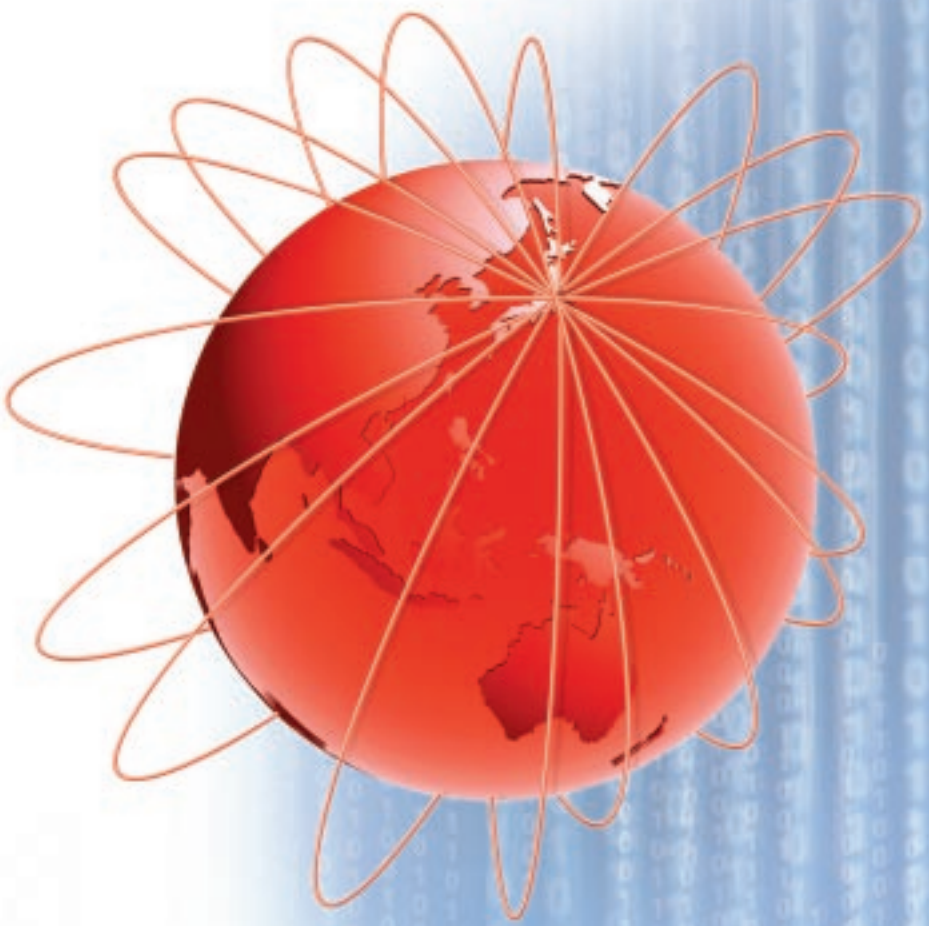
JETRO

INVEST JAPAN

Attractive Sectors

ICT Information and Communication Technology



Overview

Expansion of Activities in the ICT Market

The ICT industry has broadened its focus beyond manufacturing equipment to maintenance and management services as well as creating audio, video, print and digital content. These developments are anticipated to create a variety of new opportunities in Japan's ICT market.

Incentives for Growth

Japan has numerous IT clusters, areas where IT companies have concentrated. These clusters have been developing organically, rather than under government direction. To encourage further growth, the national and local governments are providing incentives to these IT clusters, creating attractive business environments for potential investors from abroad.

Six Promising Sectors

Within this growing market, six market segments are considered to have the most promising future: Mobile Phone Services, IC Card/RFID, Visual Communications, Online Affiliate Marketing, Gaming Industry, and Public Sectors.

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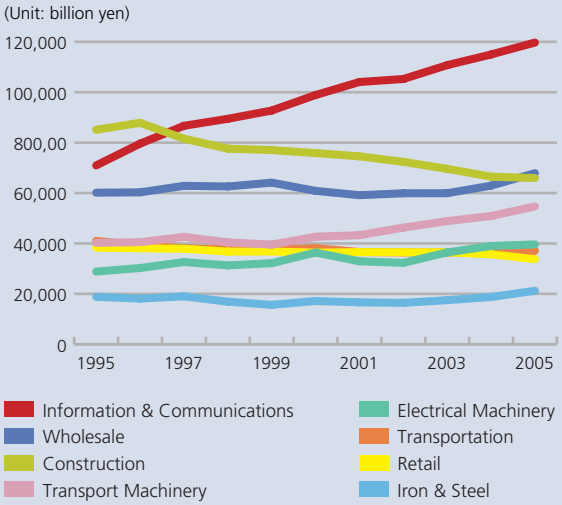
Market Overview

Japan's Top Industries by Market Scale

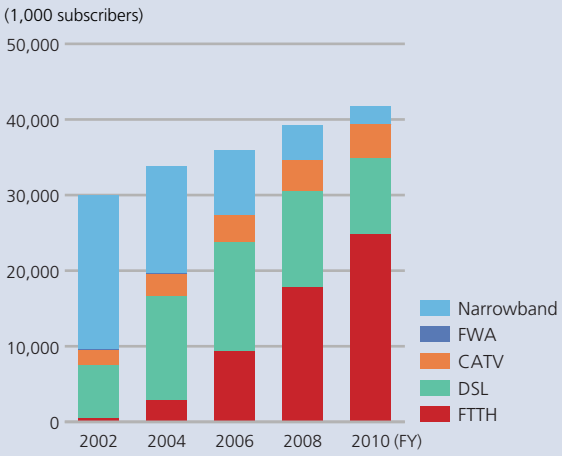


Source: "ICT Industry Economic Analysis Survey," Ministry of Internal Affairs and Communications

ICT—Japan's Largest and Most Dynamic Market

After growing at an average annual rate of 5.4% between 1995 and 2005, Japan's information and communications technology (ICT) industry is now the largest in the country in terms of market scale, totaling 120 trillion yen in 2005. Growth is expected to continue with the advent of a "ubiquitous network society."

Breakdown of Japan's Internet Subscribers by Connection Type



Source: "Broadband Network Market 2006," Yano Research Institute Ltd.

Highly-advanced Infrastructure

Japan's ICT infrastructure has seen considerable development in recent years. As a result, the country features some of the fastest broadband connection speeds and highest Internet penetration rates in the world. These qualities supported the quick spread of multi-function mobile telephones, which include camera, bar-code reader, music player and contactless payment functions, as well as an increasing number of ways for people to connect to the Internet.

Japan as an R&D Hub

A high rate of technological advancement, supported by vigorous investment in R&D, is one of the leading factors in Japan's competitiveness and makes the country a key investment destination.

Structure of Japan's ICT Industry

Solutions

-Food traceability
-Home security
-Online shopping
-B2B electronic marketing
-Online games
-E-mail, video mail
-E-government and e-municipalities
-Video and music delivery
-Distance education
-Electronic books
-ERP (Enterprise Resource Planning)
-SCM (Supply Chain Management)
-CRM (Customer Relationship Management)
-Videophones
-Telemedicine
-ITS (Intelligent Transport Systems)
-Disaster monitoring
-Employment systems
-Electronic data exchange

Platforms

-Digital rights management (DRM, etc.)
-Authentication
-Accounting, accounts settlement
-Time stamping
-Security
-Privacy
-Systems infrastructure
-Positional information

Terminals

-Digital TV
-Mobile phones, PHS
-Car navigation systems
-Wearable terminals
-Information appliance
-Ubiquitous terminals
-Electronic tags
-DVR, video
-Game machines
-PDA, mobile
-Phone, Fax
-Network robots
-PCs
-Sensors

Networks

-Cable Internet
-Cable TV
-Optical fiber
-Home networks
-Fixed line networks
-Wireless LAN
-Bluetooth
-Terrestrial digital broadcasting
-Transport related systems (DSRC, etc.)
-Satellite broadcasting
-Satellite communications
-Electronic tag networks
-Sensor networks
-Next-generation mobile phone networks
-DSL

Source: "Advisory Body for the Realization of a Ubiquitous Network Society - Final Report," Ministry of Internal Affairs and Communications

IT Industry Competitiveness Index

Rank		Overall index score	Rank	R&D environment
1	US	77.4	**1**	**Japan**
2	**Japan**	**72.7**	2	Korea
3	Korea	67.2	3	Taiwan
4	UK	67.1	4	US
5	Australia	66.5	5	Sweden
6	Taiwan	65.8	6	Finland
7	Sweden	65.4	7	Germany
8	Denmark	64.9	8	Denmark
9	Canada	64.6	9	Israel
10	Switzerland	63.5	10	Netherlands

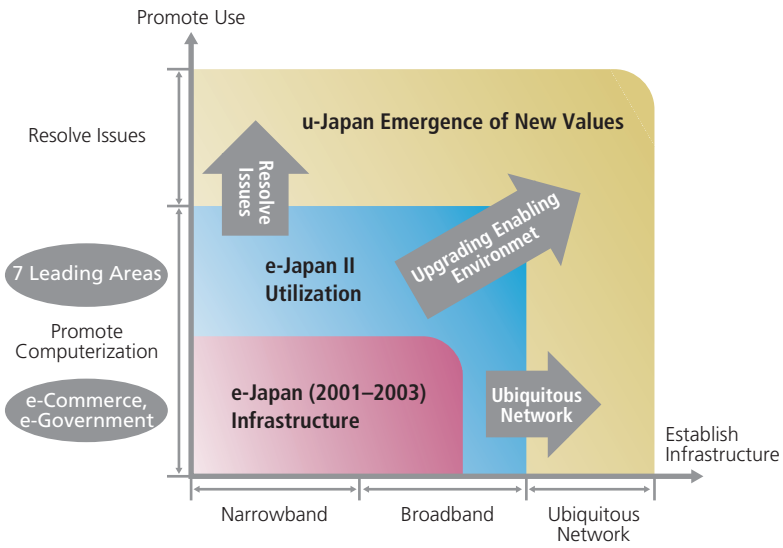
Note: The IT industry competitiveness index is organized into six distinct categories, which include overall business environment, IT infrastructure, human capital, legal environment, R&D environment and support for IT industry development.

Source: "IT Industry Competitiveness Index, 2007," The Economist Intelligence Unit

Policy Initiatives

Government Support Moves Japan Closer to Ubiquitous Society

To stimulate growth in Japan's ICT industry, the government is backing initiatives such as "u-Japan" and "Frequency Open", as well as the digitalization of TV broadcasting and promotion of NGN (Next-generation Network). The government is also seeking to accelerate introduction of various laws that would give maximum support to growth in the ICT industry, in line with the "Basic Law on the Formation of an Advanced Information and Telecommunications Network Society," enacted in November 2000.



Source: Formulated by JETRO based on information from the Japanese government IT Strategic Headquarters, Ministry of Internal Affairs and Communications, and others

Charting the Progress of Japan's ICT Strategy

2000	"Basic Law on the Formation of an Advanced Information and Telecommunications Network Society" enacted
2001	"e-Japan strategy," which aimed to make Japan the most advanced IT nation in the world by 2005 (mainly focused on IT infrastructure), announced
2003	"e-Japan strategy II," which attached importance to utilizing IT, enacted
2004	"u-Japan strategy," with the goal of making Japan the world's foremost ICT nation by 2010, [From "e" (electronics) toward "u" (ubiquitous)] enacted
2006	"New IT Reform Strategy," aimed at accelerating necessary structural reforms by utilizing IT, announced.

ICT-Related Laws & Regulations

1 Law Concerning the Use of Information and Communications Technology in Government Administrative Procedures (effective February 2003)

This law aims to increase online submissions of applications and other forms to state and regional authorities by at least 50% by 2010, creating opportunities for IT businesses in the government-to-citizen and government-to-business areas.

2 Personal Data Protection Law (effective April 2005)

This law requires businesses handling personal data to ensure the accuracy of that data and protect it from leaks, loss, and damage; the law also requires the monitoring of secure management of personal data by employees and contractors.

The law has created additional revenue sources, particularly for software firms and system integrators that specialize in personal data protection.

3 Regulation of Internal Control Reporting Systems (scheduled to go into force in April 2008)

The "Financial Instruments and Exchange Law" came into effect in June 2006. The section of this law related to internal control reporting systems, nicknamed J-SOX, will go into force in April 2008. The regulation, which will apply to all listed companies, calls for the establishment of internal controls to ensure proper internal accounting procedures. It will also require company management to ensure compliance and require auditing firms to conduct relevant audits.

As the use of IT is included in the practice standards of internal controls as a fundamental element for accomplishing what the regulations are intended to do, the IT services industry is now pinning its hopes on the expansion of related markets, paying careful attention to moves by U.S. and European IT vendors, whose considerable know-how makes them leaders in the field.

Key Sectors

Current and Projected Usage of Mobile Phone Functions

(%)

Function	Used currently	Intend to use in future
Camera	87.2	69.8
Applications (games, etc.)	42.7	36.9
2D barcode reader	25.4	26.1
Movie player	20.9	26.8
Music player	13.6	39.4
Videophone	8.5	20.2
GPS/ navigation	7.8	30.5
Internet viewer	7.4	27.7
TV broadcast reception	6.2	29.7
Electronic money	6.2	34.4
Listen to FM radio	6.0	22.4
Read electronic book	3.2	14.1
Operate household appliances remotely	2.2	17.3
Document reader	2.1	14.4
Overseas roaming	1.5	8.6
Crime prevention bell	0.3	12.7

Source: "White Paper on Information and Communications 2006," Ministry of Internal Affairs and Communications

1. Mobile Phone Services

With more than 100 million mobile phone subscribers (nearly 80% of the population), Japan is leading the way in third-generation (or 3G) mobile telephony. And with the introduction of mobile number portability (so-called MNP), which allows customers to keep their number when switching to a new carrier, Japan's mobile operators are placing increased focus on customer service, marketing and other activities aimed at retaining customers. Companies are also striving to expand their customer base to all segments of the market.

Japan continues to be at the forefront of cell phone technology. Digital cameras first appeared on cell phones back in October 2000, when J-Phone (now Softbank Mobile) released its Sharp handset J-SH04. Cameras became a standard feature by 2003 and are now on virtually every cell phone sold in the country. The popularity of cell phone cameras has also had a positive effect on sales of digital cameras.

Today, Japan's cell phone operators are racing to offer the latest high-tech features and most attractive handsets to lure and keep customers, targeting all segments of the market.

Foreign-affiliated Firms in Japan (by industry category)

Case Study GeoVector KK

GeoVector Corporation, a US-based provider of pointing-based mobile search solutions, established a Japan subsidiary, GeoVector K.K., in 2005. Working closely with its Japanese partners, including KDDI, Mapion, and NEC Magnus, GeoVector built up a large base of phones with the necessary embedded hardware and built an extensive database of location-specific information required for its pointing applications.

Picture: GeoVector's "Click on the real world®" technology allows cell phone users to point and click at restaurants, billboards, and other objects or locations to receive information about them.

2. IC Card/RFID

The increasing use of IC cards and electronic money is rapidly changing the face of commerce in Japan. In Tokyo, for example, commuters can use a single IC card to pay for rides on all train, bus and subway lines (the cards can also be used to pay for items at select convenience stores and the like). In addition, identification systems using IC cards are being introduced actively at educational facilities and offices, on the back of increasing demand for security.

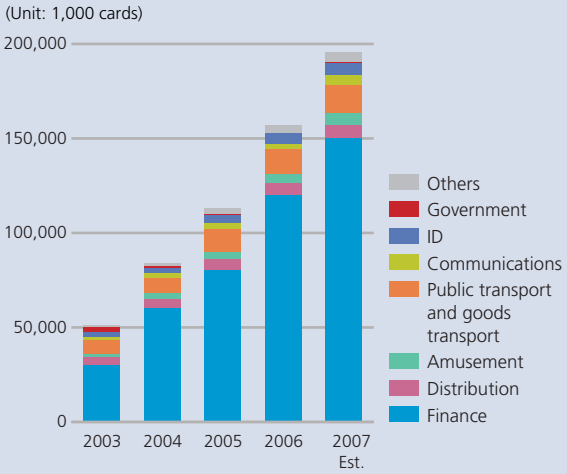
The Japan Automatic Identification Systems Association (JAISA) reports that radio frequency identification (RFID) tags are commonly used in factory automation, which accounts for 36.8% of the total market as of April 2007. But new uses are being found for these technologies every day. RFID tags are moving beyond the factory and warehouse to a variety of uses in general society, such as for consumer products, including clothing, consumer electronics, foods and books.

Japan will be an important market to watch to understand the full potential of these exciting technologies.

Case Study Infineon Technologies Japan K.K.

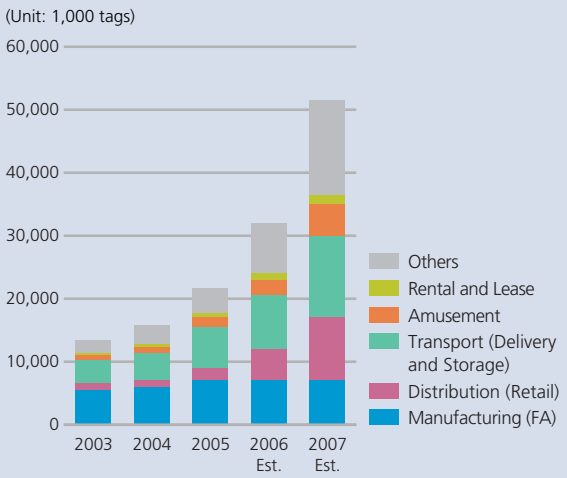
Infineon Technologies Japan K.K., the Japanese arm of German chipmaker Infineon Technologies AG, offers semiconductors and system solutions for automotive, industrial electronics, chip card and security as well as applications in communications in the Japanese market. In its operations, the company bundles smart card-related devices , platform security , and cryptographic technology to provide products for use in applications such as communications, account settlement, personal authentication ID, healthcare, distribution control, transport, and computing.

IC Card Usage by Category



Source: Yano Research Institute Ltd.

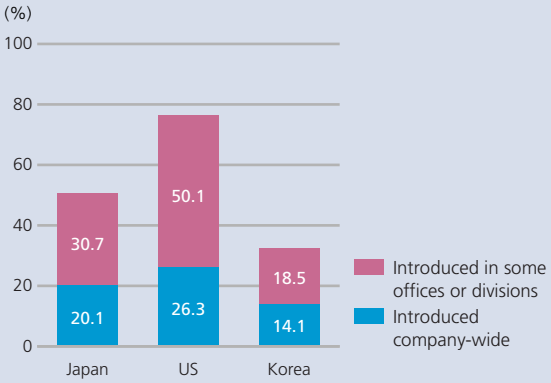
RFID Usage by Category



Note: "Others" includes: immobilizers, parking facilities, recycling, personal authentication, etc.

Source: Yano Research Institute Ltd.

Video Conferencing Penetration Rate



Source: "White Paper on Information and Communications Japan 2006," Ministry of Internal Affairs and Communications

3. Visual Communications

Video conferencing and other means of visual communication are on the rise in Japan, due in part to enhanced infrastructure in the industry. More and more companies and organizations are looking to video conferencing to streamline operations and improve internal communications. Improved technology in this area, such as high-definition video and large format displays, is making it easier than ever to conduct business halfway around the world without ever leaving the office or boardroom.

The Japanese market for visual communications is expected to grow, as new advances in the area are made and more firms see the benefits of the technology.

Case Study Nihon Tandberg K.K.

In July 2002, Tandberg AS, a Norwegian provider of videoconferencing systems headquartered in Oslo and New York, opened its first Japan branch office in Tokyo. In January 2007, the firm made a new start, establishing a Japan subsidiary, Nihon Tandberg K.K.

In response to strong growth in sales in the Kansai region (around Osaka), which now accounts for nearly 30% of its Japan sales, the firm opened a second base in Osaka in June 2007 to widen its customer base and enhance its service capabilities in the region.

Picture: [TANDBERG Centric 1700 MXP]
Executive control center designed for offices, the 1700 MXP features a superior HD camera and a widescreen LCD. This fully integrated system operates both as a video conferencing system and PC display, enabling seamless and real-time face-to-face collaboration at the desktop.

4. Online Affiliate Marketing

Online affiliate marketing, where two websites share revenue based on traffic and purchases, has become an integral part of Internet-related business and advertising, especially in Japan. Consumers are shifting away from traditional mediums for their shopping information, such as commercials and print materials from the brands themselves, and relying more and more on word-of-mouth, such as through weblogs and consumer product evaluation websites, which are changing the way people buy products and get information.

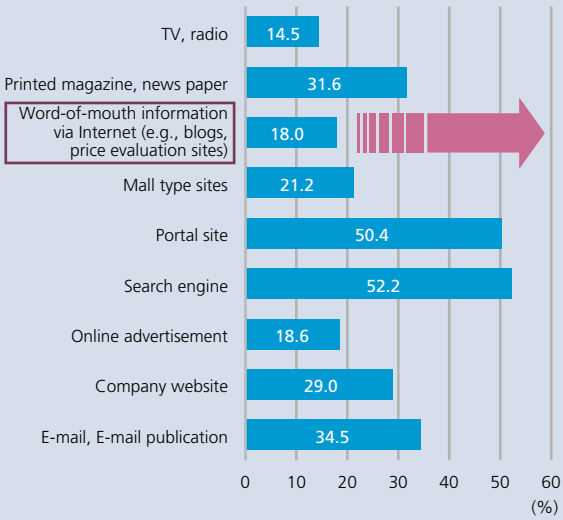
These trends are positive for online affiliate service providers, who can use their know-how of online marketing to act as an agent or an Internet mall operator to lead Internet users to visit to advertiser websites through their affiliate site (e.g., weblog, evaluation websites, etc.).

Case Study LinkShare Japan K.K.

US-based LinkShare Corporation got its start in 1996 as the world's first affiliate service provider. In March 2001, the firm formed a partnership with Japan's Mitsui and Co., Ltd. and began developing a service aimed at PCs. The firm began offering services aimed at mobile phones in spring 2004 and, in January 2005, became independent from Mitsui, establishing LinkShare Japan K.K.

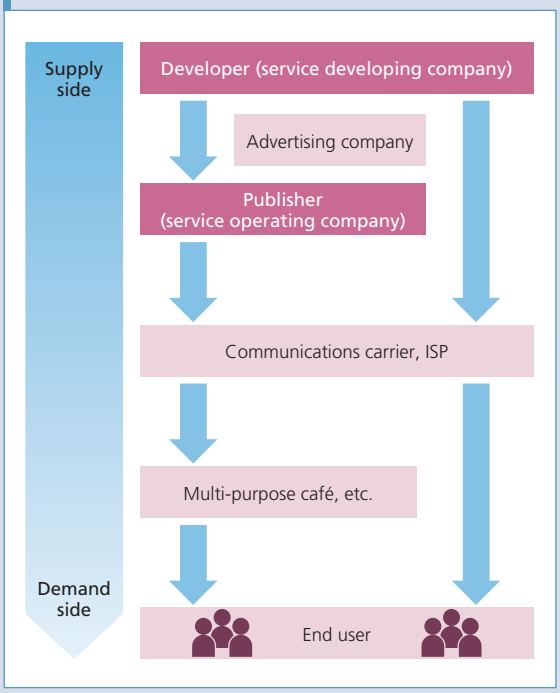
As of August 2007, the Japan subsidiary had more than 270 E-commerce sites (advertisers) and some 225,000 affiliates.

Where Japanese Consumers Get Their Shopping Information



Source: "Survey on Actual Conditions and Market Size of e-Commerce Industry for 2006," Ministry of Economy, Trade and Industry

Online Game Market Structure



5. Gaming Industry

With increasing broadband penetration rates and faster connection speeds, the future of digital content continues to brighten, in particular for online gaming. Since 2002, a number of gaming firms, mainly from China and Korea, have entered Japan and are seeking to expand their business in the country.

Many of these new entrants are focused more on product management and localization of existing games titles, rather than new product development. For other firms, success in the Japan market has led to success in other markets.

Case Study NEXON Japan Co., Ltd

NEXON, a Korean online games service company, established a Japan arm in 2002, NEXON Japan. The company aims to do away with borders that surround the online game genre, and make a service that fuses all digital contents flexibly, including online communities, blog service, and music delivery, to provide a comprehensive entertainment service.

6. IT Use in Public Sector

Greater and more effective utilization of IT is changing the way people live and work. This expansion of IT into our lives is being seen more rapidly in the private sector, with utilization in such public sector areas as transportation, education, the government and medical services lagging behind. This looks set to change, however, with increasing demand, for example, to computerize health care and expand e-learning. In the medical field, IT is being used to create safe and inexpensive networks that allow health professionals real-time access to patient data and leading to improvements in advanced preventative medicine and remote medical systems.

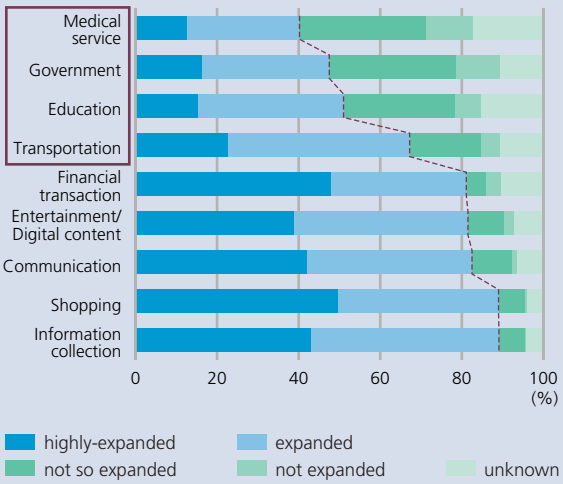
The expansion of IT utilization offers almost limitless opportunities for enterprising firms, and Japan is a market that cannot be ignored.

Case Study Nortel Networks Japan

Leading Canada-based networks system provider, Nortel Networks, established its Japan arm in 1983. Since then, the company has provided communication and network solutions to a number of companies, institutions and organizations. In one example, the firm partnered with Kyushu University Hospital to help the facility achieve its aim of offering patient-oriented, one-stop medical care. Working with its channel partner, Fuji Xerox, Nortel Japan designed various communications systems for the hospital that allowed quick access to diagnosis data, X-ray and ultrasound results and also real-time readings of patient vital signs and operating theater monitoring. This improved access to vital information has greatly enhanced the hospital's ability to deliver the highest level of patient care.

Areas where the use of ICT is expanding

Public awareness on status of expansion of IT utilization compared to 4 years ago (by sector)



Source: "Survey of Networks and National Life" (March 2005), Ministry of Internal Affairs and Communications

Regional Opportunities

ICT Industry Clusters

1. KANAGAWA PREFECTURE: Yokosuka Research Park

The Yokosuka Research Park, or YRP, is a concentration of communications industry research institutions established in Yokosuka City. A number of public and private research institutions from both Japan and overseas have established R&D operations in the park.

2. KYOTO PREFECTURE: Kyoto Research Park

With more than 40 universities, Kyoto is a center for research and innovation. Kyoto prefecture, which is home to such successful firms as HORIBA and KYOCERA, actively promotes development in ICT industries, with such programs as "University Town Kyoto" and "Venture Capital Kyoto."

The Kyoto Research Park (KRP), which opened in 1989 as Japan's first private sector research park, lies at the core of these activities. Working with local governments and industries, the park provides a supporting environment for R&D and new business creation.

3. GIFU PREFECTURE: Softopia Japan

Gifu prefecture is working to develop a huge complex in Ogaki City called "Softopia Japan", which it hopes will ultimately have the concentration of IT businesses and workers.

The aim of the complex is to be a center for outsourcing services for the prefecture's IT-related operations (consulting, training operations, etc.) and to create a data center that would serve as a base for the creation and operation of e-prefecture electronic government facilities. Another aim is to cultivate human resources in network management for the prefecture's information super highway and LAN, etc.

4. OKAYAMA PREFECTURE: Okayama Research Park Incubation Center

Okayama prefecture promotes the formation of a strategic concentration of IT related companies by implementing a variety of support policies in a concentrated fashion.

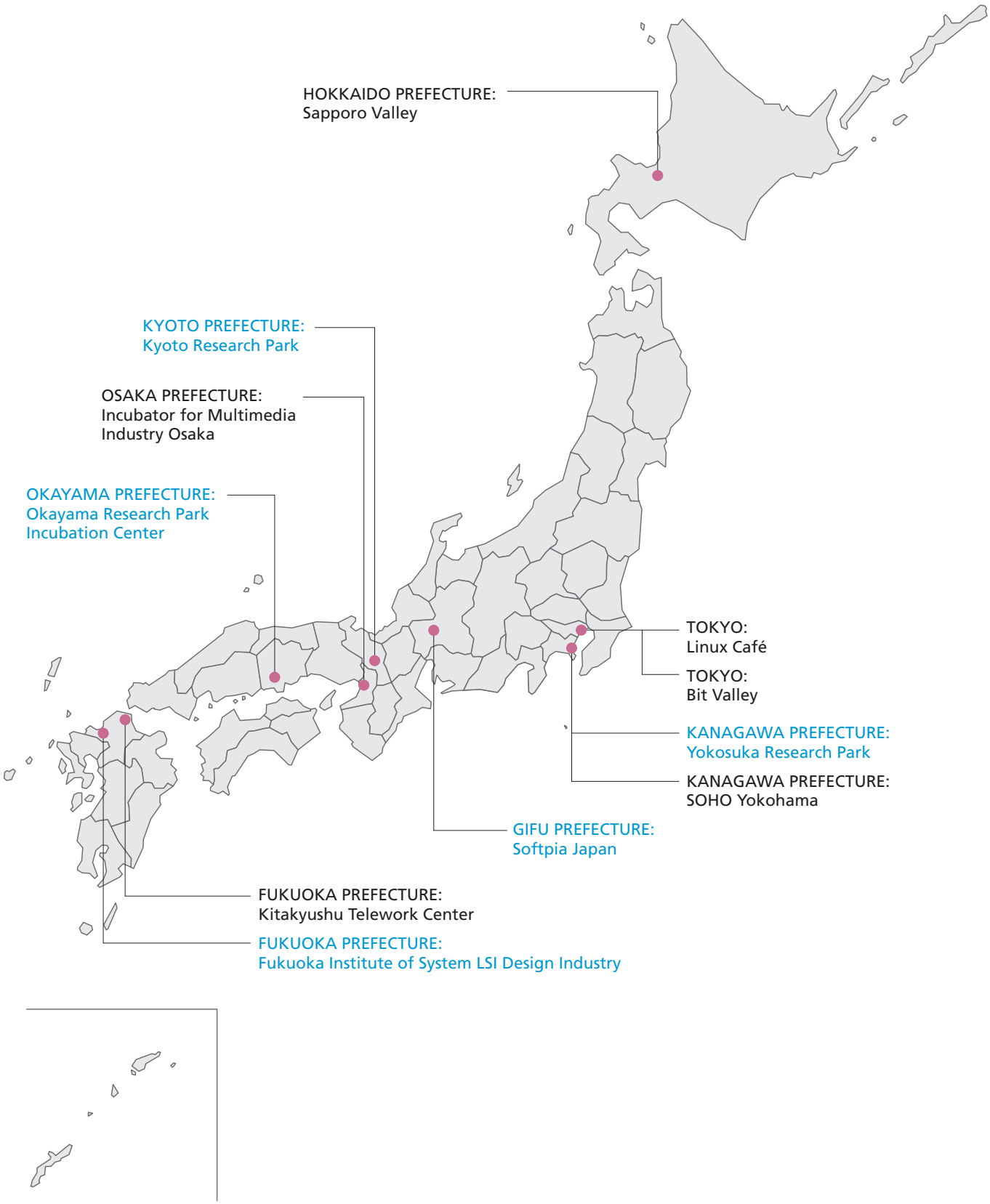
The Okayama Research Park, an incubation facility, manages support policies including detailed support combining the characteristics of resident companies with a stage for growth, support for the promotion of alliances and collaboration through the provision of information for both local and partner companies, and the promotion of network creation among local companies.

5. FUKUOKA PREFECTURE: Fukuoka Institute of System LSI Design Industry

Fukuoka prefecture is located in the northern part of Kyushu Island. The area is part of the "the Silicon Sea Belt," a collection of global semiconductor production areas that extends from Korea to Kyushu Island and also Shanghai, Taiwan, Hong Kong, and Singapore.

With a concentration of semiconductor design companies and institutions with top-level system LSI researchers, Fukuoka aims to continue to develop as Asia's base for system LSI design and development, with the Fukuoka Institute of System LSI Design Industry at the core of these efforts.

Japanese Main IT Venture-Concentration Areas and Incubation Facilities



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