Current Situation of Information Systems Usage in Japan.

Koh SATO
Japan Users Association of Information Systems (JUAS)
Today’s Agenda

About JUAS

- Business environment of Japanese enterprises
- Characteristic of Japanese enterprise’s utilization of IT and information-system (IS) organization
- Trend of IT investment from last year to this year and the aim by utilization of IT in the future.
JUAS : Japan Users Association of Information Systems

JUAS was established as Japan Data Processing Association in 1962, and it was reorganized and renamed in 1992. Object of activity: Promotion of Information Systems from the standpoint of system-users

◆ Characteristic of JUAS

- Members include major corporations of all industries in Japan included the following enterprises.
  - Tokio Marine & Nichido Fire Insurance Co., Ltd.
  - ITOCHU Corporation
  - TOKYO electric power company
  - NIPPON Telegraph and Telephone east Corporation
  - SUMITOMO Electric industries, Ltd.

- Provides a forum for exchanging information

- Aims to be the association that can offer the knowledge concerning with practical applications of information technology.

◆ No. of members as of July in 2009

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular member</td>
<td>175 corporations</td>
</tr>
<tr>
<td>Associate member 1</td>
<td>137 corporations</td>
</tr>
<tr>
<td>Associate member 2 (only taking “privacy mark”)</td>
<td>330 corporations</td>
</tr>
<tr>
<td>Total no. of members</td>
<td>642 corporations</td>
</tr>
</tbody>
</table>

Distribution ratio of regular members

- System users: 64%
- System vender: 14%
- Subsidiary of IT: 17%
- Other 5% (Consultant/Think tank)
Activity chart of JUAS in 2009

Community of members

"Forum"
- on IT division management - 4 communities
- on Subsidiary of IT management - 2
- for top management IT - 2
- for Chief Information Officers (CIO) - 3
  <in Kansai>
- for top management on IT
- on Subsidiary of IT management
- on planning and implementation of IT
- for a group of enterprises

"Plaza"
- For "Takumi" old boys of system-users
- For only women

Society for the study
- Study of IT strategy
- Study of training
- Study of co-ownership of information
- Study of system operation
- Study of Enterprises risk management
- Study of utilization of IT

Study project
- on Services Sciences
- on Technology of Requirements Specification
- on Technology of Requirements Specification
- on improvement of delivery, quality and cost
- on utilization of IT in global
- on utilization of Open Source Software
- on standards of documentation
  for system development
- on the span of life of hardware and software

Research
- Trend of systematization
- Software-metric

Diffusion of system reference manual

Research Project
- Technical research
- Information security
- System of Important infrastructure
- IT Management (large-sized enterprise)
- IT Management (Small and medium-sized enterprise)

information supplement
JUAS academy

Security center
Inspection for approval of the Privacy Mark

UISS center
Users’ Information Systems Skill Standards

Training
Open seminar
Order-made seminar
Publication
Overseas visit

Training of CIO
"Innovation Management College"

System Users’ Symposium
"JUAS Square"

- Almost 1000 persons joined 42 projects in 2009.
- Not only the system-users, but also the IT vendor and IT consultant participating
Today’s Agenda

◆ About JUAS

▶ Business environment of Japanese enterprises

◆ Characteristic of Japanese enterprise’s utilization of IT and information-system (IS) organization

◆ Trend of IT investment from last year to this year and the aim by utilization of IT in the future.
Business environment of Japanese enterprises

• Low birthrate and longevity
• Demand drop of the domestic market.
• Entry into global markets.
• Limits of resources
• Global financial crisis
Comparing GDP 1994-2006
Growing industry 1: Finance 2: IT 3: Natural resource

GDP per one person in 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>Luxembourg</td>
<td>Finance</td>
</tr>
<tr>
<td>2006</td>
<td>Norway</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>Qatar</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>Switzerland</td>
<td>Finance</td>
</tr>
<tr>
<td>2006</td>
<td>Iceland</td>
<td>IT</td>
</tr>
<tr>
<td>2006</td>
<td>Ireland</td>
<td>IT</td>
</tr>
<tr>
<td>2006</td>
<td>Denmark</td>
<td>IT</td>
</tr>
<tr>
<td>2006</td>
<td>Sweden</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>United States of America</td>
<td>Finance/IT</td>
</tr>
<tr>
<td>2006</td>
<td>Netherlands</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>United Kingdom</td>
<td>Finance</td>
</tr>
<tr>
<td>2006</td>
<td>Austria</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>Belgium</td>
<td>Finance</td>
</tr>
<tr>
<td>2006</td>
<td>France</td>
<td>Manufacturing industry</td>
</tr>
<tr>
<td>2006</td>
<td>Australia</td>
<td>Natural resource</td>
</tr>
<tr>
<td>2006</td>
<td>Germany</td>
<td>Manufacturing industry</td>
</tr>
<tr>
<td>2006</td>
<td>Japan</td>
<td>Manufacturing industry</td>
</tr>
</tbody>
</table>

Copyright (C) 2009 JUAS All rights reserved
Transition of population in Japan

- the Yayoi era
- the Kamakura era
- the Edo era
- the Meiji era
- WW2
- The peak
Transition of population in Japan

Population of over 65 years old
Export and Import on Japan

The amount of exporting increased 1.6 times and the amount of importing increased 2 times in 8 years.

The globalization of business has progressed.

<table>
<thead>
<tr>
<th></th>
<th>Export</th>
<th>Import</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2000</td>
<td>460,894</td>
<td>345,870</td>
<td>126,926</td>
</tr>
<tr>
<td>FY2008</td>
<td>740,613</td>
<td>702,020</td>
<td>127,771</td>
</tr>
<tr>
<td>increase-decrease rate</td>
<td>1.61</td>
<td>2.03</td>
<td>1.006</td>
</tr>
</tbody>
</table>

*dollars in millions
Today’s Agenda

- About JUAS
- Business environment of Japanese enterprises
- Characteristic of Japanese enterprise’s utilization of IT and information-system (IS) organization
- Trend of IT investment from last year to this year and the aim by utilization of IT in the future.
Characteristic of Japanese enterprise’s utilization of IT

◆ Affected the stagnation in Japanese economy, Japanese enterprise’s aimed the following by utilization of IT
  - IT Invest for Innovation Business model or Business process.
  - Cutting down the IT property that is already.
Ten-years Increase-decrease rate of All IT budget (2006/1996)

Increase-decrease rate of All IT budget

-50% 0% 50% 100% 150% 200%

A
B
C
D
E
-28%
F
-3%
H
-37%
I
-10%
J
-26%
K
L
-18%
M
N
P
55%
Q
46%
P
182%

Copyright (C) 2009 JUAS All rights reserved
Correlation of sales volume increase-decrease rate and IT budget per employee Increase-decrease rate

The IT investment supported an increase of sales.

drop-off sales but recovered by IT utilization.
The theme of IT investment 2008

The theme that the management planning section wants to emphasize first is real-time-management, i.e. the speed at which executive management can get information about organizational performance.

![Diagram showing various themes of IT investment with percentages]
Three types of IT investment

IT investment by enterprises can be categorized into three types: i.e. Infrastructure-type investment, rationalization-type investment and strategic type investment.

<table>
<thead>
<tr>
<th>Investment type</th>
<th>Features</th>
<th>Method of evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure-type investment</td>
<td>Is the basis of general business processes, such as groupware, networks, and includes investments relating to security.</td>
<td>They decide its investment on the responsibility of top management with reference to investment amount to the amount sold, or investment amount per employee per year. (They don’t evaluate it in special measure.)</td>
</tr>
<tr>
<td>Rationalization-type investment</td>
<td>It is measurable, such as labor saving, reduction of goods in stock, reduction of costs, improvement of yield rates and so on.</td>
<td>ROI is usually 2 or 3 years</td>
</tr>
<tr>
<td>Strategic type investment</td>
<td>The impact of IT on a firm’s ability to build brand equity, customer satisfaction, etc. is often difficult to measure, making it harder to justify and measure the success using traditional measures</td>
<td>· Concerned with measurable items; goals focus on “Key Performance Indicators” and customer satisfaction. Ultimate investment decision focuses on profitability of its business. → Application-ownership is effective.</td>
</tr>
</tbody>
</table>
By a simple average, the infrastructure-type investment is 40%, the rationalization-type investment is 40%, and the strategic type investment is 20%.

Using a weighted average the infrastructure-type investment is 30%, the rationalization-type investment is 30%, and the strategic type investment is 40%.

The infrastructure-type investment is increasing, and rationalization-type investment is decreasing.
Transition of Japanese IS organization

Type A
- Management
- User
- Information-systems division
- Strategy
- Planning
- Development
- Operation
- Maintenance

Type B
1980s ~
- Management
- User
- Information-systems division
- Strategy
- Planning
- Development
- Operation
- Maintenance

Type C
2000s ~
- Management
- User
- Information-systems division
- Strategy
- Planning
- Development
- Operation
- Maintenance

Type D
- Management
- User
- Information-systems division
- Strategy
- Subsidiary of IT
- Planning
- Development
- Operation
- Maintenance

- System vender
- Planning
- Development
- Operation
- Maintenance

M&A by Big System vender

outsourcing

spin-out
### Japanese Information-System Organization

<table>
<thead>
<tr>
<th>Formation</th>
<th>Assigning tasks</th>
<th>• Subsidiary of IT • System vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>company-wide</td>
<td>division</td>
</tr>
<tr>
<td>Centralization type A</td>
<td>Strategy Planning</td>
<td>Development</td>
</tr>
<tr>
<td>Centralization type B</td>
<td>Strategy Planning</td>
<td></td>
</tr>
<tr>
<td>Centralization type C</td>
<td>Strategy</td>
<td></td>
</tr>
<tr>
<td>Federal type A</td>
<td>Strategy Planning</td>
<td>Development</td>
</tr>
<tr>
<td>Federal type B</td>
<td>Strategy Planning</td>
<td>Development</td>
</tr>
<tr>
<td>Apostasies</td>
<td>Strategy</td>
<td></td>
</tr>
</tbody>
</table>

- **Centralization type A**
  - Strategy Planning
  - Development
  - Operation

- **Centralization type B**
  - Strategy Planning
  - Development
  - Operation

- **Centralization type C**
  - Strategy
  - Development
  - Operation

- **Federal type A**
  - Strategy Planning
  - Development
  - Operation
  - company-wide

- **Federal type B**
  - Strategy Planning
  - Development
  - Operation
  - company-wide

- **Apostasies**
  - Strategy
  - Development
  - Operation
  - division
The ratio of Formation information-system organization

The Centralization’s ratio increases. Japanese enterprises tries to strengthen IT governance.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sample Size</th>
<th>Centralization</th>
<th>Federal</th>
<th>Apostasies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>851</td>
<td>77%</td>
<td>21%</td>
<td>2%</td>
</tr>
<tr>
<td>2007</td>
<td>623</td>
<td>76%</td>
<td>22%</td>
<td>2%</td>
</tr>
<tr>
<td>2006</td>
<td>772</td>
<td>73%</td>
<td>23%</td>
<td>4%</td>
</tr>
<tr>
<td>2005</td>
<td>915</td>
<td>74%</td>
<td>23%</td>
<td>4%</td>
</tr>
<tr>
<td>2004</td>
<td>965</td>
<td>74%</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>2003</td>
<td>855</td>
<td>73%</td>
<td>20%</td>
<td>7%</td>
</tr>
<tr>
<td>2002</td>
<td>1152</td>
<td>71%</td>
<td>18%</td>
<td>10%</td>
</tr>
<tr>
<td>2001</td>
<td>883</td>
<td>70%</td>
<td>19%</td>
<td>11%</td>
</tr>
</tbody>
</table>
Outsourcing seems to expanded in large enterprises.

<table>
<thead>
<tr>
<th>Category</th>
<th>2008 Actual (n=269)</th>
<th>2008 Foresight (n=267)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-house</td>
<td>31%</td>
<td>31%</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>69%</td>
<td>69%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>2008 Actual (n=575)</th>
<th>2008 Foresight (n=564)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-house</td>
<td>69%</td>
<td>69%</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>31%</td>
<td>31%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>2008 Actual (n=851)</th>
<th>2008 Foresight (n=831)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-house</td>
<td>61%</td>
<td>61%</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>39%</td>
<td>39%</td>
</tr>
</tbody>
</table>
Today’s Agenda

◆ About JUAS
◆ Business environment of Japanese enterprises
◆ Characteristic of Japanese enterprise’s utilization of IT and information-system (IS) organization

▶ Trend of IT investment from last year to this year and the aim by utilization of IT in future.
IT Budget from the latter half of 2008 to 2009

The big drop in IT Budget’s DI (Diffusion Index)
The average of IT Budget decreased 10%

The graph shows the IT Budget from FY2001 to FY2009. The actual budget and the expectation of the next year at Nov. 2008 are depicted. The average of IT Budget decreased significantly, particularly from FY2008 to FY2009, with the expectation dropping sharply to -39%.

Expectation of the next year at Nov. 2008

Expectation of the next year at March 2009

Copyright (C) 2009 JUAS All rights reserved
Material industries and Manufacturing industries plans to cut the IT Budget.

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Nov. 2008</th>
<th>Mar. 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Industry</td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>19%</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>19%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>19%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>38%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>16%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>38%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>35%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>37%</td>
<td>13%</td>
</tr>
<tr>
<td></td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>35%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>20%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>10% or more increase</td>
<td>1-9% increase</td>
</tr>
</tbody>
</table>
Business environment of Japanese enterprises from last year to this year

Because of The ever difficult economic environment by Global financial crisis, the information-system division have to reduce costs.

But is a quiet economic recovery good ..only waiting..?

The enterprise should survives.

The enterprise should ready "The following move" of utilization of IT for the next age.
"The following move" utilization of IT

Opinions on IT division management forum

Contribution for Innovation Business model or Business process.

- Effect of IT investment
- Simplification of operations
- Readjustment of constant cost
- Reduced servers
- Inner cloud
- System life management
- Human resource development
- Investment for maintenance
- Proper budget
- Standardization of infrastructure
- Hardy IS division
- Commitment of user section
- Effect of IT investment

The following move

Normalization of IT budget

Strengthen IT governance

Understanding of Top management

Copyright (C) 2009 JUAS All rights reserved
Shift of human resource of IS division

Case A company (food manufacturer)

Persons who make a contribution for Innovation Business model or Business process while having the point of view of management,

Persons who make point of contact with customers while having the point of view of marketing.

Persons who make judgments of Information technology and IT cost
Thank you for listening.

JUAS
http://www.juas.or.jp/