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Reflections on RRI Education and Teaching in Asia

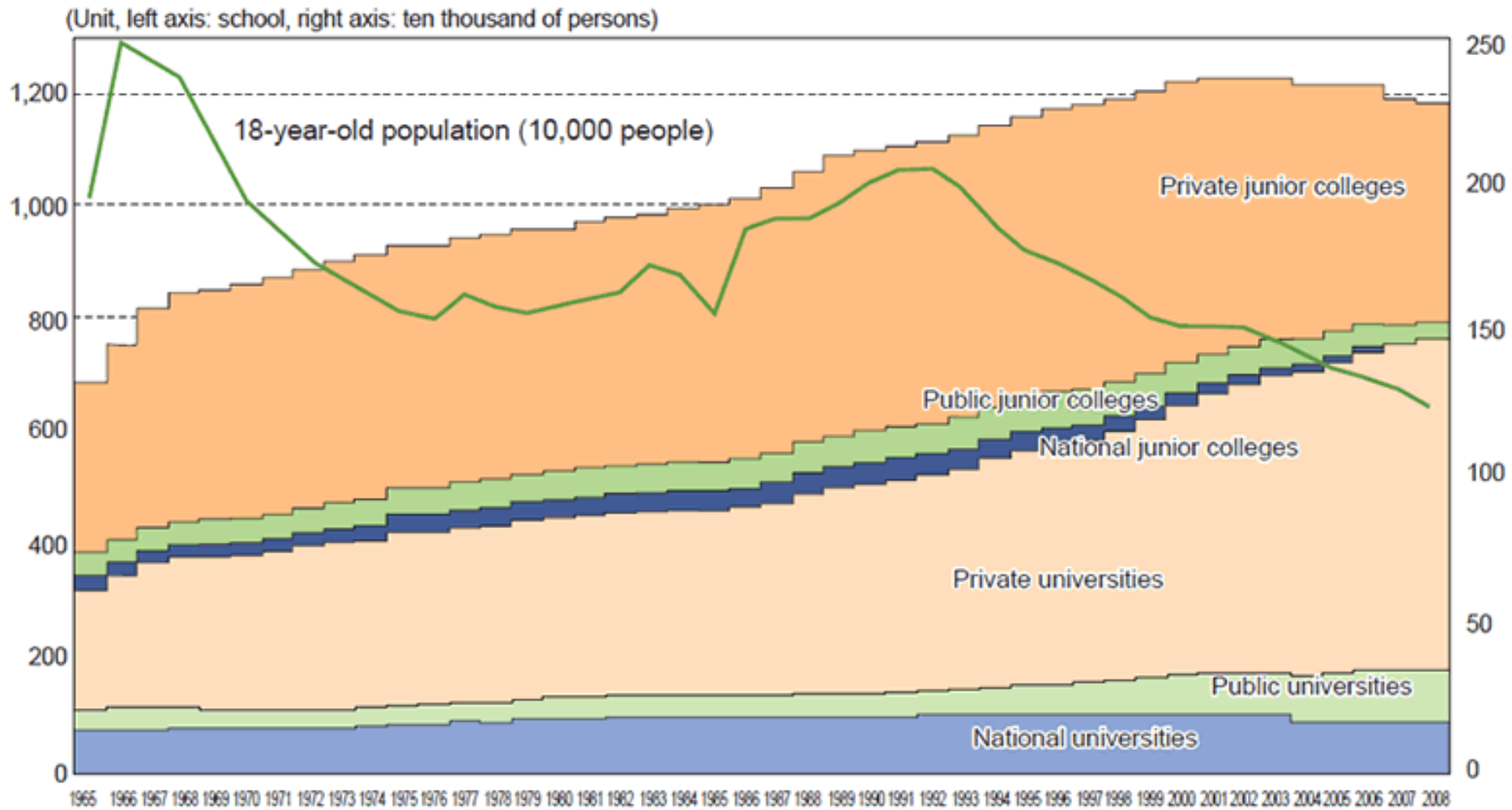
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Universities in Japan

History of Universities in Japan

- Modelled after European universities, higher education officially started in late 19C, with the foundation of the first imperial university in 1886.
 - Currently, there are 86 national universities, 88 public universities, and 601 private universities in Japan.
 - The enrollment rate has now reached 50%.
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Number of Universities in Japan



- Competitive environment and deregulation for universities in the context of knowledge globalization and declining birthrate
 - Needs for excellent education and research and autonomous and agile management
 - University evaluation systems over the past 15 years have encouraged organizational reform as complementary to deregulation
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University Social Responsibility (USR)

- USR is a philosophy or principle for social movement for the sustainable development of the local and global community
- This underlines an ethical collaboration not only with the university community but also with other societal communities in terms of stakeholder involvement

Universities have deployed a number of efforts to maintain their autonomy, but such efforts

1. did not necessarily direct to university reform and raise **staff awareness and sensitivity**
 2. created a **gap between education and research functions**
 3. paid less attention to **comparative advantages** over other universities
 4. premised **on-campus resources** in university planning and policymaking
 5. tended to be passive about **community activities and national policy**
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University Reform Action Plan (June 5, 2012)

1. Reform of tuition and entrance examination
 2. Human resources for global society
 3. Centre of Community (CoC)
 4. Prominent research impacts and innovation
 5. National university
 6. Information system and infrastructure
 7. Funding support
 8. University quality assurance
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Whither University Reform?

- Widening the gap between education and research function?
 - Segregation of research universities and CoC-based universities?
 - Urban vs. local
 - More difficult to conduct transdisciplinary research due to functional differentiation of universities?
 - CoC as an ideal?
 - universities have no capacities to address local issues and evaluate outcomes of the activities
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Research Policy Perspective

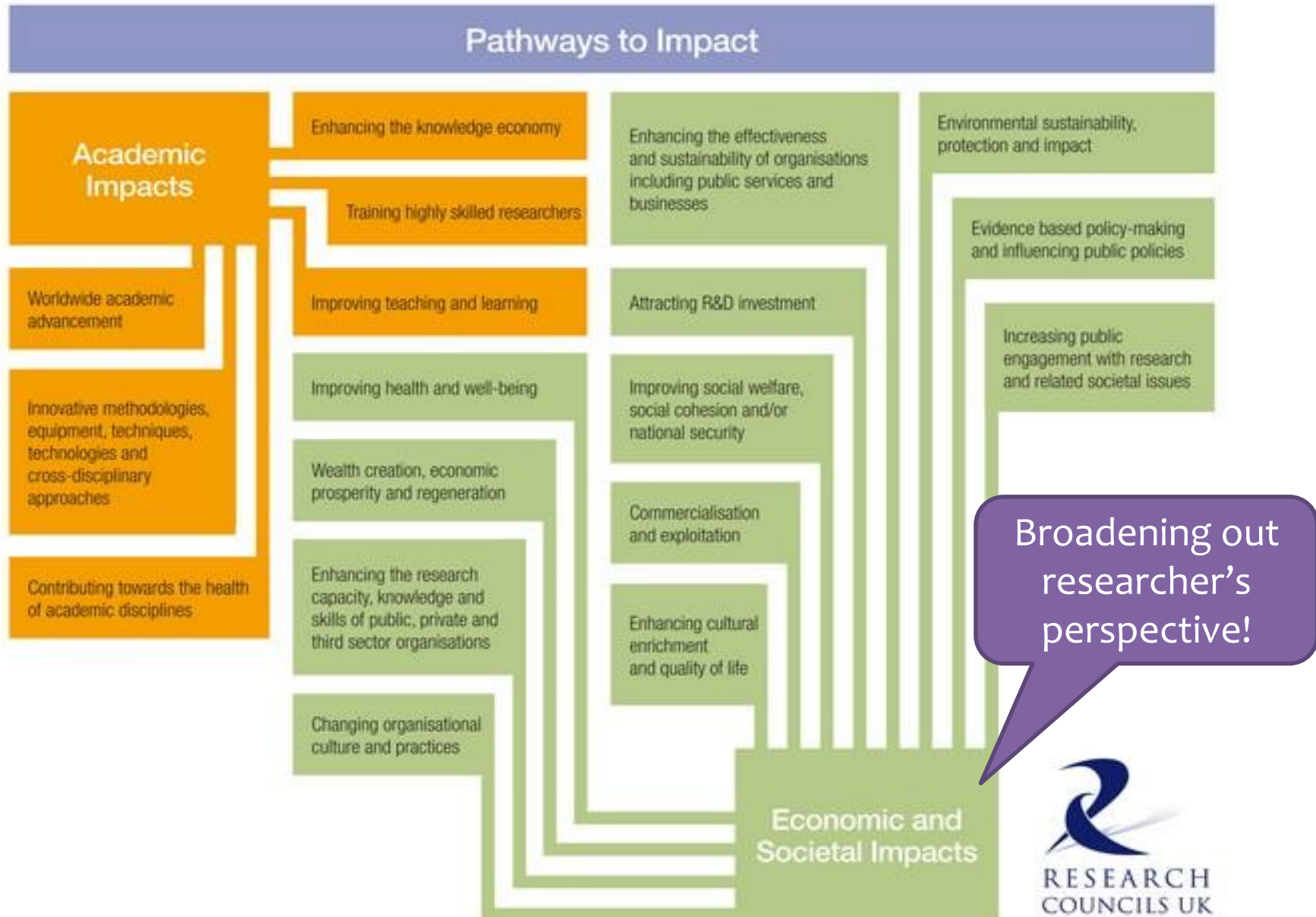
Intellectual merit

- Advancing knowledge in some field of study

Broader Impacts

- Benefiting society
 - Advancing specific societal goals
 - Training
 - Diversity
 - Infrastructure
 - Dissemination / Public Awareness
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Pathways to Impact in RCUK



RRI Education and Teaching in Japan

- Many courses on ethics, sustainability or gender equality
 - Few courses on science, technology and society (STS), including technology assessment (TA) and ethical, legal and social implications (ELSI) of research
 - No interaction between higher education & secondary education
 - However, such education usually “points out” ethical dilemmas or controversies, but does not necessarily consider how science-based issues reflect our moral principles and social ethics (cf. Zeidler et al. 2005)
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STiPS: Program for Education and Research on Science and Technology in Public Sphere



Social Responsibility of Research Communities

- Duality of power in research – universities and “research communities” (Ebara 1997)
 - Professional associations (e.g. medicine, engineering) are more organized, but academic societies react to the society on an *ad hoc* basis
 - Largely delegating scientists’ social responsibility to universities, research communities exercise latent power over the scientists
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Pilot Survey on Academic Societies

- 52 Japanese societies in life science
 - Review earlier literature on evaluation criteria for RRI
 - Based on publicly available information from homepages
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Indicators for RRI in EU

Criteria	Performance indicators		Perception indicators	Key actors
	Process indicators	Outcome indicators		
Public engagement				
Gender equality				
Science education				
Open access				
Ethics				
Governance				
Sustainability				
Social justice/inclusion				

RRI Rubric

Socially relevant and Solution oriented

Sustainability centered and Future scanning

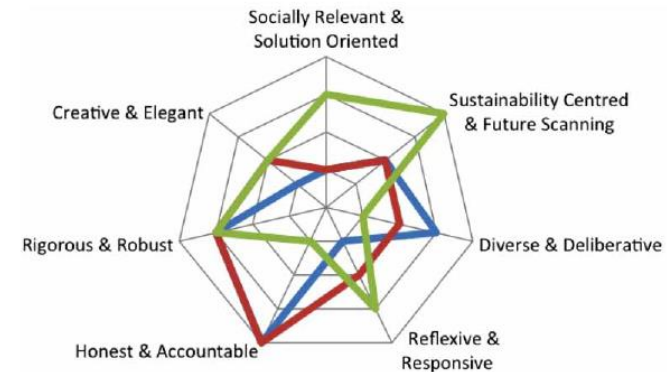
Diverse and Deliberative

Reflexive and Responsive

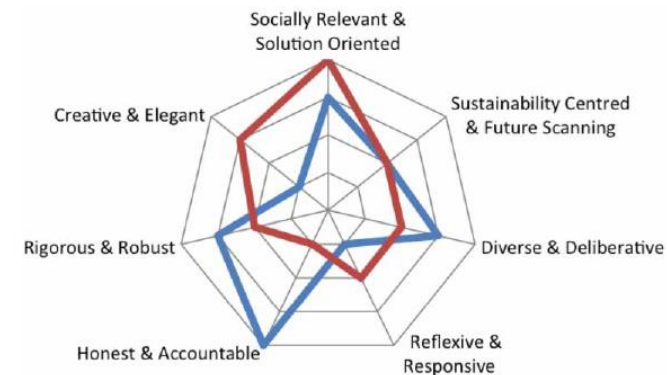
Rigorous and Robust

Creative and Elegant

Honest and Accountable



Comparing projects



Comparing timepoints

Wickson & Carew (2014)

Results

Criteria			
Guideline		No.	%
	Compliance	9	17.3
	Human rights	7	13.5
	Privacy protection	12	23.1
	Research data management	9	17.3
	Fabrication, falsification and plagiarism (FFP)	15	28.8
	Informed consent	8	15.4
	Hazard or disadvantage to research subject	9	17.3
	Social trust	8	15.4
	Researcher's social responsibility and conscience	7	13.5
	Bioethics (incl. medical or clinical ethics)	8	15.4
	Animal testing	13	25.0
	Research ethics and education	14	26.9

Results (cont'd)

	No.	%
Conflict of interest	17	32.7
Dual use	0	0.0
Gender equality	29	55.8
Science education	24	46.2
Care for handicapped / minorities	1	1.9
Antidiscrimination	5	9.6
Social communication	32	61.5
Open access, open science	41	78.8
In-house discussion forum	14	28.8



Discussion

- For universities and research communities
 - Globalization of research could enable Asian researchers to bypass their local academic societies and possibly national commitments in favour of participation of international efforts (e.g. Yoshizawa et al. 2014)
 - More careful attention to handicapped/minorities, antidiscrimination and dual use
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- Critical, reflexive capacity is crucial for understanding the role and responsibilities of one's own field of research
- Students as co-inquirers; teacher as a facilitator
- Important obstacles in RRI education and teaching
 - lack of support at the level of management of HEIs
 - lack of incentives for the individual researcher

- *Satoyama*: border zone or area between mountain foothills and arable flat land
 - Opening up both universities and research communities
 - Local university
 - as an anchoring institution to address and solve societal problems in a sustainable way
 - as an attractive space for external experts to meet other experts and stakeholders and find a new research or project agenda
 - as a host for a transdisciplinary research conference (cf. Gordon Research Conferences)
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Higher Education Institutions & Responsible Research and Innovation

- “Organizations and society for responsible research and innovation” (OSRRIs) project (2014-17), funded by Japan Society for the Promotion of Science (JSPS)

<https://sites.google.com/site/osrrijsps/english>
