

School of Creative Science and Engineering, Graduate School of Creative Science & Engineering

Department of Architecture/Major in Architecture

Department of Modern Mechanical Engineering/

Major in Modern Mechanical Engineering

Department of Industrial and Management Systems Engineering/

Major in Industrial and Management Systems Engineering

Major in Business Design & Management

Department of Civil and Environmental Engineering/

Major in Civil and Environmental Engineering

Department of Resources and Environmental Engineering/

Major in Earth Sciences, Resources and Environmental Engineering

Division of Socio-Cultural Studies



In 1889, his right leg was amputated in a bombing. After this attack, with an improvement on the American A.A. Marks Company's product, his artificial leg was considered as the most advanced instrument of the time. Shigenobu Okuma's artificial limb became a model for our country's prosthetic manufacturing technology.

history

President Okuma Shigenobu

established the Department of Science and Technology in 1908.

machinery	→ Modern Mechanical Engineering and
mining	→ Industrial and Management Systems Engineering
electricity	→ Environmental Resources
civil engineering	→ Earth Sciences, Resources and Environmental Engineering
architecture	→ Architecture
applied chemistry	

The decision was made to establish the above six departments.

Among these six, the four departments are the origin of the current five departments of the School of Creative Science and Engineering.

People, Life, Environment.
Creating New Scientific Technology
and Realize a Truly Prosperous Society

Department of Earth Sciences, Resources and
Environmental Engineering
"saving **humanity** from environmental and
resource problems.

Department of Architecture
Bringing happiness to **people** through
familiar space design

Department of Industrial and
Management Systems Engineering
"Bettering **society** through systems and
structures.

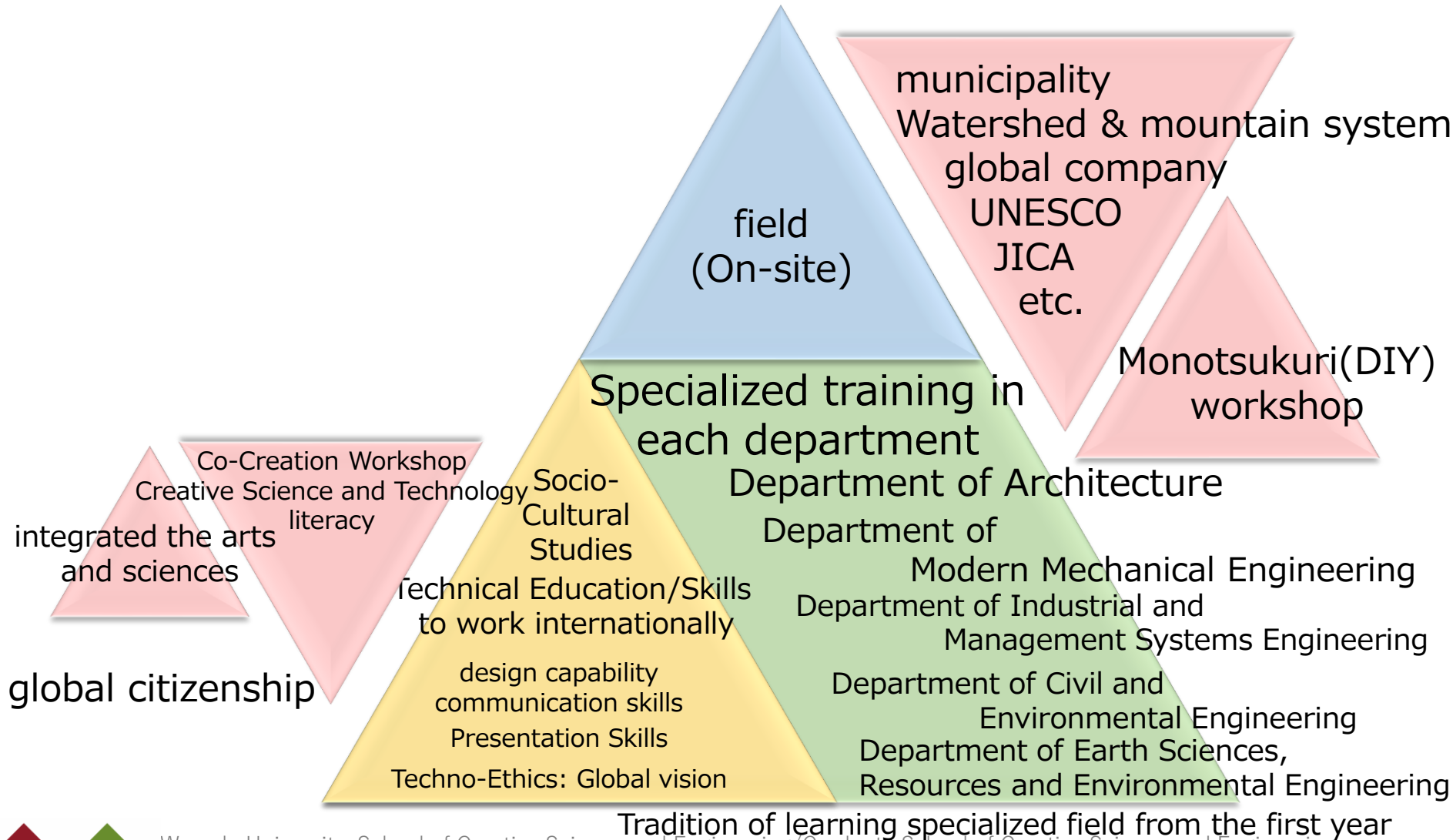
Department of Modern Mechanical Engineering
Changing the **world** with new machine
and AI technology

Department of Civil and Environmental Engineering
Building a society that is resilient to **disasters**
and in **harmony** with the environment

idea

Pursuit of Diverse Abundance

Training of international engineers and researchers
Qualifications (JABEE, International architect licences, PE, etc.)



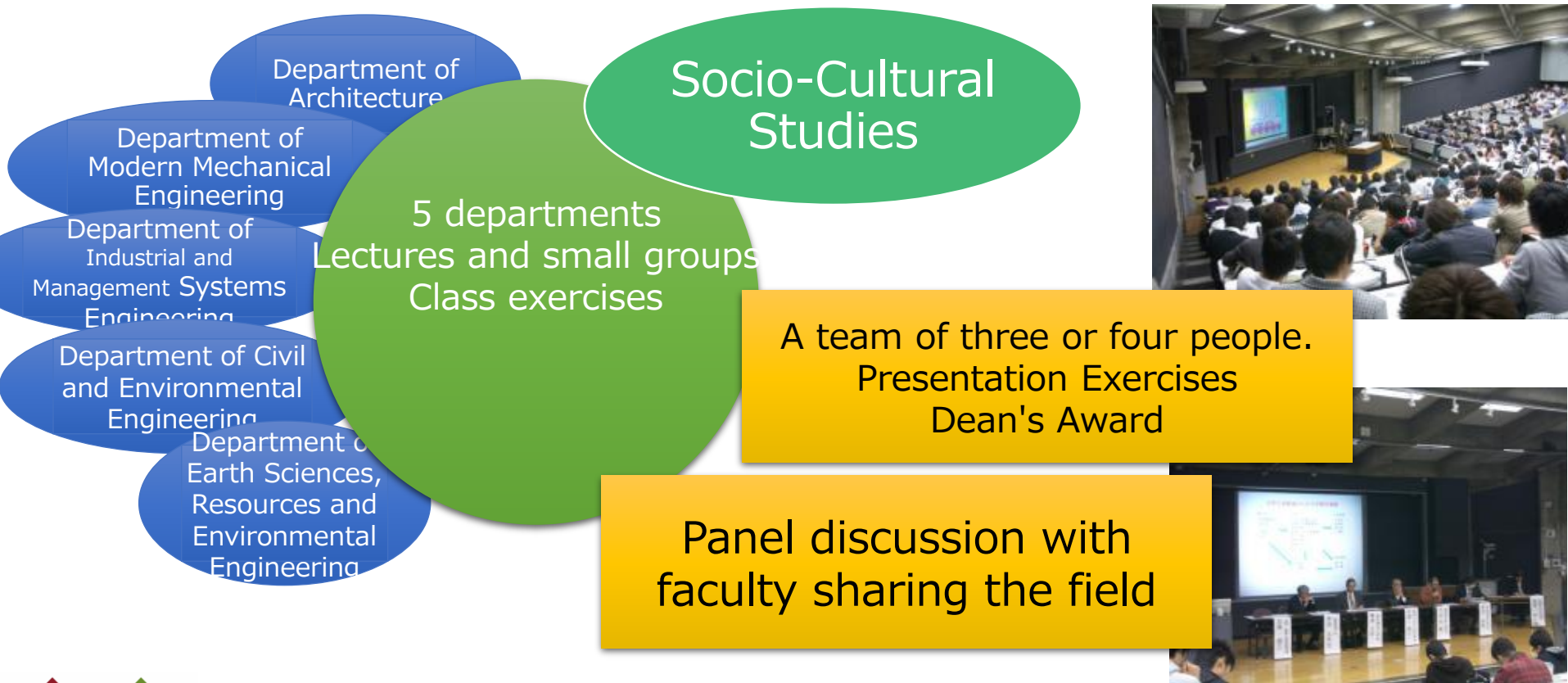
Creative Science and Engineering Literacy (the first-year students)

An essential tool for students of creative science & technology

Intellectual property, ethics for engineers

Risk communication and cross-cultural communication

Presentation, communication and writing skills



Creative Science and Engineering Co-Creation Workshop (2nd year and above)



Cross-disciplinary
practice classes

Simulated planning and
product development
meetings with guest
lecturers from
corporations

Companies we have worked
with includes

Kajima Corporation,
Taisei Corporation,
AXS Satow Inc.,
Yamashita Sekkei, Inc.,
Bosch, CyberAgent,
Toshiba, Rohm, JRTT,
JAPEX, the Japan
Research Institute,
Kyocera, Yamaha, etc.

School of Creative Science and Engineering Graduate School of Creative Science and Engineering

Variety of fields





Surveys on the living environment in developing countries and proposals for improvement

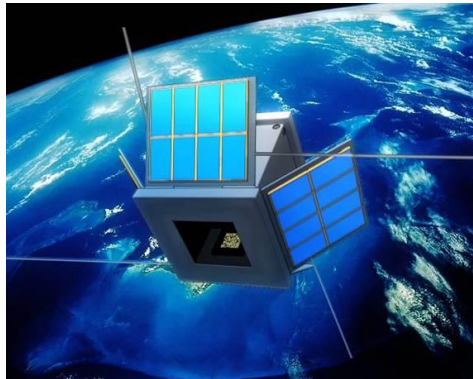




Developing human resources to promote interdisciplinary projects

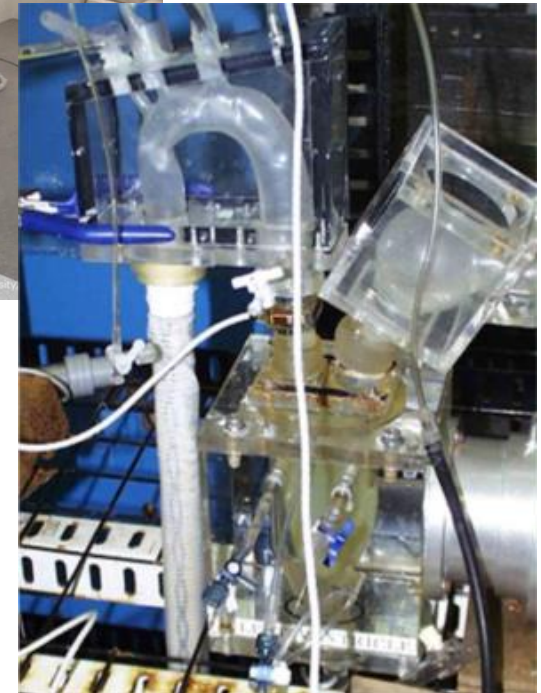
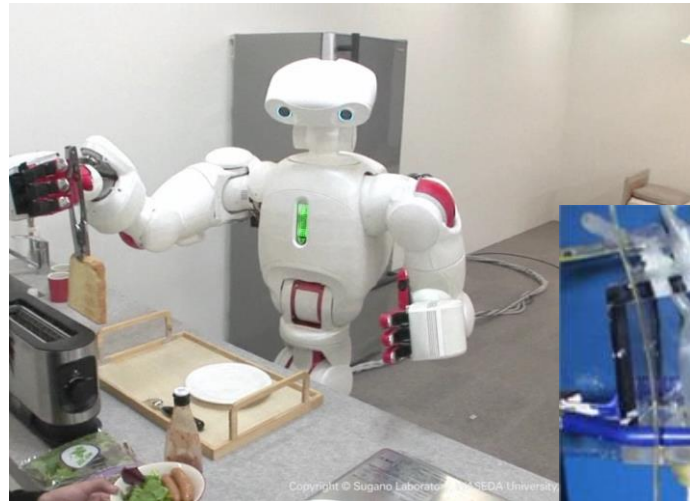


Environment / Energy
next-generation cars



Design / Co-creation
Space development

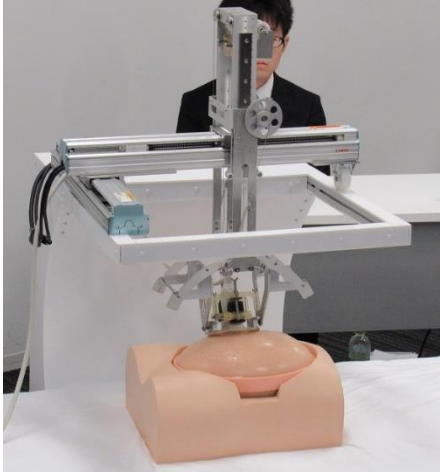
Robotics/Medical/Welfare



Supernumerary Robotic Limb “3rd Arm” towards Human Augmentation



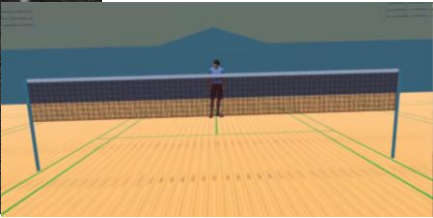
VR badminton



Tele-prenatal
robot

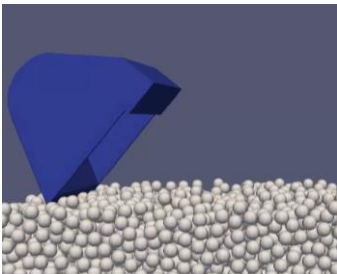


High precision
robotic surgery for
progressive cancer



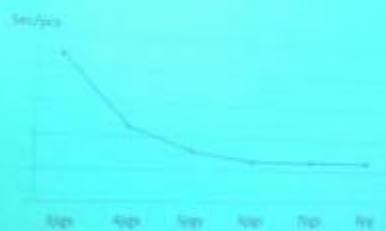
Intuitive interface for
unmanned construction

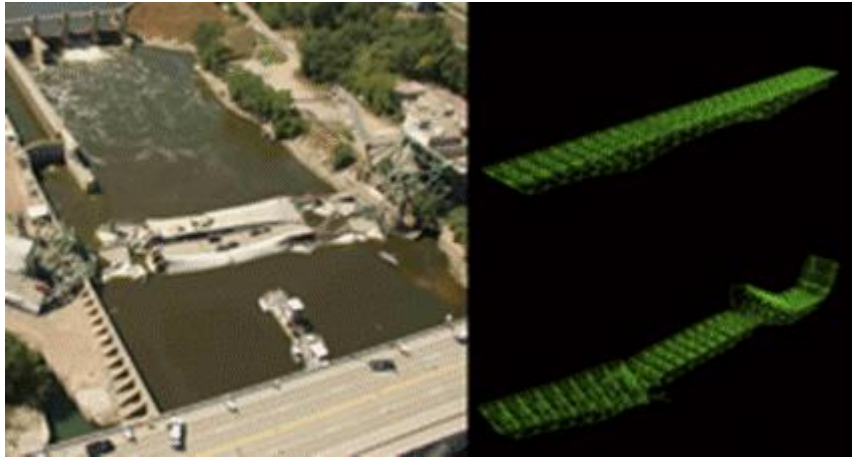
Improving productivity and energy-efficiency -Real Machinery vs Scale Model vs Simulation-



4.4.3 The relation of the number of jigs and cycle time

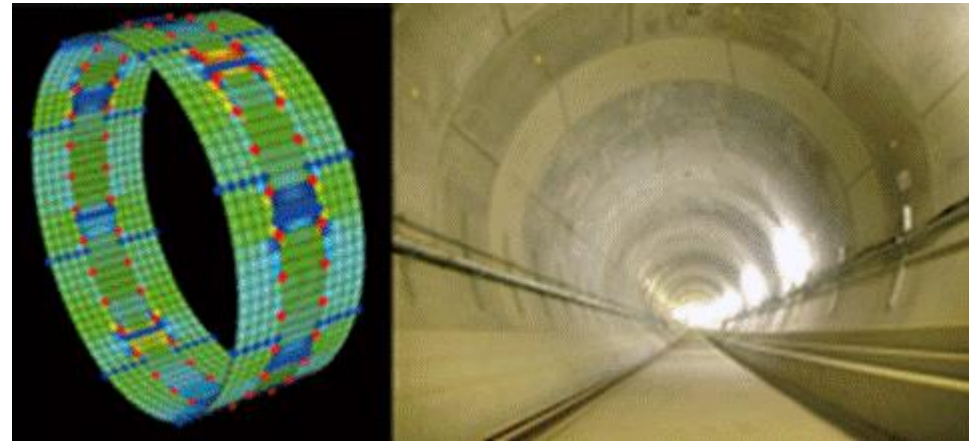
- In the theory, the relation of the number of jigs and cycle time is this graph.





Bridge Collapse

Structural Analysis of tunnels



Connections between train stations and town area

City Planning

PLANNING & MANAGEMENT

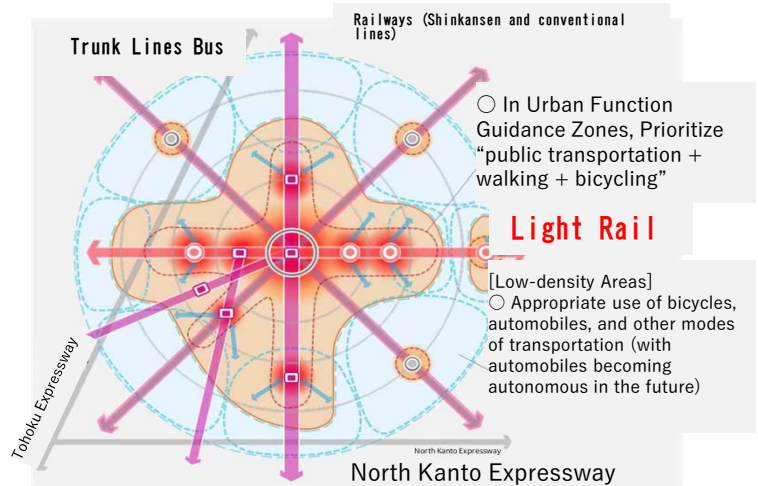
“People” and “Cities”: Analysis and Design for the Future

Japan's First Entirely New LRT Line Begins Operation

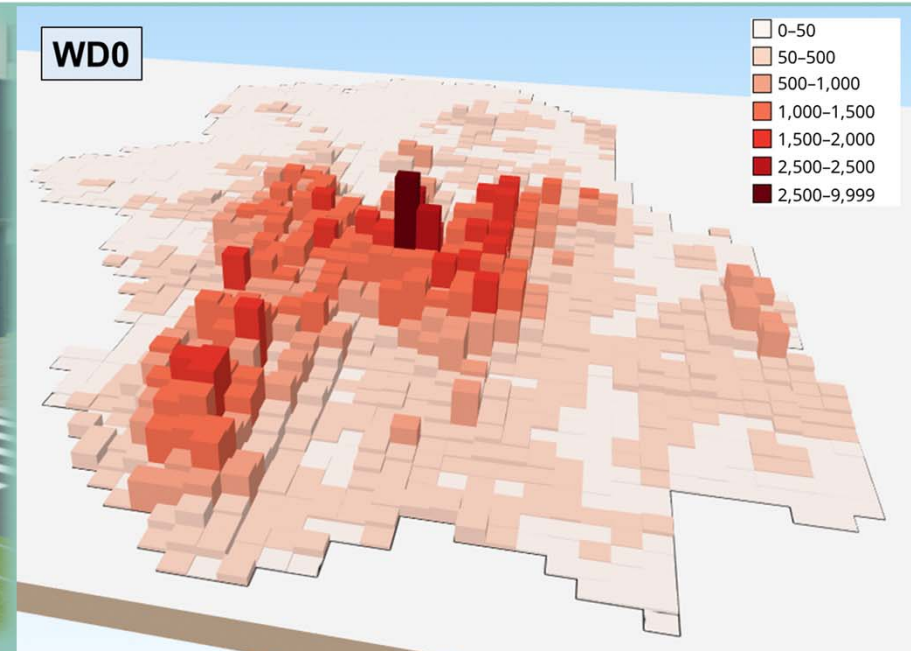
Proposal for a New Sustainable Urban Model

A New Urban Model for a Society with a Declining Population

network-based
compact city



Transportation-Oriented Urban Development Utilizing LRT, Expected to Contribute to Urban Regeneration and Reduce Environmental Impact



Computer-Generated Visualizations of Future Cities

Analyzing Human Mobility

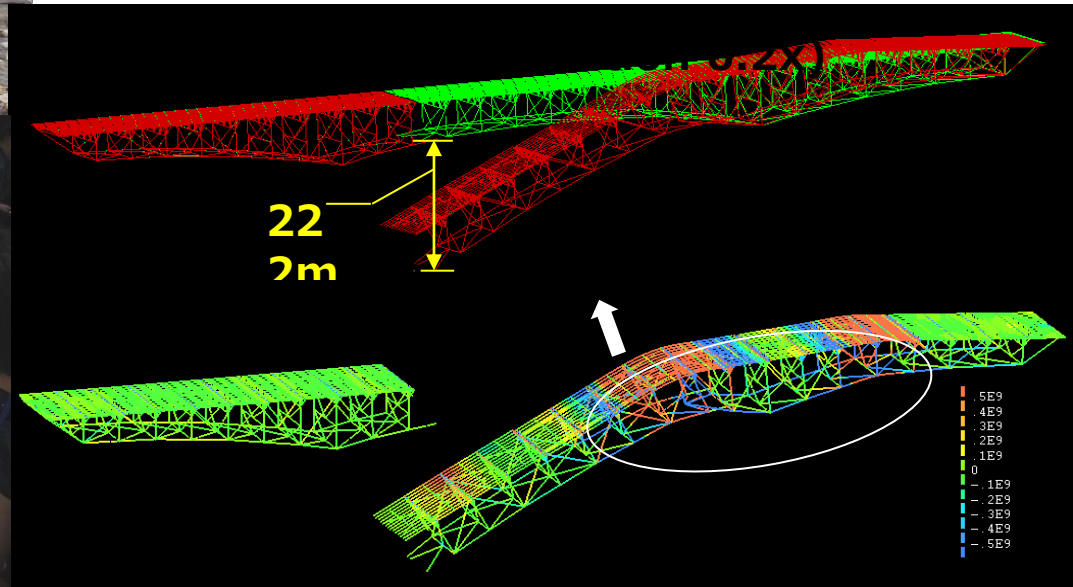


Waseda University, School of Creative Science and Engineering / Graduate School of Creative Science and Engineering
School of Creative Science and Engineering, Waseda University



Surveys on Damage Caused by the Great East Japan Earthquake

Fracture mechanism analysis of bridges



Creating a landscape plan with residents



Understanding the current situation through actual measurement

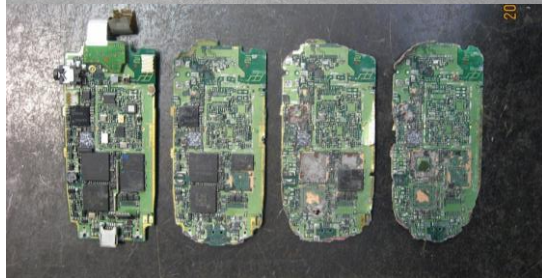
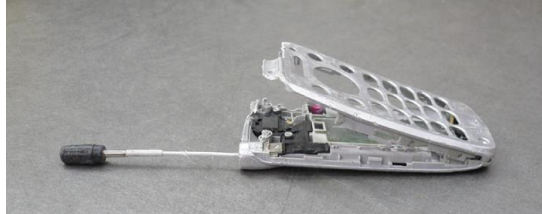
**Survey on PM2.5 at the top of Mt.Fuji (World Heritage)
Heat Island Phenomenon and Energy Consumption**



**Abu Dhabi
Offshore
Oil Field**



**Development of Metal Concentration and
Separation Process from Small Home Appliances**



**Green hydrogen
production plant from
aluminum waste**



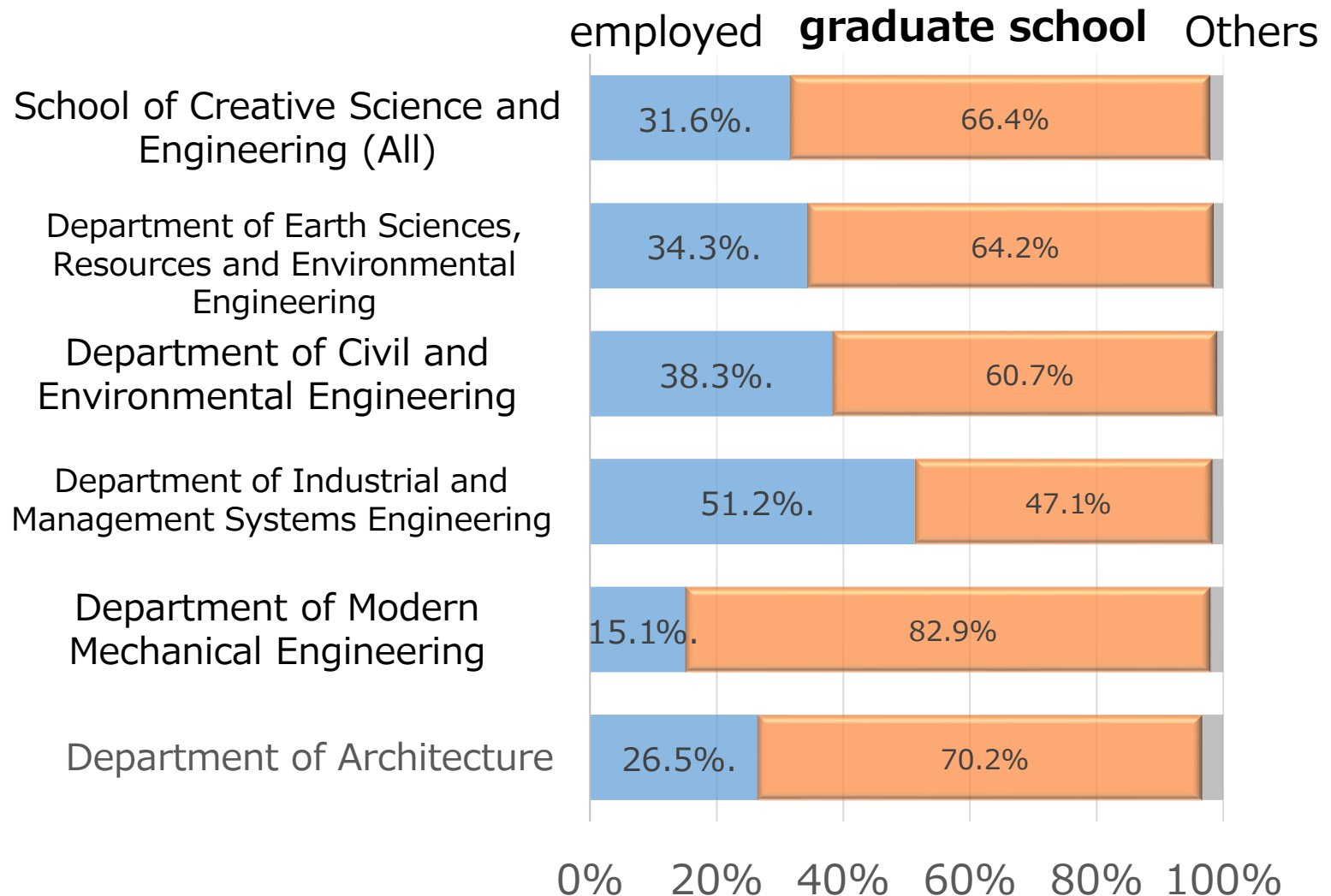
Small automatic solar-powered rainwater collector

School of Creative
Science and
Engineering
Graduate School of
Creative Science and
Engineering

Graduate School and
Employment



Career paths for Undergraduate students



Various Scholarships and reciprocity

- **On-campus scholarships with a variety of benefits**
 - Okuma Memorial Scholarship (Academic Excellence Award: 640,000 yen))
 - Azusa Ono Scholarship (financial support for students in need: 400,000 yen)
 - Alumni benefits, faculty and staff benefits, co-op benefits, etc.
- **Limited to Creative Science and Engineering Students**
 - Katsumi Yokomizo Scholarship (for Industrial and Management Systems Engineering students: 300,000 yen)
 - Scholarship for Earth Sciences, Resources and Environmental Engineering students(300,000 yen)
 - Tohdo-kai (Civil and Environmental Engineering: 370,000 yen)
 - Miyashita Takahiro Scholarship (Modern Mechanical Engineering or Expedition Club: 150,000 yen)
 - Murano Togo Scholarship (Architecture students(Master or Doctor) : up to 600,000 yen)
 - Many other scholarships for science and engineering students
- Approximately 23% of first-year undergraduates (55% of applicants) receive scholarship
- Approximately 65% of graduate students receive scholarship
- All qualified applicants for scholarship from Japan Student Services Organization (Class 1 and 2) were accepted.
- Of all the scholarship recipients, 80% are JASSO scholarships (loans).
About 30% of those who requested a repayment waiver were fully or half exempted. (Only graduate students are eligible for repayment exemption.)

A well-organized career support



Waseda University Co-op's Joint event for
Waseda University Students of Science and Engineering



The strongest alumni association in science and engineering field

- Department of Architecture
 - Tomon Architectural Association (25,000 members)
- Department of Modern Mechanical Engineering
 - Kiyu-kai (20,000 members)
- Department of Industrial and Management Systems Engineering
 - Waseda Society for Industrial and Management Systems Engineering (10,000 members)
- Department of Civil and Environmental Engineering
 - Tohdo-kai (6,000 members)
- Department of Earth Sciences, Resources and Environmental Engineering
 - Waseda Society for Earth Sciences, Resources and Environmental Engineering (4,000 members)

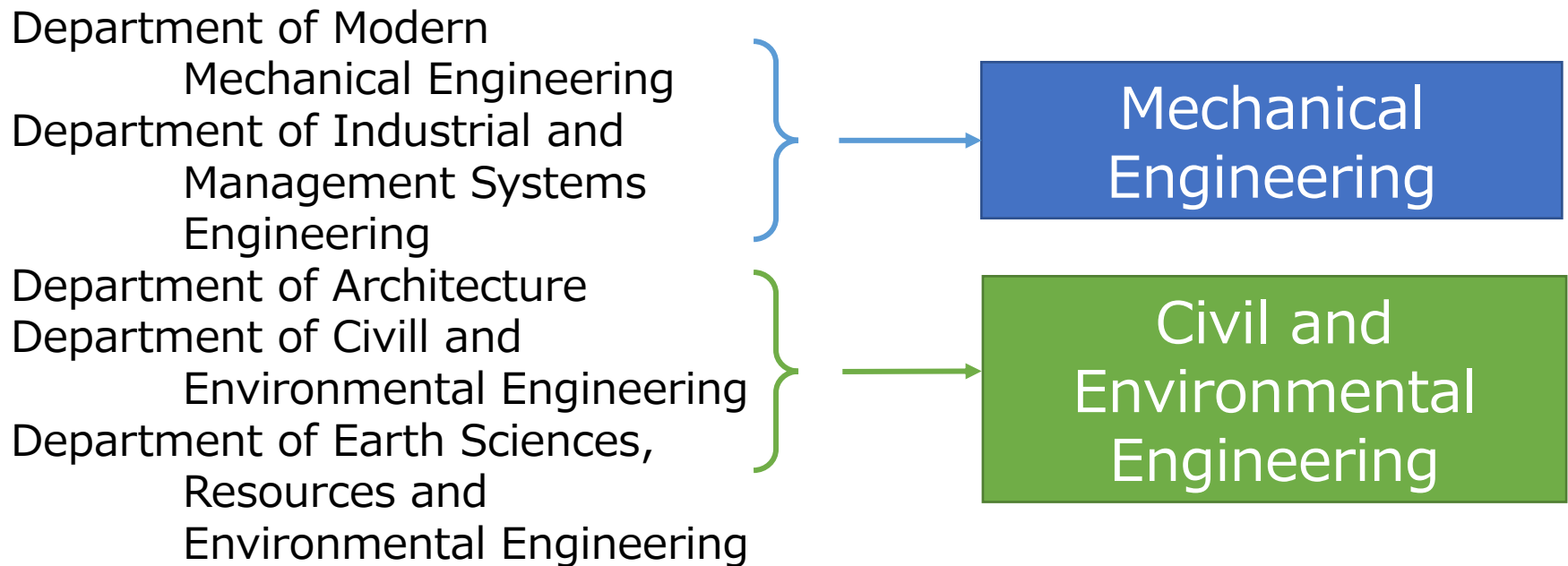
School of Creative Science and Engineering Graduate School of Creative Science and Engineering

New English Language Degree Program



The English-based degree Program

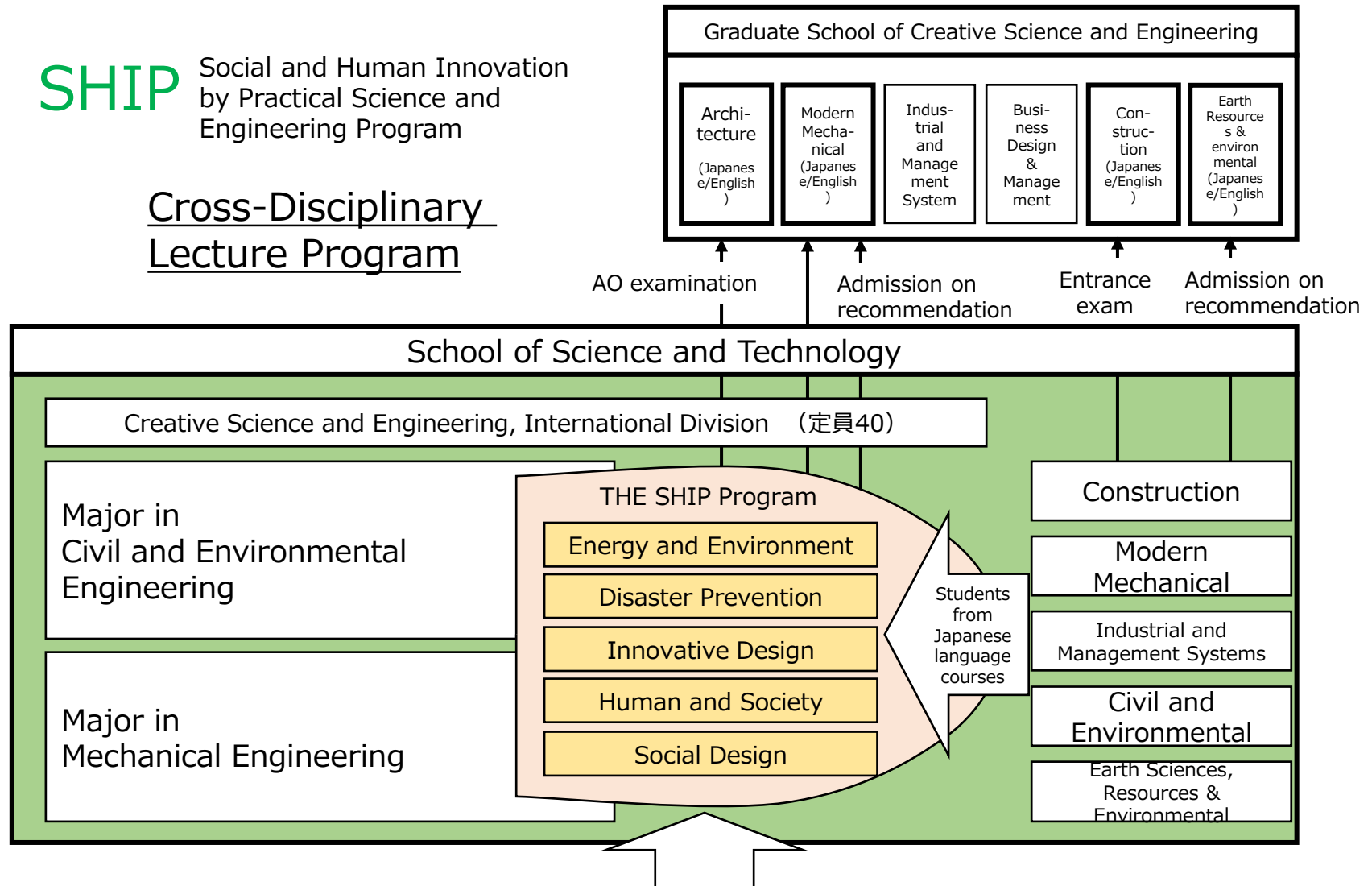
English-based degree programs
launched in April 2018



The English-based degree Program

SHIP Social and Human Innovation
by Practical Science and
Engineering Program

Cross-Disciplinary
Lecture Program

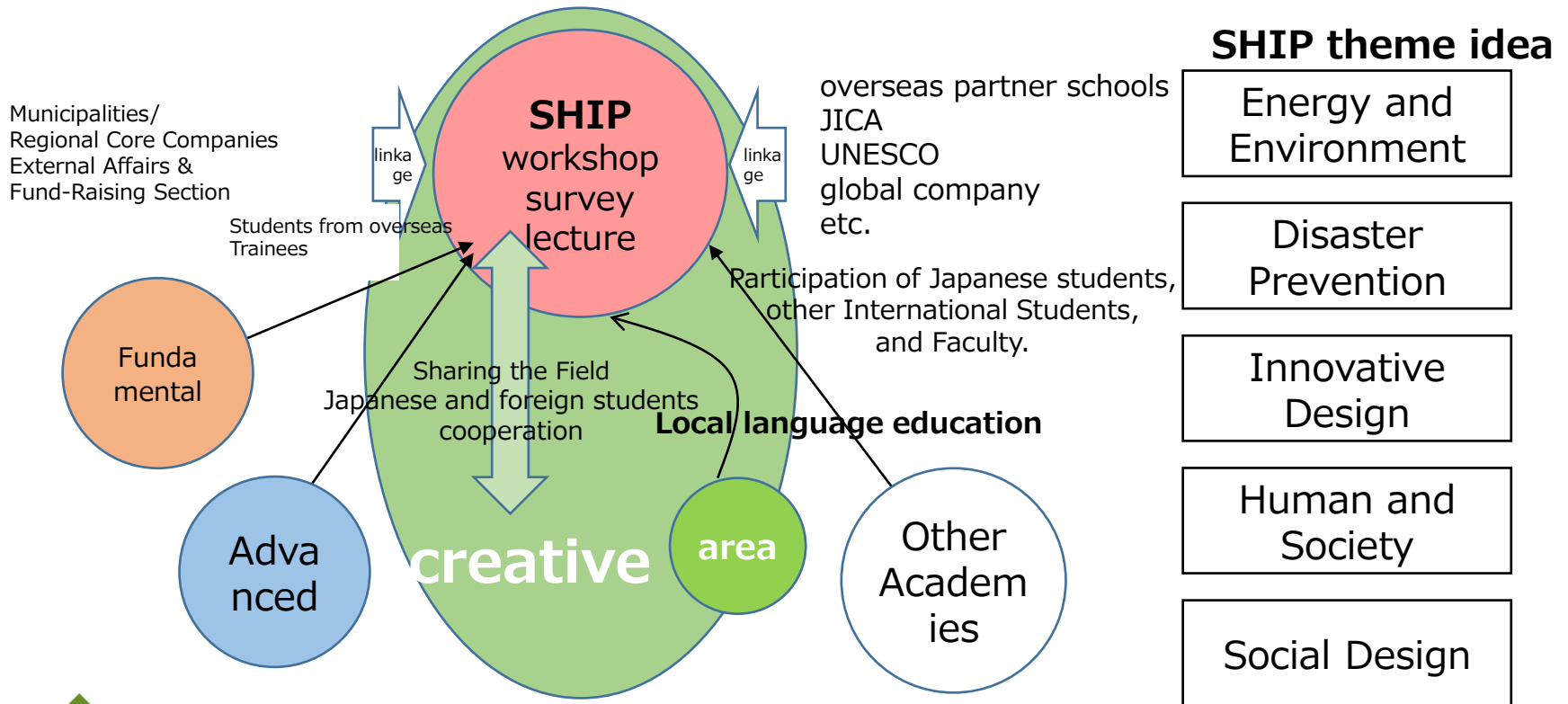


Waseda University, School of Creative Science and Engineering/Graduate School of Creative Science and Engineering
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SHIP Curriculum (10 credits)

SHIP Social and Human Innovation by Practical Science and Engineering Program

- ✓ Research Planning and Skill A, B
- ✓ SHIP Field Practice A, B



The booklet “創造人(Creators)” tells you more about the School of Creative Science and Engineering, which can be downloaded from our website. It will deepen your understanding of our five departments, our faculty members' researches.



43

人の生活がもっとよくなる
——社会環境工学の目的は社会を
より良くすること

社会環境工学科

佐々木邦明 教授

フィールド

都市計画、行動分析、交通工学

創造理工学部

検索

