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# Strategic Utilization of the Big Data for Parliamentary Libraries and Research Services

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**NATIONAL ASSEMBLY  
RESEARCH SERVICE**

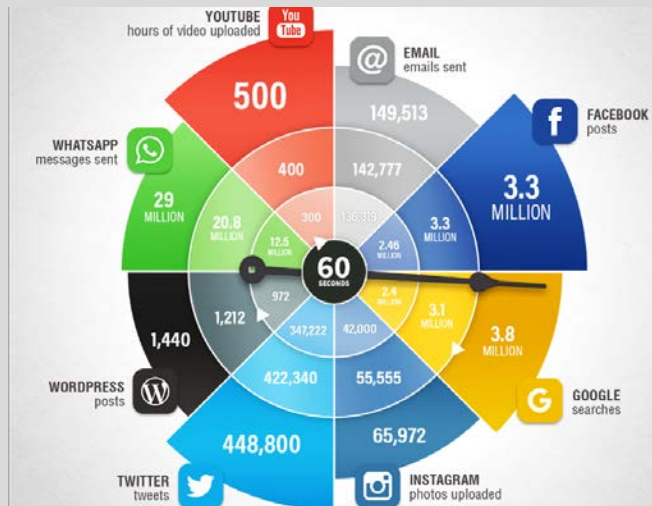
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# 1. What is the Big Data?

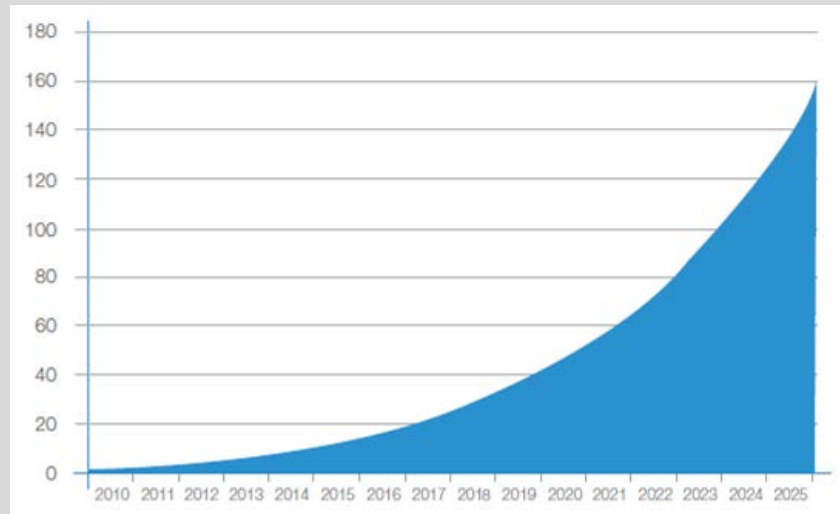
## NOW, the Big Data Era is Here

Data Created in 1 Minute  
(global, 2014-2016)



Source : [www.smartinsight.com](http://www.smartinsight.com)

The Annual Size of the Global Datasphere Increase  
(global, 2010-2025)



Source : IDC (2017)



# 1. What is the Big Data?

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## Pros and Cons of Big Data

### PROS

**Enhanced Explanation**

**Possibility of Customized Service**

**Responding to the Changes of Digital Environment**

### CONS

**Privacy Risk**

**Digital Divide**

**Others**

- Data Storage Cost
- Data Garbage, ...

# 1. What is the Big Data?

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## Various Ways to Utilize Big Data in Parliamentary Units

### Utilizing the Big Data in Parliamentary Libraries and Research Services can give

- A possibility to exceed their current role of collecting books and researching literature to meet the new demands of the digital era
- Enhanced capacity for Parliamentary Libraries and Research Services as a key think-tank
- A variety of personalized information to the public
- More easily accessible and valuable archived information
- More insights about the legislation

# 1. What is the Big Data?

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## Big Data for Parliamentary Units

	<b>Parliamentary Library</b>	<b>Research Service</b>
<b>User's Perspective</b>	✓ Personalized services to library visitors	✓ In-depth analysis results
<b>Institution's Perspective</b>	✓ Efficient use of library resources ✓ Development of a new function within the library	✓ Appropriate analysis on the government policies ✓ Enhanced research capacity

## 2. Case Study

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### Case Study in South Korea

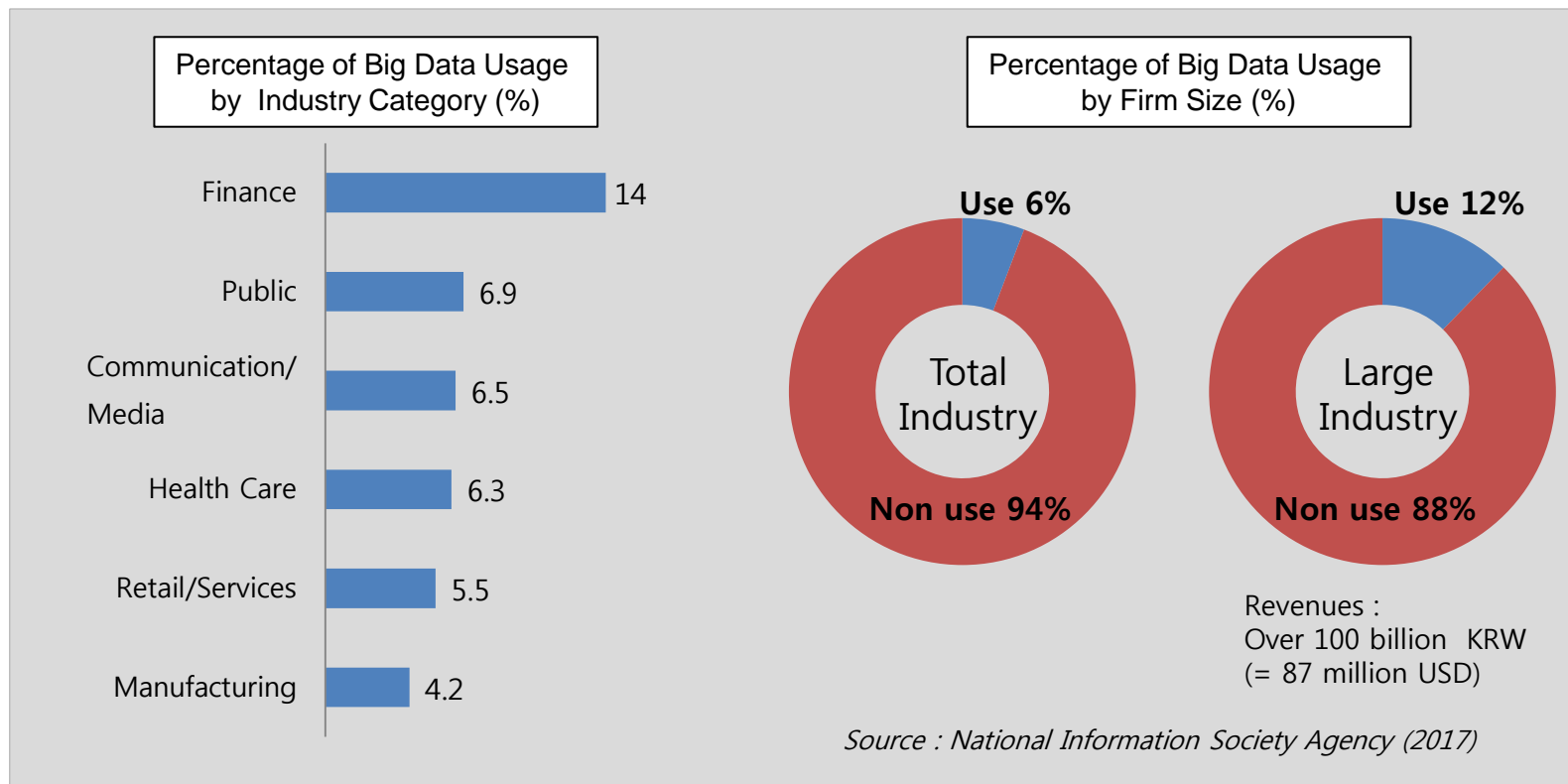
#### **Considerations as Introducing the Big Data Infrastructure from Previous Experiences of Public and Private Sectors:**

- The Parliamentary Libraries and Research Services have few precedents of adopting the Big Data infrastructure in earnest
- Thus, it is appropriate to establish strategies to introduce the Big Data from other public and private organizations' experiences



## 2. Case Study

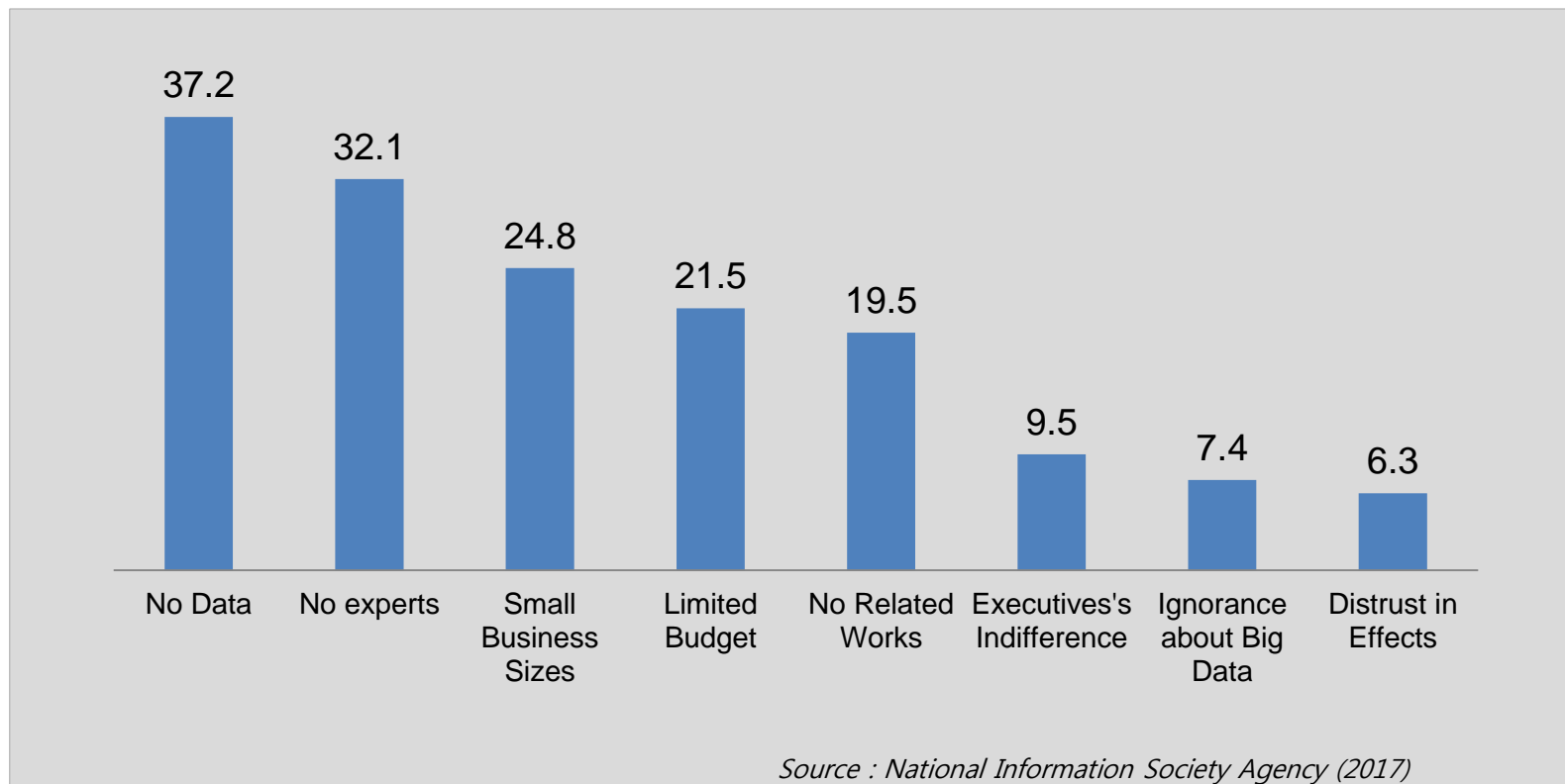
### Big Data Usage Rates of Private Enterprises



## 2. Case Study

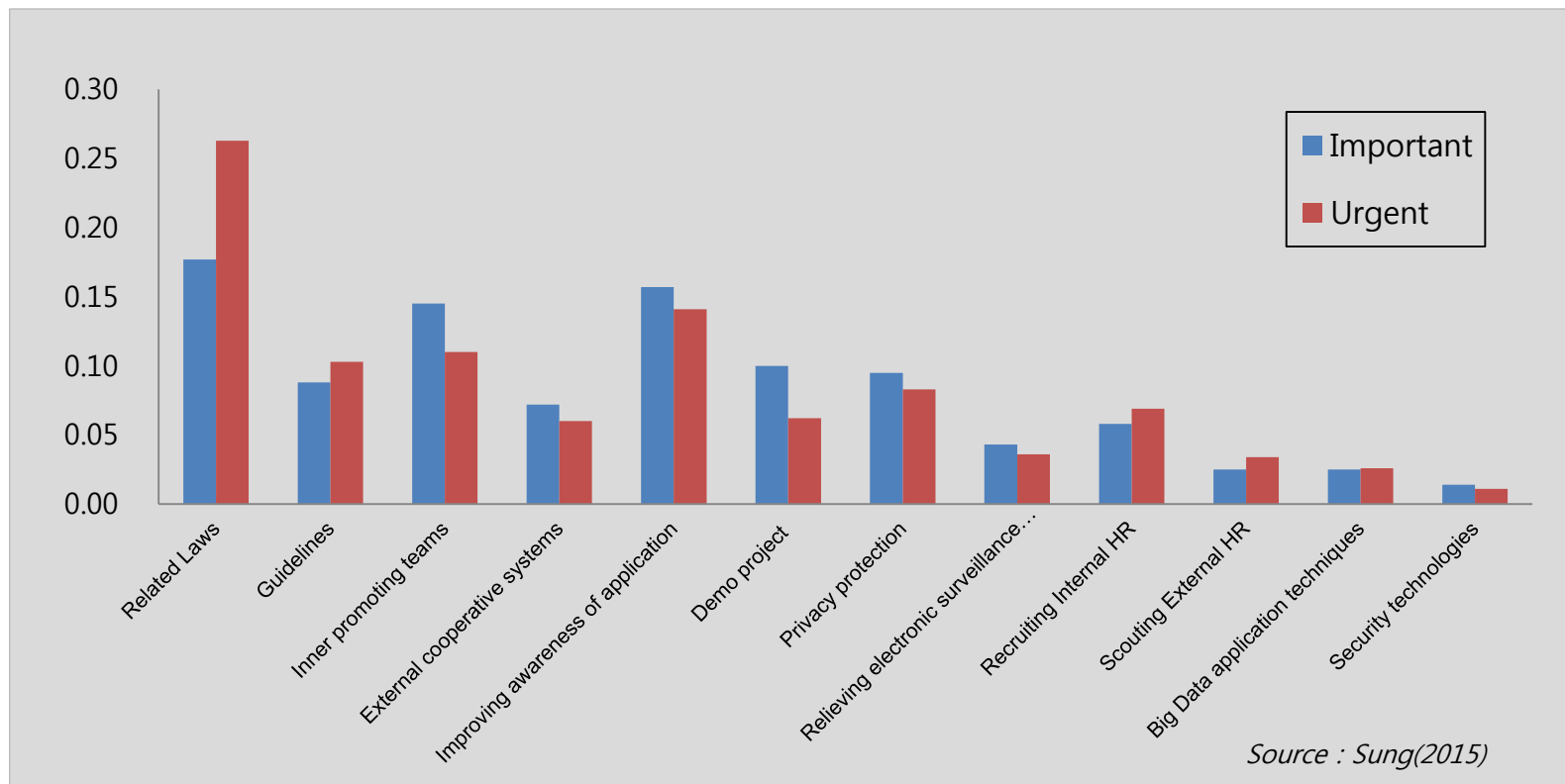
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### Reasons of NOT Using Big Data in Private Enterprises



## 2. Case Study

### Tasks to Activate Big Data Use in Public Sector: Results of AHP



## 2. Case Study

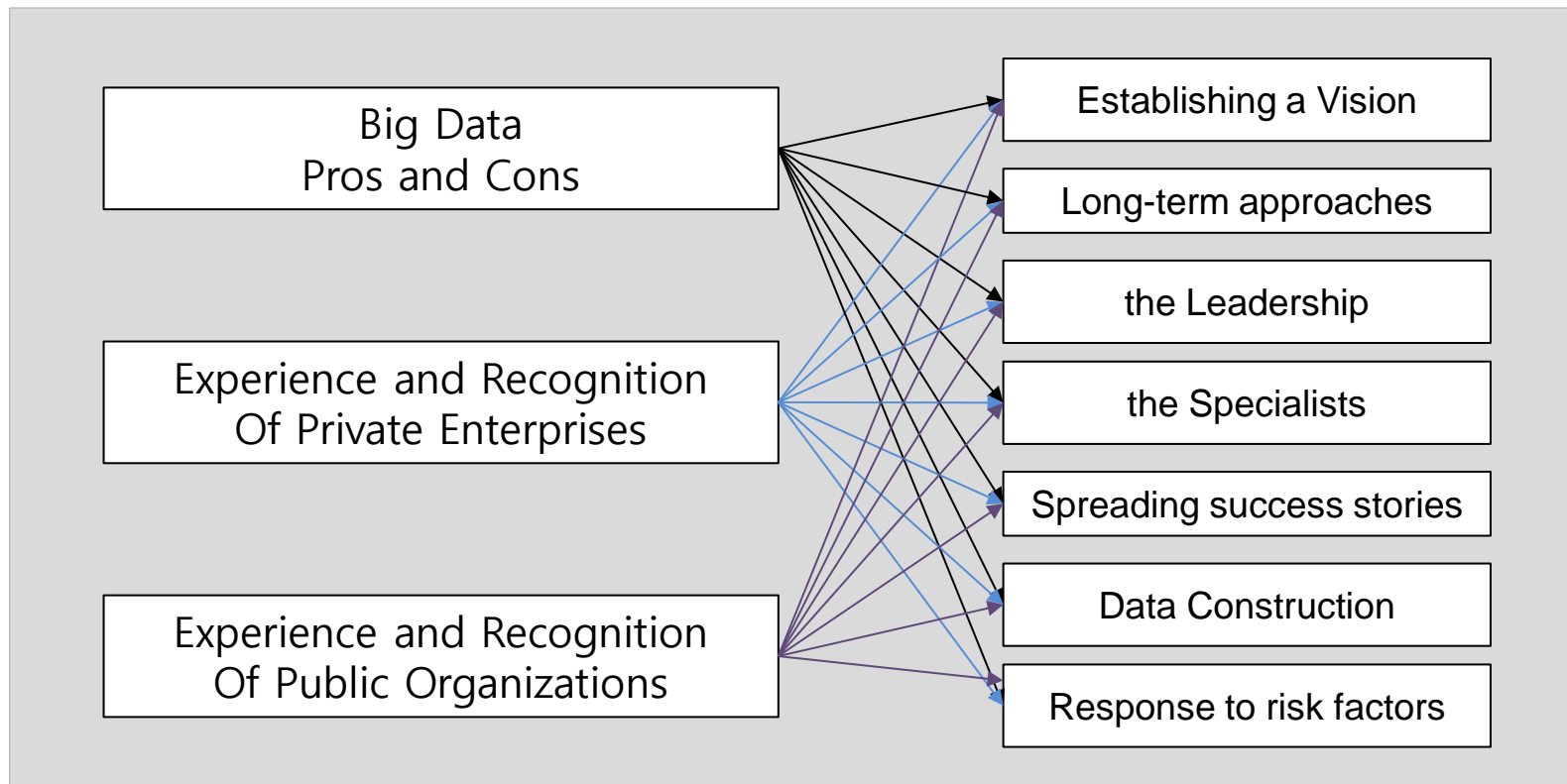
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### Tasks to Activate Big Data Usage in Public Sector: Interview

Clear Goal	<ul style="list-style-type: none"><li>▪ Need a Differentiated Goal from Private Enterprises</li></ul>
Leadership	<ul style="list-style-type: none"><li>▪ Need a Leadership to Drive Big Data projects Forward as Overcoming Members' Resistances</li></ul>
Open and Share Data	<ul style="list-style-type: none"><li>▪ Need to Release Public Organizations' Exclusive Information</li><li>▪ Need a Data Sharing System between Institutions</li></ul>
Continuous Application	<ul style="list-style-type: none"><li>▪ Need a Continuous Utilization of Big Data, NOT the One-Time Event</li></ul>
Data Literacy	<ul style="list-style-type: none"><li>▪ Need the Data Literacy to Understand Data Contexts and Obtain a New Insight</li></ul>

# 3. Strategies for Utilization

## Key Strategic Considerations



# 3. Strategies for Utilization

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## Establishing a Vision

### Under this Big Data era, the Library and Research Services

#### #1. Need a Distinctive Aim to Establish Own Identities

- In searching and retrieving information, Google is preferred over libraries
- In consideration of current circumstances, it is meaningless for libraries to preserve its current roles or to compete with the digital environment
- Instead, it is important for the libraries to establish a new identity and an unique vision to preserve its traditional value and to blend with the digital environment

#### #2. Serve Two Main Functions

- Producing Big Data: digitalization of libraries' archived data, data sharing, etc.
- Utilizing Big Data: utilize the Big Data analysis and make it accessible to the congressmen and the public.
- Thus, establishing a clear goal is necessary to find a balance between these two functions.

# 3. Strategies for Utilization

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## Long-Term Approaches

### **In Order to Achieve Specific Goals through Big Data Analysis, it is Important to Guarantee a Sufficient Time**

- It doesn't happen overnight. Big Data analysis is not a plug-and-play as producing immediate results
- In case of pursuing short-term outcomes, we will end up analyzing "Large Data" instead of "Big Data"
- Because successful cases occur after several failures, aborting after a single trial of the Big Data analysis is undesirable.
- We must gather necessary data and apply various methods of analysis. We must translate the result and attempt different methods of analysis, if necessary. It requires a long time in order to achieve a result that can accommodate each institution's situations and goals.

# 3. Strategies for Utilization

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## The Leadership

### **A Leadership who Put Priority on the Big Data is Crucial**

- There could be a member's objection to utilizing the Big Data
- The chief's leadership is a key to effectively relieve all sorts of resistance and drive up a continuous utilization of Big Data
- In addition, the Big Data analysis could fail to achieve certain meaningful outcomes in a short time. At this time, the leadership is necessary to deal with both internal and external negative perspectives and produce data analysis results appropriate to each institution
- For example, a specific direction by a chief can enhance the Big Data utilization level



# 3. Strategies for Utilization

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## The Specialists

### **Specialists with Technical Expertise, Data Understanding, and Knowledge about the Parliament are Needed**

- The methods and data for Big Data Analysis depend on each institution's role and situation. There can not be the best practice which commonly applicable
- Recruiting external technical specialists, generally called 'data scientist', is insufficient
- For this reason, educating internal staffs to be the Big Data specialists is more desirable

# 3. Strategies for Utilization

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## Spreading Success Stories

**Appropriate Fields should be Selected for the Big Data Analysis among Various Institution's Tasks**

### **Operating a Big Data Demo Project for the Assigned Fields**

- The demo project can figure out the most appropriate way to analyze the Big Data for the Parliamentary Libraries and Research Services and verify its effectiveness

### **Spreading Success Cases of Big Data Analysis to Settle Down**

- By spreading the success cases of Big Data analysis, it can overcome the ambiguity in Big Data and improve an awareness of it
- It can also bring continuous interest and support from the congressmen, the key consumers of Big Data analysis

# 3. Strategies for Utilization

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## Data Construction

### **Need the Big Data Infrastructure within Organizations**

- Digitized library databases and legislative research resources can be used for the Big Data analysis

### **Data Sharing with External Institutions should be Expanded**

- Data sharing with other institutions is important because it is impossible to compose all data by a single institution
- For this reason, the Parliamentary Library and Research Services should release their own data to public first
- In addition, managing metadata and standardized data are required to share between different institutions

### **Considering Data Storage and Management Expenses, It is also Important to Actively Use the Cloud Computing**

# 3. Strategies for Utilization

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## Response to Risk Factors

### **Need and Respect the Standard for Privacy Protection**

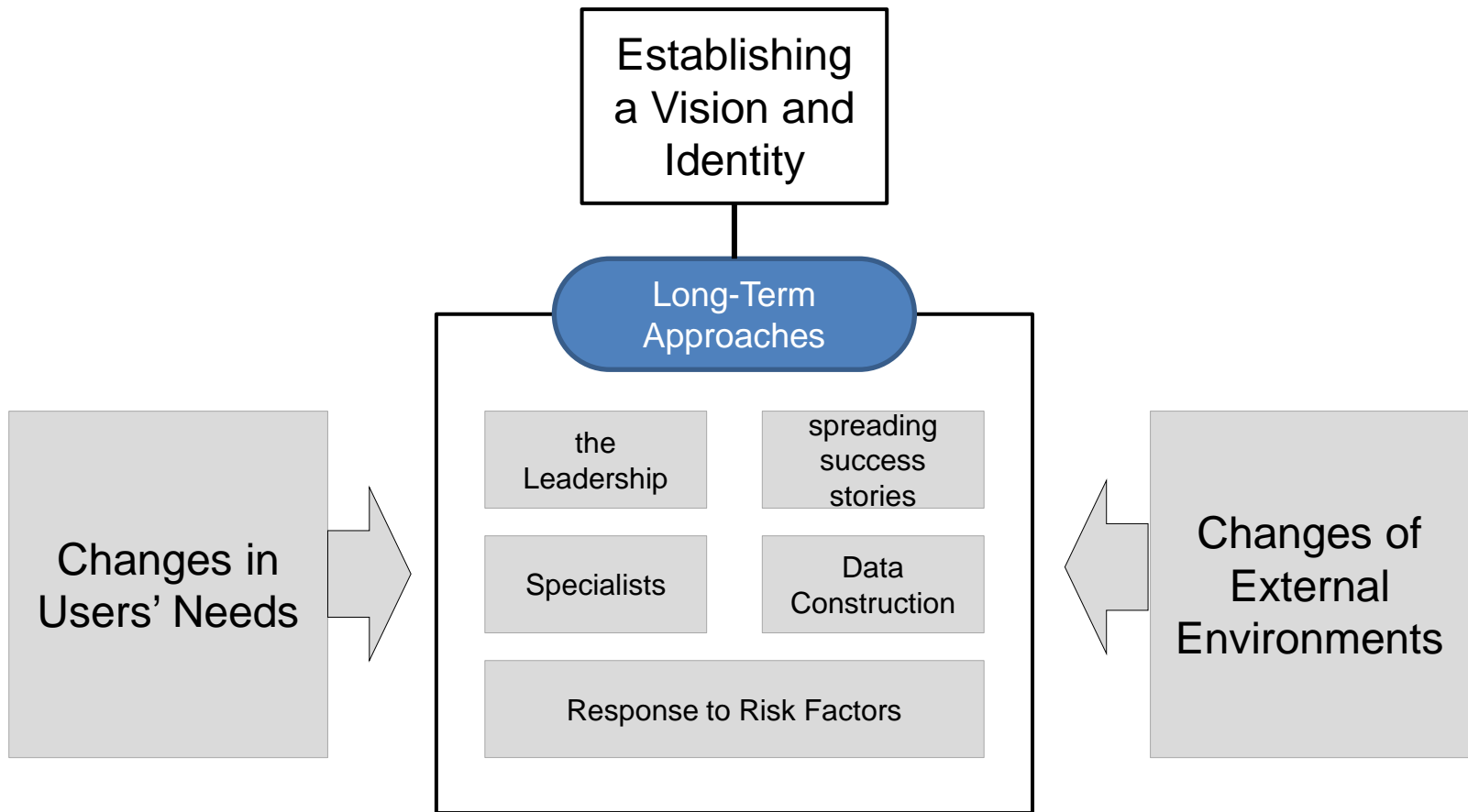
- An individual could be distinguished and profiled by mash-up data
- Release and respect clear and strict standards of privacy are important to achieve the balance between Big Data utilization and privacy protection

### **The Digital Literacy Should Be Improved to Deal with Digital Divide**

- An action to promote users' digital literacy should be carried out because people with low access and insufficient digital technology can be easily excluded from the Big Data environment

# 4. Conclusion

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# 4. Conclusion

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## **Parliamentary Library → Library as a Platform**

- A library has been a 'hub' so far. People usually congregate in the library to get the information from books
- Now, all information are on the Internet. Specific space cannot monopolize information anymore
- The library should be a platform of information & knowledge eco-system as distributing, utilizing, and spreading the information

## **Research Service → Supporting Evidence-based Decision**

- The society is getting more complex.
- Intuitions and experiences of congressmen or simple numerical data could not be sufficient to solve policy issues
- More accurate and powerful evidences are needed to solve them
- SO, the Research Service need to support evidence-based decision making of Parliament through the Big Data analysis

# Thank You

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