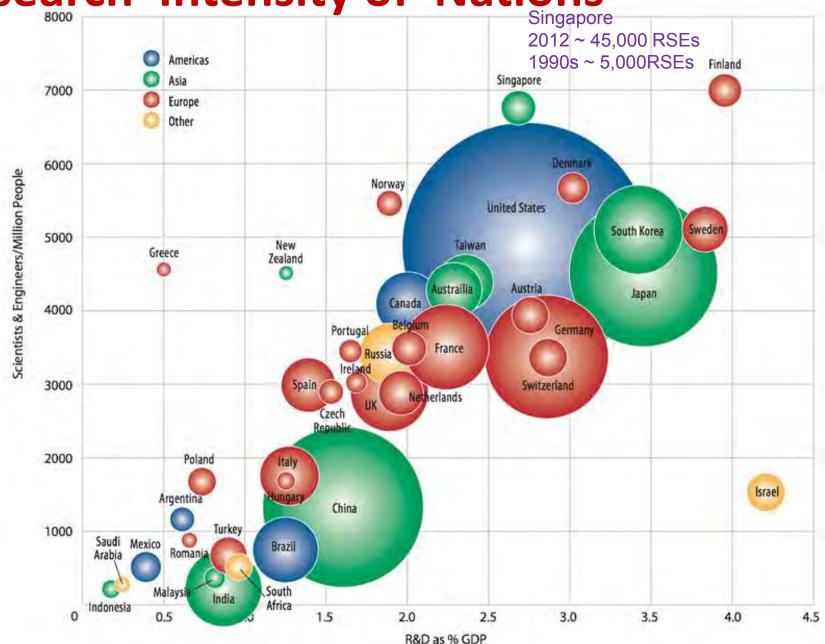


Research Intensity of Nations



The Changing Face of Innovation, Seeram Ramakrishna, 2011, World Scientific Publishers

Quality Assurance Framework for Universities

Three-step Approach

Institutional Self-Assessment

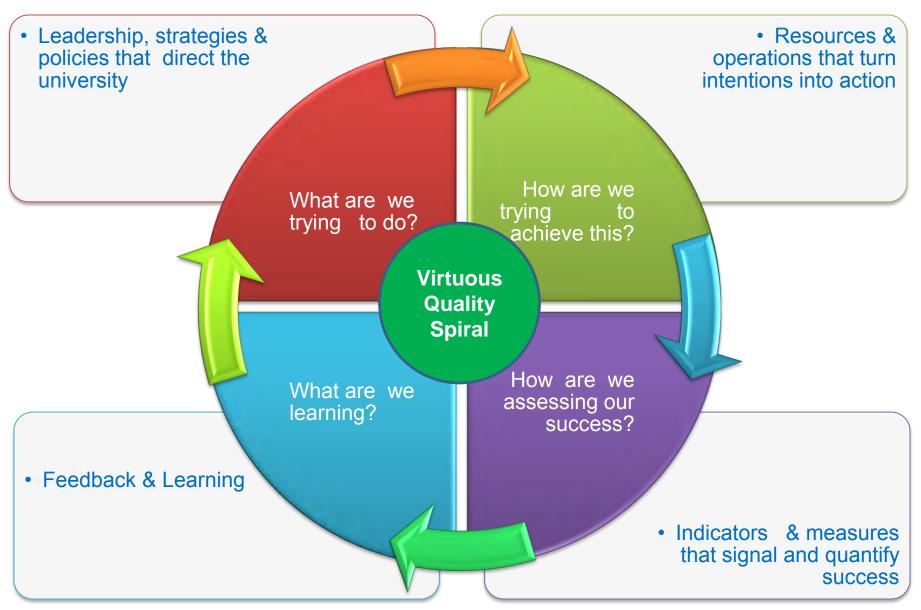
External Validation

Feedback and Development

Take Action

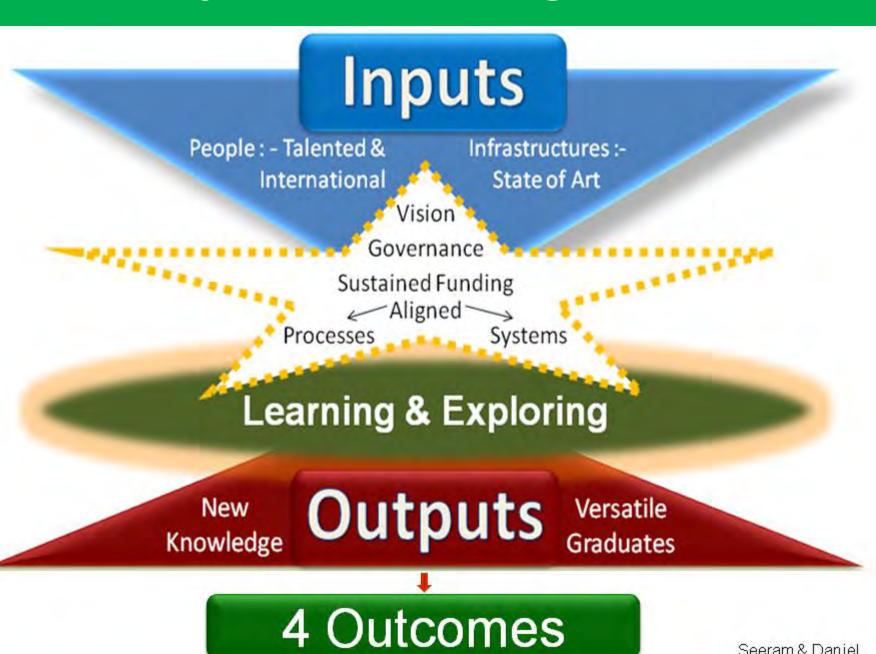
Source: MOE, Singapore

Quality Assurance Framework for Universities



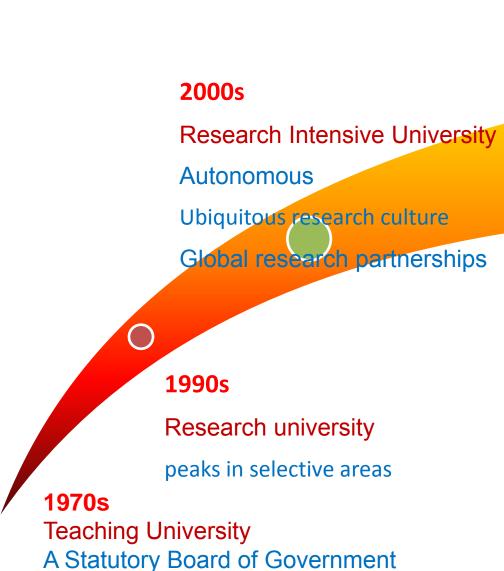
Source: MOE, Singapore

Rooting Culture of Excellence @ Universities



Seeram & Daniel

National University of Singapore



2010s

Global Research University (GRU)

Frontier research & global leadership

Innovation & entrepreneurship

World-class universities in various nations are pursuing similar paths

Evolution of Private Education Regulation

BEFORE NOW Before 2002 2003 - 2004 2004 - 2009 **2010 - Present ERF EduTrust Unregulated SQC - PEO Case Trust Private Education** Number Number **Number Certified:** 4-years EduTrust: Registered About 600 Registered with MOE: with CPE: 1-year EduTrust 347* Provisional: 70* 1,200++

Enhanced Standards Enforced by Council for Private Education, CPE

Higher Standards

EduTrust Certification

- To further raise standards in industry

Enhanced Registration

- To set minimum standards for Private Education Institutions (PEIs)

- Voluntary; impact PEIs recruiting Student-Pass Holders
- More prescriptive criteria in academic & organizational processes/structures
- Provisional 1-year, 4-years EduTrust certification and EduTrust Star.
- Mandatory requirement for <u>all</u> PEIs
- Renewable registration
- PEI obligations in advertising control, dispute resolution, information disclosure
- Graduated penalties and higher levels of monitoring and enforcement

Movement in Private Education Institution

- > Tighter rules under the Advertising Code
- ➤ Raising Capabilities of Singapore's Private Education Sector through Process Innovation and Manpower Development

In order to meet the growing demand, PEIs are

Improving campuses; leveraging ICT

- **PSD** Academy
- Launching new programs relevant to today's worktorce
- Establishing new partnership collaborations
- Upgrading opportunities to the faculty members

Conclusions

- National policies & guidelines are in the catching up mode. There are concerns about the relevance and quality of tertiary education. Role of government is strategic.
- With regards to the quality assurance framework, one size fits all approach will not work
- > Benchmarking is a useful tool to promote diversified excellence
- Autonomy without adequate resources should not become the 'new normal'
- Internationalization at home and abroad to nurture talents for the globalized, new world
- Leverage ICT to improve management systems, education content quality, & the learning experience of students

Way Forward

(Public) universities

- Differentiate and continue to be relevant to the needs of society
- Deliver high quality
 education in areas needed
 the most & maintain the
 public nature of institution
- Nurture talents for globalized world

(Private) Universities

- Provide upgrading & training opportunities for academics
- Improve campus

 infrastructure by investing in
 better teaching facilities &

 equipment
- Transparency of information

Governments

- Set the framework for quality assurance; expectations in terms of level of resources, academic & organizational processes & structures
- Define obligations in advertising control, dispute resolution, information disclosure
- Graduated penalties and higher levels of monitoring and enforcement



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Academic leadership: National University of Singapore Vice-President (research strategy); Dean of Faculty of Engineering; Founding Director of Bioengineering; Founding Director of Nanotechnology Institute; Chairman of SERIS; Chairman PSB Academy Academic Board; Board member of several national organizations

Founding Chair of Global Engineering Deans Council; Vice-President of International Federation of Engineering Education Societies; Thinker and speaker on global trends of higher education, research & innovation facilitated by World Bank, EU, OECD, ASEAN, Governments, media organizations, think tanks, NGOs, etc.

➤ Academic Scholarship: Ranked among the world's top 30 authors, most cited materials scientists. Authored 5 books and ~ 500 peer reviewed papers with ~22,500 citations and h-index of 74. An elected international fellow of major professional societies and academies of Singapore, UK, India and USA