Higher Education and Internationalisation

2nd Seminar

Sharif University of Technology
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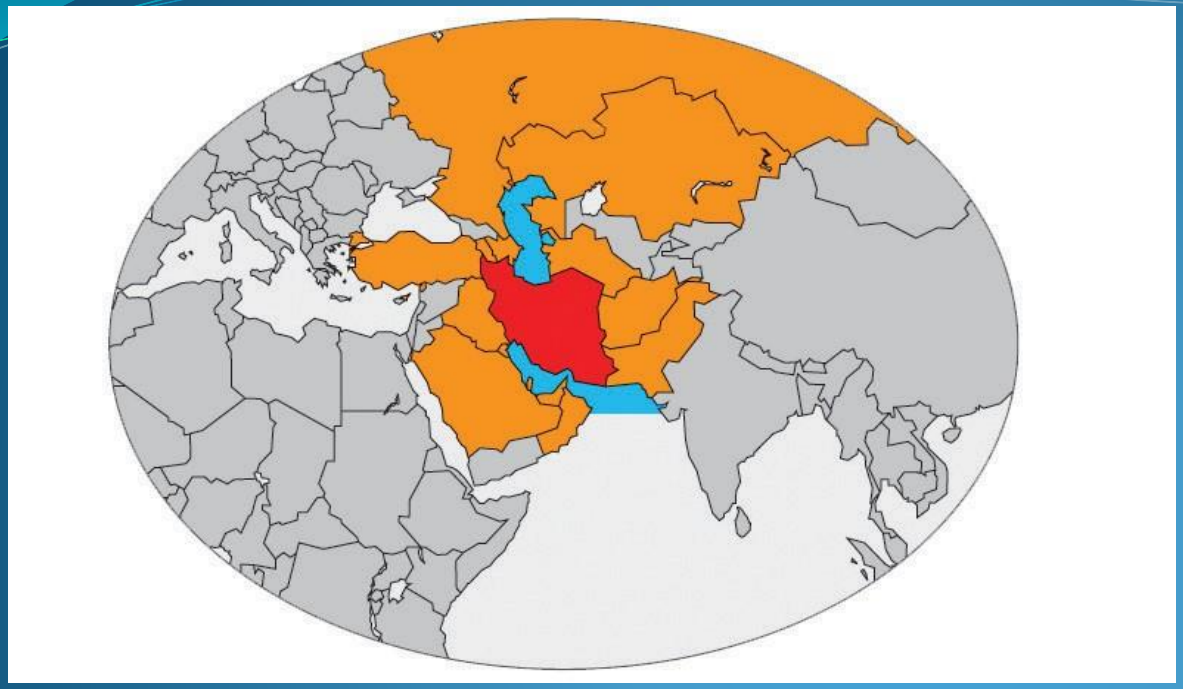
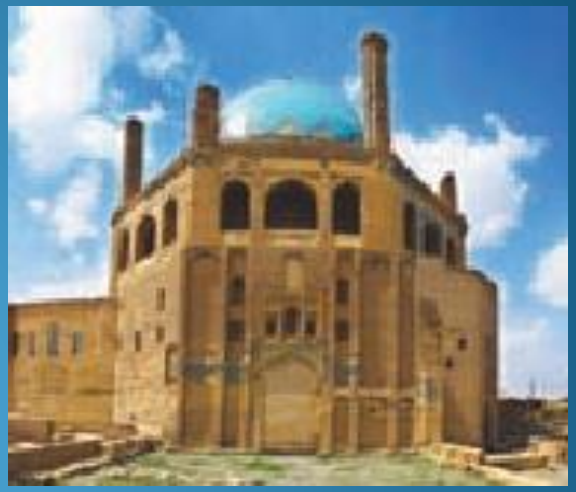
Outline

- Context: Iran and the Middle East
- Higher Education Landscape
- Knowledge Triangle
- University Governance and Verticals
- Students and Learning

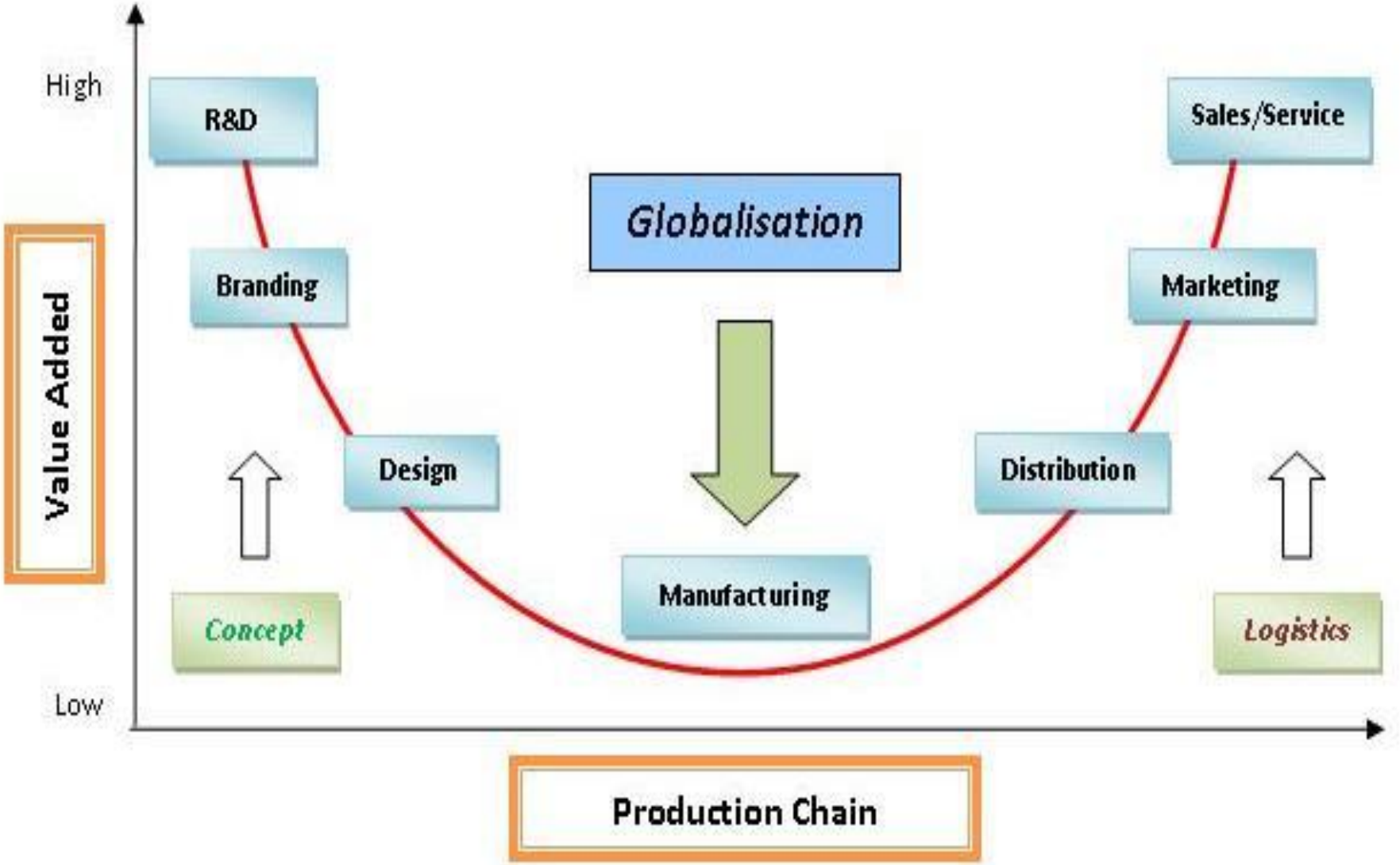
The Islamic Republic of Iran





Mineral Exports and Growth

The "Smile" Curve



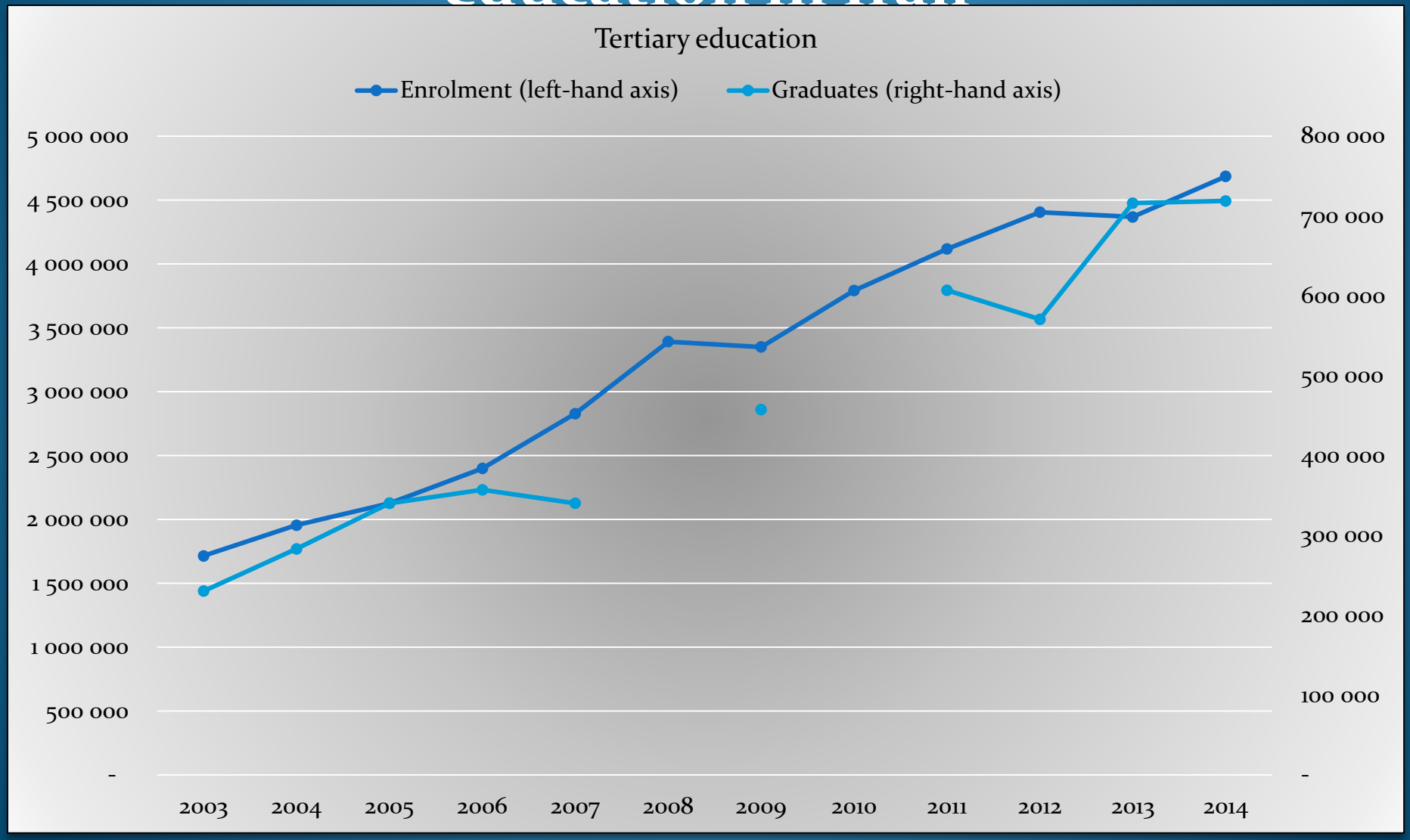
Regional Context

- Natural resource wealth – high growth but instability,
- Large public sector, public dominance, high costs
- “Rentier” economy - emphasis on real estate and tangible investment
- Information era with generational change; wired and educated young generations which meet with quality problems in education, mismatch with labor markets
- Fragmentation in STI development
- Struggle to diversify away from oil & gas, and to shift towards higher-value added generally

Share of adults with at least a bachelor's degree	30%
Number of Iranian universities in top 10% worldwide	5
Full-time university professors per million population	2 000
Share of PhD students among total students	3.5%
GERD/GDP ratio	4.0%
Share of GERD financed by business enterprise sector	50%
Researchers (FTE) per million population	3 000
Government researchers (share of total researchers)	10%
Researchers in business enterprise sector (share of total researchers)	40%
Share of researchers employed by universities	50%
Scientific articles per million population	800
Average citations per publication	15
Number of articles among 10% most cited worldwide	2 250
Number of Iranian journals with an impact factor of more than 3	160
Number of national patents	50 000
Number of international patents	10 000

Source: Government of Iran (2005) Vision 2025

Enrolment in and graduation from tertiary education in Iran



Source: UNESCO Institute for Statistics database (2016)

Education ranking for the selected peer countries (2017)

	Iran	Brazil	Egypt	Malaysia	Mexico	Korea	Saudi Arabia	Turkey
Overall ranking (GCI)	69	80	100	23	51	26	30	53
Primary education enrolment	14	94	33	32	71	30	42	82
Secondary education enrolment	77	50	84	92	74	53	22	37
Tertiary education enrolment	25	56	76	89	81	3	40	2
Quality of education system	94	125	130	14	108	81	41	101
Quality of Management schools	92	95	124	25	67	69	52	108
Internet access in schools	93	90	119	27	83	15	57	72

Source: The Global Competitiveness Report 2017-2018

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Diversity

- Different kinds of universities (comprehensive, substantively focused, colleges, entrepreneurial)
- Public, private (diversity of funding, but switch towards competitive, including student fees)
- Rules and regulations are different
- Expectations, local context

Universities and autonomy?

Table 3.1 Extent of autonomy experienced by universities[1]

	Institutions are free to:							
	1 Own their buildings and equipment	2 Borrow funds	3 Spend budgets to achieve their objectives	4 Set academic structure/ course content	5 Employ and dismiss academic staff[2]	6 Set salaries[2]	7 Decide size of student enrolment[3]	8 Decide level of tuition fees
Mexico	●	◗	●	●	●	◗	●	●
Netherlands	●	●	●	◗	●	●	●	◗
Poland	●	●	●	●	●	◗	●	◗
Australia	●	◗	●	●	●	●	◗	◗
Ireland	●	◗	●	●	●	◗	●	◗
United Kingdom	●	◗	●	●	●	●	◗	◗
Denmark	◗	●	●	◗	●	◗	●	◗
Sweden	◗	◗	●	●	●	●	◗	
Norway	◗		●	●	●	◗	●	
Finland	◗		●	◗	●	●	◗	
Austria	◗		●	●	●	●		
Korea (national – public)			◗	◗		◗	●	
Turkey				◗	◗		◗	
Japan (national – public)				◗	◗			

Legend: Aspects in which institutions:
● have autonomy
◗ have autonomy in some respects (see the Appendix for details).

1. Data in Table 3.1 are based on responses to a 2003 survey of university governance by members of the OECD's Institutional Management in Higher Education (IMHE) programme. Participation in the survey was voluntary, responses were not received from institutions in all OECD countries, and the IMHE members do not necessarily represent the full range of higher education institutions in the countries concerned. Institutional responses were cross-checked for consistency against each other, and published sources and national experts were consulted in preparing the table. However, the table shows a simplified picture, and countries vary in many detailed respects, as described in the Appendix. Non-university institutions are not included except where specifically mentioned in the Appendix. Countries are ranked in order of the number of areas in which universities reported autonomy, and alphabetically where the number is the same.

2. "Employ and dismiss academic staff" (column 5) and "Set salaries" (column 6) include cases where any legal requirements for minimum qualifications and minimum salaries have to be met.

3. "Decide size of student enrolment" (column 7) includes cases where some departments or study fields have limits on the number of students able to enrol.

Financing of Higher Education

X = ja ; - = nej

Country	Free Education	Charges	Selected comments
Australia	-	X	Charges for all
Danmark	X	X	Free for EU/EES, exchanges
Finland	X	-	Free for all
Iceland	X	-	Free for all
Kanada	-	X	Charges for all
Korea	-	X	Charges for all (low cost)
Netherlands	-	X	Charges for all (higher for outside EU)
Norway	X	X	Fre for all at public universities
New Zealand	-	X	Charges for all
Sweden	**X**	**X**	Free for EU/EES, exchanges
UK	-	X	Charges for all
US	-	X	Charges for all

Sources; National agencies

Major changes in higher education

- One of the world's fastest growing industries
- More aware and more demanding students (less prepared, and less prone to accept authority for the sake of it)
- Non-traditional working adult students more important
- Explosion in online distance education enables organisations to foster anytime/anywhere learning
- Students choosing to study and live abroad are increasing rapidly.
- Public sector dominance, although private alternatives and spending are on the increase
- Universities are internationalising operations
- New entrants are challenging the traditional university model
- Universities meet with a host of pressures to be "relevant"
- New labor market issues, costs out of hand, threat of populism

Internationalisation of Higher Education

- Enhanced opportunities for cross-border exchange (students, faculty, research, knowledge-flows)
- Growing need of compatibility as a basis for mobility
- Sharpened competition, need of communicating quality, branding, accreditation, ranking
- Earning trust, transparency, user-friendliness
- Relevance, including employability, locally, globally
- Growing importance of partnerships
- Specialisation/niche strategies

Framework for Higher Education in Iran

- Competitive, performance-based!
- Cultural depth: art, technical, engineering, medicine!
- Theory vs. practice?
- Individualistic vs Teamwork?
- Technology, Engineering, Medicine vs. Social, Humanities?
- Weight of regulations
- Role of financing
- Merit-based labor-market?
- Role of stakeholder relations

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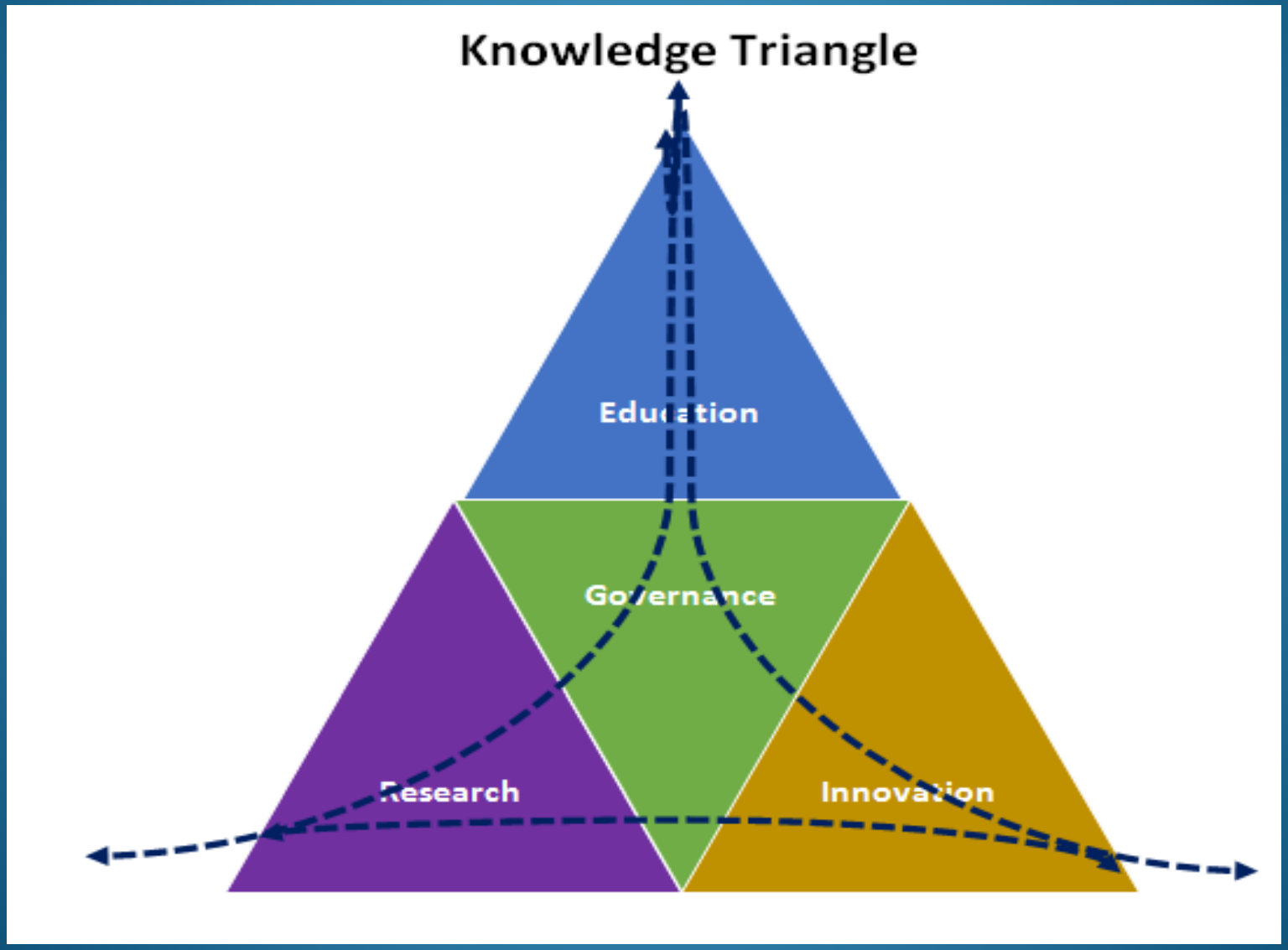
University Missions

The Traditional Role: Education

The 2nd Role: Research

The 3rd Role: Serving/dynamizing society (innovation)

Knowledge Triangle



Knowledge Triangle Issues

- Lack of traditions, appropriate funding and regulations
- Balance specialisation and collaboration: Sense of trade-off rather than complementarity
- Mismatch research edge – student interest - labour market needs
- Identifying and drawing on “core mission” within the triangle
- Corporate unwillingness to engage with universities, sense of uneasiness′, and lack of “culture” for collaboration

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Governance related

i) Participatory going together with capacity to make strategic decisions

ii) Ability to underpin specialisation and edge in niches, while keeping all motivated

iii) Quality control, external -> internal, permeating all levels of organisation

iv) Ethical, values, to go along with diversity

Partnerships, organisational

i) Academic (student exchange, joint degrees, research collaboration, strategic collaboration, affiliates)

ii) Corporate/society (large firms/SMEs, hospitals, schools, means of linking)

iii) Outsourcing/organisational, e.g. adult/continuous learning, executive

iv) Partnerships in support of branding & international organisation

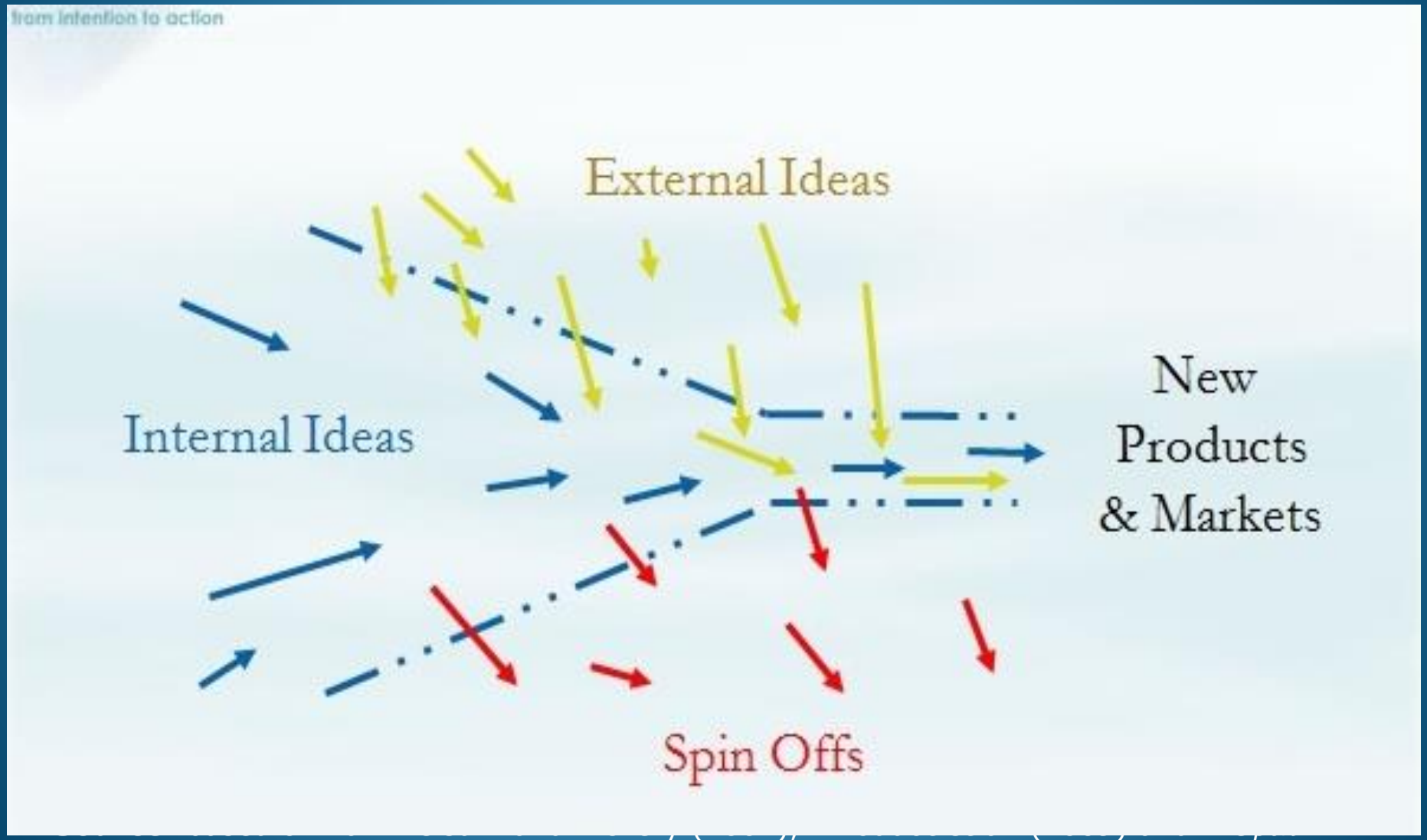
Tools for university – industry interface

- Substantive orientation & receptiveness
- Engagement through concrete activities
- Consultations in regard to curricula
- Specific institutes established with industry engagement and support
- “Champions” and “bridge-builders” need to be grown, structures are needed to promote mobility and brain-circulation (industrial professors, research-in-the-workplace)

IPR rights

- Distribution of ownership rights (institution vs. reasearcher)
- Contractual arrangement sharing of rights
- Building the infrastructure for support
- Professional service providers
- …. A living, responsive and supportive organisation

Open Innovation Model



Innovation: The New Imperative for Creating and Profiting from Technology, H. Chesbrough, 2003

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Supporting Employability

- *Study visits, career fairs*
- *Role models, incl. active alumni networks*
- *Mentorship arrangements, incl. with companies*
- *Pro-active engagement of employers with students as well as employers with universities*
- *Co-opt, apprenticeship*
- *Interest inventories, Career Counselling, Talent shows*
- *Thesis work in collaboration*

Soft Skills

- *Awareness*: Recognising your own strengths and weakness.
- *Imagination*: Identifying new patterns in complexity and opportunities in uncertainty.
- *Curiosity*: Challenging and thinking out of the box.
- *Regulation*: Keeping emotions under control.
- *Motivation*: Developing optimism and personal drive.
- *Empathy*: Reading emotions and motivation in other people.
- *Ability* to build and manage relationships.

Experiments

- Conducting tests
- Events in process
- Participation in social interactions with peers
- Placing the learner under realistic conditions
- Collaboration: agent based experimentation

Entrepreneurial university

- *Introduction of entrepreneurship to all*
- *Serious tracks for deepening capabilities, backed with infrastructure for start-ups and growth*
- *Dynamic arena for student social life ("associations")*
- *Integrating with S&T park, linking up with external parties*

Education for maturity and mindset change…

- Quality education and learning for life
- Entrepreneurial training, experimentation
- Mobility, brain circulation
- Inspiration and engagement:
  - *Transpassing borders*: building alliances between disciplines, age groups, nation states
  - *From push to pull, from turf to inclusion*
  - *Role models*: authority and mentoring, not authoritarian rule…
  - Learning in action

Entrepreneurship and innovation, engagement, learning in action