

Introduction to Activities of UNISEC-Japan

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History

- Established in 2002
 - University Satellite Consortium
 - Hybrid Rocket Group
- Non-Profit Organization 2003
- Formation of UNISON (student group) in 2003
- Formation of UNISAS (alumni group) in 2006
- UNISEC International Committee in 2011
- UNISEC International Advisory Board in 2012
- UNISEC-Global in 2013



Mission

- Facilitate/promote university level students' practical space development activities, such as designing, manufacturing and launching small satellites and hybrid rockets.



UNISEC Concept

Unique

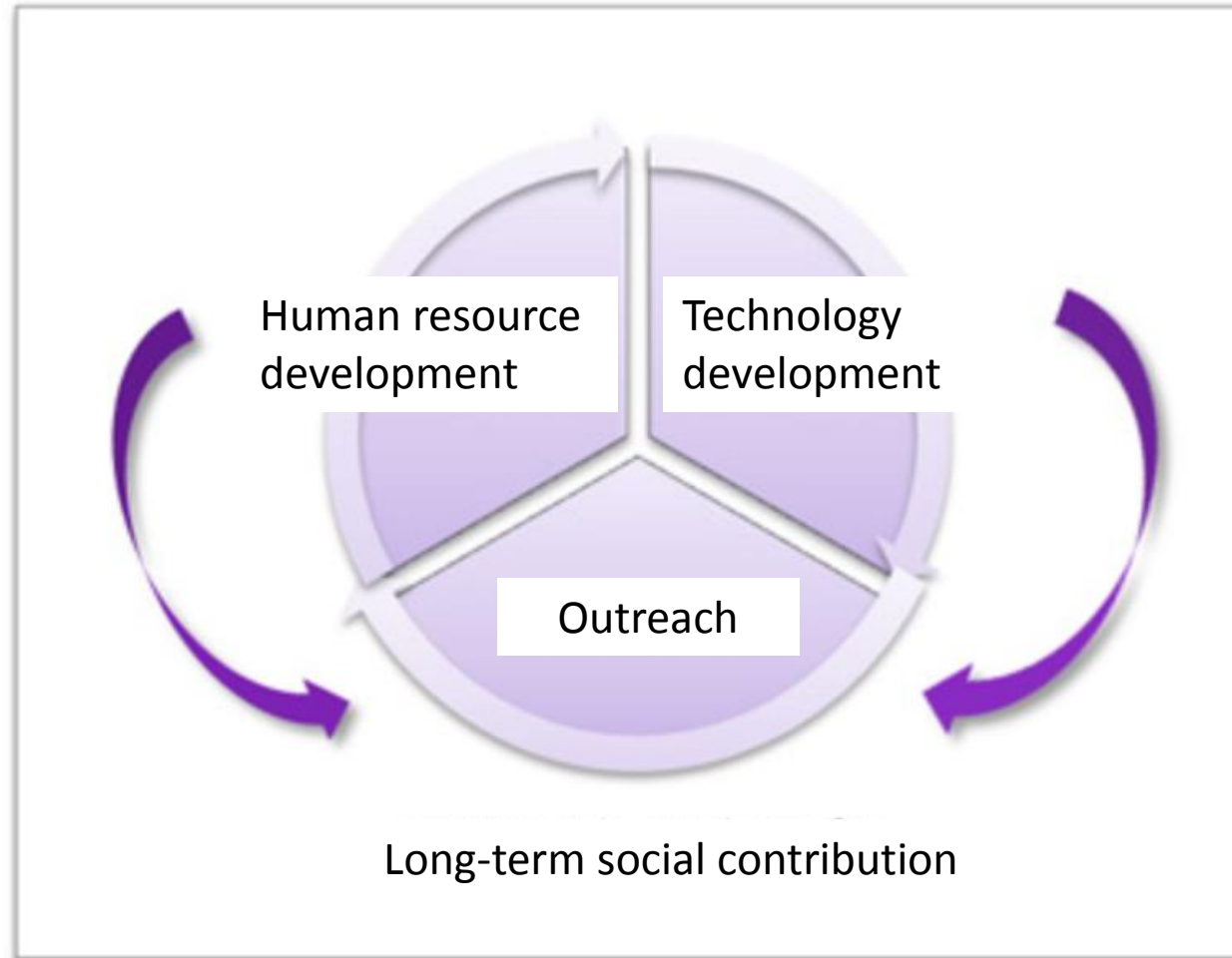
Never-give-up

Innovative

Sincere

Energetic

Challenging



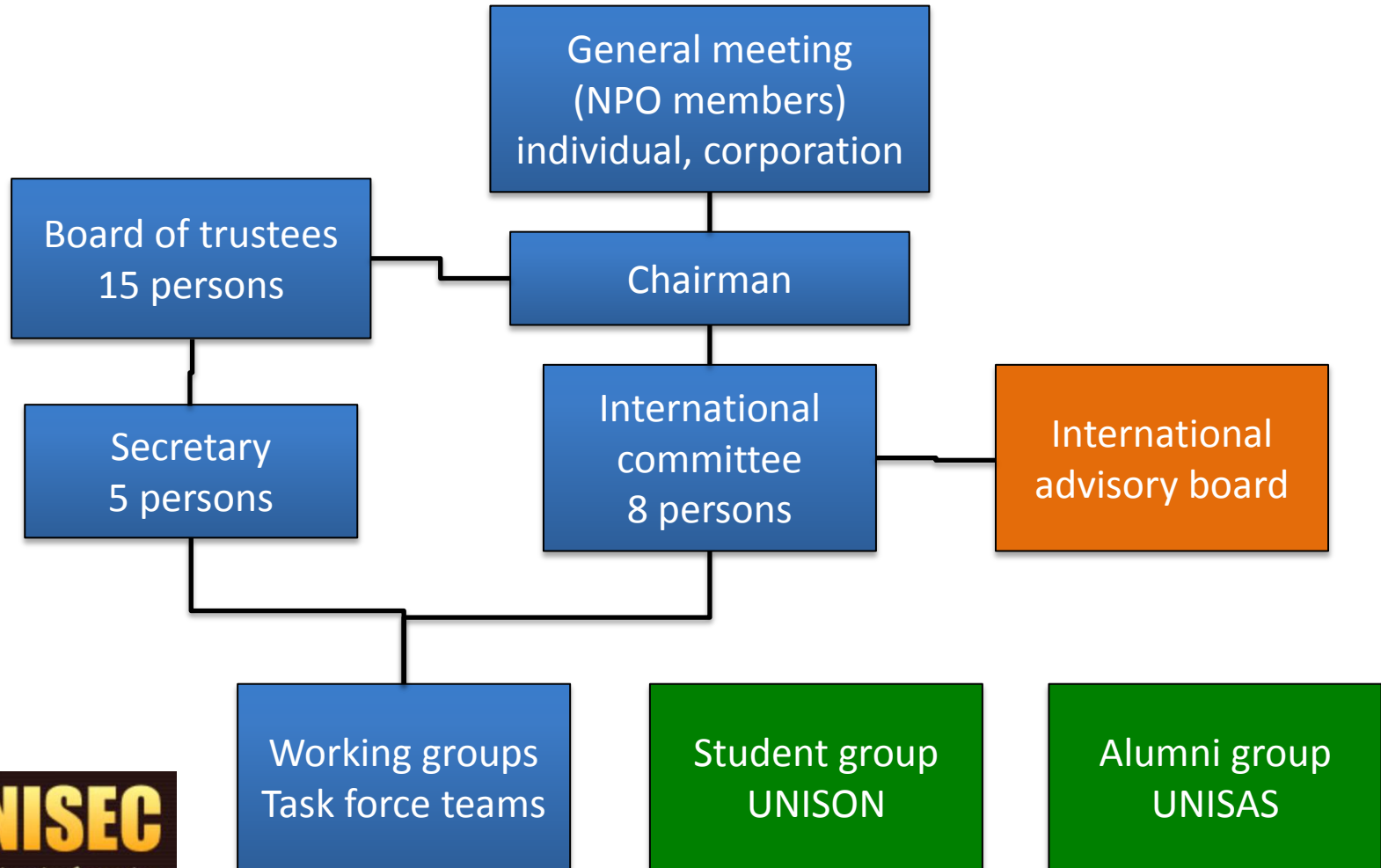
Organization

47 universities (67 groups)

24 corporation, 270 individual members

811 student members

As of January, 2015



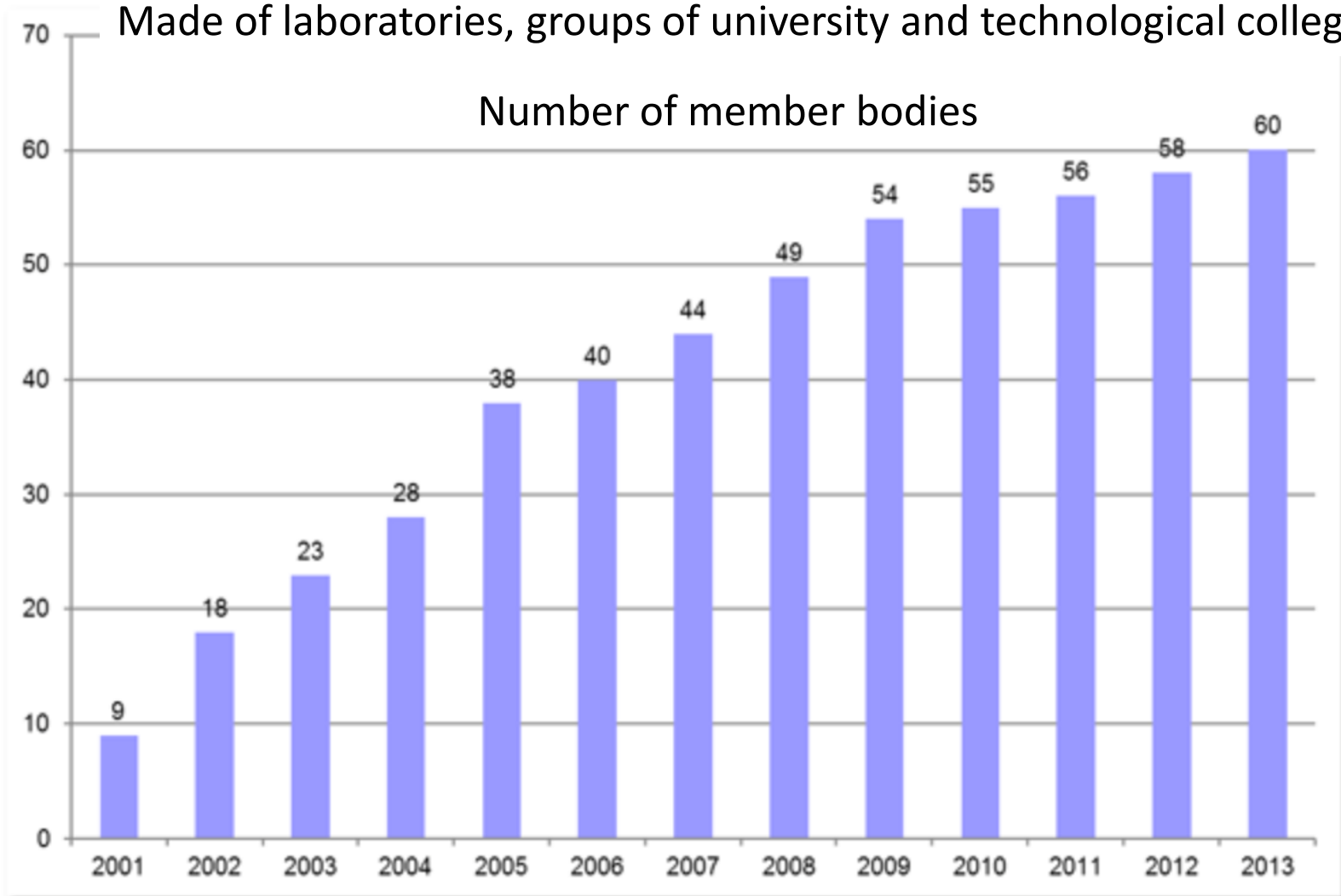
Activities

- Distribution of funding from space agencies and others
- Consulting
- Safety issues
- UNISEC Aerospace Lectures
- International activities
- Frequency, legal issues
- Finding launch opportunities
- Promotion of member body activities
 - Workshops & symposium for activity reports, information exchange
 - Joint procurement & development
 - Competition, e.g. Noshiro Space Event, ARLISS
 - Outreach
 - Working groups on ground station network, satellite, rocket, CanSat,
 - Others



Member bodies

Made of laboratories, groups of university and technological college



Multiple member bodies from one university can join
To join, each member body requires a professor responsible

Student activities



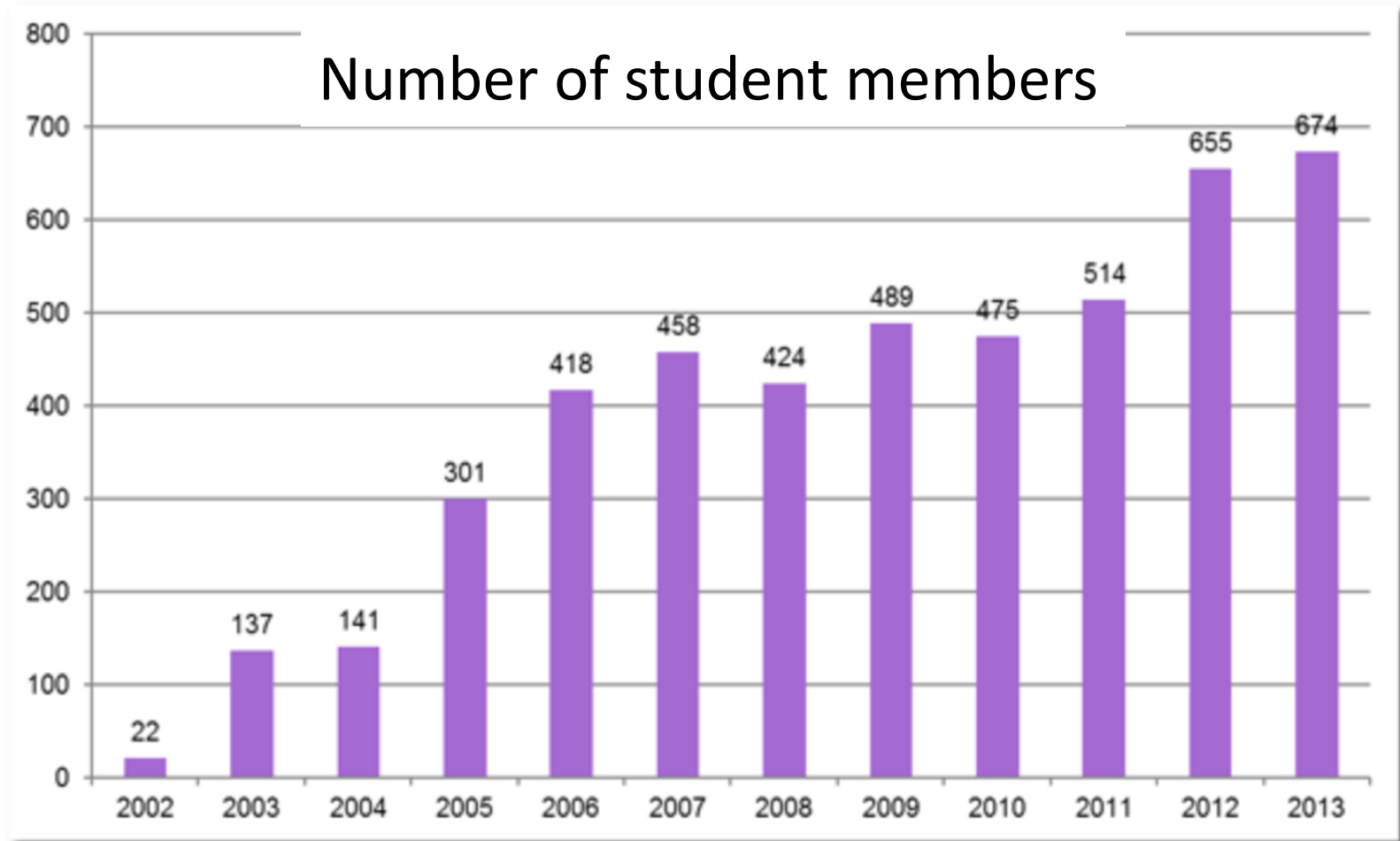
UNISEC Student Organization



UNISEC Alumni Society

Student activities

学生会員数の推移



Number of student member of UNISEC = 811 (Jan. 2015)

Number of student member of JSASS

(Japan Society for Aeronautical and Space Sciences) = 1031 (year 2014)

Achievements

More than 34 university satellites launched in 12 years



From CanSat to CubeSat, Nano-Satellite
From Educational purpose to Practical application

Achievements

(human resource development)

- Provide many engineers/researchers who have
 - Project management skills
 - Proficient knowledge of satellite/rocket and their subsystem design and manufacturing
 - Systems engineering and integration
 - “Guts” to tackle challenging problems
- To Japanese space sectors as well as **many other technological areas** such as automobile, aircraft, plants, electronics, construction, etc.

What enabled the Achievements of UNISEC?

- UNISEC provided university students with a
- Platform - **opportunities to observe and exchange**;
What other universities achieved and how, leading to
 - strong motivation (we can do something similar!!)
 - hints of achieving something (rocket, satellite, CanSat,--)
 - competitive feeling (if they can do it, we can do it better !!)
- Highly motivated leading persons (such as professors) continually have had to consider what they can achieve even without enough resources.

Conclusion

- Since 2002, UNISEC has been successful to provide valuable engineering talents to Japanese society
- Supported by individual, corporations, government, agency
 - But most of all, students
- UNISEC is still struggling
 - Challenge continues