

Integration and Imagination

How can Japan better exploit the advanced ICT infrastructure it has put in place? **Sawako Nohara**, president of IPSe Marketing, Inc., offers a personal perspective.

Japan's progress in using and utilizing ICT has been patchy, with considerable variation in the degree of progress in different fields. It is now more important than ever that these efforts continue to evolve, so that Japan can capitalize on its advanced infrastructure, which will continue to grow. In particular, efforts should focus on expanding utilization of advanced fields and developing those fields that are less advanced.

Progress is being made in some fields, such as transport, e-commerce, distribution, and information services. However, information technology is still not being fully utilized in other fields, such as government services, education, health and welfare.

The progress in these first areas is due to the progress in IT investment by individual companies, which has been directed at improving profitability either by capturing a greater market share or by improving services or making operations more efficient. The fact that the necessary infrastructure is now in place, and that the benefits are clearly visible, has allowed companies to invest by focusing on the future.

One area in which the utilization of information and communications technology has progressed remarkably is in services for Internet-enabled mobile telephones. Mobile telephones now have all kinds of advanced functions, such as Internet access, originally via the i-mode service offered by NTT DoCoMo but now via several different carriers, sending and receiving e-mails, watching and recording television programs, taking photographs and shooting video, and then exchanging these photographs and videos with other users—as well as making regular voice calls. The services available have expanded so that users can now view information such as news, weather and timetable infor-

mation for buses and trains, as well as making reservations for flights and checking in at the airport. Users can download games and play against other players over the Internet, or use their mobile telephone for Internet banking or shopping. Mobile telephones can be used for social networking or to write or view blogs, and some mobile telephones even come with GPS navigation services. Businesses are providing services that users are prepared to pay for, and users have enjoyed improvements to their lifestyle as a result of using these services. The power of the service industry for mobile telephones is expanding as service providers offer more and more services that meet user needs, having mutual benefits.

In contrast, progress in the other areas that I mentioned—government services, education, health and welfare—is relatively inadequate in terms of the expansion of ICT utilization. Put simply, excessive bureaucracy and compartmentalization in organizations and conflicts between the interests and established practices of different stakeholders mean that it is impossible to make initiatives to introduce IT programs that cut across multiple organizations without some kind of compromise or coordination. This has prevented ICT from moving beyond the stage of partial utilization.

Toward Total Optimization

Take the medical field, for example. Various medical institutions have installed very expensive and advanced systems, but the problem is that the data used by these different systems are not mutually compatible. This means that patients might try to move from one medical institution to another only to find that their examination data (such as CT scans or MRI scans)

have been forwarded from their old institution but cannot be used at the new one, or that data have not been forwarded at all. As a result, patients often have to physically carry their own examination data from one hospital to the next.

There are also problems with the government services that are used by the general public. Even though various application forms may have been digitized, government agencies still go to the trouble of printing these forms out and asking people to fill out their name and address by hand. So even though this handwritten information is digitized and stored electronically, neither the user nor the government agency enjoys the potential benefits of information and communications technology. This is inefficient and there is also a risk of problems caused by data entry mistakes and so on. There is already an urgent need for improvements that increase efficiency by making better use of digital data, and the way to do this is to work towards integrating different systems, starting with those parts of the public sector where systems can be shared and standardized.

The same problem also exists in private companies. Different departments within a company often use different systems, and there are many cases where large companies have attempted to improve the efficiency of their business systems by integrating all of these different systems, only to run into problems, with the result that very little progress is made. Similar issues are often faced by group companies, where different companies in a group tend to use different systems.

So far most IT investments, both public and private, have been directed towards partial optimization. However, we will not see the real benefits of introducing ICT—in terms of increased value and efficiency—unless we move from partial optimization to total optimization.

A Problem of Imagination

Of course, government ministries are working towards standardizing and optimizing the different systems that have been introduced to meet their

various requirements. In the area of health that I discussed earlier, the government is starting advanced trials for information and communications technology, such as developing a health information network for sharing all of the medical information that various institutions and organizations acquire about each individual patient over the course of his or her life. Hopefully this health information network, which will surpass any particular institution or organization, will be successful and will serve as a positive model for other areas where ICT utilization is lagging.

In all these areas, stakeholders must move towards allowing users to enjoy the benefits of IT by working towards coordinating their work procedures, rules and workflows so that IT can be introduced. Whenever an attempt is made to introduce reforms there is a tendency for any vested interests that might be negatively affected to mount a fierce resistance. What stakeholders need to do is exercise their imaginations to move beyond these obstacles and into the future—to promote cooperation and coordination so that utilization of ICT can be maximized.

There is already a concrete example of how these obstacles—such as system differences, established practices and conflicts of interest—can be overcome.

This example is the standardization/integration of the different smart card systems that have been introduced by different public transport companies. This integration allows passengers holding Suica cards (issued by JR East), PASMO cards (issued by Tokyo Metro), ICOCA cards (issued by JR West), or TOICA cards (issued by JR Central) to transfer freely between different transport networks. JR Hokkaido will launch the same service, titled Kitaca, on March 14, 2009. The Suica card facilitated transfers between JR and private rail companies in the greater Tokyo area. Tokyo Metro's PASMO smart card then extended the network by allowing passengers to transfer to routes operated by various bus companies. The ICOCA followed by standardizing transport networks throughout the

Whenever an attempt is made to introduce reforms there is a tendency for any vested interests that might be negatively affected to mount a fierce resistance. What stakeholders need to do is exercise their imaginations to move beyond these obstacles and into the future—to promote cooperation and coordination so that utilization of ICT can be maximized.

—Sawako Nohara, president of IPSe Marketing, Inc.



Kansai area.

This integration was achieved despite all kinds of minute differences in the way the different systems operated (such as paying before boarding or after disembarking) and has resulted in much greater convenience for passengers. A passenger from Kansai, for example, can travel all around the greater Tokyo area with a single ICOCA card, making purchases at affiliated stores. This model for reform shows that there is no reason why those areas that are lagging behind in IT utilization cannot undertake similar initiatives.

Thinking Positively

Whenever issues emerge in a new industry or business area, there is a tendency for government to try to regulate, by looking for all possible risks and dangers. However, to attempt ongoing reforms of legal systems which have not premised an Internet society until recently, it is crucial that regulations are created and conducted so as to allow a high degree of freedom within a certain broad framework. Being *proactive* in introducing regulations is certainly important, but it is even more important to actually put reforms into practice—while also preparing mechanisms that can respond to ongoing developments by revising and perfecting regulations *reactively*, even as the regulations are being implemented. The shift towards networks cannot be reversed, and so the government needs to lead the way in promoting these reforms.

For the private sector, it is also important to develop human resources.

Manufacturers, in particular, are good at developing new technology, but are not so good at marketing or developing new projects. Even so, there are talented people who are actively involved with developing new services, and such people need to be included in organizations, in roles where they can act as mentors for the next generation. We also need to create career paths for these kinds of people.

The era where only people from scientific or engineering backgrounds can work at the research institutes that are the cutting edge for technical development has come to an end. We need to promote organizational structures that also take advantage of those who are educated in business development and marketing. In order to support the needs of an Internet society, it will become even more important to develop “pull” projects that respond to social needs—rather than developing “push” products and systems. At the same time, the ability to expand overseas will become more and more important, and so we need to increase the number of people with this kind of experience.

People have a tendency to resist changes and adopt a negative attitude towards things that they are not familiar with. Even so, the Internet and Japan's advanced ICT infrastructure have had a huge positive impact on people's everyday lives. I am full of optimism that promoting the use and utilization of ICT will result in even more benefits in the future. □

Nohara Sawako is president of IPSe Marketing, Inc. and a member of the expert panel for IT strategy of the IT Strategic Headquarters and the panel on IT Growth for the Ministry of Internal Affairs and Communications.