Commission on Approaches to ICT Global Expansion Report Summary

July 21, 2011

ICT Strategy Policy Division
Global ICT Strategy Bureau, MIC

Chapter 1

Basic principles for global expansion

- The switch to ICT industries to capture global market growth
- Japan's international contributions as an advanced "issue-solving" nation
- The construction of global cooperative relationships

Chapter 2

Specific policies for future implementation

- Project formation through the Japan Initiative
- Standardization strategies
- Assertive use of financing
- Formation of a global expansion framework

Chapter 3

The role of government

- Pitch projects through intergovernmental dialogue
- Assist pilot projects in partner countries
- Communicate the Japan brand and the state of reconstruction efforts
- Strengthen ties within government

Basic Principles for Global Expansion

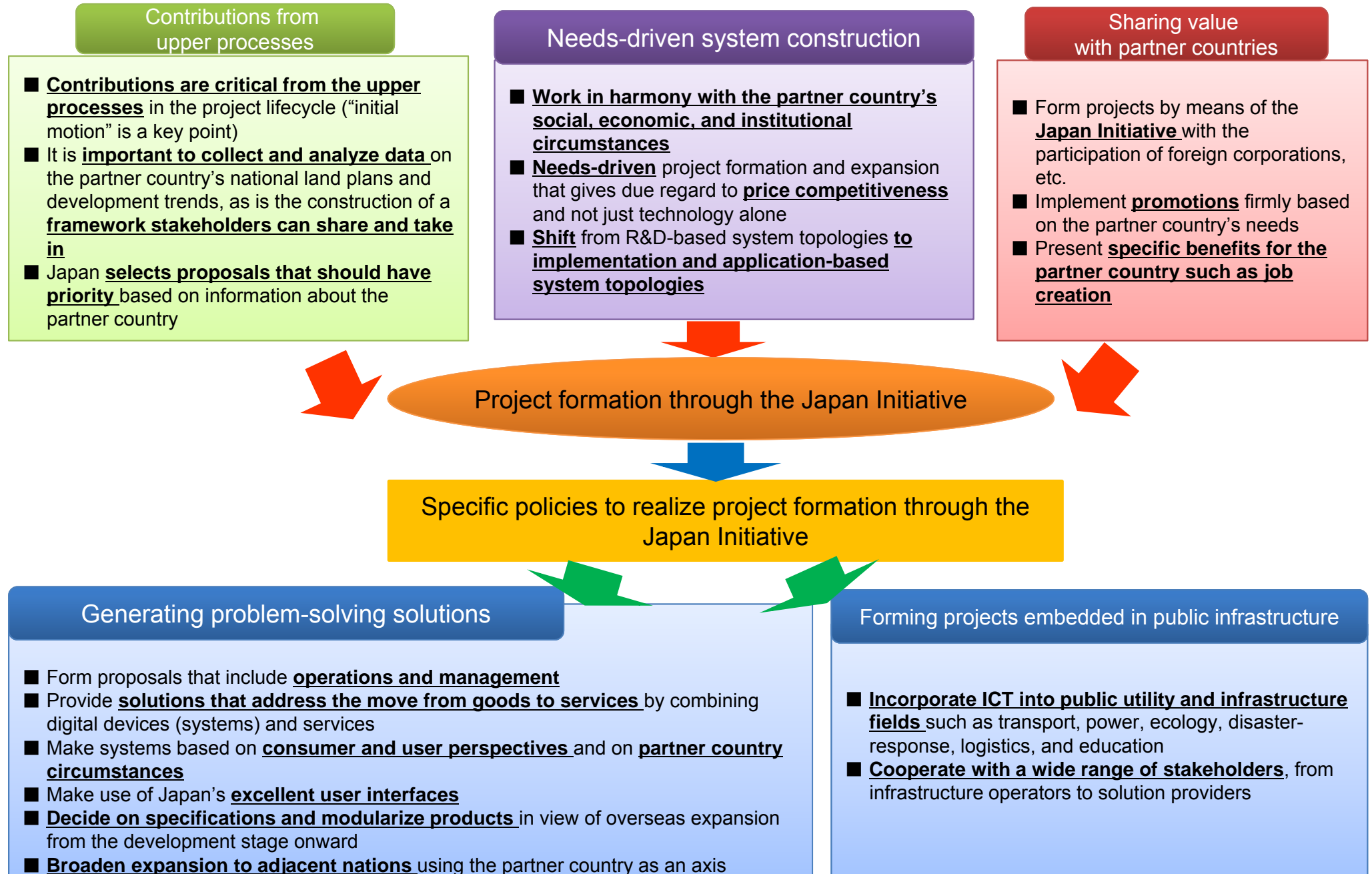## 1. The switch to ICT industries to capture global market growth

➤ The **declining birth rate and aging population** is advancing at an unprecedented speed in Japan. And **contraction of the domestic market** continues.

➤ The shift of production bases overseas in the wake of the March 11th Tohoku Earthquake and the entry of foreign competitors are prompting **fears of a hollowing-out of industry**.

➤ Thus, **global expansion** is needed **that captures the growth potential of Asian and other emerging nations**. It is critical for us **to bolster the international competitiveness of our ICT industries**, which are strategic since they support about a third of Japan's economic growth.

2. Japan's international contributions as an advanced "issue-solving" nation

➤ Japan is **an advanced "issue-solving" nation** in terms of many social issues such as a declining birth rate and an aging population. **Our store of knowledge and experience represents beneficial solutions** to countries about to face similar issues.

➤ We must **realize "open innovation"** that crosses traditional corporate and industry divisions and we need, among other things, **the formation of solution-based projects** through links between corporations in the same industries and in different industries, **the establishment of global expansion assistance frameworks**, and **a shared international strategy vision**.

➤ The government must actively support the construction of "problem-solving" models and global expansion through "open innovation" in the private sector and these must be promoted jointly by government and industry.

3. The construction of global cooperative relationships

➤ It is necessary to aim to **form solutions based on global cooperative relationships**.

➤ Because **standardization is an effective means of global expansion**, coordinated links with standardization activities are needed.

➤ It is necessary to continue **building cooperative relationships** by promoting the creation of global partners beginning in the standardization stage.

Project Formation Through the Japan Initiative

Contributions from upper processes

- **Contributions are critical from the upper processes** in the project lifecycle ("initial motion" is a key point)
- It is **important to collect and analyze data** on the partner country's national land plans and development trends, as is the construction of a **framework stakeholders can share and take in**
- Japan **selects proposals that should have priority** based on information about the partner country

Needs-driven system construction

- **Work in harmony with the partner country's social, economic, and institutional circumstances**
- **Needs-driven** project formation and expansion that gives due regard to **price competitiveness** and not just technology alone
- **Shift** from R&D-based system topologies **to implementation and application-based system topologies**

Sharing value with partner countries

- Form projects by means of the **Japan Initiative** with the participation of foreign corporations, etc.
- Implement **promotions** firmly based on the partner country's needs
- Present **specific benefits for the partner country such as job creation**

Project formation through the Japan Initiative

Specific policies to realize project formation through the Japan Initiative

Generating problem-solving solutions

- Form proposals that include **operations and management**
- Provide **solutions that address the move from goods to services** by combining digital devices (systems) and services
- Make systems based on **consumer and user perspectives** and on **partner country circumstances**
- Make use of Japan's **excellent user interfaces**
- **Decide on specifications and modularize products** in view of overseas expansion from the development stage onward
- **Broaden expansion to adjacent nations** using the partner country as an axis

Forming projects embedded in public infrastructure

- **Incorporate ICT into public utility and infrastructure fields** such as transport, power, ecology, disaster-response, logistics, and education
- **Cooperate with a wide range of stakeholders**, from infrastructure operators to solution providers

Project Formation Through the Japan Initiative (Specific projects)

ASEAN Smart Network (tentative name)

Concept
- Join people and goods using high-speed multi-purpose ICT infrastructure
- Introduce Japan's problem-solving ICT application models
- Contribute to ASEAN planning (connectivity master plan, ICT master plan, etc.)
  - → Result in economic stimulation, resolution of social issues, contribute to greater connectivity as well as help the spread of Japan ICT

Three Priority Fields

Sensor networks

- ■ **A key elemental ICT model** in the promotion of global expansion of problem-solving public infrastructure
- ■ Expansion policies
- • **Propose models that incorporate sensor networks into public infrastructure** that have a high priority for the partner country
- • **Propose application models** with a view to fields with high social needs in the partner country
- ■ Key matters
- • **Standardization activities in various fields**
- • Exploit the superiority of Japan's operations, including **knowledge sharing from the Tohoku Earthquake**
- ■ Priority countries
  Indonesia, Thailand, Vietnam, etc.
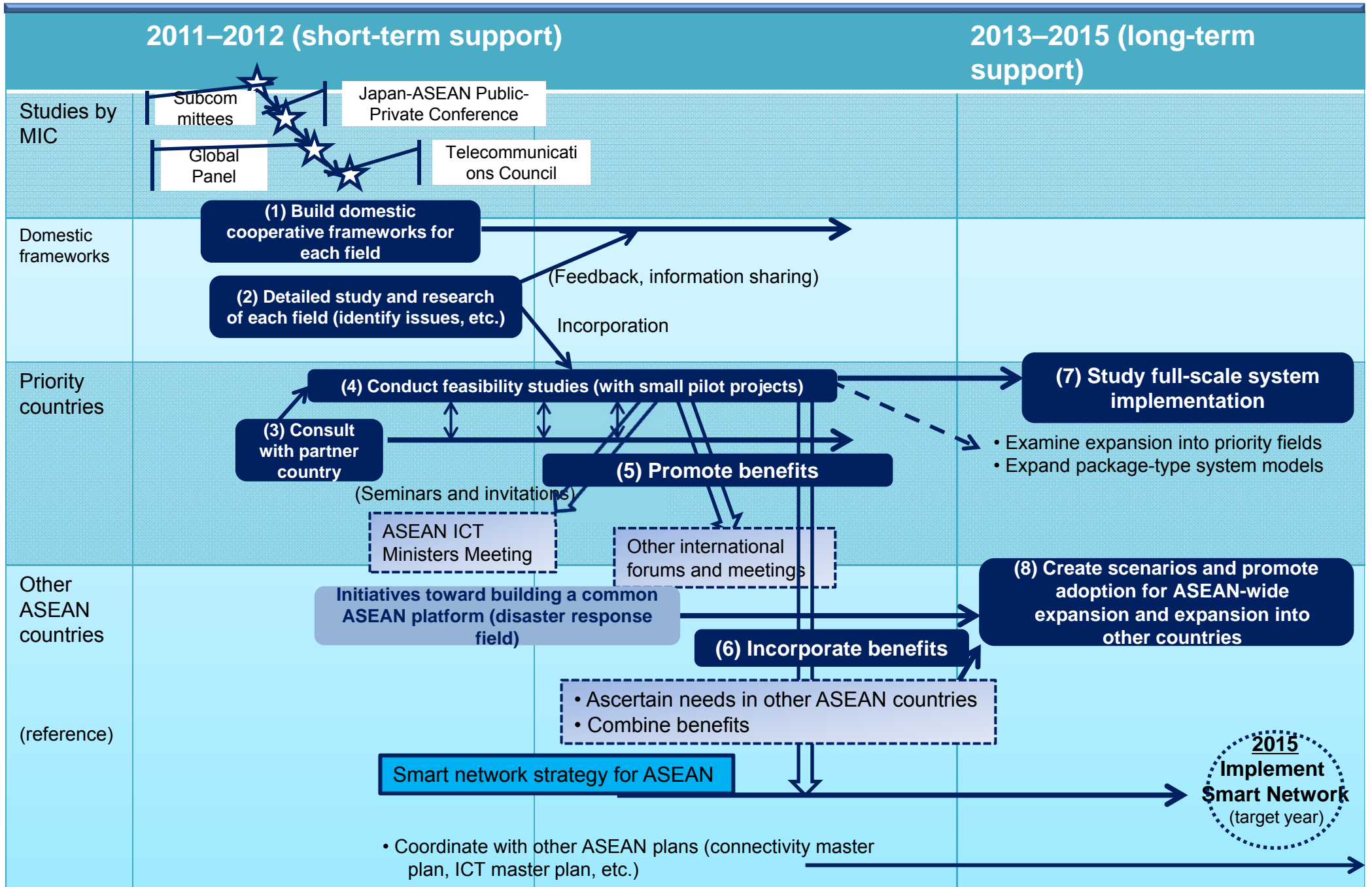
Disaster response

- ■ ICT use in the ASEAN region, which is prone to frequent natural disasters, **is expected to play a great role in effective disaster responses**
- ■ Expansion policies
- • **Propose models for specific countries and for the entire ASEAN region**
- • **Build and deploy package-type systems** based on system characteristics and highlighted function groupings
- ■ Key matters
- • Actively present **knowledge from the Tohoku Earthquake** in tandem with Japanese proposed systems
- • **Application of multifaceted systems for normal times and emergencies**
- ■ Priority countries
  All of ASEAN (common platform), plus Indonesia, Myanmar, the Philippines, Vietnam, etc.

eGovernment

- ■ eGovernments are expected to grow rapidly in the next few years, and **massive demand is expected**
- ■ Expansion policies
- • **Proposals focused on target fields**
- • **Proposals tied to platform layers and infrastructure layers** apart from individual applications or services
- ■ Key matters
- • **Pitches to partner governments from the initial stage**
- • Careful study of each country's current circumstances
- ■ Priority countries
 **Indonesia, Philippines, Thailand, Vietnam, etc.**

Common Expansion Scenarios
- ■ Short-term support (one to two years)
- • **Build domestic cooperative frameworks** for related corporations in each field to work together, whose activities are supported as needed by MIC or other related ministries
- • **Select priority countries** and **quickly embark on advance initiatives (feasibility studies, small pilot projects, etc.)** while closely scrutinizing the country's needs
- • **Promote benefits to third-party countries** at international forums, etc. and **incorporate benefits as appropriate in ASEAN-wide planning**
- ■ Long-term support (three to five years)
- • Aim to implement actual systems in the partner country as quickly as possible and **ramp up specific proposals to ASEAN as a whole**

2011–2012 (short-term support)

2013–2015 (long-term support)

Studies by MIC

Subcommittees

Japan-ASEAN Public-Private Conference

Global Panel

Telecommunications Council

Domestic frameworks

(1) Build domestic cooperative frameworks for each field

(2) Detailed study and research of each field (identify issues, etc.)

(Feedback, information sharing)

Incorporation

Priority countries

(4) Conduct feasibility studies (with small pilot projects)

(7) Study full-scale system implementation

(3) Consult with partner country

(5) Promote benefits

• Examine expansion into priority fields
• Expand package-type system models

(Seminars and invitations)

ASEAN ICT Ministers Meeting

Other international forums and meetings

Other ASEAN countries

Initiatives toward building a common ASEAN platform (disaster response field)

(6) Incorporate benefits

(8) Create scenarios and promote adoption for ASEAN-wide expansion and expansion into other countries

• Ascertain needs in other ASEAN countries
• Combine benefits

(reference)

Smart network strategy for ASEAN

2015 Implement Smart Network (target year)

• Coordinate with other ASEAN plans (connectivity master plan, ICT master plan, etc.)

Standardization Strategies

- Weighed standardization areas using the criteria of "does a prominent global market exist?" "do Japanese corporations have a strong presence?" and "can the Tohoku Earthquake experience be applied?"
- Selected optical access systems, digital signage, and smart grids as the priority fields
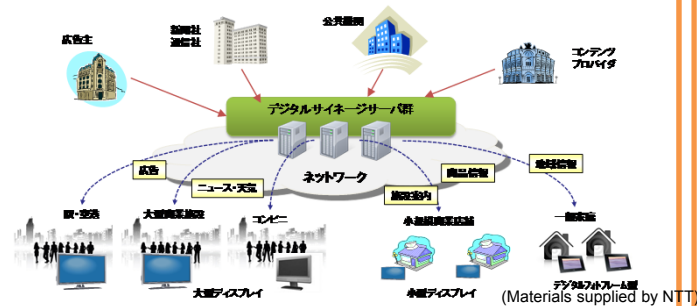
Optical access systems

(Created from materials supplied by Mitsubishi Electric)
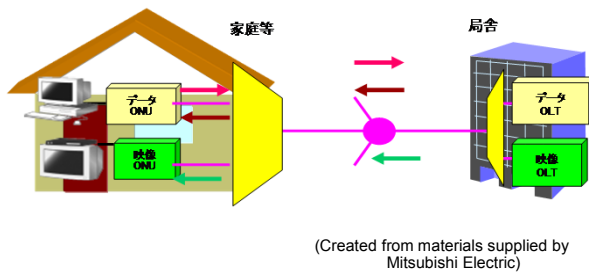
- A prominent global market exists for optical access services, as subscribers worldwide continue to increase rapidly.

- Despite the recent rise of Chinese corporations, Japanese corporations still have a relatively strong presence in this field and have an edge in foreign markets.

- Deliberations on the IEEE 10GE-PON[1] standard, the optical access network methodology used in Japan, began in February 2011 at the ITU-T SG 15 and discussions are continuing with the aim of concluding an official ITU recommendation by the end of 2012.

Digital signage

(Materials supplied by NTT)

- Reasonably large market growth is expected, as digital signage using small networked displays are spreading to small retail outlets and offices.

- The effectiveness of digital signage as a media that disseminates a wide range of information was seen in the March 11th Tohoku Earthquake. By conveying to the world Japan's experience in this area, digital signage systems and products are expected to expand to overseas markets.

- In March of this year, the ITU-T SG 16, which handles multimedia, set digital signage as a new examination topic to promote work on creating a digital signage recommendation, and work began on writing a draft recommendation. DPAA[2] and other forums are also examining digital signage standardization.

Smart grids

- In the midst of the tight power supply situation in Japan after the Tohoku Earthquake, the question is "how will Japan cope?" Expectations are rising for smart grid systems, which offer these functions, and their supporting communication technologies as one answer to this problem.

- At the ITU, the ITU-T FG Smart was set up in May 2010, and venues for smart grid discussions are being prepared at the IEC and other organizations. And the IEEE and other organizations are already working on standards for efficient wireless communications for smart meters.

Build a promotion framework as soon as possible

Use existing frameworks and accelerate studies

*1. 10 Gigabit Ethernet-Passive Optical Network   *2. Digital Place-based Advertising Association

Assertive Use of Financing

Financial assistance is a key factor for global expansion of project proposals

Private sector financing

Points on the use of financing schemes

- **Use of long-term financing schemes** is effective for **improving** power, rail, and water **infrastructure** and for **incorporating ICT into operation and management functions**
- **Use of project financing** that relies mainly on private sector financing and **formation of public-private partnerships (PPPs)** should be promoted when forming package-type infrastructure proposals

- **Use participation loan schemes** with JBIC
- Use **project financing**

JICA

- Use **ODA** in the ICT field
- Effective use of **international yen loan schemes** dependent on global expansion of **next-generation public infrastructure systems**
- Use **aid schemes for preliminary cooperative examinations** related to PPP infrastructure projects and BOP business-related promotion

JBIC/NEXI

- Check that **the necessary support measures are currently in place**
- **Make active use** of financing guarantee systems offered by JBIC and trade insurance offered by NEXI
- Anticipate continued efforts to make financing conditions more flexible and expand risk-taking and **the holding of seminars, etc.** to share knowledge and expertise

Industry reform mechanisms

- Make use of investment schemes for projects that endeavor to **commercialize leading technology through public-private-academic partnerships** and to drive **overseas expansion through collaborations of regional venture businesses and large corporations**
- Cooperation from the initial project formation stages is anticipated to generate **useful advice on profitability and forming corporate alliances**

International organizations

- Make use of assistance related to **feasibility studies**, **joint research**, and **pilot projects** by the ITU, APT, and other international organizations

Formation of a Global Expansion Framework

- Although Japan has the edge in individual technologies, there are **issues with integration and application** of these technologies. Thus, a framework must be built to **realize "open innovation"** crossing industry and organizational domains and to **consolidate corporations' strengths**.
- Such a framework requires a **function to share information** among stakeholders for the smooth formation of projects, a **function to organize and share knowledge on financial assistance schemes**, and a **matching function** to realize "open innovation."

Central government

Telecom operators

Manufacturers

**ICT Global Consortium
(to be formed by summer 2012 at the latest)**

(1) Function to collect and share information and data on target countries
(2) Function to organize financing for project formation
(3) Function to organize assistance measures to connect initial project seeds to specific project proposals
(4) Function to coordinate participating corporations
(5) Secure human resources for global expansion

Financial institutions

Trading firms

Related organizations

Action plan leading up to the framework's formation

- **While forming pilot projects for sensor networks, disaster-response ICT systems, and eGovernment**, it is appropriate to advance the formation of the framework along the two axes of enhancing the project-matching function and financing coordination and, later, aim to expand **functions sequentially**.
- Formation of the framework should be **led by the private sector**, but it is important to build a framework in which public and private interests cooperate, such as having the government **participate as an observer**.
- It is necessary to package Japan's ICT and **actively promote the Japan brand** at **conventions**, **symposiums**, and other venues in various countries.
- It is necessary to arrange the platforms for **conveying information about state of the country as its tackles earthquake reconstruction** and the **reconstruction process**.

- Constructing information exchange and collaboration platforms between governments is effective in developing infrastructure in countries because the development of infrastructure is closely related to decisions by governments on national / local development plans and urban development plans, and joint public-private initiatives are necessary for Japanese corporations to actively expand overseas.

Pitch projects through intergovernmental dialogue	Assist pilot projects in partner countries	Communicate the Japan brand and the state of reconstruction efforts	Strengthen ties within government
• Actively encourage projects at the government level (**high-level sales**) and set out a **joint public-private mission** • **Early information gathering** through intergovernmental dialogue • **Sign memorandums of understanding** with partner country governments	• Support **preliminary studies and pilot projects** • When conducting pilot projects, it is necessary to convert them into **implementation / application projects** that result in actual expansion • Construct **flexible assistance schemes** so that assistance is available even for projects that assume expansion **several years in the future**	• Arrange platforms for **conveying information about the state of the nation as it tackles earthquake reconstruction and the reconstruction process** • Actively convey information and offer assistance at **conventions**, **symposiums**, and other events	• Strengthen intragovernmental **liaison meetings** and **ties between related ministries**