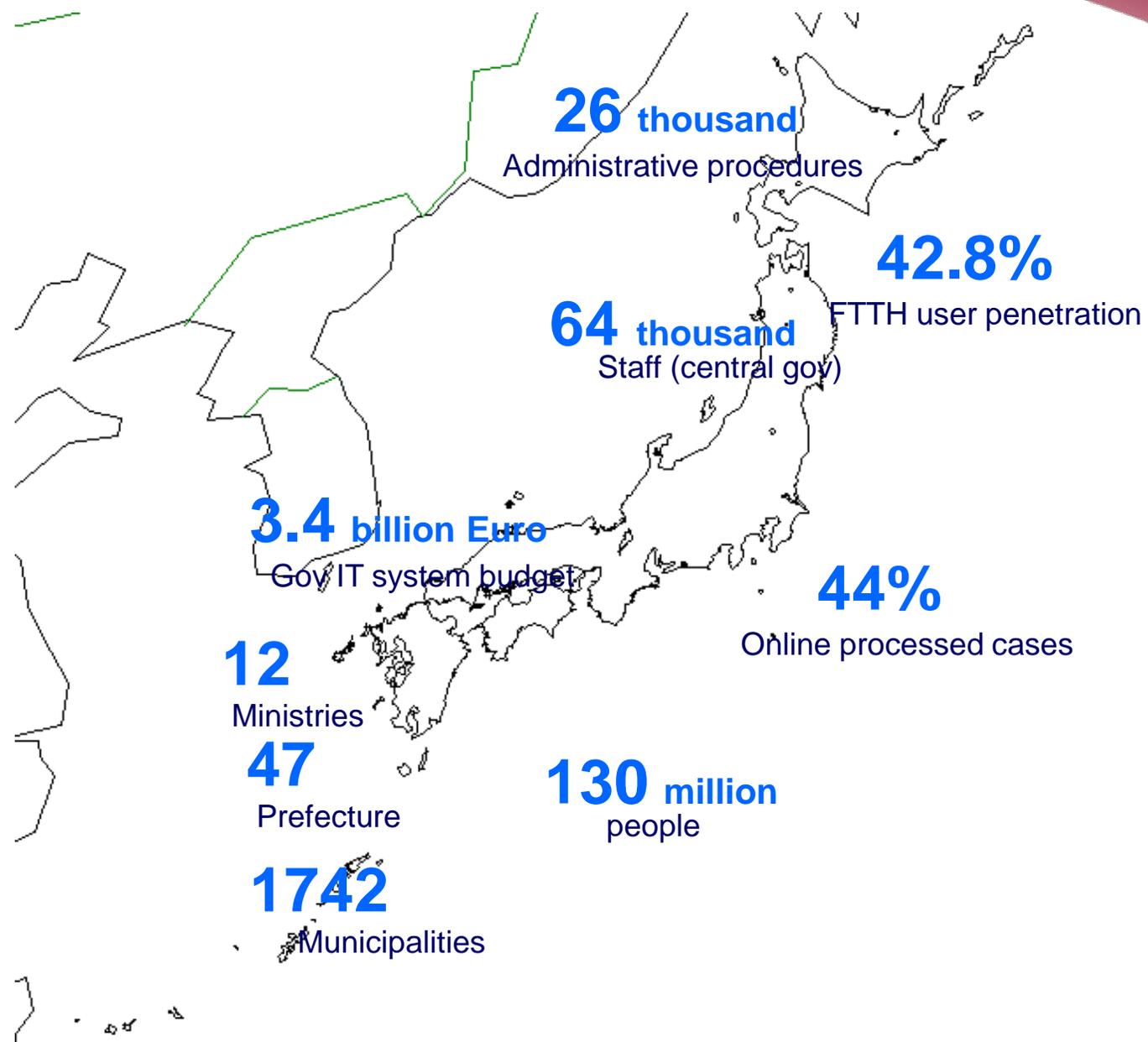# Japan's Common Vocabulary Policy

Takashi Wada

Ministry of Economy, Trade and Industry

May 2015

WHY

Fragmentation of Japan's government IT system
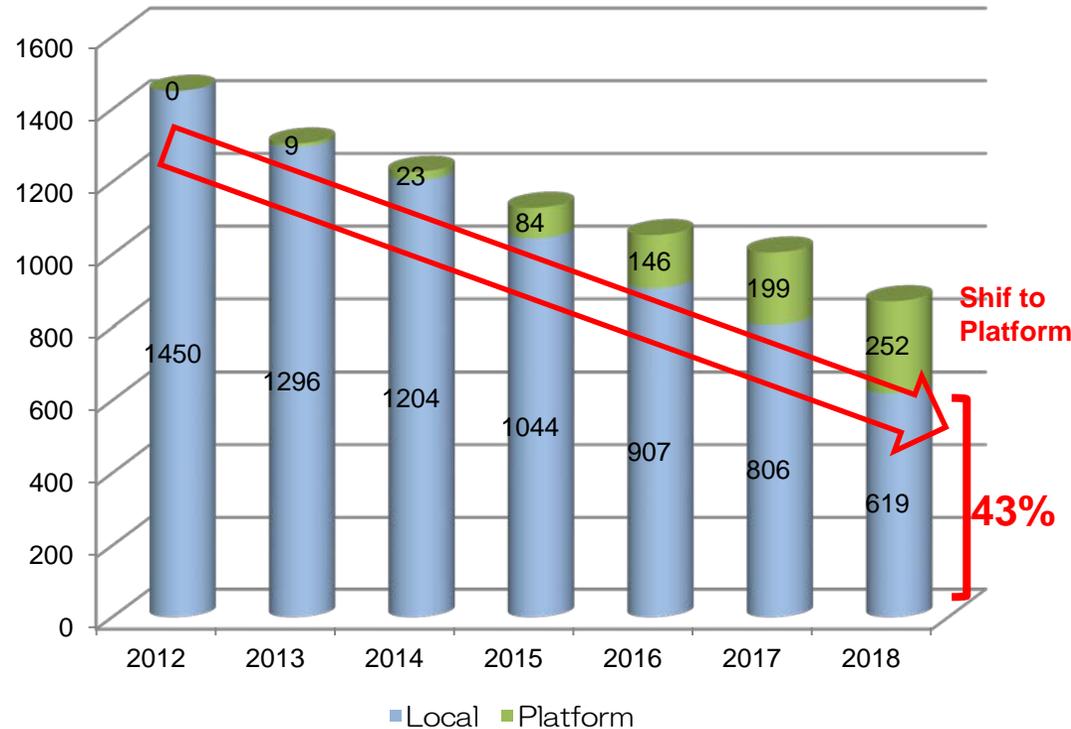
26 **thousand**
Administrative procedures

42.8%
FTTH user penetration

64 **thousand**
Staff (central gov)

3.4 **billion Euro**
Gov IT system budget

44%
Online processed cases

12
Ministries

47
Prefecture

130 **million**
people

1742
Municipalities

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Reform of government IT system

■ Shift to shared platform system

■ Reduction of gov IT systems

Consolidation of the Government IT Systems

Ministry A — Server — Operator — User (Officer)

User (Citizens and companies) — Internet — Data Center B — Server — Operation/monitoring Personal

（Kasumigaseki WAN）

(LGWAN) (Local government office)

Government Shared Platform

Ministry B — User (Officer)

Data Center C — Server — Operation/monitoring Personal — User (Officer) — Ministry C

Data Center D — Server — Operator

Year	Local	Platform
2012	1450	0
2013	1296	9
2014	1204	23
2015	1044	84
2016	907	146
2017	806	199
2018	619	252

■ Local ■ Platform

Shif to Platform
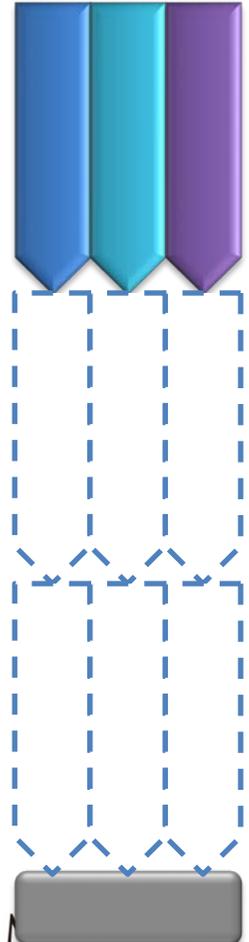
43%

Still on the way…

Interoperability policies

- **EDI (online administrative procedure)**
  - ➢ eGovernment Plan(1994)

- **Enterprise Architecture**
  - ➢ Enterprise Architecture Plan for Government (2003)
    - Data architecture & Data reference model

- **Web reform**
  - ➢ Standardize of implementation/UI rule for local government (2011)

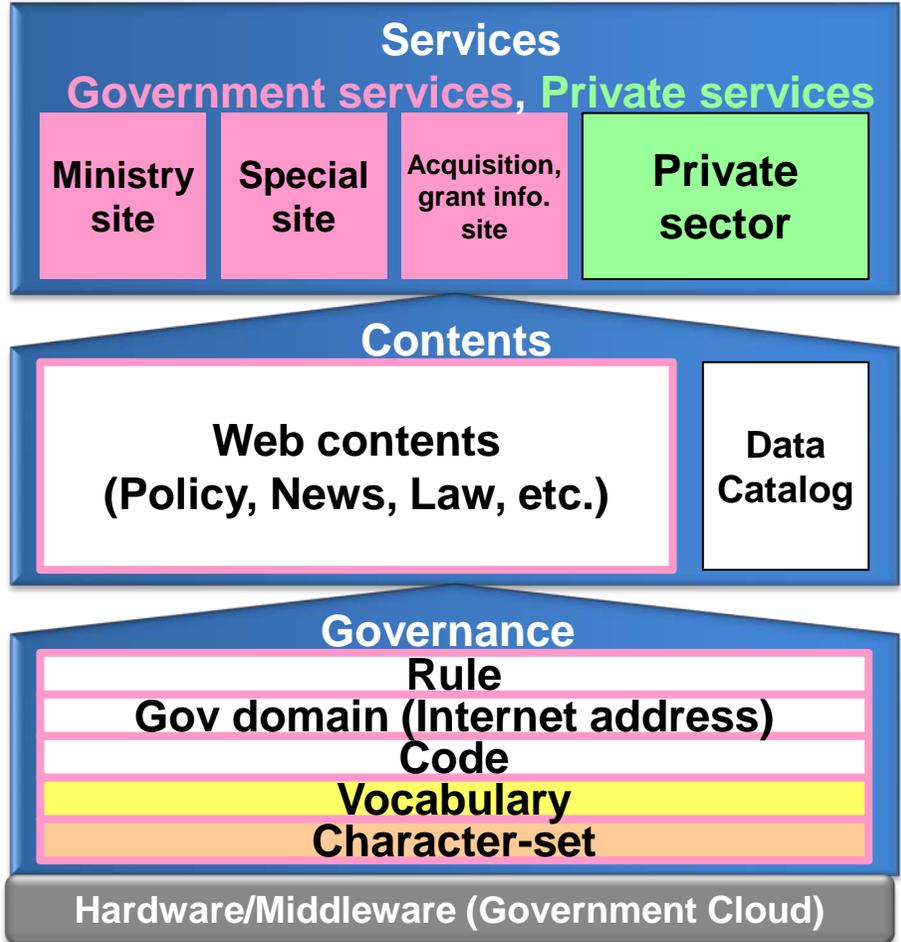- **Action plan for open government infrastructure (April 2014)**

Action Plan for Open Government Infrastructure

April 25 2014
Gov. CIO Council Decision

Before the action plan
Independent services

Ministry of Economy, Trade and Industry

After the action plan
Services on an architecture

Services
Government services, **Private services**

| Ministry site | Special site | Acquisition, grant info. site | Private sector |

Citizen centric services
・Mash-up
・BPR
・Data science

Contents

Web contents (Policy, News, Law, etc.) | **Data Catalog**

Contents and Platform
・Structured contents
・Common tags
・API

Governance
Rule
Gov domain (Internet address)
Code
Vocabulary
Character-set

Hardware/Middleware (Government Cloud)

Standard based Infrastructure
・Core vocabulary-set
　Name, Address and Organization.
　METI will launch IMI DB.
　MIC will promote API project.
・Sustainability
・Standards, codes, rules

Lessons from the Great East Japan Earthquake (1)

- 11 March 2011 at 14:46 (JST)

- Magnitude 9.0

- 15,883 Deaths and 2,654 Missing

  (Most victims died due to drowning in Tsunami)

- Total financial damage of 25 trillion Japanese yen (approx. 175 billion Euro)

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Lessons from the Great East Japan Earthquake (2)

Interoperability

●Shelter Information

・Only in paper and PDF formats

・Address and location information were missing or wrong, confusing abbreviation

・Outdated Information of shelters

Transparency

●Radiation Information

・SPEEDI (Ministry of Education, Culture, Sports, Science and Technology), Monitoring Post (Ministry of Environment), and local government data source

・Locations of data were not clear

・Locations of data changed frequently

Lessons from the Great East Japan Earthquake (3)

Disclosure

Road trafficability and closure information by ITS Japan

Participated car manufactures:

Toyota, Honda, Nissan, Pioneer

Automobile Traffic Record and Road Closure Information
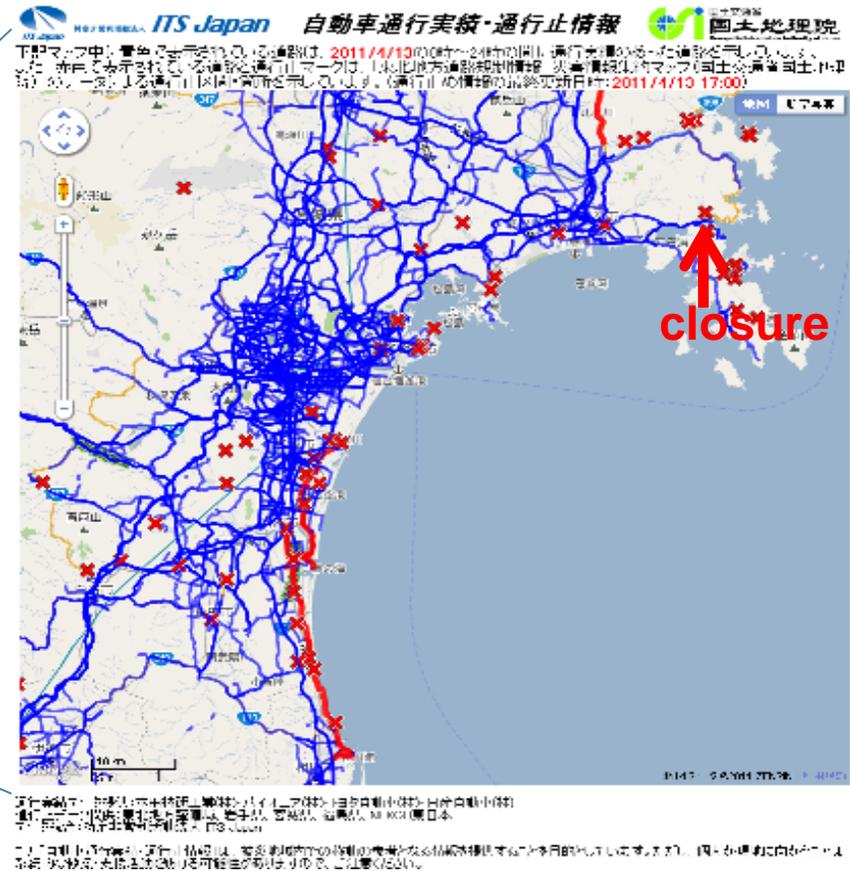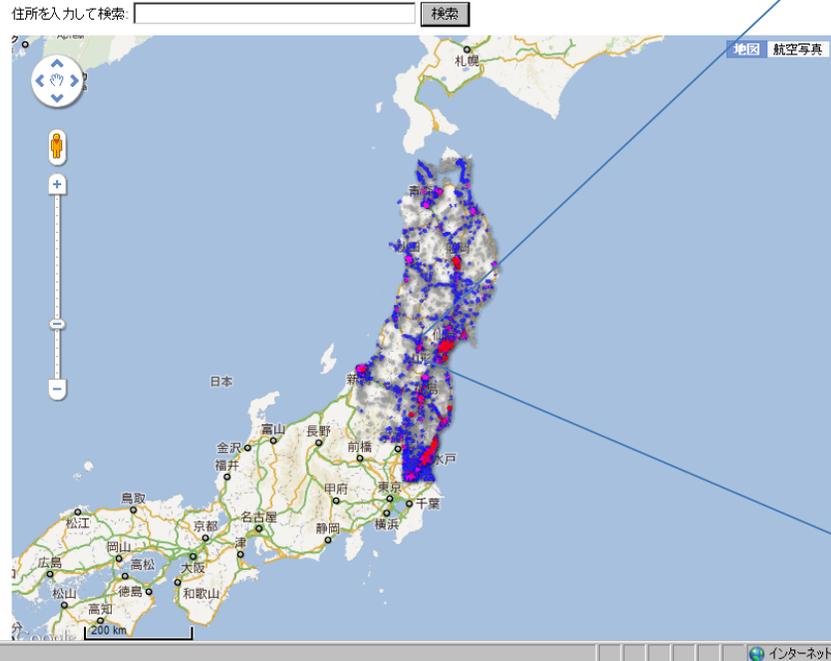
Open Government Data Strategy

- Based on the lessons from Great East Japan Earthquake
- IT Strategic Headquarters created on July 4, 2012
- 3 Principles
  - Government transparency
  - Public participation and collaboration
  - Economic stimulus and efficiency in government

- Establishment of special committee of open government data
- Creation of a data catalog site

電子行政オープンデータ戦略

平　成　2　4　年　7　月　4　日
高度情報通信ネットワーク社会推進戦略本部決定

「新たな情報通信技術戦略（平成22年5月11日高度情報通信ネットワーク社会推進戦略本部（IT戦略本部）決定）」及び「電子行政推進に関する基本方針（平成23年8月3日IT戦略本部決定）」の趣旨に則り、オープンガバメントの推進に当たっては、公共データは国民共有の財産であるという認識の下、公共データの活用を促進するための取組に速やかに着手し、それを広く展開することにより、国民生活の向上、企業活動の活性化等を図り、我が国の社会経済全体の発展に寄与することが重要であるため、公共データの活用促進のための基本戦略として、「電子行政オープンデータ戦略」を以下のとおり策定する。

第1　意義・目的

公共データの活用を促進する意義・目的は、次のとおりである。

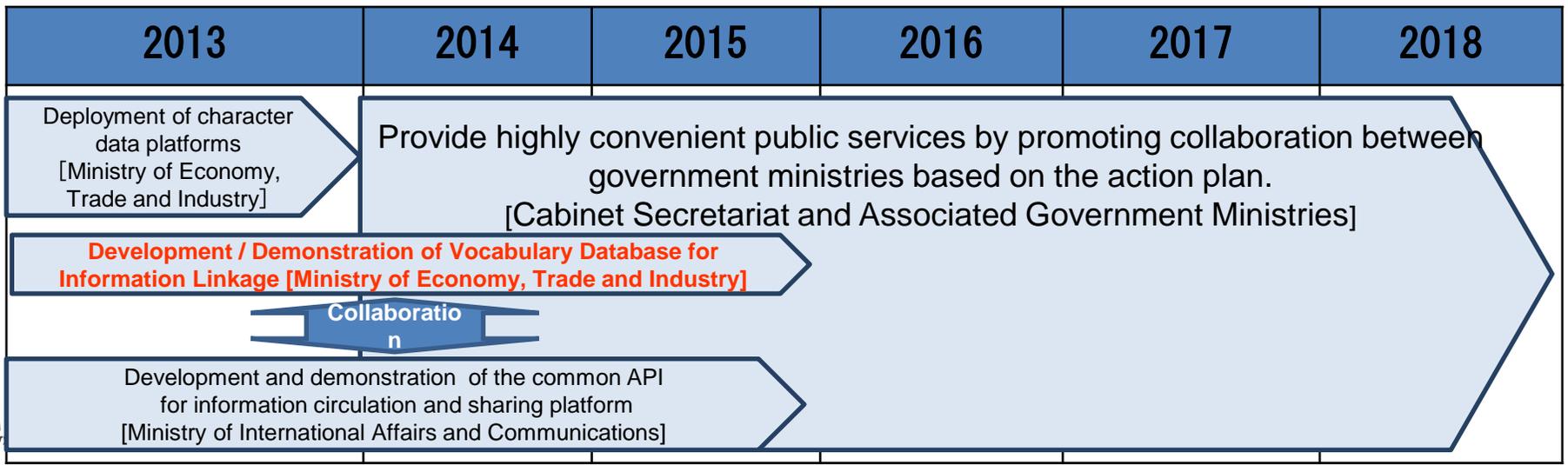# "Declaration to be the World's Most Advanced IT Nation"
(Cabinet Approval on 14 June 2013)

IMI

3. Development of one-stop public services that anyone can access at any time and from anywhere

(1) Provision of Highly Convenient Electronic Government Services

Open user environments that utilise cloud computing are being developed through <u>the standardisation and sharing of data format, terminologies, codes, and characters</u> and the public release of application interfaces (API) to facilitate active participation by members of the public as stakeholders.
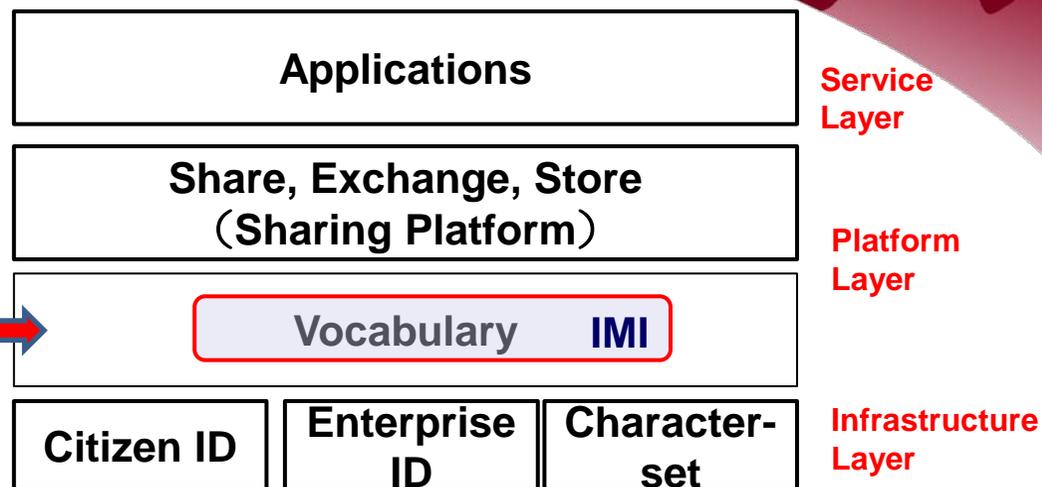
Roadmap

2013	2014	2015	2016	2017	2018
Deployment of character data platforms [Ministry of Economy, Trade and Industry]	Provide highly convenient public services by promoting collaboration between government ministries based on the action plan. [Cabinet Secretariat and Associated Government Ministries]				
Development / Demonstration of Vocabulary Database for Information Linkage [Ministry of Economy, Trade and Industry]					
Collaboration					
Development and demonstration of the common API for information circulation and sharing platform [Ministry of International Affairs and Communications]					

PROJECT

IMI Project (Apr. 2013 -)

■ Responding to the need for interoperability, transparency, opendata

■ Focused on platform layer

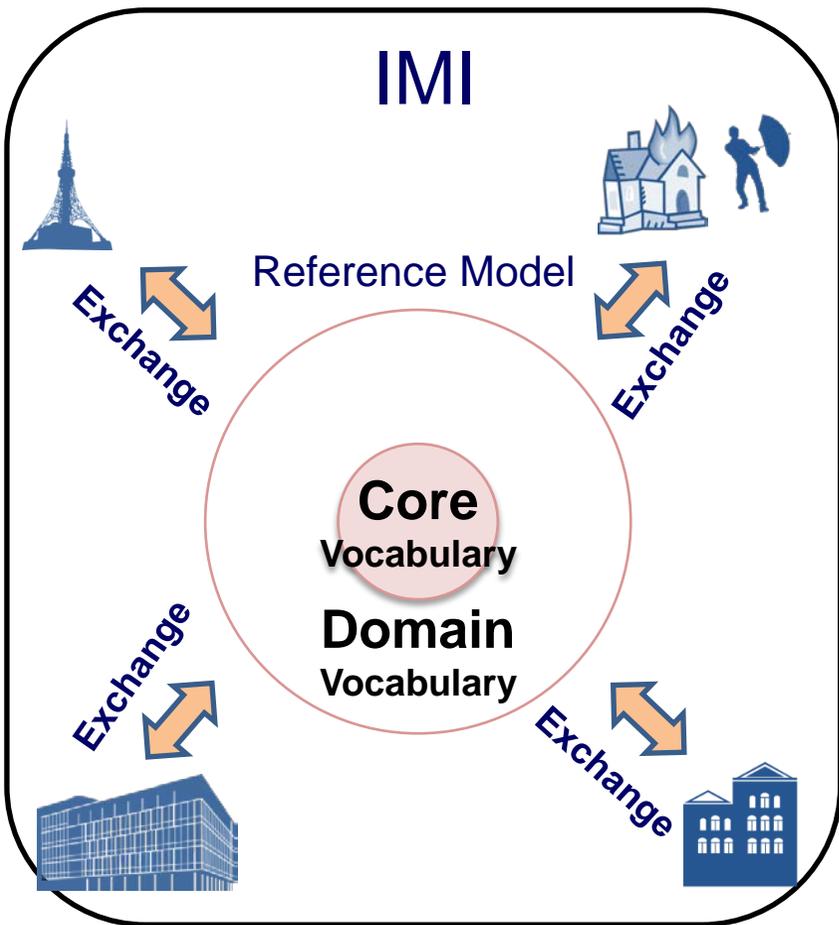| Applications	Service Layer
Share, Exchange, Store （**Sharing Platform**）	Platform Layer
Vocabulary **IMI**	
Citizen ID / **Enterprise ID** / **Character-set**	Infrastructure Layer

■ **IMI** : **I**nfrastructure for **M**ultilayer **I**nteroperability

  ➤ Information sharing platform with primary vocabulary set and attributes of objects
    • Core domain and business domains
    • International & cross field interoperability
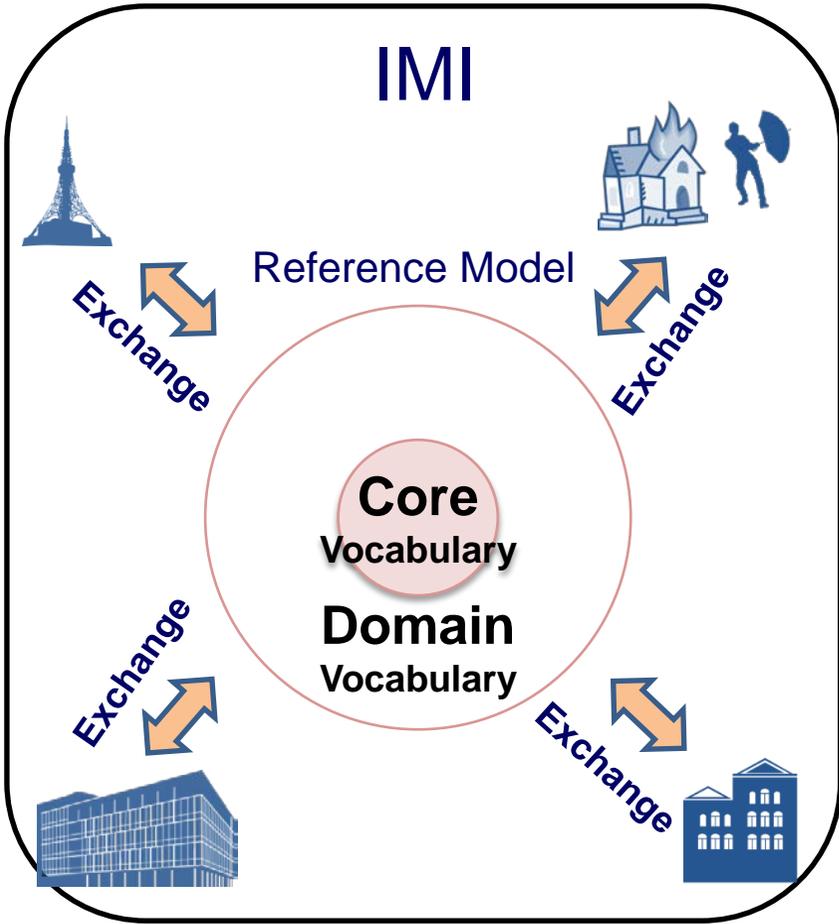   • Utilise existing standards (e.g. LG vocabulary set & DC ‥)

Domain …

Person
Location
Business
Core Item
Activity
Identification

Emergency Management

Tax

Social security

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12

Interoperability among government agencies

System Cooperation

IMI

Reference Model

Core
Vocabulary

Domain
Vocabulary

Exchange

Exchange

Exchange

Exchange

Information exchange between systems using Information Exchange Package(IEP)

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Interoperability for opendata

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Reference Model

Core
Vocabulary

Domain
Vocabulary

Exchange

Exchange

Exchange

Exchange

Open Data

Identify semantics with vocabularies, and attributes defined in Information Exchange Package.

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Interoperability for web services

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Reference Model

Exchange

Exchange

Exchange

Exchange

Core
Vocabulary

Domain
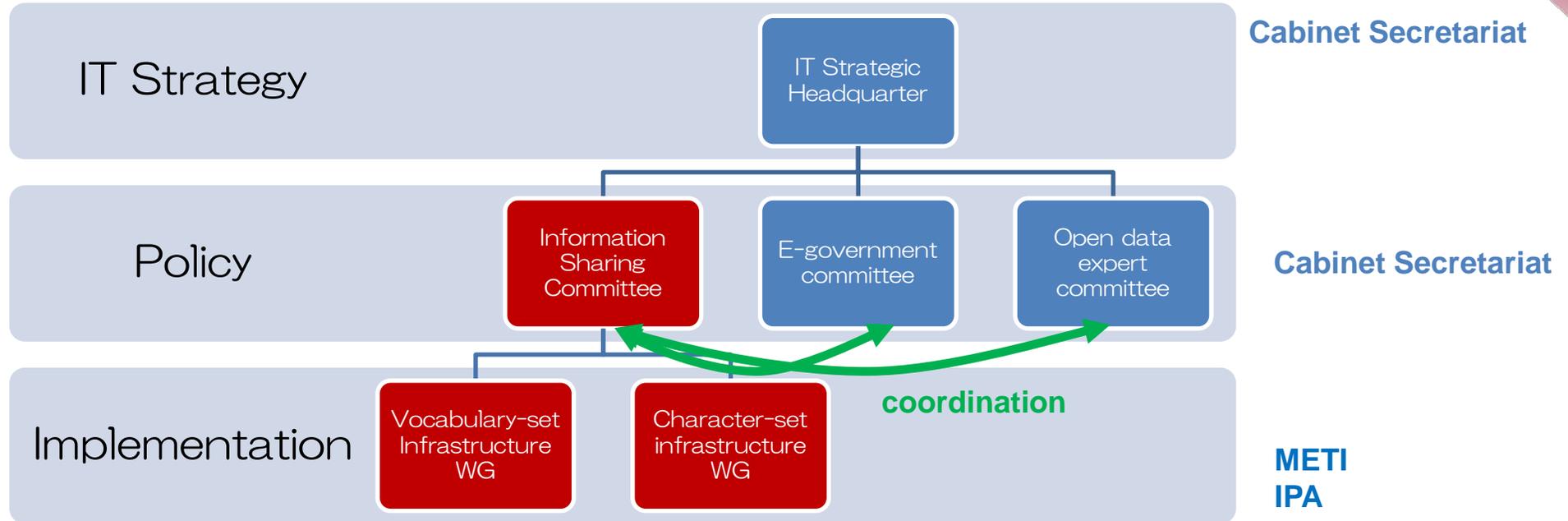**Vocabulary**
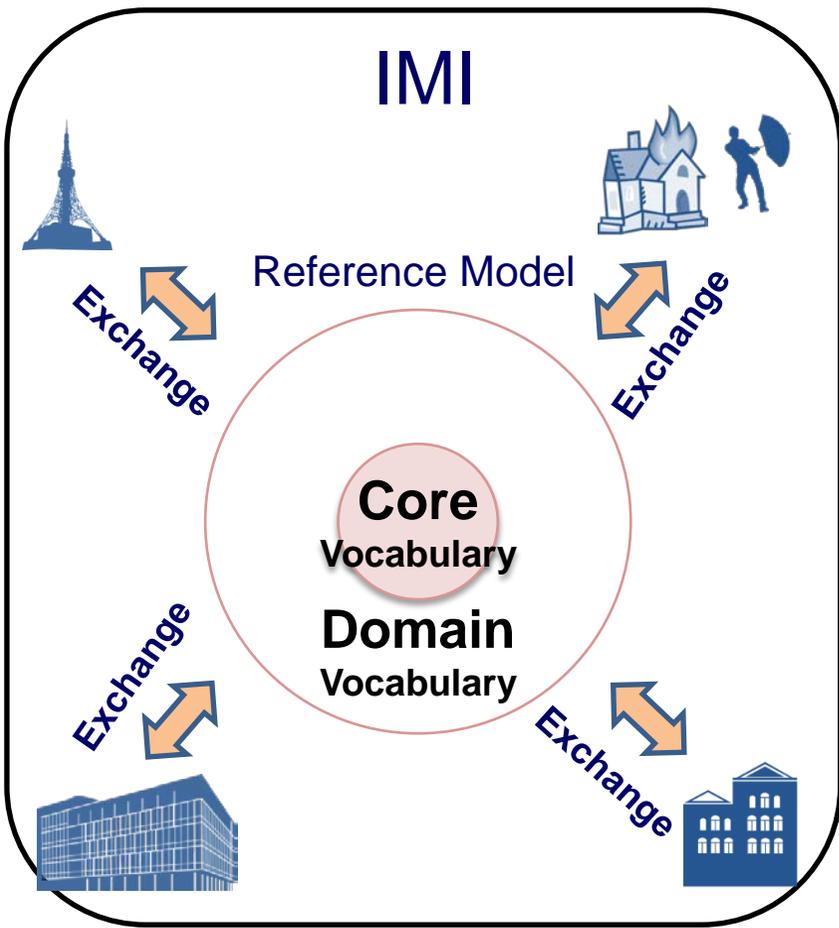
Search

Perform efficient search by set of defined attribute information
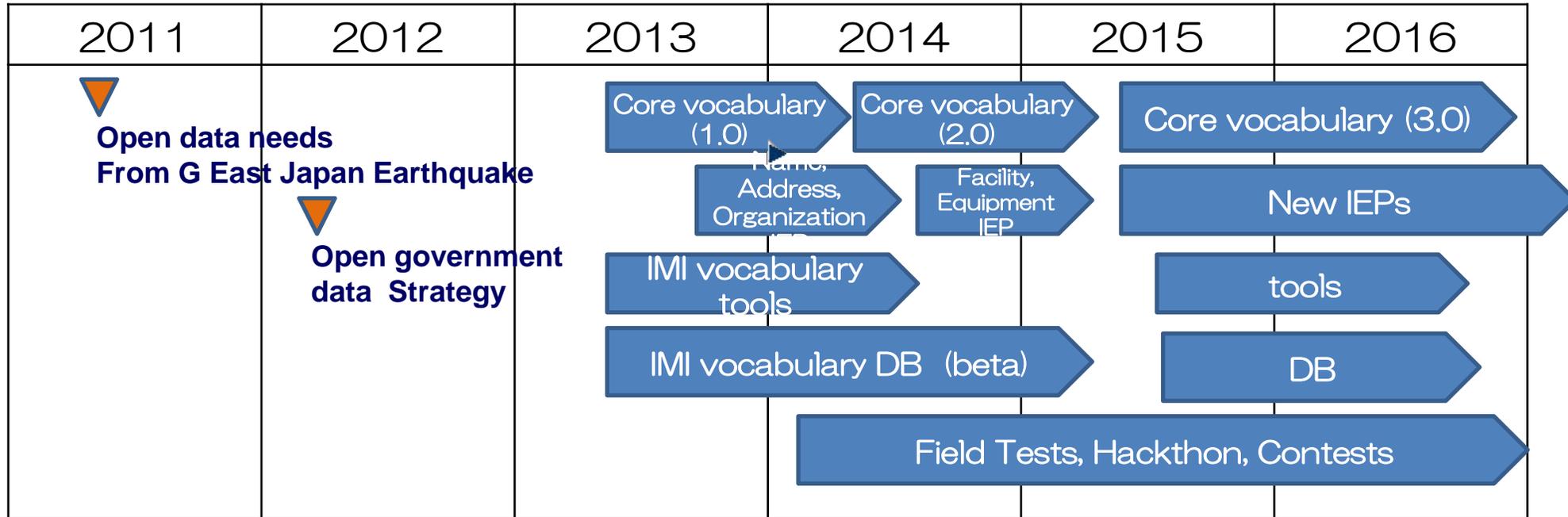
Schema.org

IMI Implementing Organization

FUTURE   PLAN

IMI projects timeline

- Common vocabulary project started in April 2013
- First major development (tools, DB blue plan, core vocabulary set) in Summer 2014

2011	2012	2013	2014	2015	2016

▼
**Open data needs
From G East Japan Earthquake**

▼
**Open government
data Strategy**

Core vocabulary (1.0)

Core vocabulary (2.0)

Core vocabulary (3.0)

Name, Address, Organization IEP

Facility, Equipment IEP

New IEPs

IMI vocabulary tools

tools

IMI vocabulary DB (beta)

DB

Field Tests, Hackthon, Contests

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Future Plan

Showcase

Strategy
- Promotion of implementation
- Organization reform
- International Cooperation

Core area
- Refine the core vocabulary
- Mapping to the other vocabularies

Code
- Code listing
- Code mapping

Domain area
- Agriculture
- Tourism
- *********

IMI

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