SMART JAPAN ICT STRATEGY
—Achieving Economic Growth and Solving Social Issues with ICT—

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The Volume of Digital Data in the World will grow 300 times larger in 15 years (2005-2020) from 130 exabytes (=130 billion gigabytes) to 40 zettabytes (=40 trillion gigabytes).
Cloud Service Market in Japan will **triple the size in 5 years**

2012-2017: 9 billion dollars to 30 billion dollars

(0.1 billion yen = 1/1000 billion dollars)

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Public Financial Assistance Creates New Market

出典:総務省調査(2013年3月)
Sensors in the global market **go down-sized, low power-consuming, low priced**

<table>
<thead>
<tr>
<th></th>
<th>2000年</th>
<th>2010年</th>
<th>将来 (2020年頃)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE AREA of CHIPS</td>
<td>10mm²</td>
<td>2〜3mm²</td>
<td>1〜2mm²</td>
</tr>
<tr>
<td>POWER CONSUMPTION</td>
<td>0.1mW</td>
<td>0.05mW</td>
<td>0.05mW less</td>
</tr>
<tr>
<td>AVERAGE PRICE</td>
<td>$ 3 &amp; over</td>
<td>$ 0.70</td>
<td>$ 0.50 under</td>
</tr>
<tr>
<td>PRODUCTION (unit: million)</td>
<td>35</td>
<td>771</td>
<td>2500 over</td>
</tr>
</tbody>
</table>

- Japan uses 1/4 of all the sensors in the world.
  (Sales base 2010: Japan 4.5 billion/ World 17 billion)

出典：Jean-Christophe Boy-Yole Developpement (http://techni nikkeibp.co.jp/article/COLUMN/20110410/191000/)
To be the most active country in the world
~Japan’s economic growth and contribution to international society by ICT~

Ⅰ. Creating new value-added industries

Ⅱ. Solving social problems

Ⅲ. Improving and strengthening a common ICT basis

Key Technology:
Broadband,
Big Data & Sensor Network

Issues:
- Economic growth
- Employment
- Information transmission capacity
- Town development
- Super-aging society
- Resource problems
- Open innovation
- Cybersecurity
- Utilizing of personal data
ICT Growth Strategy — perspective —

Creating new value-added industries

- Data utilize
- Broadcast/Contents
- Agriculture

Local revitalization

Disaster prevention

Medical care/Nursing care/Health care

Resources

Showing and demonstrating a model for success
- Cooperate with others
- Investment in specific areas
- Regulatory reform

Implementing of open data such as utilizing Geospatial Information

Consolidation of information security which ensures the safety and security of the people

Creating the world’s highest level of ICT infrastructure

Promoting research and development for creating innovations
Remote monitoring of tunnels by optical fiber sensor network

Remote monitoring of tunnels by wireless sensor network

Wireless sensor node (Inclinometer)

Position sensors

Acceleration sensors

Temperature sensors

Deformation sensors
The city of Shiojiri, Japan established a multifaceted sensor network citywide with the view to:
1) Reducing damages by animals
2) Securing children
3) Detecting Landslides

- Soil moisture sensor
- Animal sensor
- Child sensor

Data base in Shiojiri city
Sensor network
Repeater
Shiojiri city, utilizing the technologies of the network, established a system in Nepal for monitoring security of mountain climbers December 2013 with the APT budget.

- 14 Sensor base stations receive signals from sensor terminals and grasp the movement of climbers and unusual situations.
To be the most active country in the world
-Realizing Japan’s economic growth and contribution to international society through innovation by ICT-

Vision
① Building “a knowledge- and information-based nation” by 2020
② Utilize ICT to create a total solution for complex social problems faced by Japan, other counterparts and the globe.
③ Speedy implementation of actions based on global trend.

Action
① Linking National and Global Strategy
   National strategy: ICT Growth Strategy II  Global strategy: Global Outreach in the Field of ICT
② Realizing the world’s most advanced ICT environment for Tokyo 2020 Olympic and Paralympic Games
# ICT Growth Strategy II

**Vision**

Creating new innovation through connecting various things and services by ICT

## Approach

### Priority projects

- **Local revitalization**
  - ICT smart town
  - G-spatial city
  - Smart agriculture

- **Solving social problems**
  - Medical care
  - Education
  - Disaster prevention
  - Transportation
  - e-Government, e-Local government, etc.

- **Tokyo 2020 Olympic & Paralympic Games**
  - Free public Wireless LAN access
  - Multi-language voice translation
  - 4K/8K (Super Hi-Vision)
  - Broadcasting contents to foreign countries

### Platform

- G-spatial platform
- Platform of ICT smart towns
- Utilization of big data and open data

### Infra-structure

- Free public Wireless LAN access
- 4K/8K
- Development of ubiquitous network
- Review of competition policy

### Environmental improvement

- Development and utilization of human resources
- R & D
- Information Security
- Conditions to use Personal Data

### ICT common basis

- Taking advantage of "National Strategic Special Zone", etc.
SMART JAPAN (Smart City × ICT)

**Local government**

- Enabling online access to administrative services anywhere

**Disaster prevention and mitigation**

- Ensuring the safety and security of daily life

**Tourism / Transportation**

- Attractive living environment

**Building resilient cities against disasters**

- Big Data
  - Sensor Network
    - Gathering real time data from sensors in the town
    - The system can provide high value-added services

- Geospatial Information
  - Application in monitoring earthquake activity, understanding disaster information, providing support
  - Realization of advanced navigation, machine control (more efficient agricultural practices)

- Common ID
  - Combining personal information scattered in various parties, enabling provision of suitable services

**Agriculture, forestry and fisheries**

- Revitalization of local industry by utilizing ICT

**Energy and environment**

- Sustainable and environmentally friendly

**Medical care**

- Livable environment for the elderly

**Building resilient cities against disasters**

- Contribution to international society
  - Intensification of international competitiveness

- Resolving regional multiple challenges

- Economic revitalization
  - Creation of employment opportunities
Solving Social Issues with ICT

- Agriculture
- Education
- Environment
- Disaster prevention
- Medical care
- Electricity
- Water
- Congestion

SMART COLOMBIA/JAPAN
Creating new value-added industries
Solving social issues

Deployment of ICT Infrastructure

Cloud System
Big Data
Sensor Network
Broadband Access (Optical Fiber & Wireless), etc.