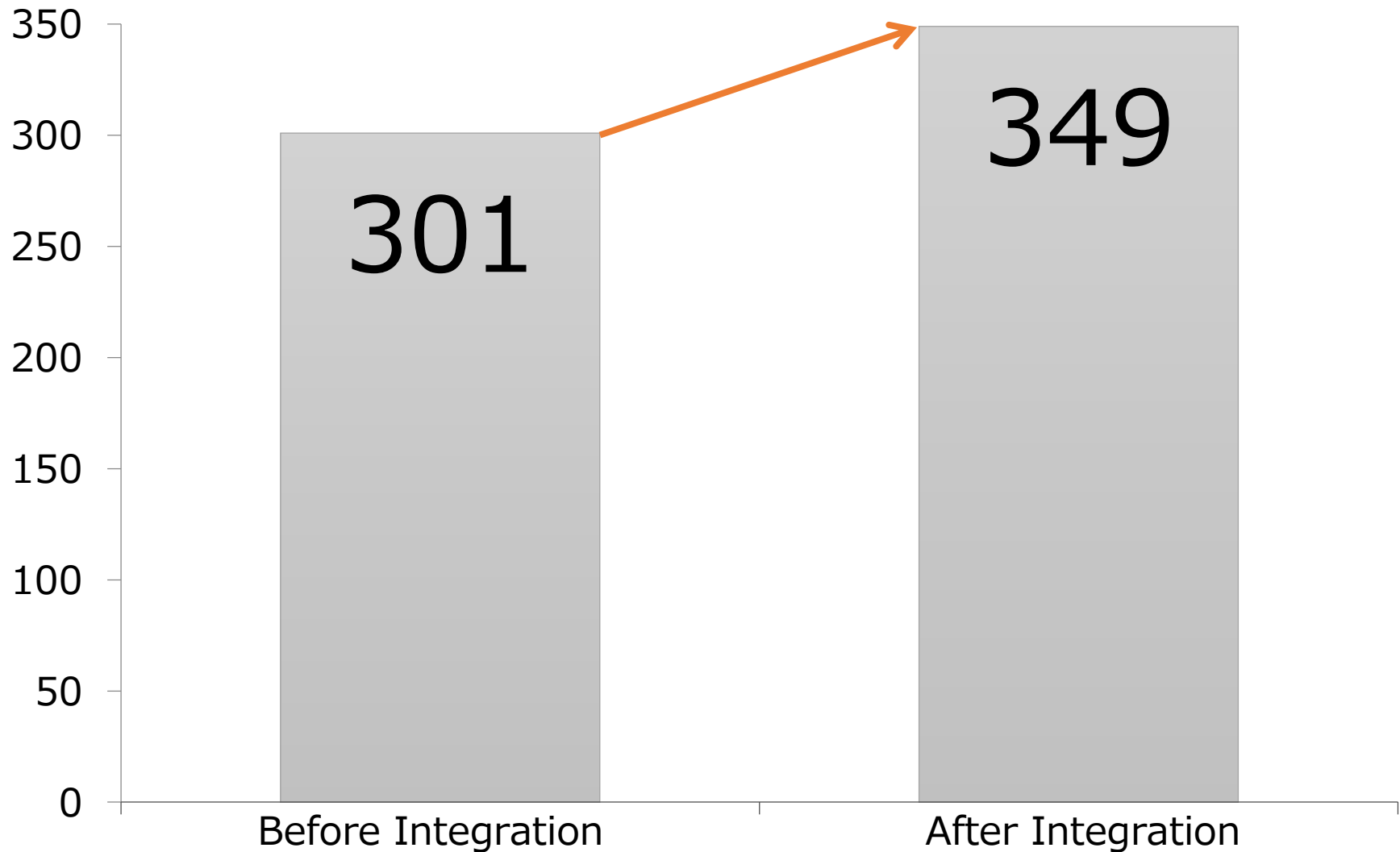
- : to be Integrated into the Platform
- : Government Shared Platform & Network
- : not to be Integrated
- : to be discontinued

# 2-② Failed Cost Management



# 2-③Failed Resource Management

## Number of Servers





## 2-③ CPU usage level is lower than expected

Extremely low usage case

- CPU usage of a database that belongs to Ministry of Internal Affairs and Communications (MIC) proved only 0.05% in average.
- MIC failed to assign adequate IT resources to the database in the Platform.

## 2-④ And More Findings...

- Information Security
  - Many Ministries defined security requirements without Risk Analyses.
  - Log analysis for reviewing security risks was done in only 28.6% of information systems.
  - Only 30% of the results of information system audits were shared with the policy owner Ministry (Ministry of Internal Affairs and Communications, MIC).

## 2-④ And More Findings...

- Data Coordination
  - Cabinet Secretariat and MIC failed to design the “Platform” as platform for data coordination
  - 22% of the systems are considered as expected candidates for data coordination

# 3. Conclusions

- Overall reduction in the number and costs of information systems matters, regardless of whether the Government Shared Platform System or not.
- Ministry of Internal Affairs and Communications (MIC) and other Ministries should be responsible for all phases from requirement definition to operations to achieve cost cuts by means of integration into the “Platform.”

# 3. Conclusions

- MIC should be responsible for utilization of virtualization technology; Ministries should estimate necessary amount of server resources.
- Ministries should analyze logs for risk analysis; MIC should consider sharing information as to risk analyses or system audit findings.
- The Government should be responsible for future necessity of data coordination.