

Three-Way Meeting 2008, APS

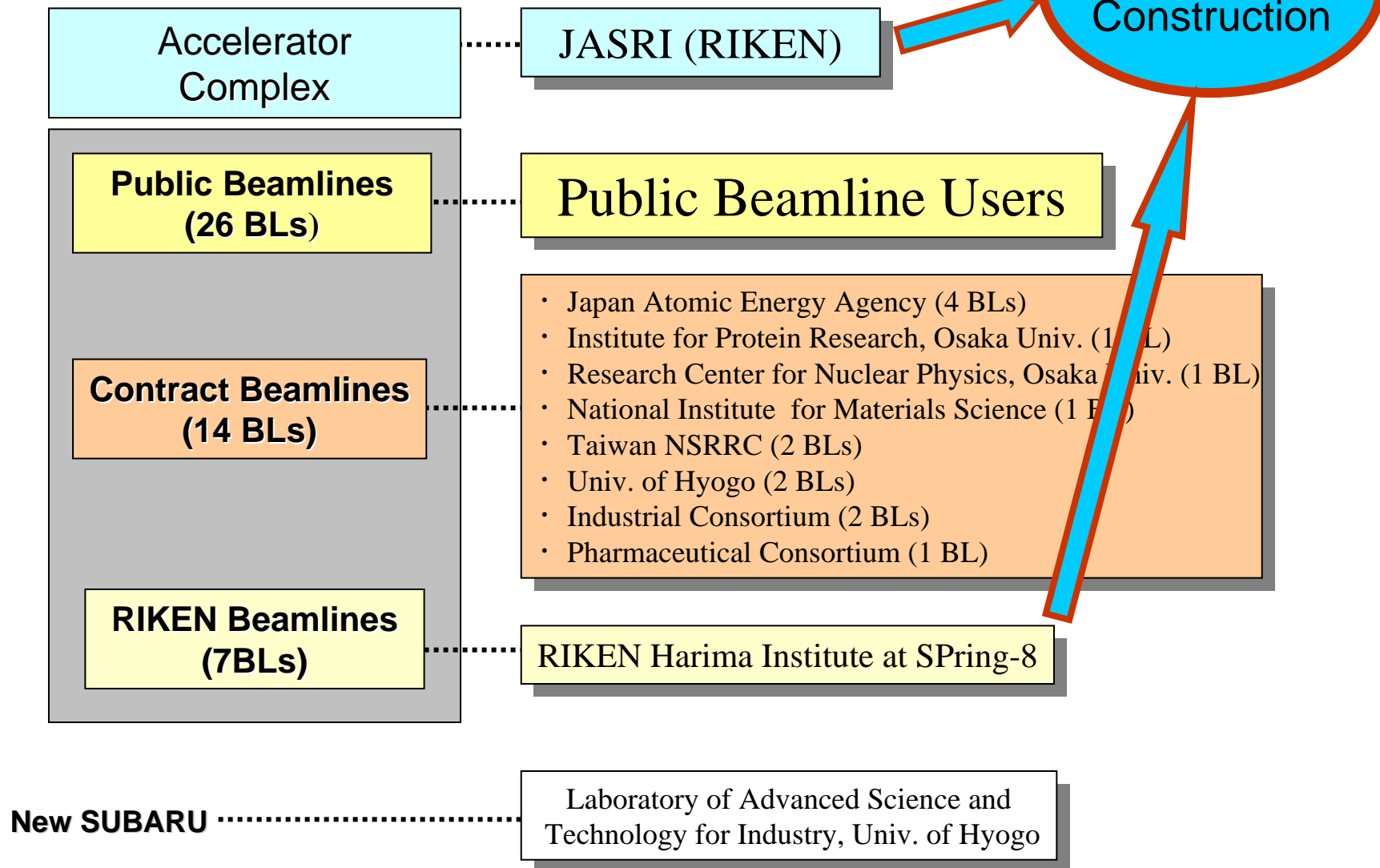
Socialization of *SPring-8*



**Akira Kira, Director General
JASRI/SPring-8**

SPring-8 Research Complex

SPring-8

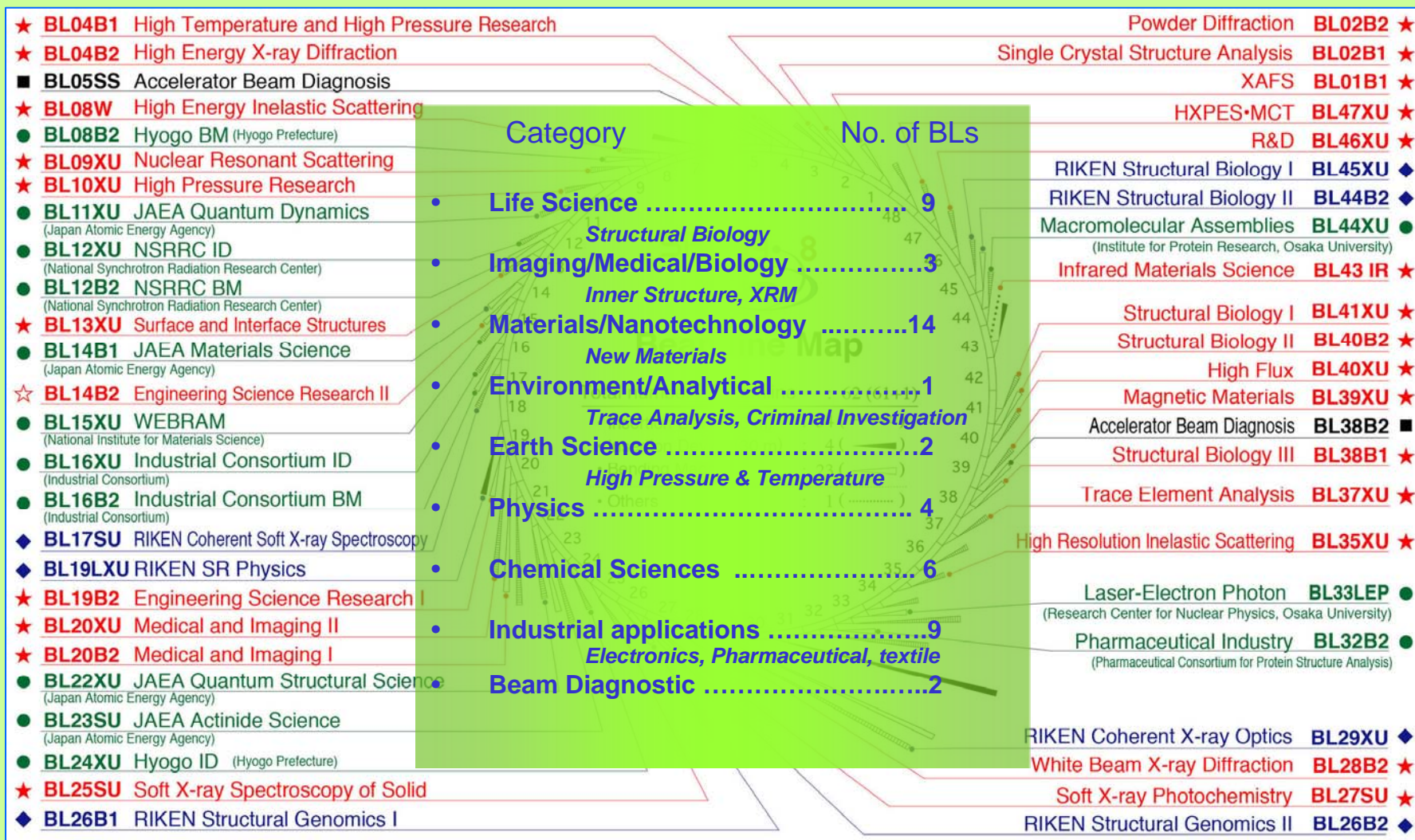


Beamlines



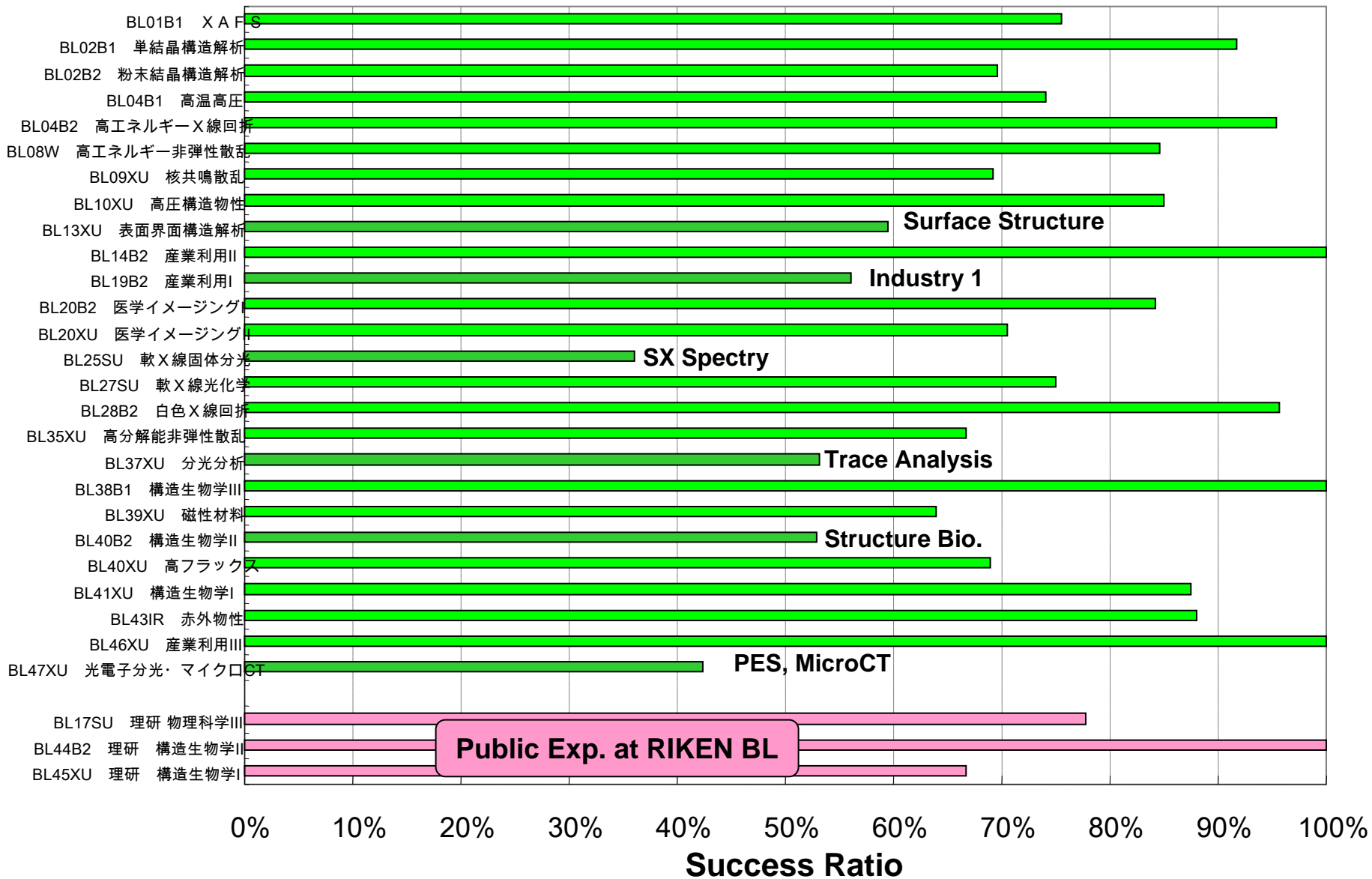
Maximum accommodation number is 62.

49 Beamlines are operational (as of September '07):
26 Public, **14 Contract**, **7 RIKEN**, and **2 Diagnostic**.

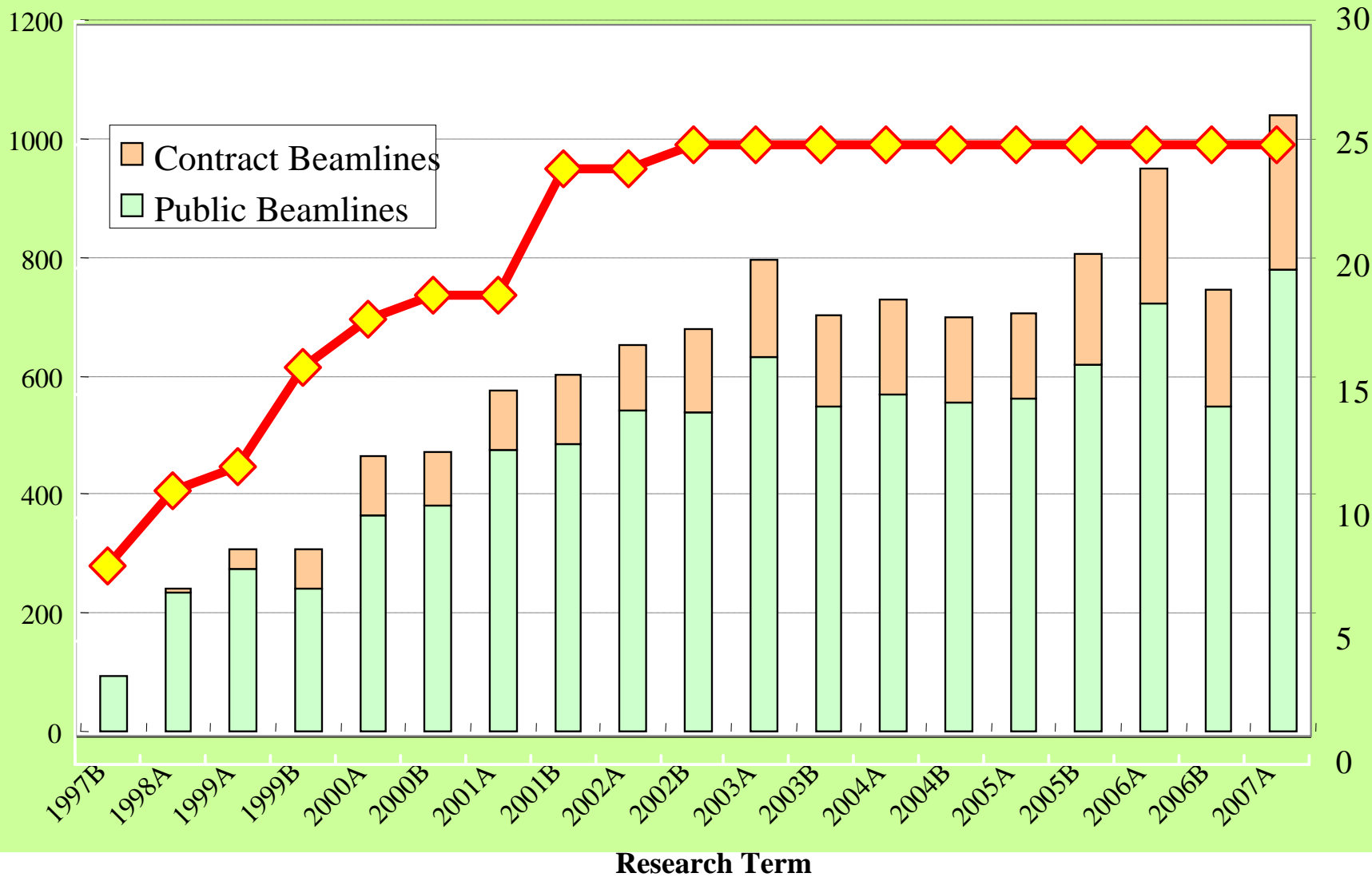


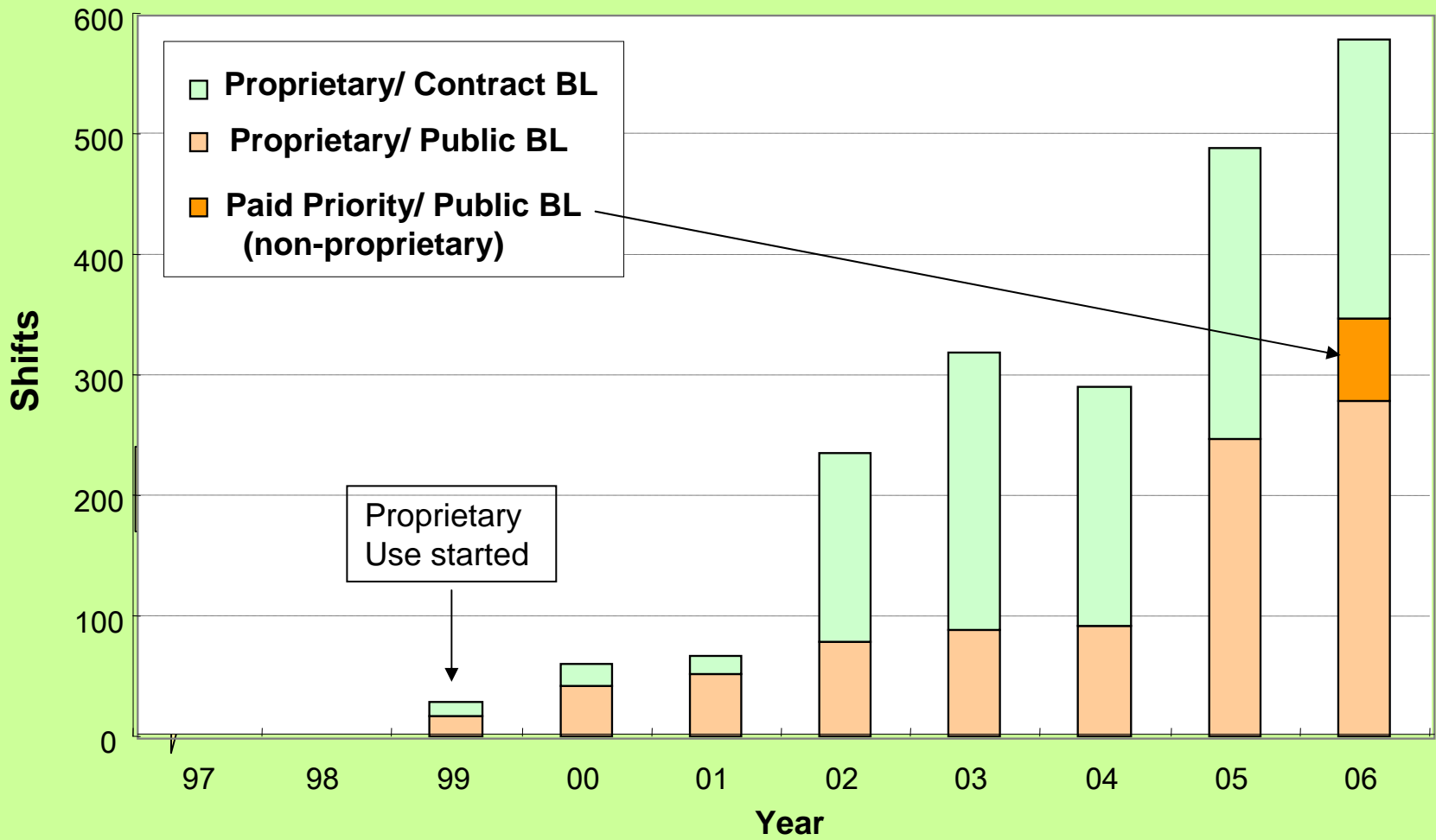
Success Ratio of Proposals at each BL (2007B)

Beam Lines (Public)



Research Proposals

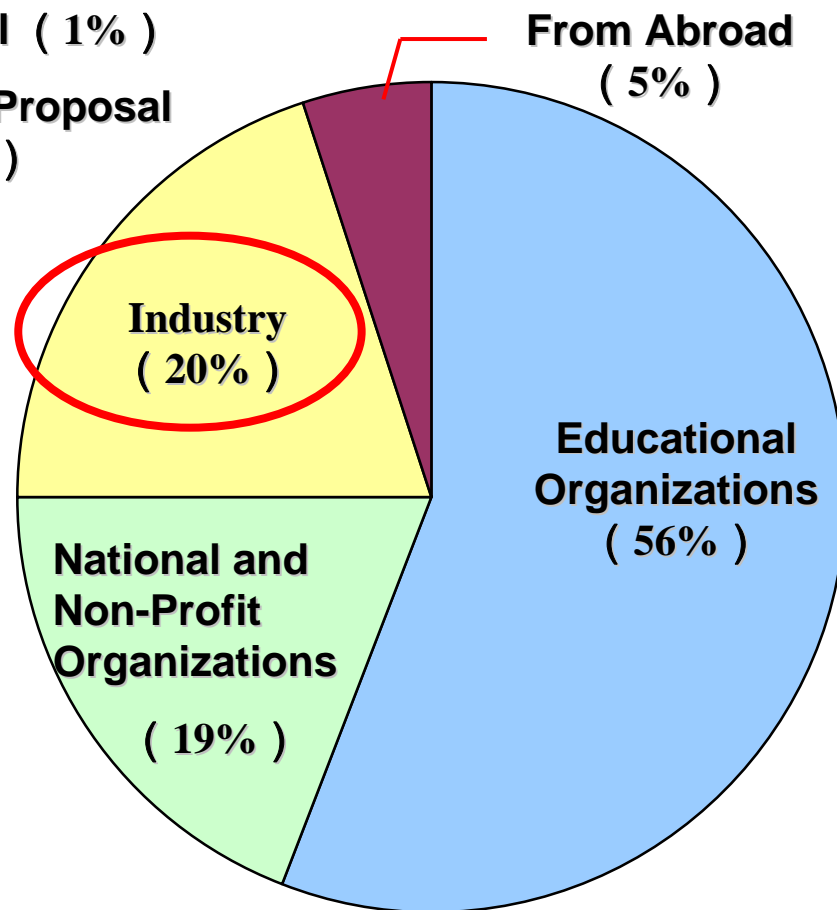
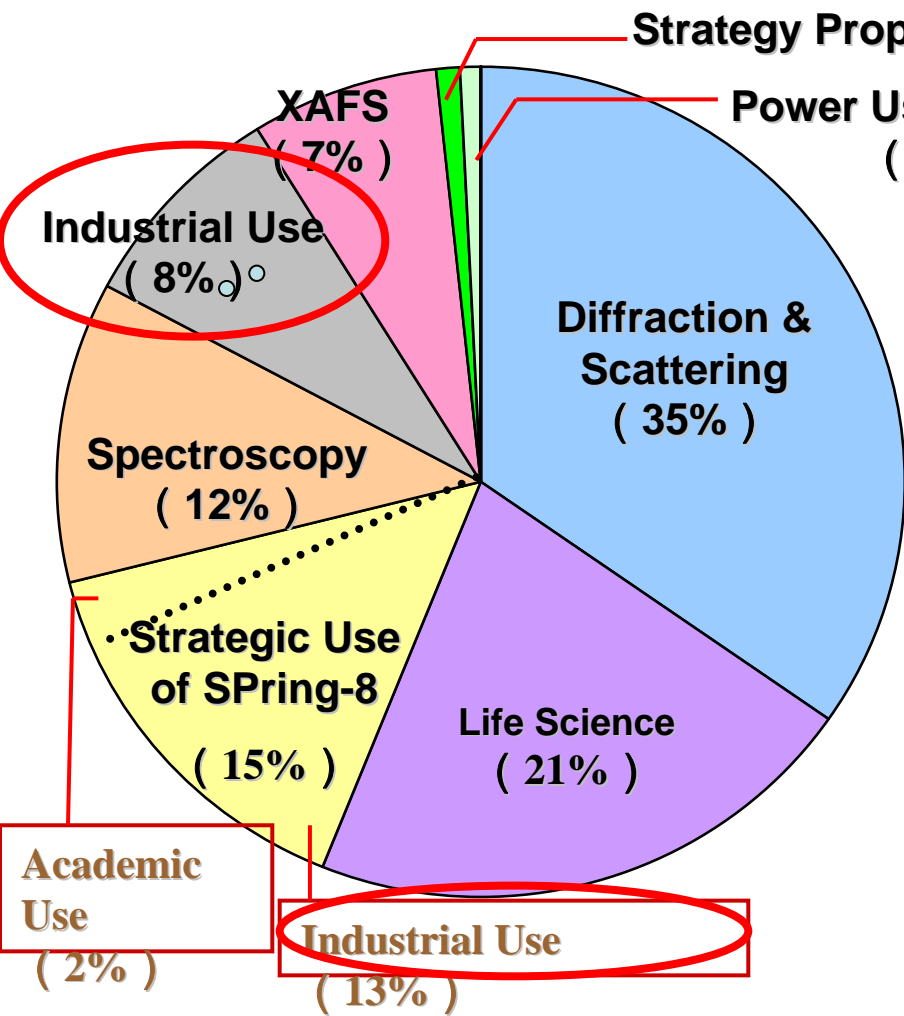


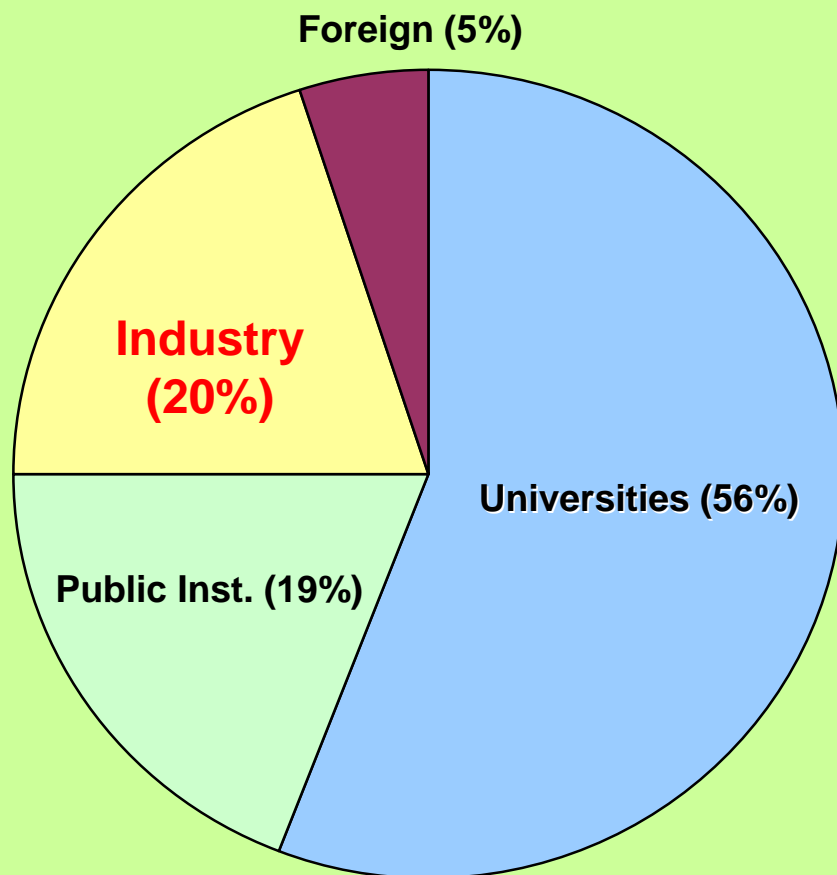


User Attributes (2006)

Fields of Applications

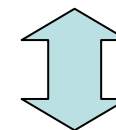
User Affiliation





The of Private Sectors' Share :

20% in the SUBJECT NUMBER

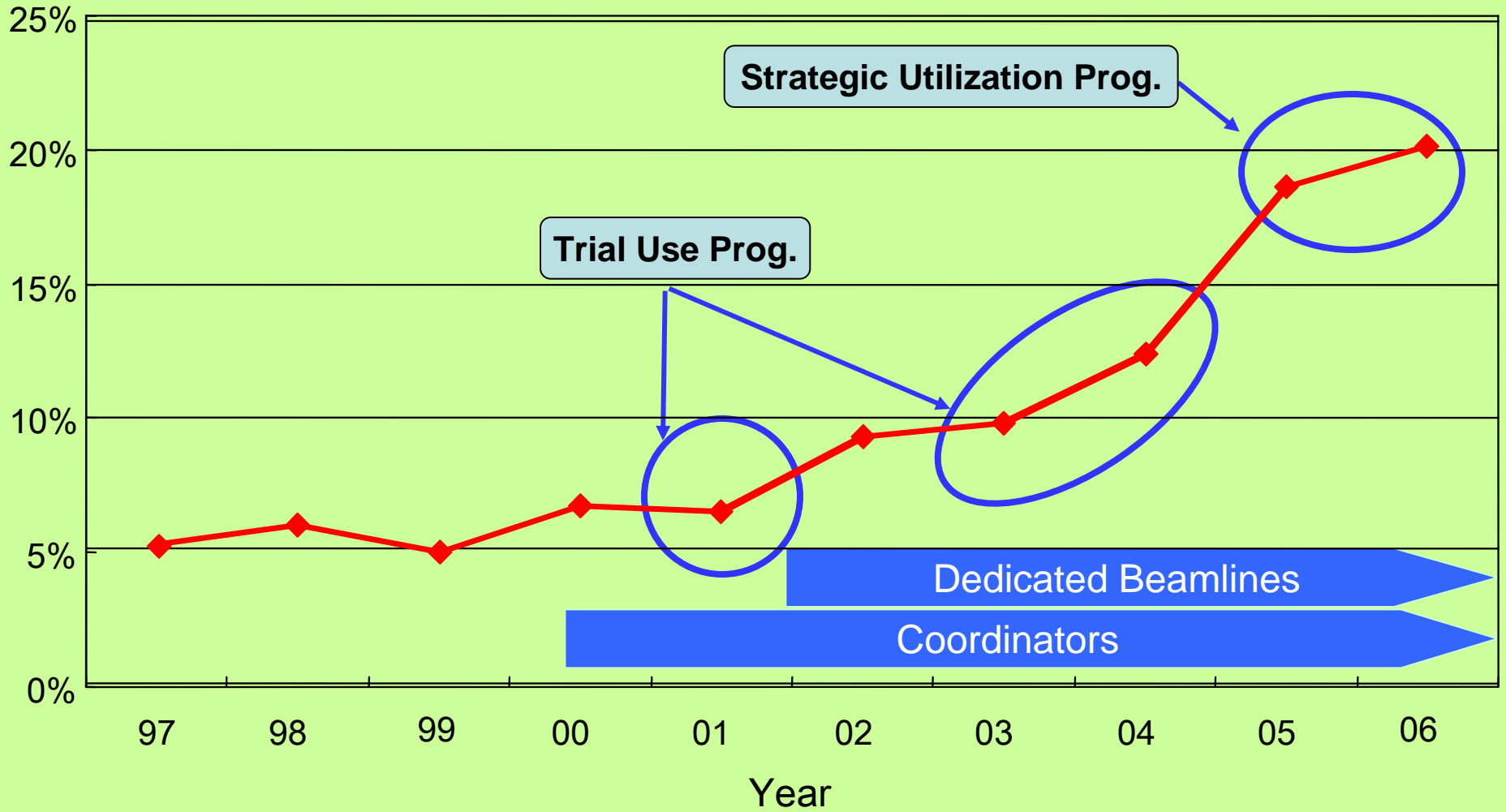


15.1% in the BEAM TIME.



Difference in the Time per Subject.

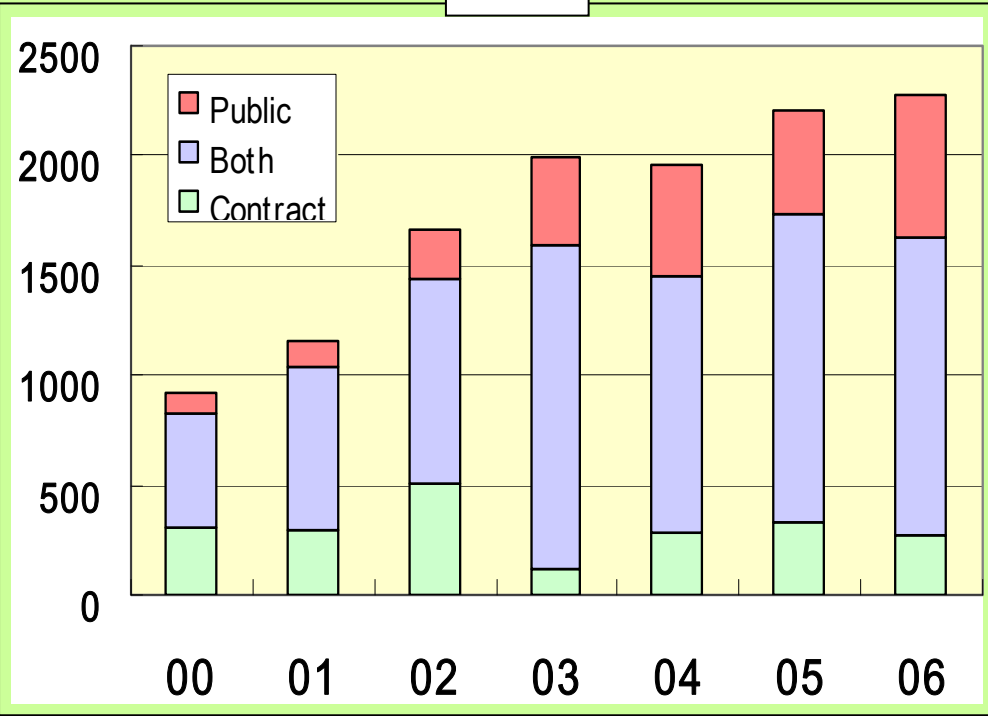
Percentage of Industrial Use



Utilization by Private companies

for Both Public and Contract Beamlines

Users



Companies



Total 2300 Users from 180 Companies/ Year

The quality of the industrial use is drastically rising.

What Happened Recently at SPring-8 since Last 3WM 2006

- International Advisory Council (July 2006)
- Amendment of the Law, effective 1 July 2006
- Construction of the XFEL started (April 2007) Ishikawa
- Call for proposals for new contract beamlines Ohno
- Cheiron School as an activity of Asia-Oceania Forum Takata
- A new industry-dedicated public beamline (September 2007) Ohno
- The 10-th Anniversary of Inauguration of SPring-8 (October 2007)
- The rise of social status

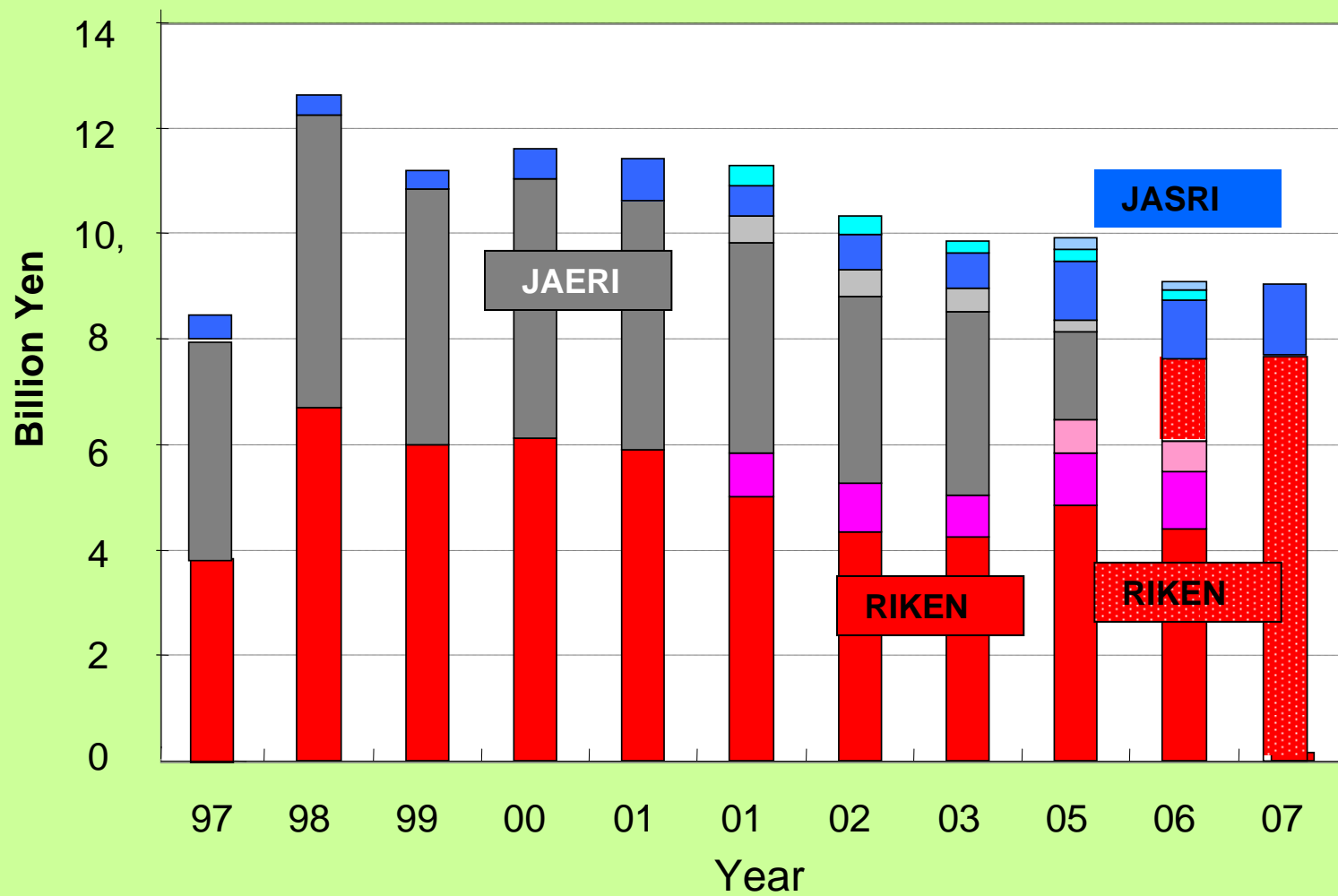
Coming:

- Peer review of the results of the academic use (November 2008)

Reputation of SPring-8 in Japanese Society

- The World No.1 or Frontier Facility for Observation and Analysis
 - Used to be: The World-Best Generator of the Light of Dream
- The Model for Public Common Research Facilities
 - Owing to the success in Industrial Utilization*
 - Tailwind (from headwind in the past)

**If I may say, the industrial use sharing 20 % supports the logistics of Spring-8.*



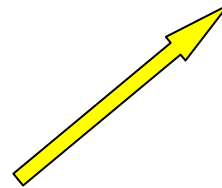
A Successful Model



A New Frame



Others



Fate of Model Institution

Coming Situations for the Big Machine

General Trend

Rush in construction of high-spec midium-energy (-3 GeV) Machine

- Vacuum-shielded Undulator of SPring-8 contributed to it.

Spring-8

The X ray of the highest energy in the world

The high operation cost compared with the medium machine



Spring-8 (other 2 bigs, too) needs

- The output worthy of the high running cost = Excelent Results
- The enhancement of utilization of the high energy X rays
- The policy setting for the ratio of high- and low energy utilization. (Japan has no medium new-generation machine)

Socialization (an Oxford Dictionary):

The process by which somebody, especially a child, learns to behave in a way that is acceptable in their society.

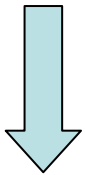
SPring-8 was a genius with extraordinary abilities but did not behave so as the society expected to this genius.

The Change written in a motto form

1. Of the experts, by the experts, for the experts.

Only experts are welcome:

The user should study hard on synchrotron radiations before coming to Spring-8 for experiment.



Promise of industrial utilization
Invasion of barbarians from industries

2. Of the people, by the experts, for the people.

The people include the experts,
thus, Motto 2 is more inclusive than Motto 1.

Way to the Socialization

Options:

1. *Nobel Prize*: depends on a user's ability and luck.
2. *Industrial Utilization*: The facility can manage to same extent.

This Option's Merits: *Strong Support of the Government*

Two policies for promotion of industrial utilization

Trial Use and Strategic Utilization Programs

which provided both the budget and the personnel.

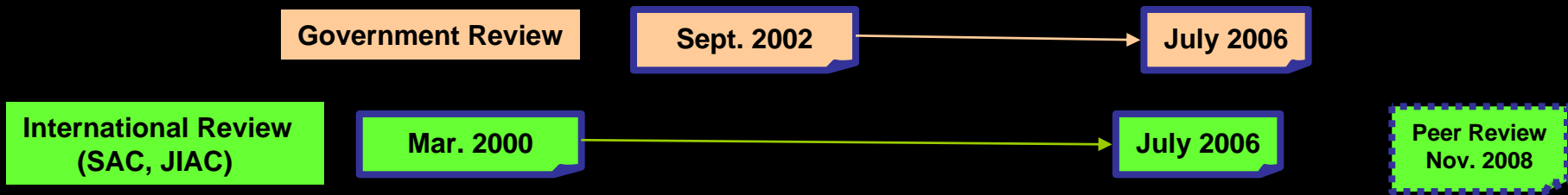
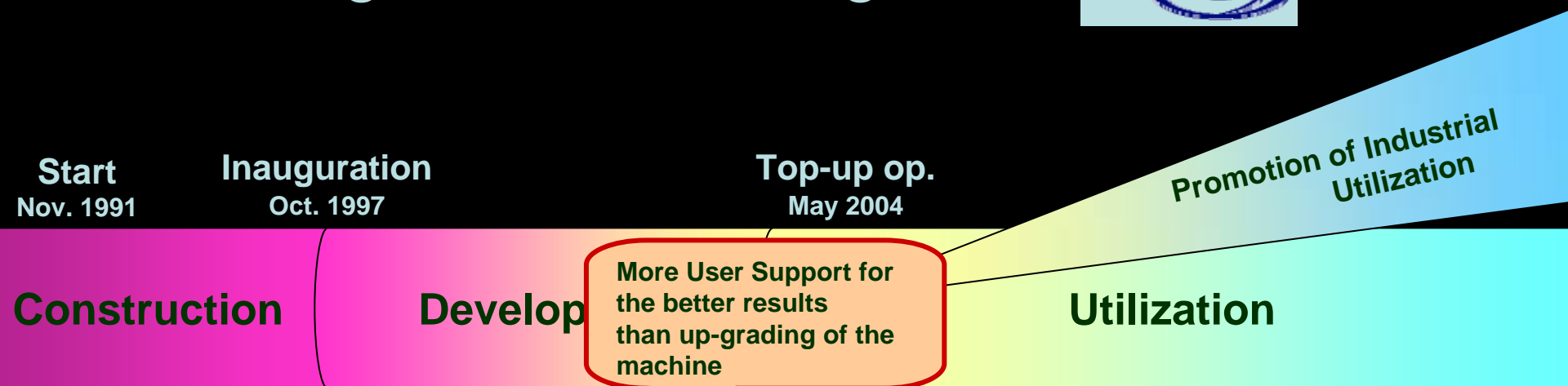
It took me 5 years to have the society appreciate the industrial use of Spring-8.

Major Criticism:

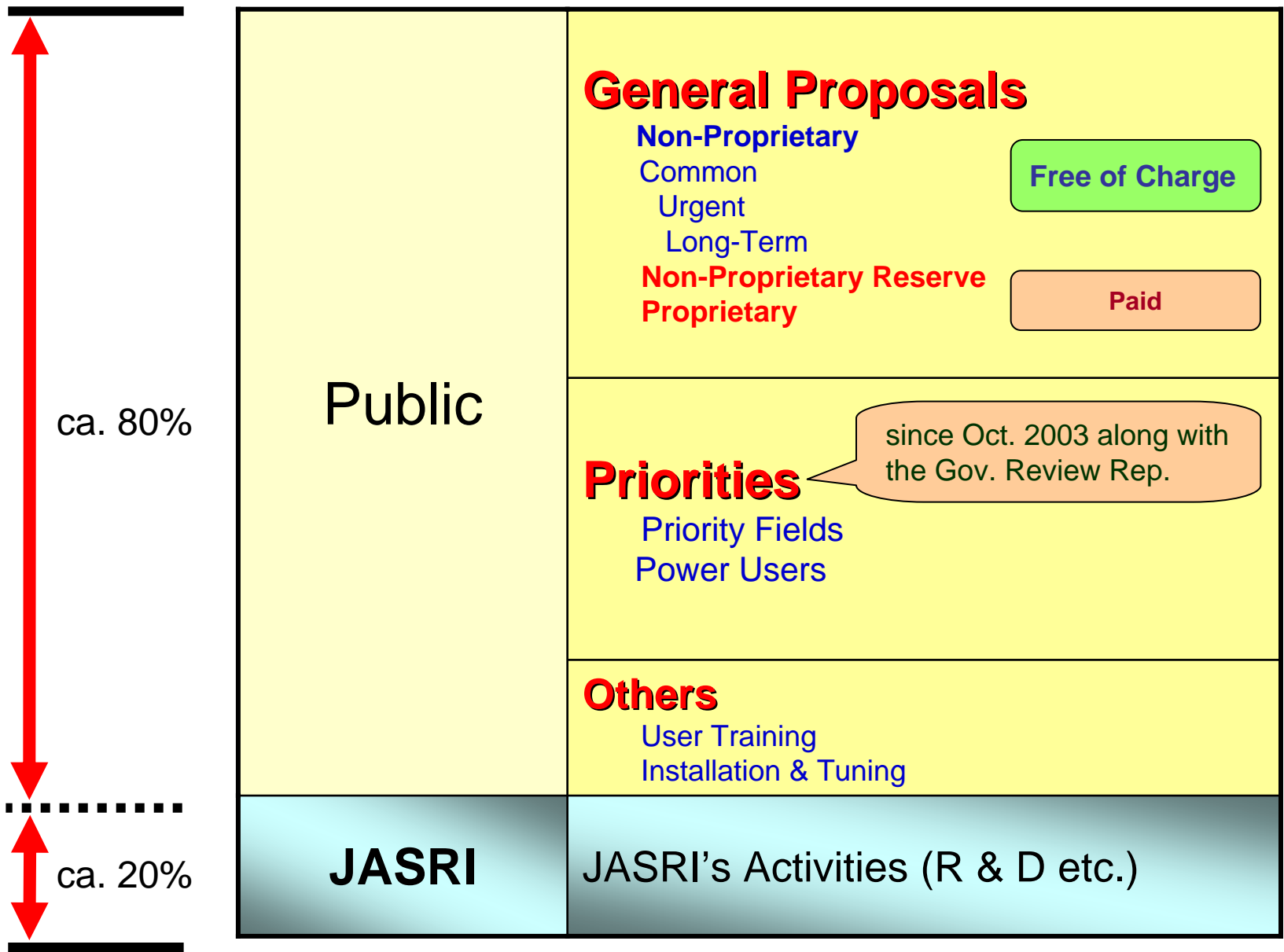
Catering to (playing up to) the Government.

Suppressing the academic research.

Management of SPring-8



Policy of Time Distribution in Common BL
since July 06



History of Industrial Utilization



Popularization
Open to Newcomers

New Field

Priority Field

Common Ind. Base
Technical Innovation

Trial Use

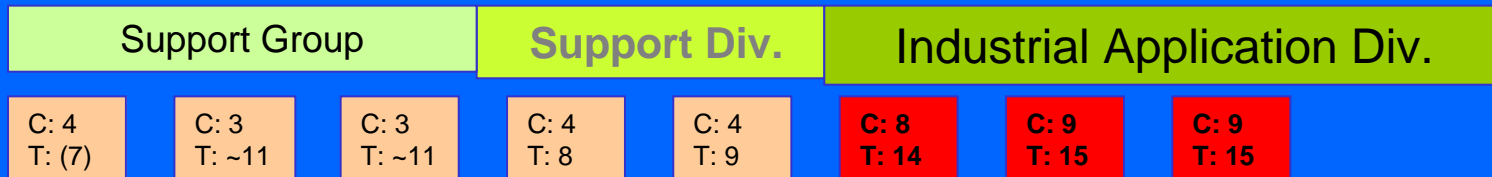
Strategic Utilization

Priority Ind. Util.

2000	2001	2002	2003	2004	2005	2006	2007	2008
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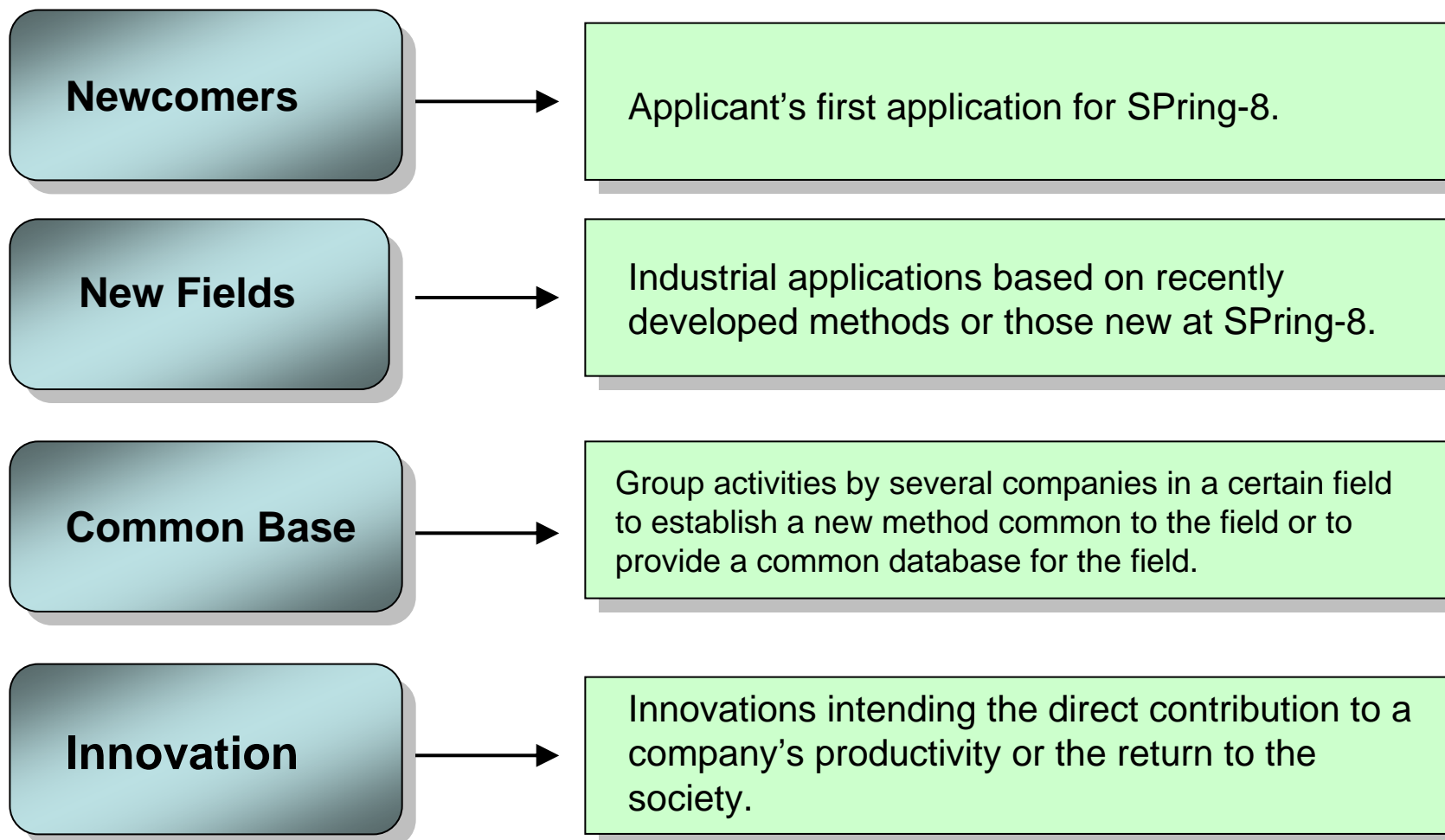
Ind. II: BL14B2

Industry Dedicated Beamline: BL19B2



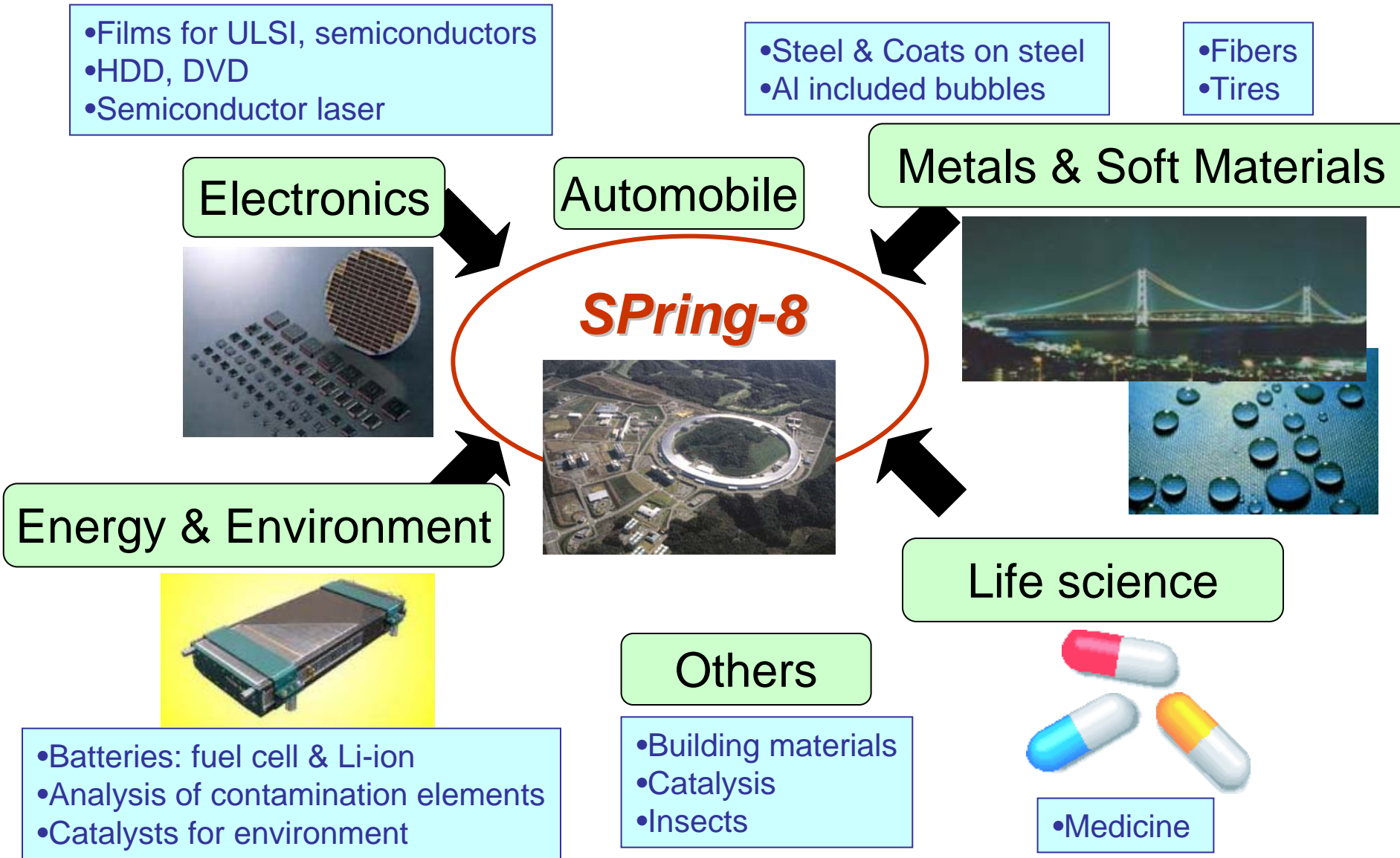
C: Coordinator T: Technician

Categories



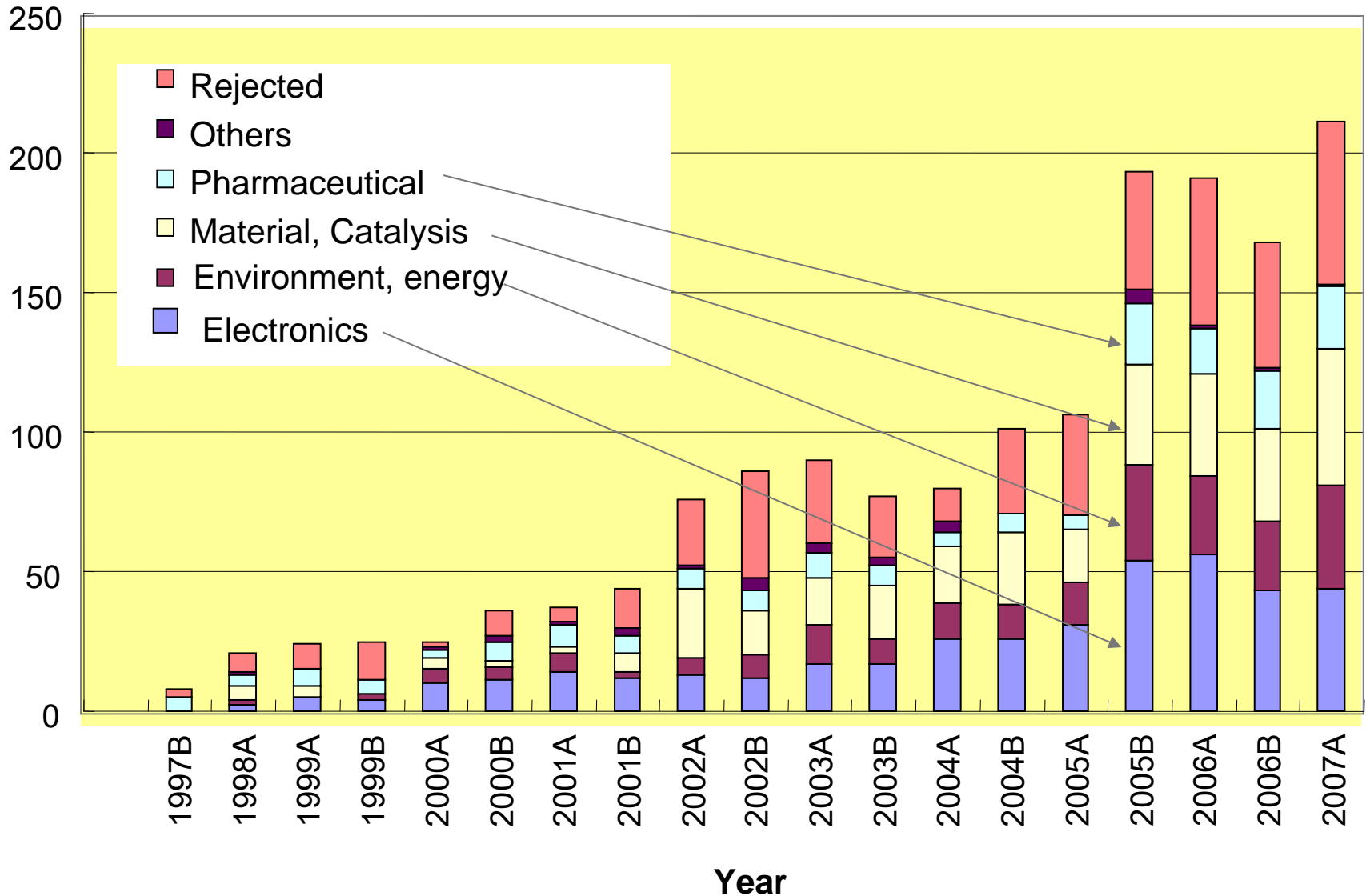
Contribution to Industry: 190 Companies used Spring-8 in 2005

Various fields of industries, not concentrating on pharmaceutical

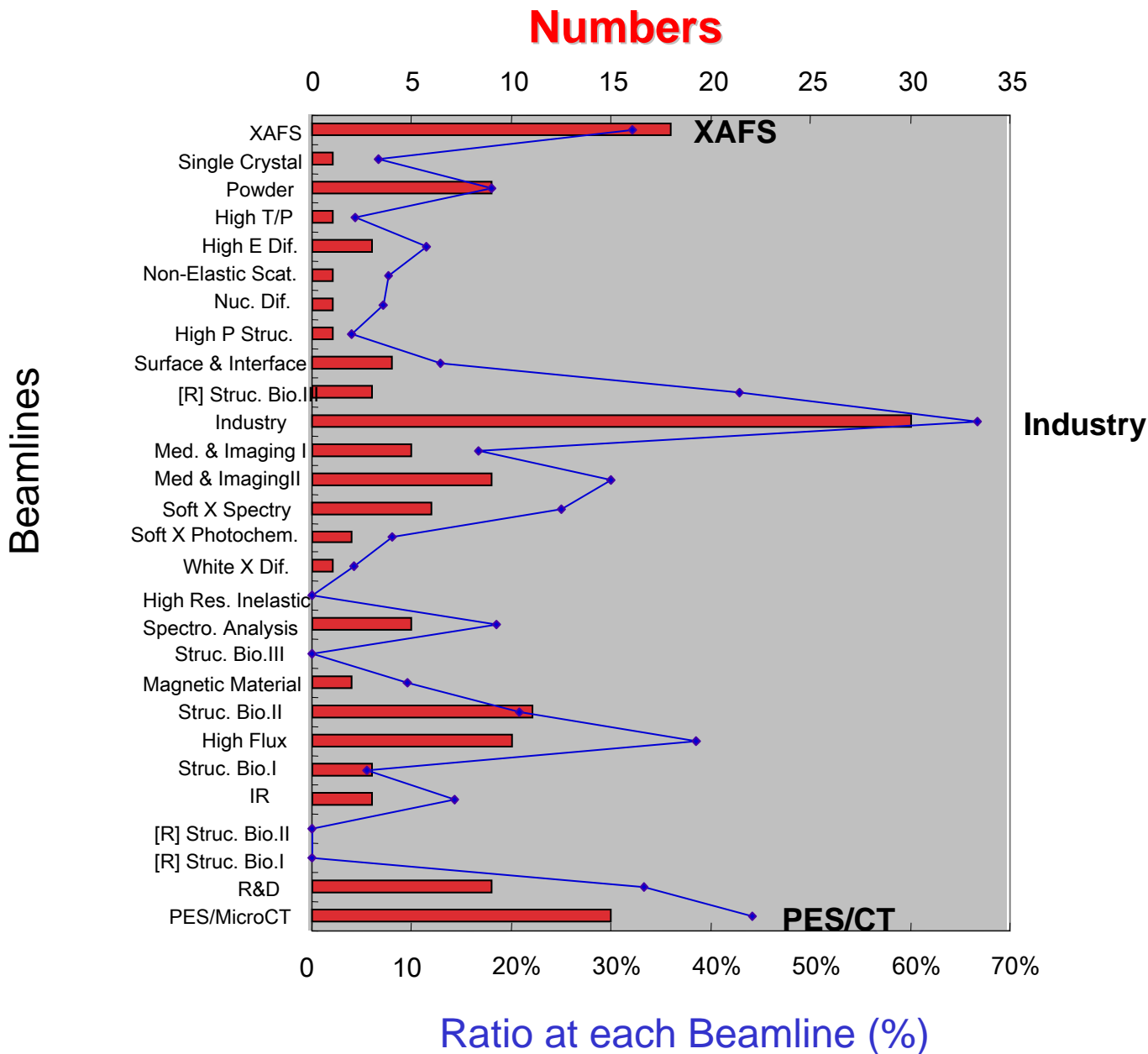


Fields of Experiments by Private Sectors

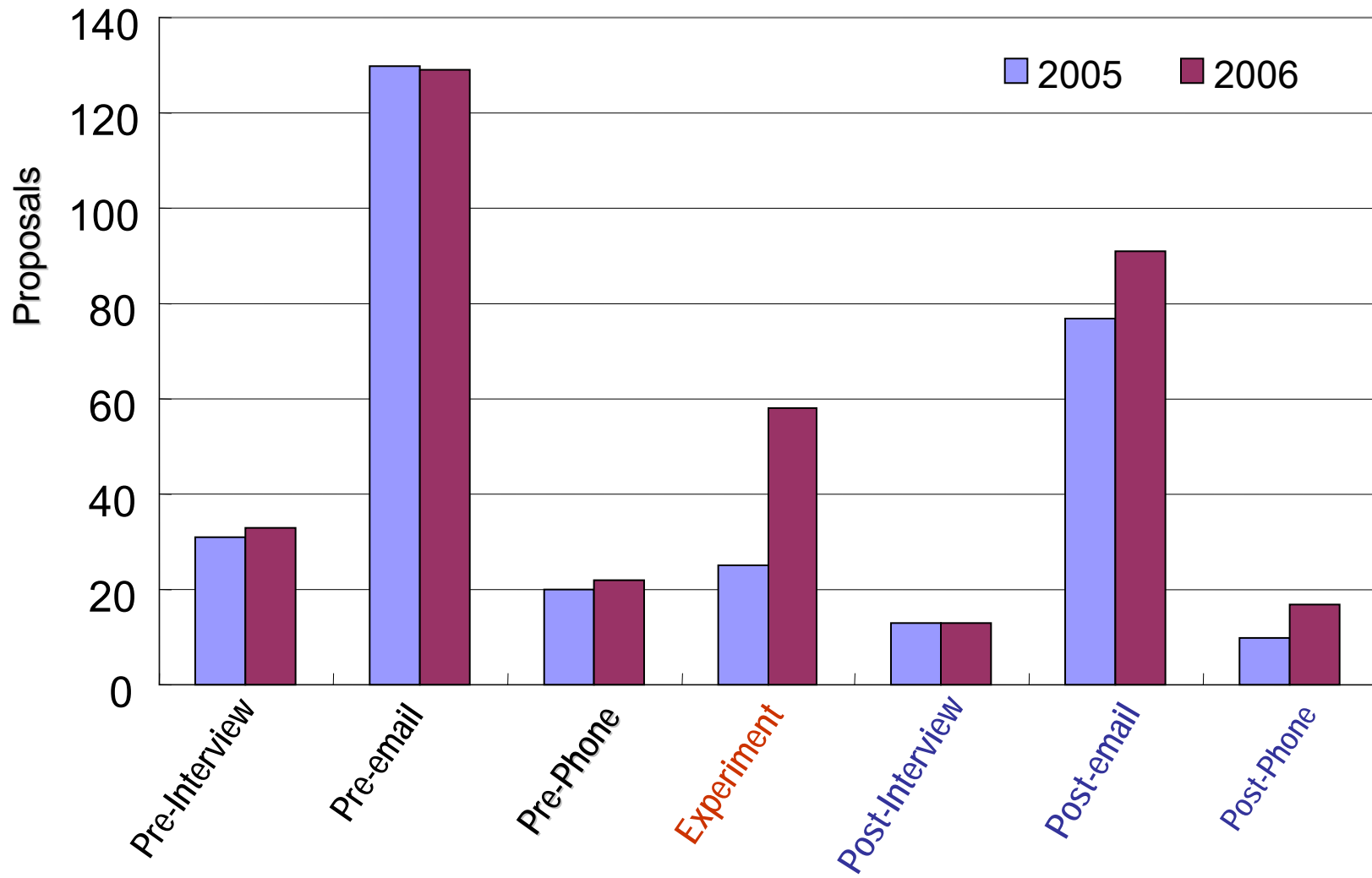
Proposals



Utilization by Private Sectors (2007A)



Coordinators' Assistance for Proposals Reaching to Application



Toward the Future (2006 ver.)

Keeping the highest standards of a SR facility

Exploring new fields of SR sciences:

Inviting new potential users:

not only in academia but also in industry

not only SR experts but also SR novices

Providing more assistance and user-friendly equipments

(necessary for inviting non-experts)

Starting entrusted analysis

Offering various options in utilization

depending on various virtues

Changing beam-time allocation procedures

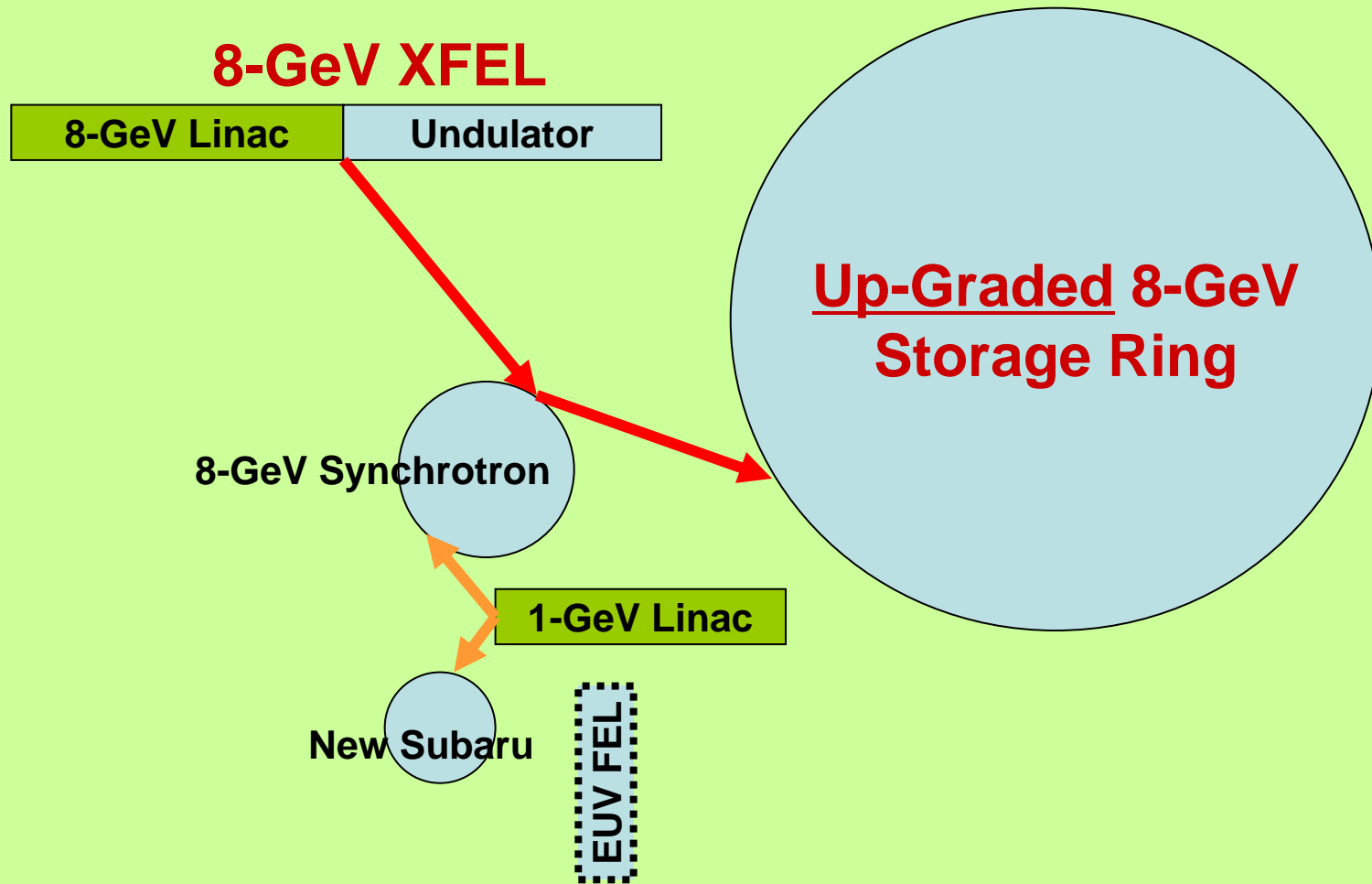
Rearranging the beamlines to accommodate more users

Toward the Future (2008 ver.)

- **Construction of the XFEL**
Connection of XFEL Accelerator and the Storage Ring
- **Keeping the highest standards of a SR facility**
Nano-beam, time resolution
- **Exploring new fields of SR sciences:**
Strong combination of academia and industry
Inviting new potential users:
(not only in academia but also in industry)
not only SR experts but also SR novices
Providing more assistance and user-friendly equipments
not only for industry but also for academia
(necessary for inviting non-experts)
Starting entrusted analysis
Offering various options in utilization
depending on various virtues
Changing beam-time allocation procedures
Rearranging the beamlines to accommodate more users

Spring-8 Campus in 201X

The only place having both SR and XFEL



Academic Research

Cutting-edge (academic) research that demonstrates the inevitability of Spring-8 (or of high-energy big machine) is demanded for the raison-d'etre of Spring-8 and for the reasoning of further development of the Ring.

Strategic selection of the proposal from this point of view should be considered. *(20 % may support the all)*

The results of the academic research should be published in a form which responds to the society's demands.

A peer review of academic research is scheduled in November '08.

Thank you for your attention.