



IEA International Workshop



**“Seeking Frontiers on Highly Efficient Energy Utilization
in Factories and Buildings”**

**The recent situation and future
market barriers of the ESCO
industry in Japan**

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Overview of Presentation



- ◆ Background of ESCO Business in Japan
- ◆ Overview of Japanese ESCO Business
- ◆ Detail survey for ESCO activities in 2001 and 2002 year
- ◆ Market Barriers
- ◆ Conclusion



Background of the ESCO business(1)



1996: METI set up the Advisory Committee on ESCO Investigation

1997: Kyoto Protocol from COP3

1997: ECCJ formed the Association for ESCO Business Introduction in Japan

1998: ECCJ formed the Committee on ESCO Business Demonstration

1998: METI set up a system of subsidies for energy efficiency retrofits



Background of the ESCO business(2)



1998: Model energy efficiency retrofit demonstration project carried out by the Committee on ESCO Business Demonstration

May 1998:Law Concerning the Rational Use of Energy revised

October 1998:Law Concerning the Promotion of Measures to Cope with Global Warming enacted

1999: ECCJ formed the Committee to Investigate Measurement and Verification Methods

June 1999:New Japanese Appliance Energy Efficiency Standards enacted



Background of the ESCO business(3)



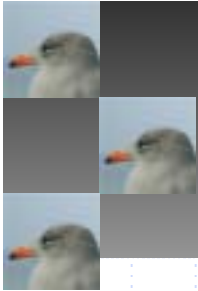
**July 1999: Law for Private Finance Initiative (LPFI)
enacted**

October 1999: JAESCO formed

**May 2000: Law Concerning the Promotion of
Procurement of Eco-Friendly Goods and Services by
the State and Other Entities (Law on Promoting Green
Purchasing) enacted**

**March 2002: The New Climate Change Policy Programme
(NCCPP)**

April 2003: Energy Conservation Law revised



Subsidy Program(2004 year)



<Subsidy Programs for energy efficiency retrofits>

-pioneering model project to introduce equipment with rational use of energy(\$125.5 M:1/3)

-project to introduce and promote high energy efficient system in residence and buildings (\$19.0M:1/3)

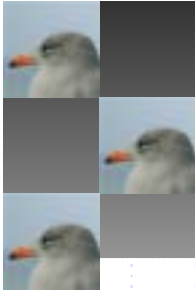
-local energy-saving diffusion-and-promotion project (\$25.5 M:1/2)

-spread of building and energy management systems (\$32.7 M:1/3)

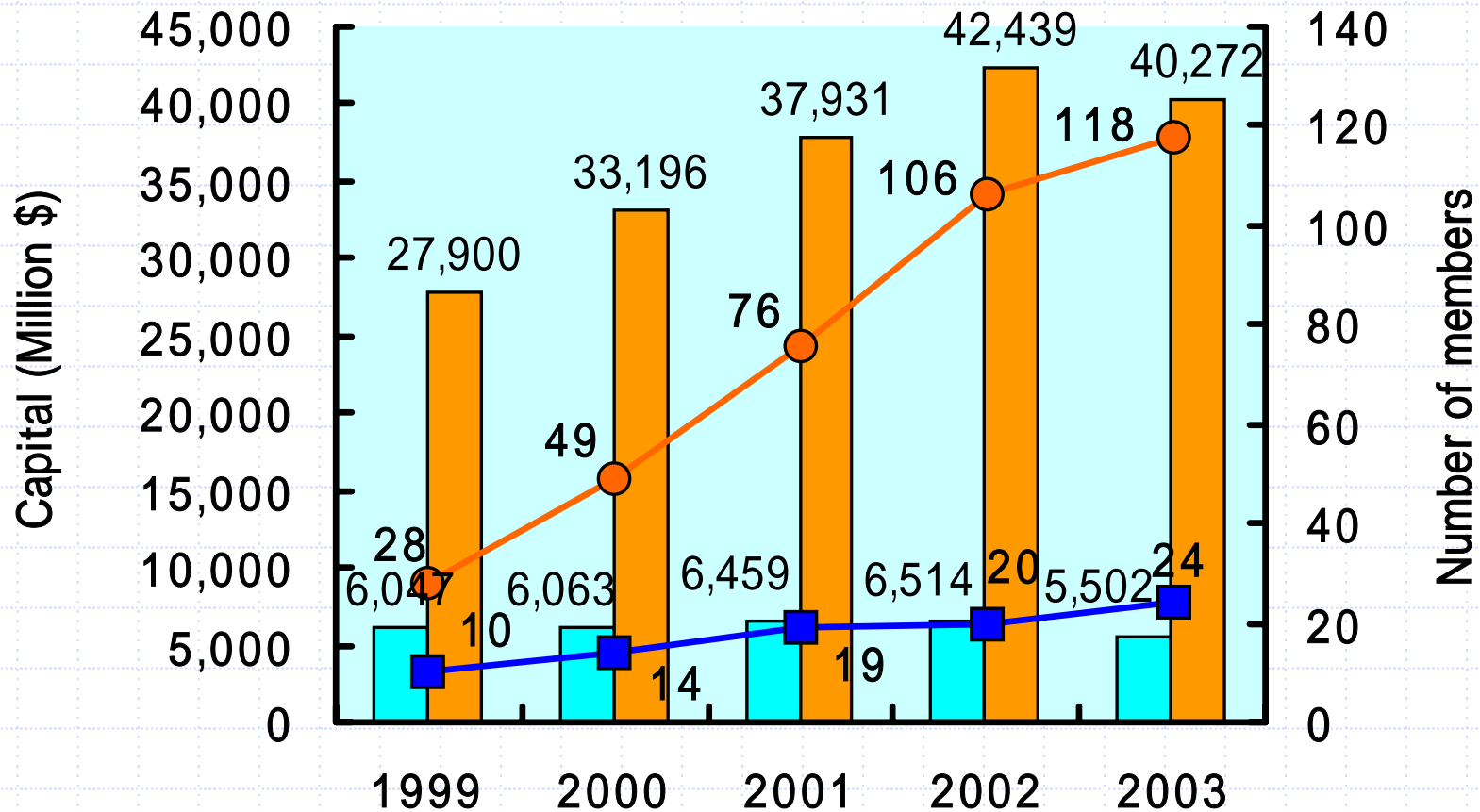
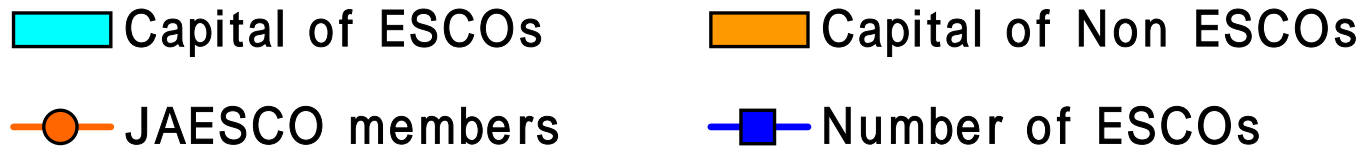
<Research for local authorities>

-the local energy-saving planning(\$4.5 M:100%)

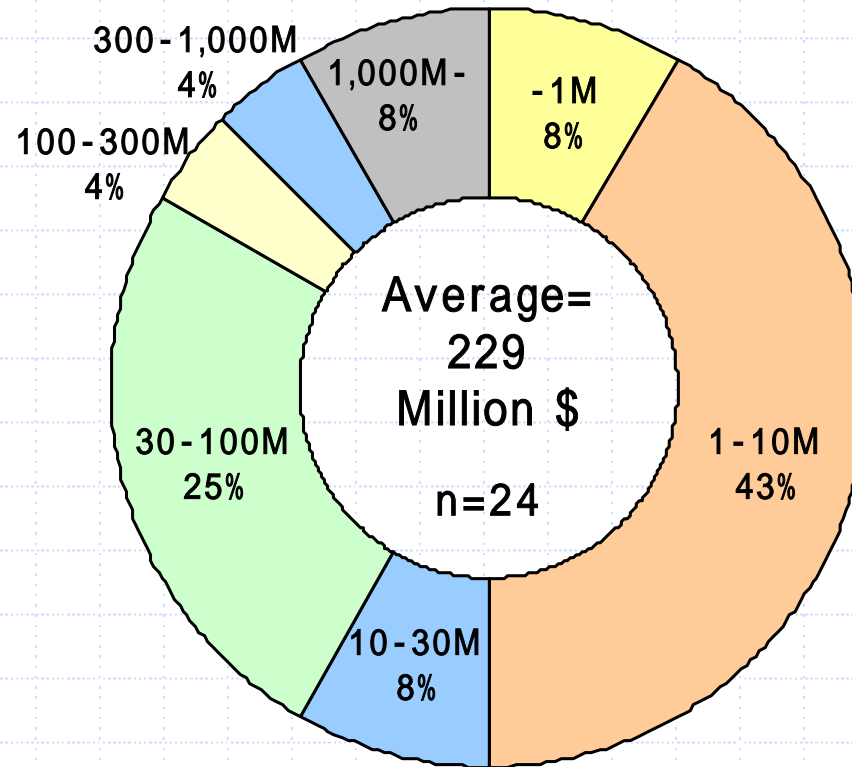




Number of JAESCO members and total capital



Capital distribution of ESCOs

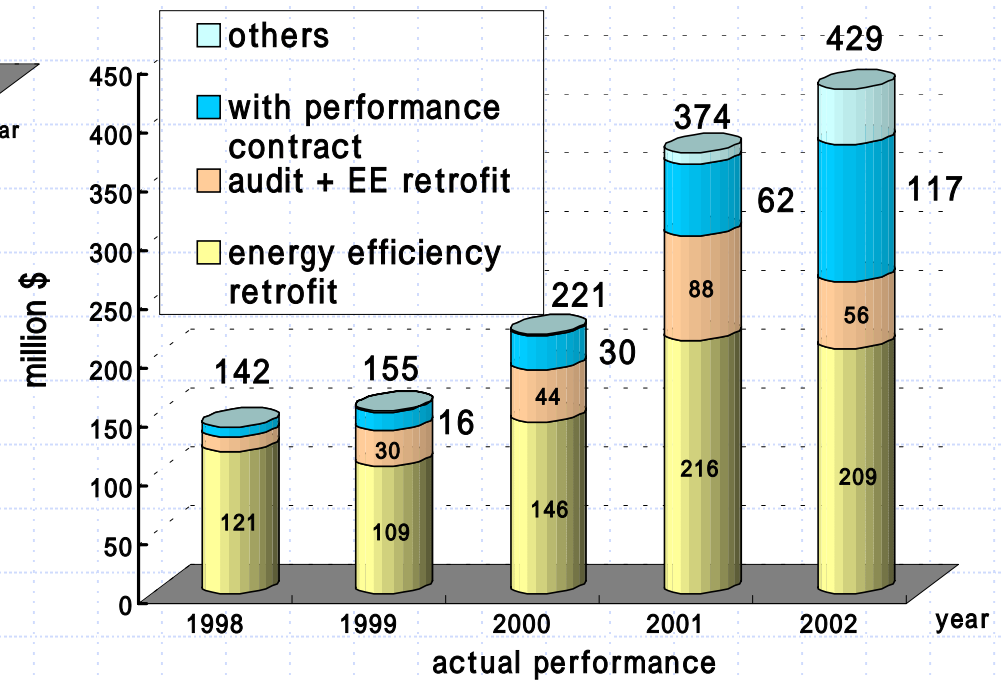
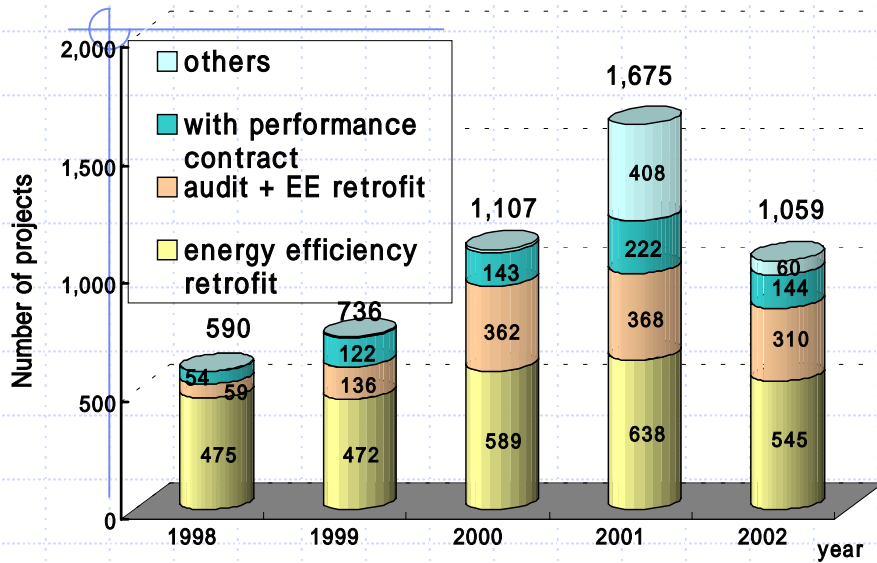


large companies

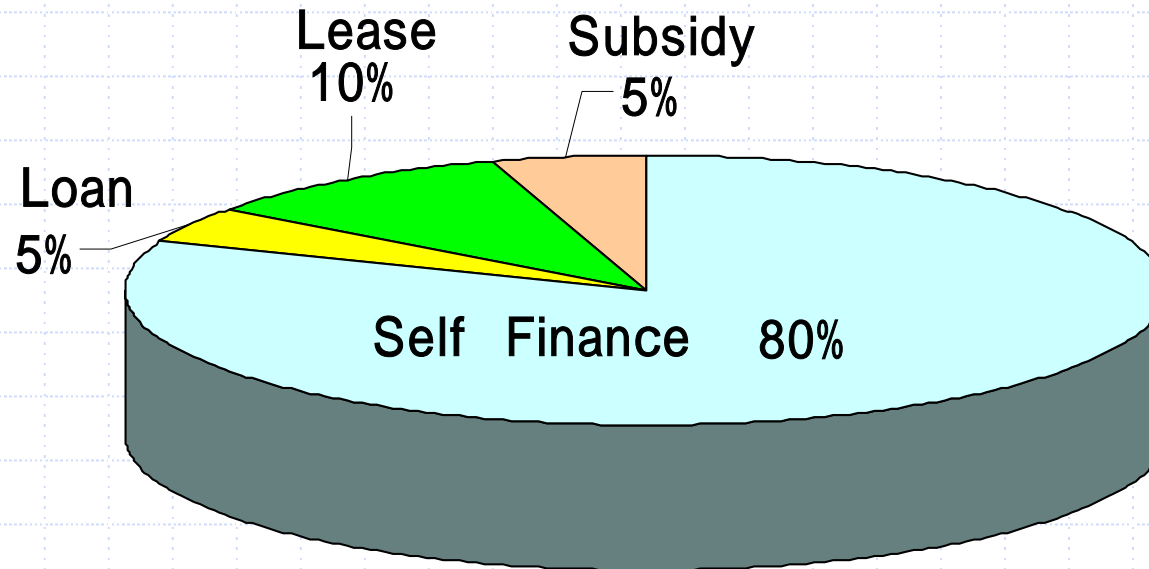
58% are subsidiary of large companies



Market size of ESCO business

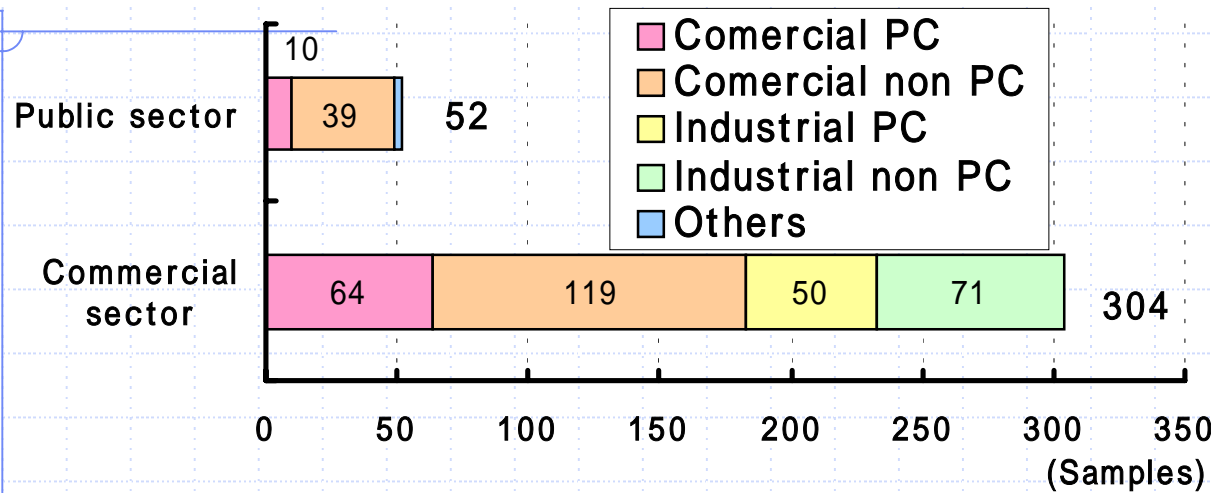


Source of fund for energy efficiency retrofits



- Afford to execute energy efficiency retrofits are limited to the wealthy ones
- Financial environment for energy efficiency retrofits lags behind

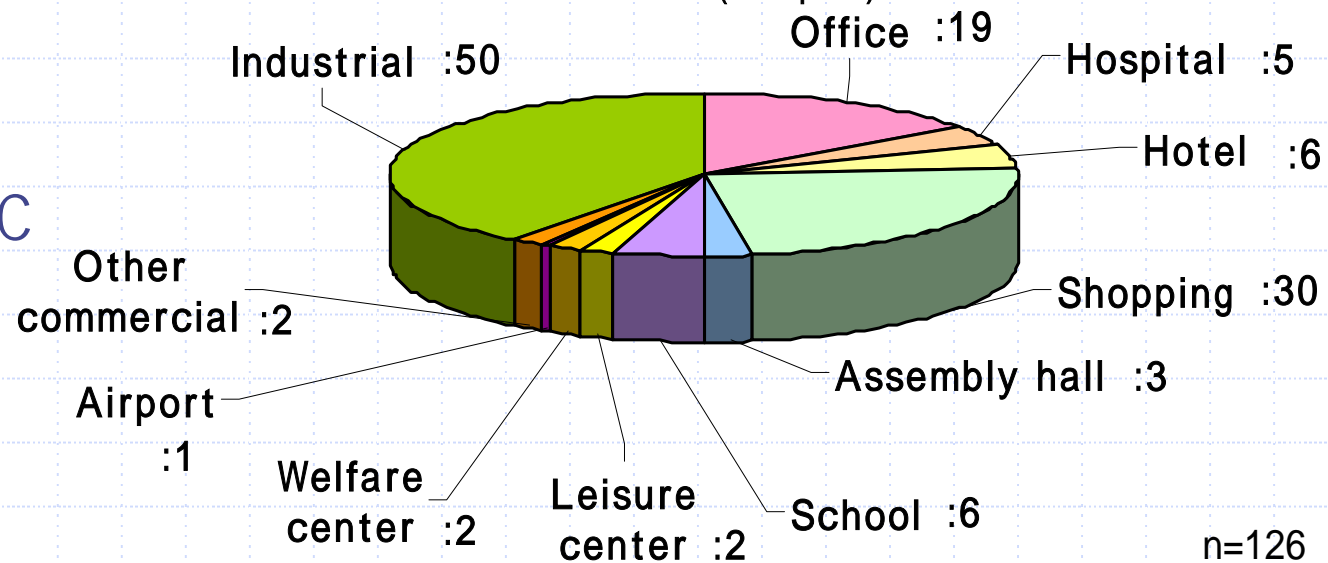
Detail survey for ESCO activities in 2001 and 2002 year



Total number of samples

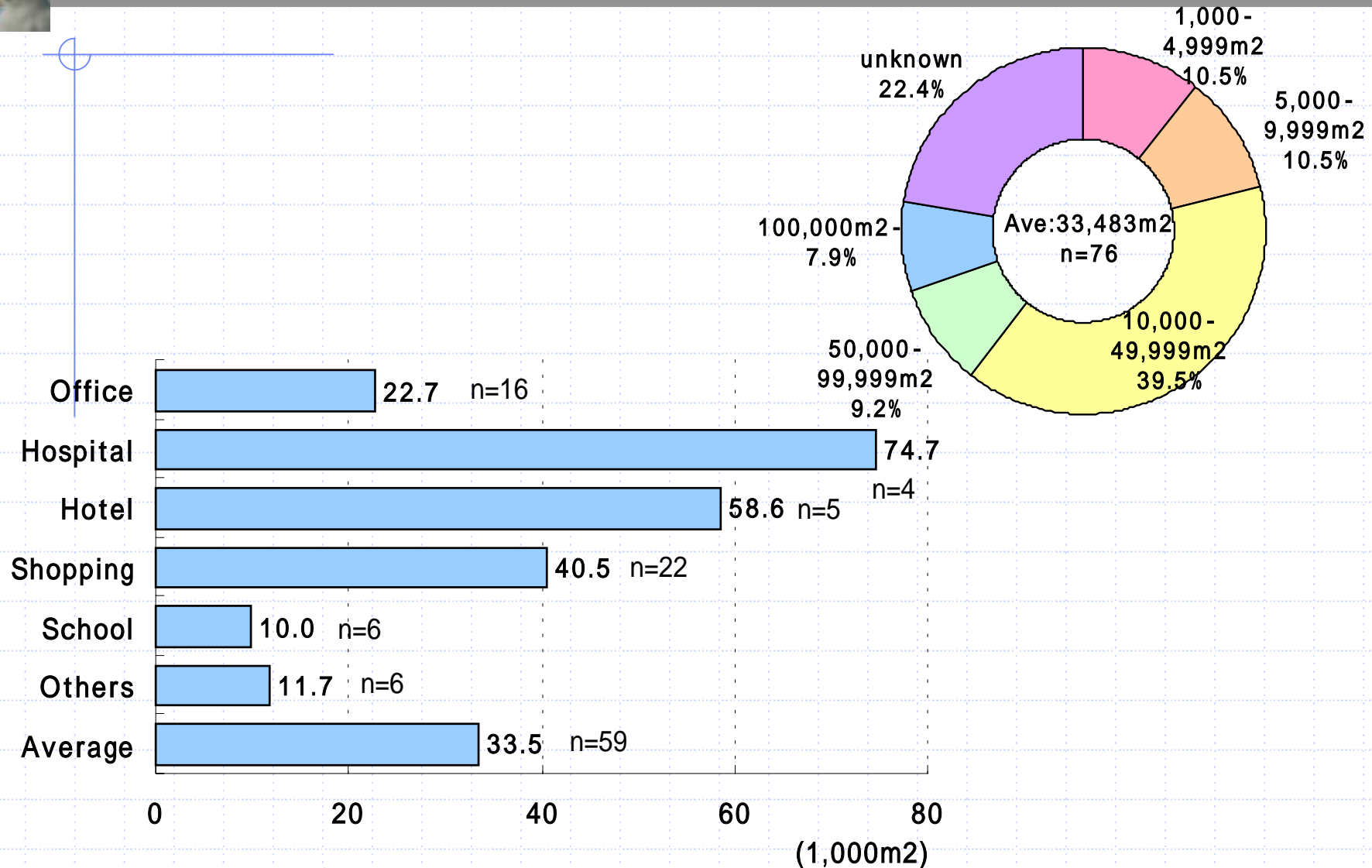
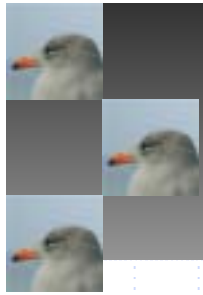
PC: Performance Contract

Number of samples for PC projects



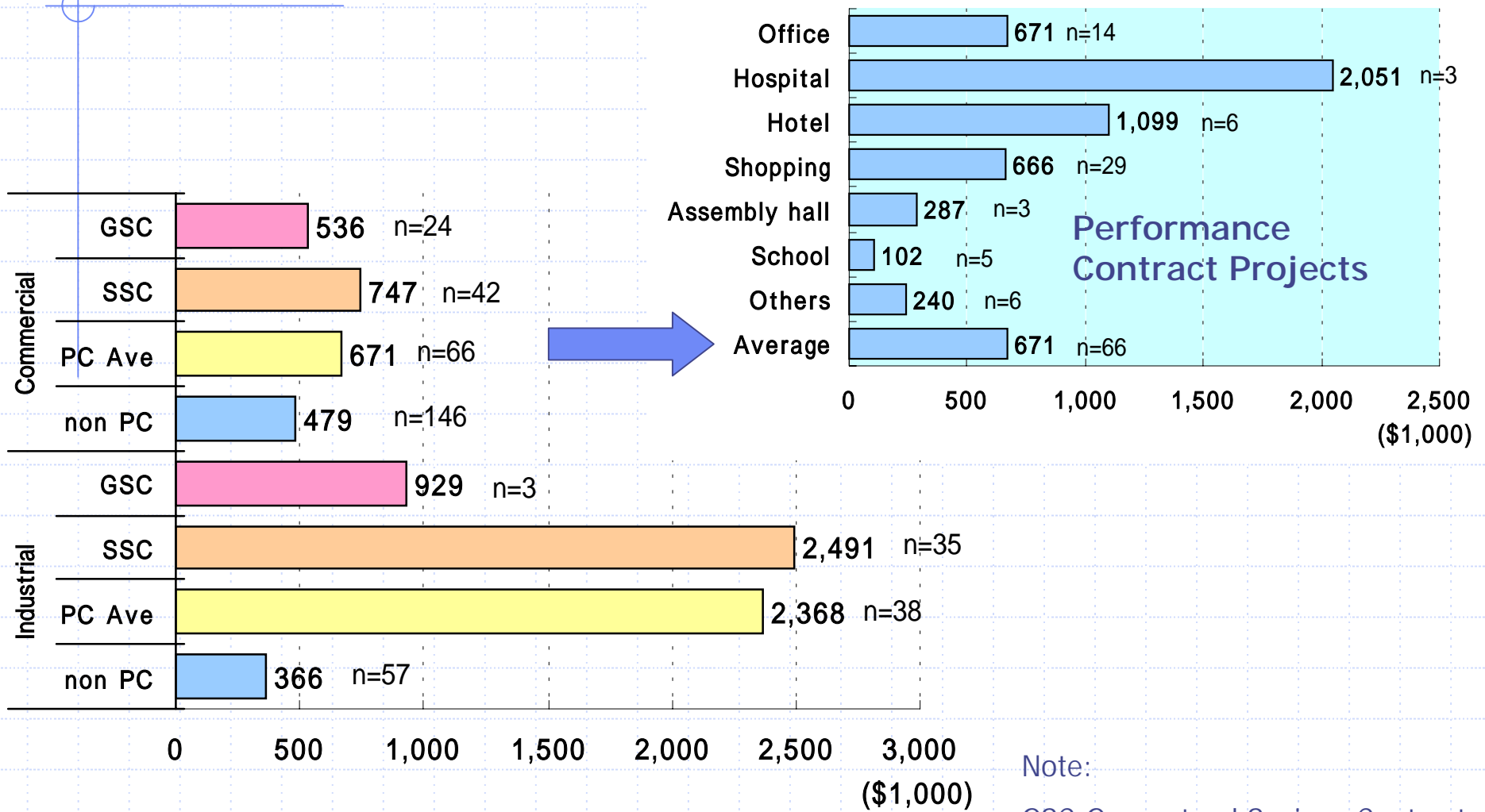
Data source: JAESCO survey, 2003

Floor area of commercial building's PC projects



Data source: JAESCO survey, 2003

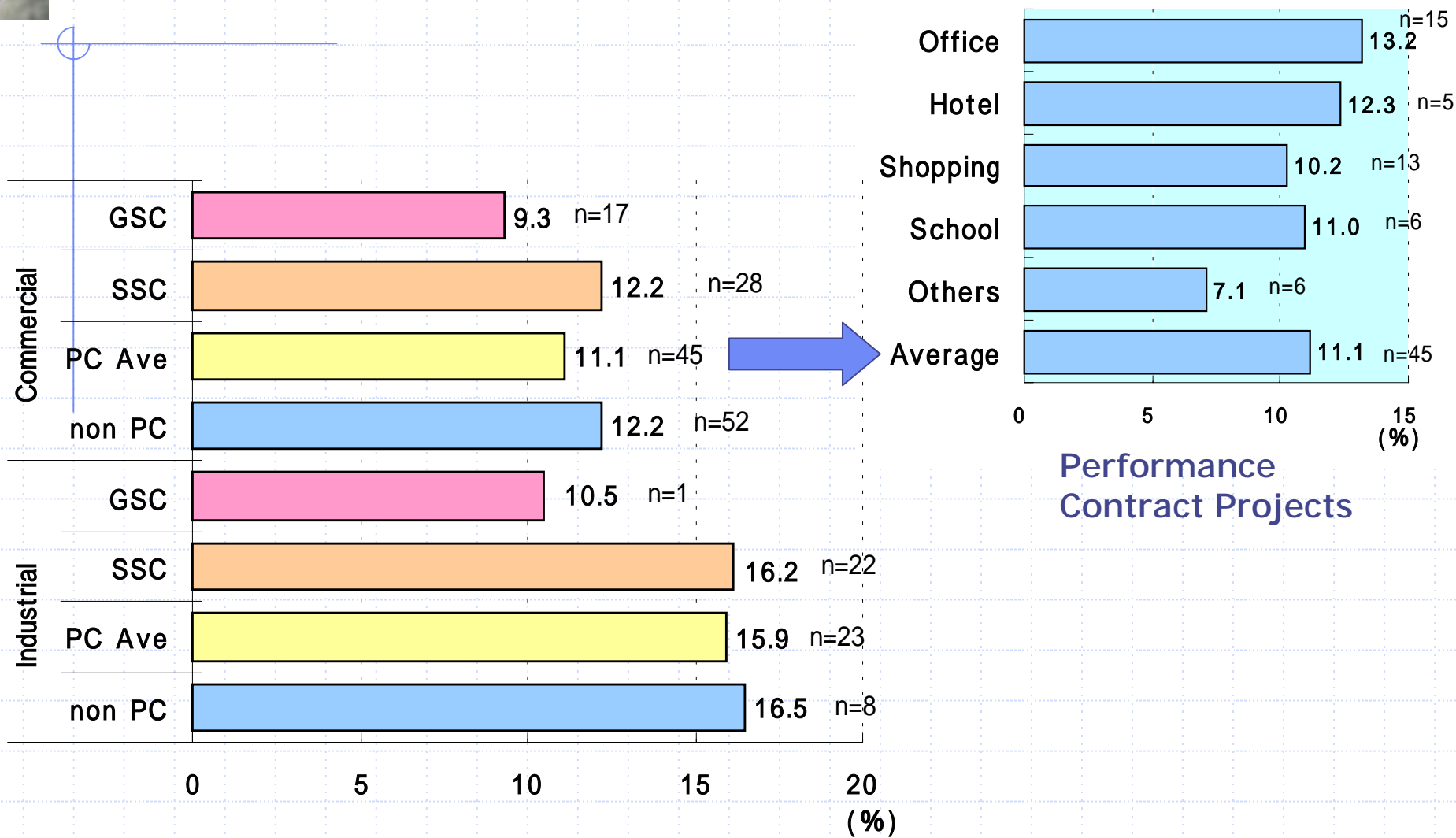
Project cost



Note:
 GSC:Guaranteed Savings Contract
 SSC:Shared Savings Contract

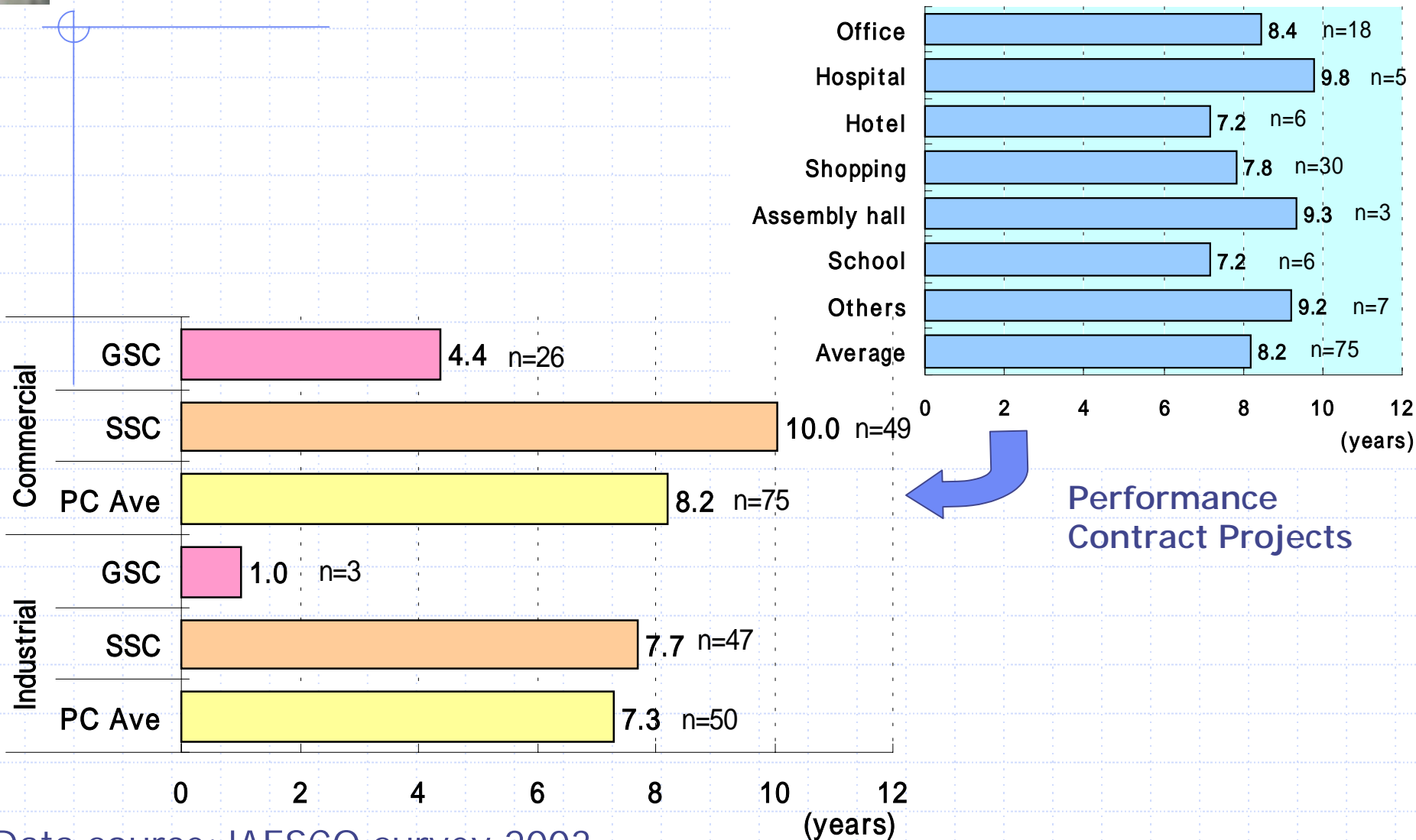
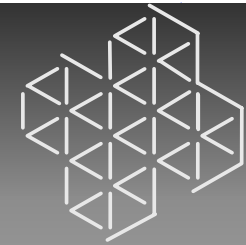
Data source:JAESCO survey,2003

Ratio of energy savings



Data source: JAESCO survey, 2003

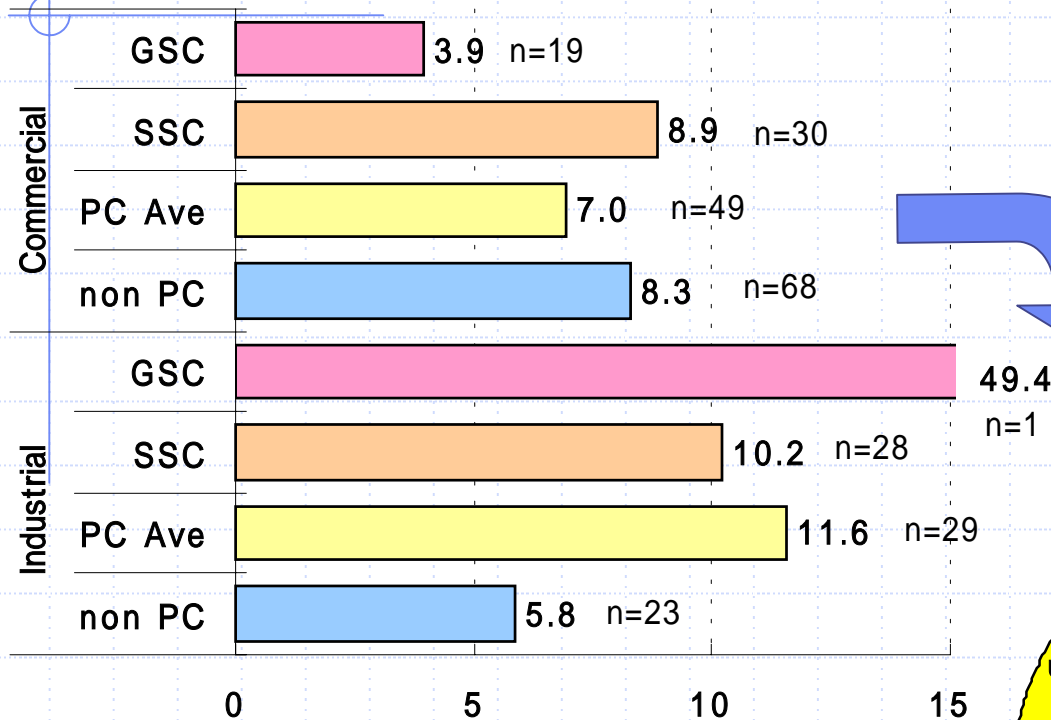
Contract period



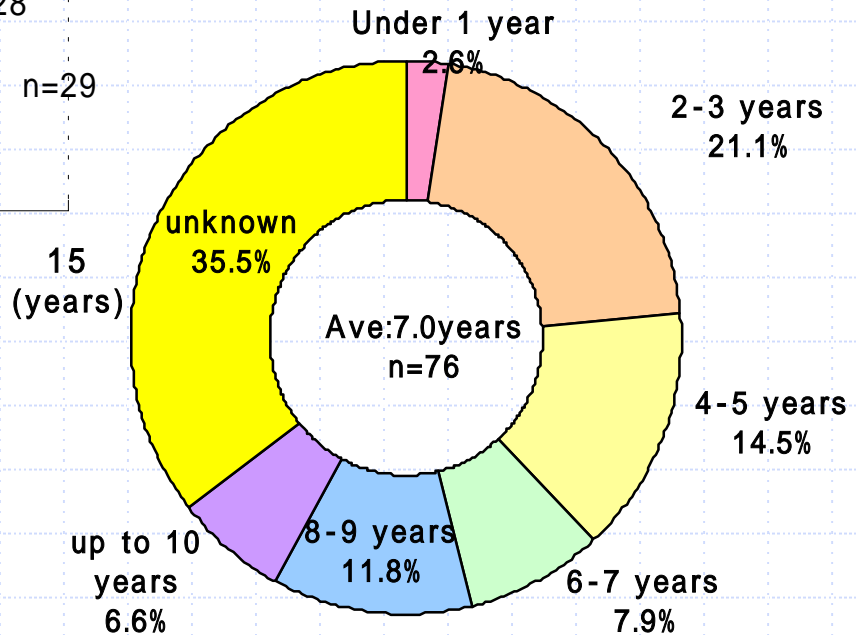
Performance Contract Projects

Data source: JAESCO survey, 2003

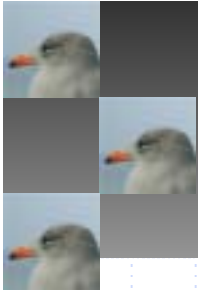
Simple pay-back period



Performance Contract Project of commercial buildings



Data source: JAESCO survey, 2003



Market barriers/Low recognition for ESCO business



- ESCO business offers many varied services
- Most organizations budget on a single-fiscal-year basis, so in order to arrange investment conditions the recognition and consent of many superiors is needed
- If facility manager is to carry out ESCO business, he or she must explain the new business model called ESCO to many bosses and receive their understanding and approval (Top sales is needed)
- JAESCO is conducting activities to raise the level of awareness
- Recognition for ESCO model are rising, now



Market Barriers/ Unavailability of project finance



-Mainly asset-based or credit based (corporate finance)

<financial institutions>

-Do not have proper understanding of ESCO
performance contracts

-Do not have enough experiences on the small size
project finance to such as ESCO projects

<we need>

-Project finance or limited recourse financing is
indispensable for future ESCO business in Japan



Market barriers/Issues of application to local authorities

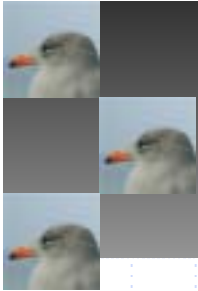


-Budgeting for hiring technical experts for preliminary studies(FS) and the growth of organizations that can offer these services are needed

In the case of free information offered by ESCOs, in loss of transparency and fairness

-Energy costs, construction costs, and ESCO service fees are all in separate budget categories

-If a loss occurs a penalty is assessed but if the profit is larger than forecasted the bonus is not returned to the ESCO



Conclusion(1)



- It has been 7 years since the approach toward the ESCO business in Japan started in 1996
- Increasing number of companies have entered the ESCO business; participation from large companies
- The ESCO business is drawing attention gradually, and is also expanding the market with strengthening of governmental support

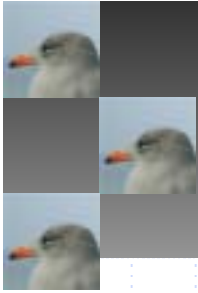
Conclusion(2)



- Kyoto Protocol ratification is a driver for Japan to promote energy saving measures
- The ESCO business is expected to play one of the important roles with government's countermeasures against global warming
- There still remain big problems to be solved, such as energy efficiency finance and administrative procedures

probably, we will be OK !!





**Thank You for
Listening !**

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