Section 3

ICT Use by Companies

1 Enhanced use of ICT by companies

(1) Progress in use of the Internet

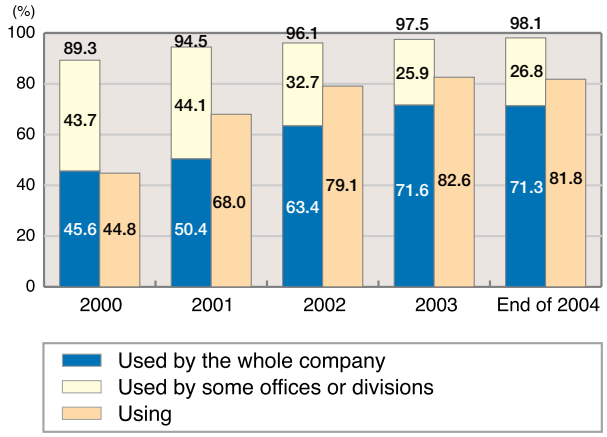
Companies' Internet utilization rate increased by 8.8 points from 89.3% at the end of 2000 to 98.1% at the end of 2004, which indicates that most companies are using the Internet. Meanwhile, the Internet utilization rate at business establishments increased by 37.0 points from 44.8% at the end of 2000 to 81.8% at the end of 2004 **(Figure 1-3-1)**.

(2) Introduction of ICT systems

The introduction of ICT systems has made progress in almost all operations compared to FY 2002. The introduction is particularly noticeable in areas of development/design and customer services **(Figure 1-3-2)**.

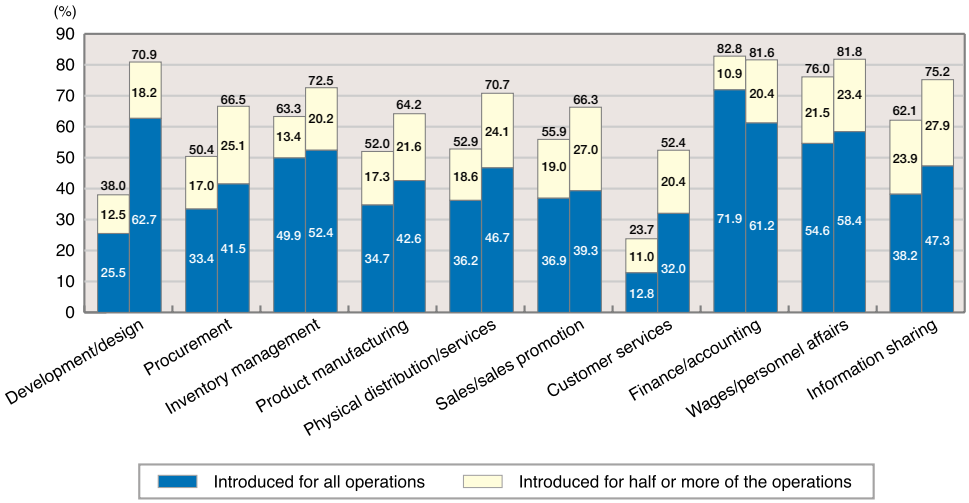
ICT systems are generally introduced for two main purposes: "reducing costs/improving operational efficiency" and "expanding sales/increasing added value." When the purposes were compared with those in FY 2002, the number of companies that introduced ICT systems for "reducing costs/improving operational efficien-

Figure 1-3-1 Transition in the Internet utilization rate (left: enterprises; right: establishments)



Produced from MIC, Communications Usage Trend Survey

Figure 1-3-2 Transition in the introduction of ICT systems by type of operations



Source: Survey on the Current Status of ICT Use by Companies (Web Survey)

cy" decreased, while those that introduced the systems for "expanding sales/increasing added value" increased **(Figures 1-3-3 and 1-3-4)**. This shows that the conventional tendency of Japanese companies to link introduction of ICT with improvement of operational efficiency has been undergoing changes over the past two years.

In order to increase the effectiveness of ICT system investment, the mere introduction of ICT systems would not be enough, but efforts such as reviewing the existing operational processes and verification of the effectiveness would be essential. When such corporate efforts toward increasing the effectiveness were compared with those in FY 2002, larger efforts were being made in respect to "verifying cost-effectiveness," "organizational/institutional reform for management of ICT systems," and "selection and concentration" **(Figure 1-3-5)**.

When the actual effects of introducing ICT systems were compared with those in FY 2002, more companies were found to recognize effectiveness both in terms of reducing costs/improving operational efficiency and expanding sales/increasing added value **(Figure 1-3-6)**. The assumable factors behind such increase are the progress in the connection of ICT systems between companies, changes in the purpose for introducing ICT systems, and advancement in the efforts toward increasing the effectiveness of ICT system investment.

There are no major differences among Japan, the United States, and the Republic of Korea as to the ICT system introduction rate by type of operations, except that the introduction in customer services is advanced in

Figure 1-3-3 Purpose for introducing ICT systems (reducing costs/improving operational efficiency)

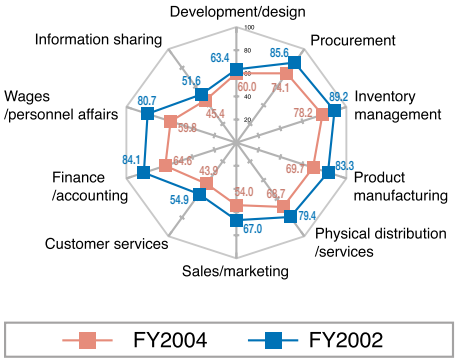


Figure 1-3-4 Purpose for introducing ICT systems (expanding sales/increasing added value)

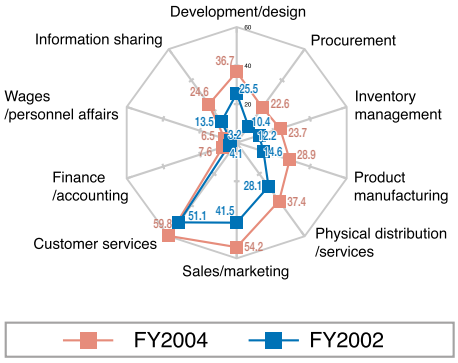
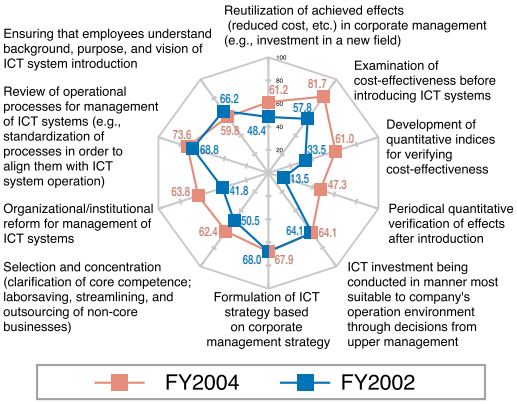
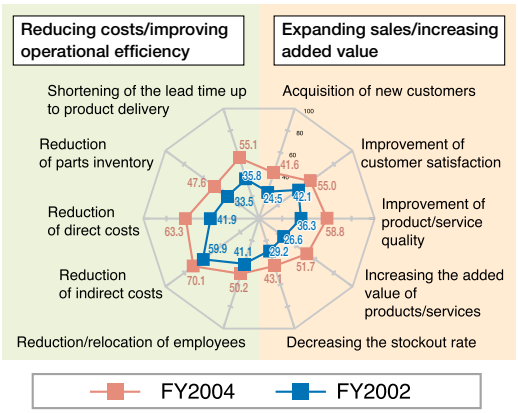


Figure 1-3-5 Efforts toward increasing effectiveness of ICT system investment



* The percentage of companies that answered "sufficient efforts are made" or "some efforts are made."

Figure 1-3-6 Effects of introducing ICT system



* The percentage of companies that answered "sufficient effect was observed" or "some effect was observed."

Source for Figures 1-3-3 and 1-3-6 Source: Survey on the Current Status of ICT Use by Companies (Web Survey)

the United States **(Figure 1-3-7)**.

The percentages of companies that introduced ICT systems for "reducing costs/improving operational efficiency" and "expanding sales/increasing added value" were the highest in the United States, followed by Japan and the Republic of Korea **(Figures 1-3-8 and 1-3-9)**.

The efforts toward increasing the effectiveness of ICT system investment were the most advanced in the United States, followed by the Republic of Korea and Japan **(Figure 1-3-10)**.

The actual effects of introducing ICT systems were the highest in the Republic of Korea, both in terms of "reducing costs/improving operational efficiency" and "expanding sales/increasing added value" **(Figure 1-3-11)**.

2 Expansion of E-Commerce

With respect to B2B e-commerce, 42.8% of companies "procure goods/services from companies via the Internet (procurement)" and 27.0% of companies "sell goods/services to companies via the Internet (sales)." In the United States, procurement is implemented by 68.6% of companies and sales by 34.4%, while in the Republic of Korea, procurement is implemented by 44.5% of companies and sales by 22.2%. The implementation rates for procurement and sales are both high in the United States.

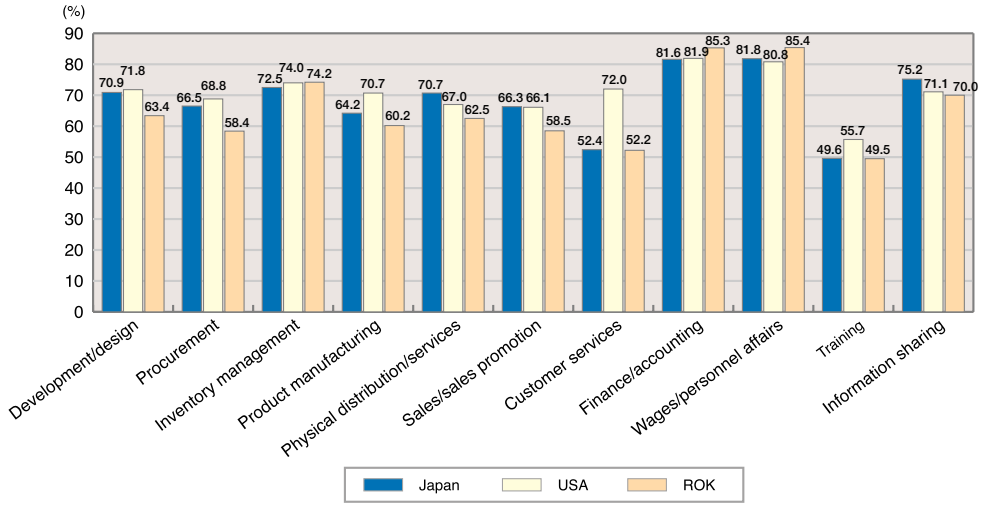
As for B2C transactions via PC Internet in Japan, 28.9% of companies are "currently implementing" and 18.3% are "scheduled to implement or considering implementation." With regard to e-commerce via mobile phones, 9.1% of companies are "currently implementing" and 25.6% are "scheduled to implement or considering implementation." The implementation rate of e-commerce via mobile phones is one-third of that via PCs, but since many companies are "scheduled to implement or considering implementation," e-commerce via mobile phones is expected to come into wider use in the future. Most of the companies that answered "currently implementing" or "scheduled to implement or considering implementation" for e-commerce via mobile phones also answered "currently implementing" or "scheduled to implement or considering implementation" for e-commerce via PCs, so companies that implement both e-commerce via PCs and mobile phones are likely to increase in the future. In the United States, the implementation rate of e-commerce via PCs is higher than in Japan and the Republic of Korea, and the situation in the Republic of Korea is similar to that in Japan **(Figure 1-3-12)**.

3 Comparison of ICT use among Japan, the United States, and the Republic of Korea

The rate of introducing video conference systems is the highest in the United States at 76.4%, followed by Japan (50.8%) and the Republic of Korea (32.6%). The utilization rate of mobile phones is around the same in Japan and the United States at a little less than 70%, and it is 29.6% in the Republic of Korea.

The rate of introducing telework is the highest in the

Figure 1-3-7 Comparison among Japan, the United States, and the Republic of Korea as to the introduction of ICT systems by type of operations



Source: "Survey on the Current Status of ICT Use by Companies" (Web Survey)

Figure 1-3-8 Purpose for introducing ICT systems (reducing costs/improving operational efficiency)

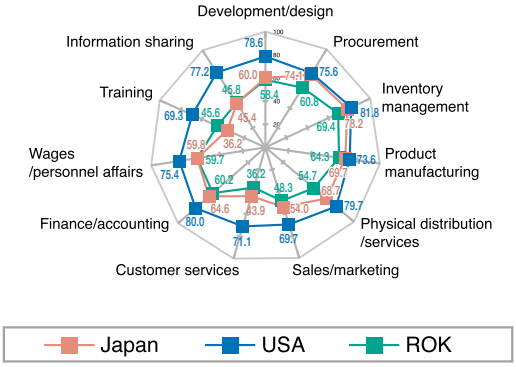


Figure 1-3-9 Purpose for introducing ICT systems (expanding sales/increasing added value)

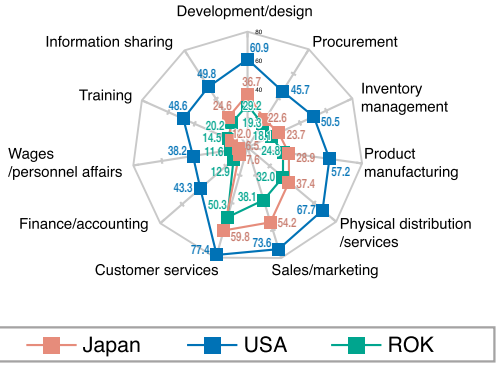


Figure 1-3-10 Efforts toward increasing effectiveness of ICT system investment

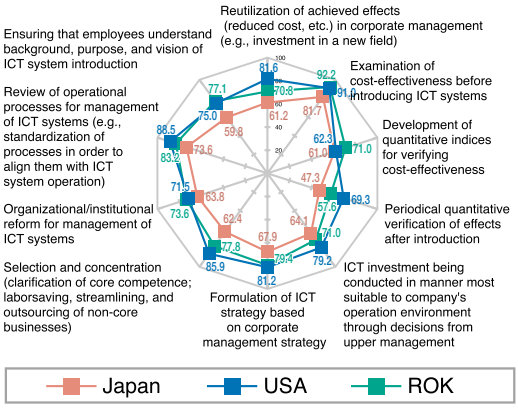
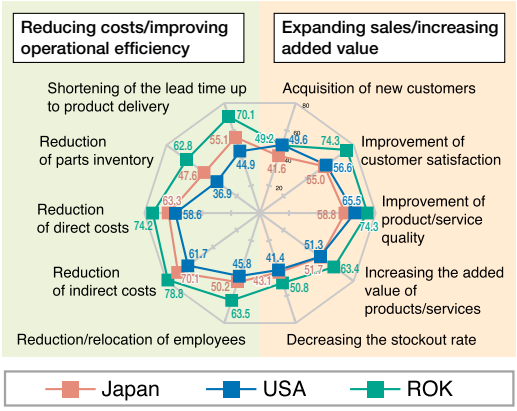


Figure 1-3-11 Effects of introducing ICT system

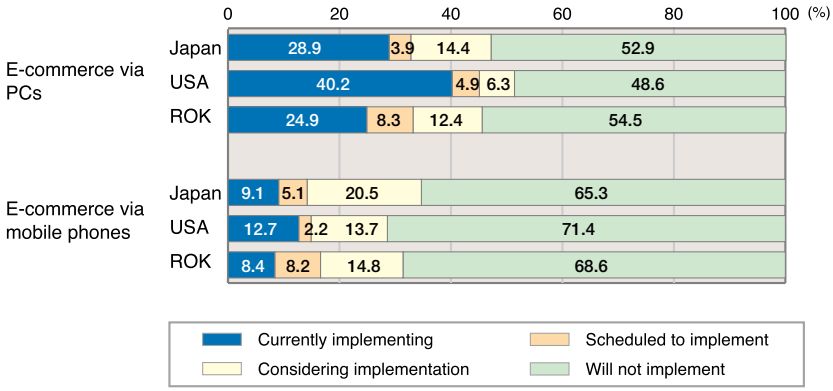


* The percentage of companies that answered “sufficient efforts are made” or “some efforts are made.”

* The percentage of companies that answered “sufficient effect was observed” or “some effect was observed.”

Source for Figures 1-3-8 and 1-3-11: Survey on the Current Status of ICT Use by Companies (Web Survey)

Figure 1-3-12 Implementation of e-commerce via PCs/mobile phones



Source: Survey on the Current Status of ICT Use by Companies (Web Survey)

United States at 68.9%, followed by the Republic of Korea (21.2%) and Japan (14.7%) **(Figure 1-3-13)**. The rate of introducing open source software (OSS) as the server OS is the highest in the United States at 33.0%, while the rate was 21.0% in Japan and the Republic of Korea **(Figure 1-3-14)**.

With respect to the shift from mainframe systems to open systems, companies that "already conducted full replacement/[are] considering full replacement" account for 21.9% in the Republic of Korea, 20.1% in the United States, and 17.7% in Japan. Companies that "already conducted partial replacement/[are] considering partial replacement" account for 45.6% in Japan, 43.6% in the Republic of Korea, and 36.4% in the United States. Companies "continuing to use mainframes" account for 34.7% in the United States, 31.8% in Japan, and 26.0% in the Republic of Korea **(Figure 1-3-15)**.

The utilization rate of ASP services is the highest in the Republic of Korea at 24.4%, followed by the United States (20.5%) and Japan (12.6%), while that of iDC services is the highest in the Republic of Korea at 27.9%, followed by Japan (12.5%) and the United States (10.8%) **(Figure 1-3-16)**.

Figure 1-3-13 Introduction of telework

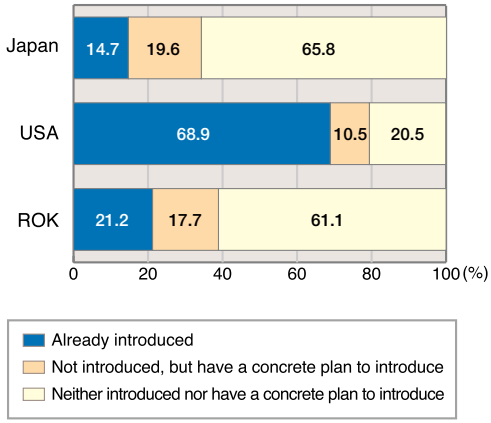
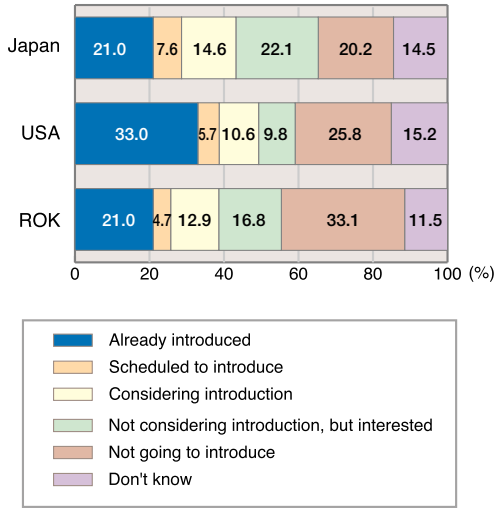


Figure 1-3-14 Introduction of OSS (Linux, FreeBSD, etc.) as the server OS



Source for Figures 1-3-13 and 1-3-14: Survey on the Current Status of ICT Use by Companies (Web Survey)

Figure 1-3-15 Status of the shift from mainframes to open systems

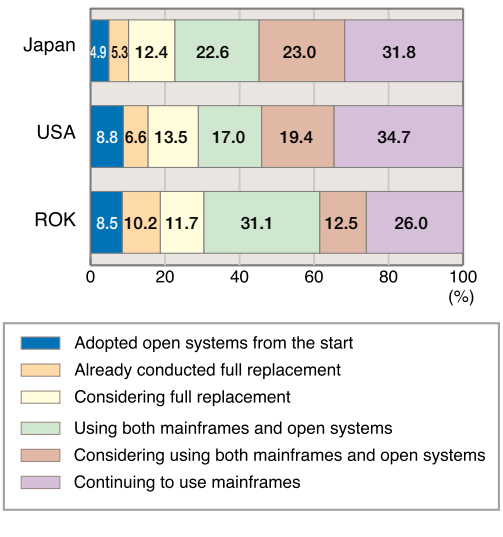
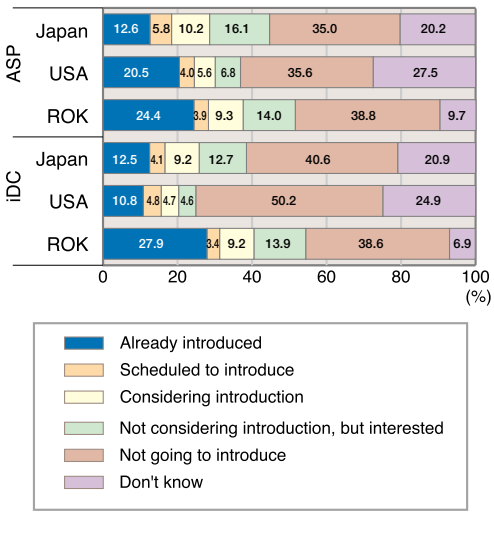


Figure 1-3-16 Status of use of ASP and iDC services



Source for Figures 1-3-15 and 1-3-16: Survey on the Current Status of ICT Use by Companies (Web Survey)