UAE Higher Education
The Road to Excellence and Innovation
by

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How can Universities improve their own performance and international rankings?

While

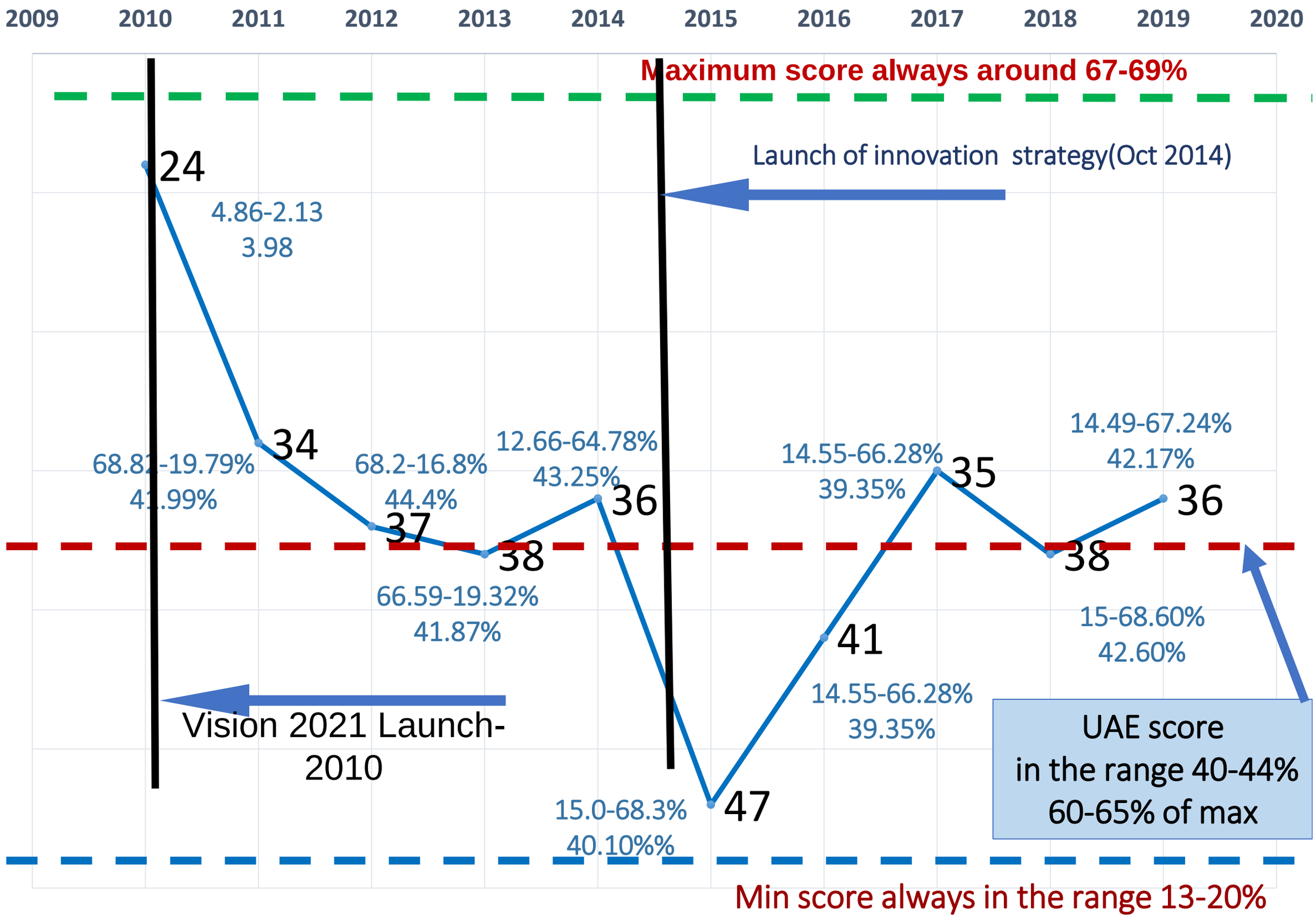
Having an impact on the socio-economic aspects of the UAE as knowledge-based economy ?

Evidence-based analysis on Identification of areas for further developments for the UAE and for the Universities, and linking the two.

The presentation will highlight how the performance of the UAE in the Global innovation index (GII) and University ranking criteria are linked

Part one
The Performance of UAE knowledge-based activities In the Global Innovation Index

UAE Ranks in Global Innovation Index (GII)



Indicator (2019)	Score	Ranking
Input index	57.65%	24
Output index	26.68%	58
Efficiency Ratio	**0.46**	
GII	**42.17%**	**36**

- The overall GII score is the simple average of the Input and Output Sub-Index scores.

- The Innovation Input Sub-Index is comprised of five input pillars that capture elements of the national economy that enable innovative activities: (1) Institutions, (2) Human capital and research, (3) Infrastructure, (4) Market sophistication, and (5) Business sophistication.

- The Innovation Output Sub-Index provides information about outputs that are the results of innovative activities within the economy. There are two output pillars: (6) Knowledge and technology outputs and (7) Creative outputs.

- The Innovation Efficiency Ratio is the ratio of the Output Sub-Index score over the Input Sub-Index score. It shows how much innovation output a given country is getting for its inputs.

Apparently UAE inputs a lot into innovation in terms of
Institutions, Human capital and research,
Infrastructure, Market sophistication, and Business sophistication
(#24/2019)

BUT

gets little output in terms of knowledge, Technology and creative products

A losing scenario
(#58/2019)

GII	Field				score	rank
input 57.65% #24	Institutions	sub-field	score	rank	78.8	28
		political environment	80.5	20		
		regulatory environment	84.2	24		
		Business environment	71.9	58		
	Human Capital & research	education	61.9	17	52.4	18
		Tertiary Education	57.5	6		
		Research and development	37.7	28		
	Infrastructure	ICT	88.7	14	59.4	21
		general	52.7	12		
		Ecological sustainability	36.8	71		
	Market Sophistication	Credit	53.5	27	56.1	34
		investment	46.2	53		
		Trade, competition and market	68.6	39		
	Business Sophistication	knowledge workers	40.7	55	41.5	30
		innovation linkages	41.9	24		
		knowledge absorption	42	34		
Output 26.68% #58	Knowledge and Technology output	knowledge creation	6.4	88	22.2	63
		knowledge impact	34.9	73		
		knowledge diffusion	25.2	37		
	Creative output	tangible assets	50.4	66	31.2	50
		creative goods & services	35.9	13		
		online creativity	7.9	57		

Areas for improvement that the UAE needs to look at:

	Field				score	rank
input 57.65% #24	institutions				78.8	28
		sub-field	score	rank		
		Business environment	71.9	58		
	Human Capital & research				52.4	18
	Infrastructure				59.4	21
		Ecological sustainability	36.8	71		
	Market Sophistication				56.1	34
		Trade, Competition& market	68.6	39		
	Business Sophistication				41.5	30
		knowledge workers	40.7	55		
		knowledge absorption	42	34		
Output 26.68% #58	Knowledge and Technology output				22.2	63
		knowledge creation	6.4	88		
		knowledge impact	34.9	73		
		knowledge diffusion	25.2	37		
	creative output				31.2	50
		tangible assets	50.4	66		
		online creativity	7.9	57		

Part two
Ranking Criteria

QS Ranking International

World/ Arab world

Teaching/Research Int'l 80%/Arab 85%		International outlook Int'l 20%/Arab 15%	
Academic Reputation	30%/30%	Proportion of international students	2.5%/2.5%
Employer Reputation	20%/20%	Inbound exchange student	2.5%/0%
Staff with PhD	5%/5%	Outbound exchange students	2.5%/0%
Staff-to-student ratio	10%/15%	Proportion of international staff	2.5%/2.5%
Paper per faculty	5%/5%	International collaboration	10%/10%
Citation	10%/5%		
website	--/5%		

Times Higher Education Ranking

Teaching 30%		Research 30%		International Outlook 7.50%		Citation	30%
Reputation Survey	15%	Reputation survey	18%	Proportion of International Students	2.5%		
Staff-to-student Ratio	4.50%						
Doctorate-to-Bachelor's Ratio	2.25%	Research Income	6%	Proportion of International Staff	2.5%	industry income (knowledge transfer)	2.5%
Doctorates-Awarded-to-Academic-Staff ratio	6%						
Institutional Income	2.25%	Research Productivity	6%	International Collaboration	2.5%		

Part three
The link between UAE Innovation Performance and University Ranking

Grouping GII Fields with Ranking parameters

PG programmes Masters/Doctorate

Doctorates-Awarded-to-Academic-Staff ratio

Doctorate-to-Bachelor's Ratio

Proportion of International Students

knowledge creation

knowledge workers

Entrepreneurial & Innovation Activities

knowledge impact

knowledge diffusion

online creativity

tangible assets

Institutional Income

industry income (knowledge transfer):

knowledge absorption

Ecological sustainability

Trade, Competition& market

Business environment

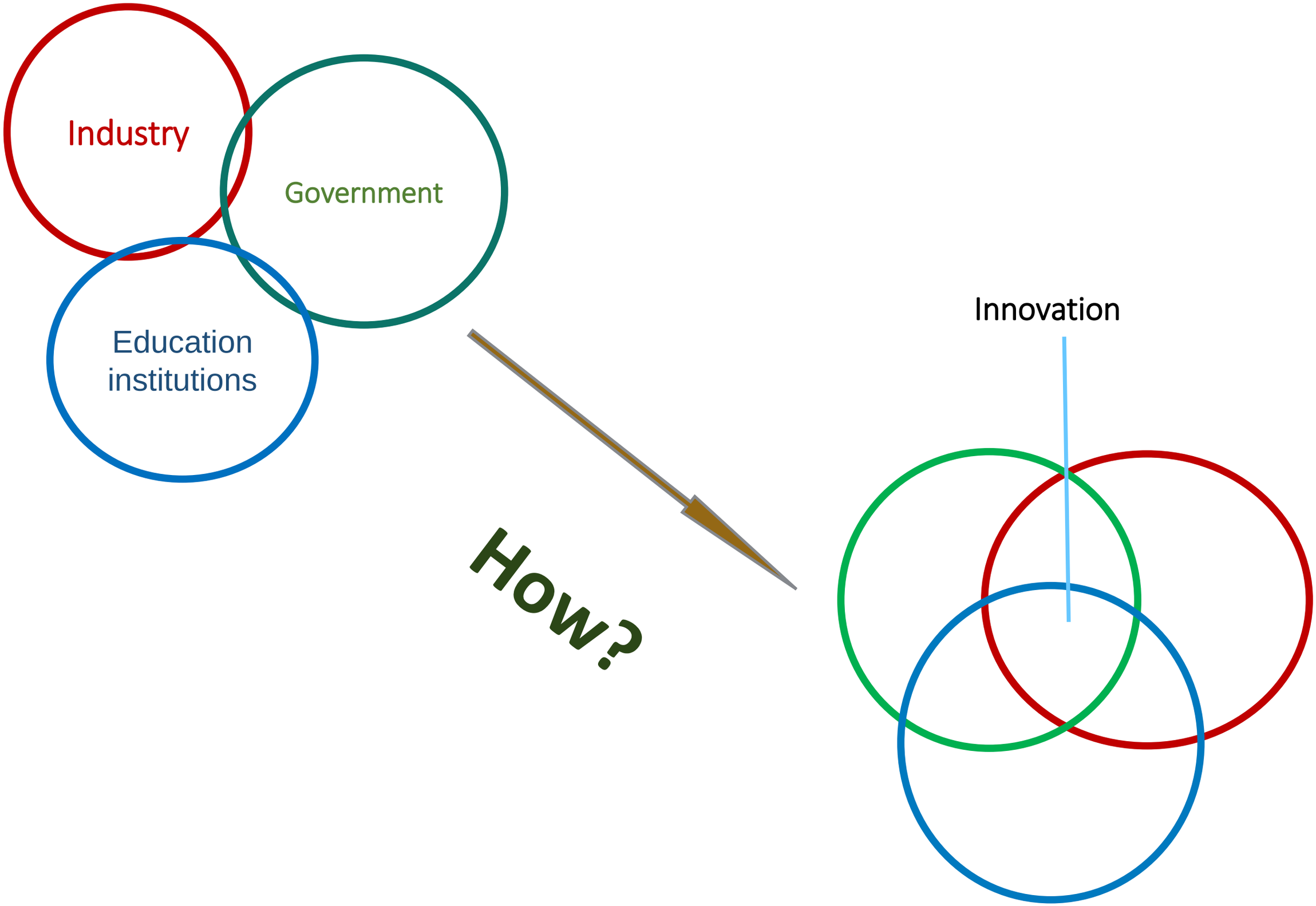
Research

Research Income

Citation

Research Productivity

knowledge creation


Industry
Government
Education institutions
How?
Innovation

	GII parameters	Universities Role		
		Research Sector	PG Programs, Masters and Doctorates	Entrepreneurial University
UAE level	knowledge creation			
	knowledge impact			
	knowledge diffusion			
	Tangible assets			
	Online creativity			
University level	Doctorate-to-Bachelor’s ratio			
	Doctorates-awarded-to-academic staff ratio			
	Institutional income			
	Research income			
	Research productivity			
	Proportion of international students			
	International collaboration			
	Industry Income (knowledge Transfer)			

Entrepreneurial University

The Concept of Entrepreneurial University was developed to undertake entrepreneurial activities for improving the national economy by merging it with student activities through:

Student incubators, Science parks, Start-ups, Spin offs

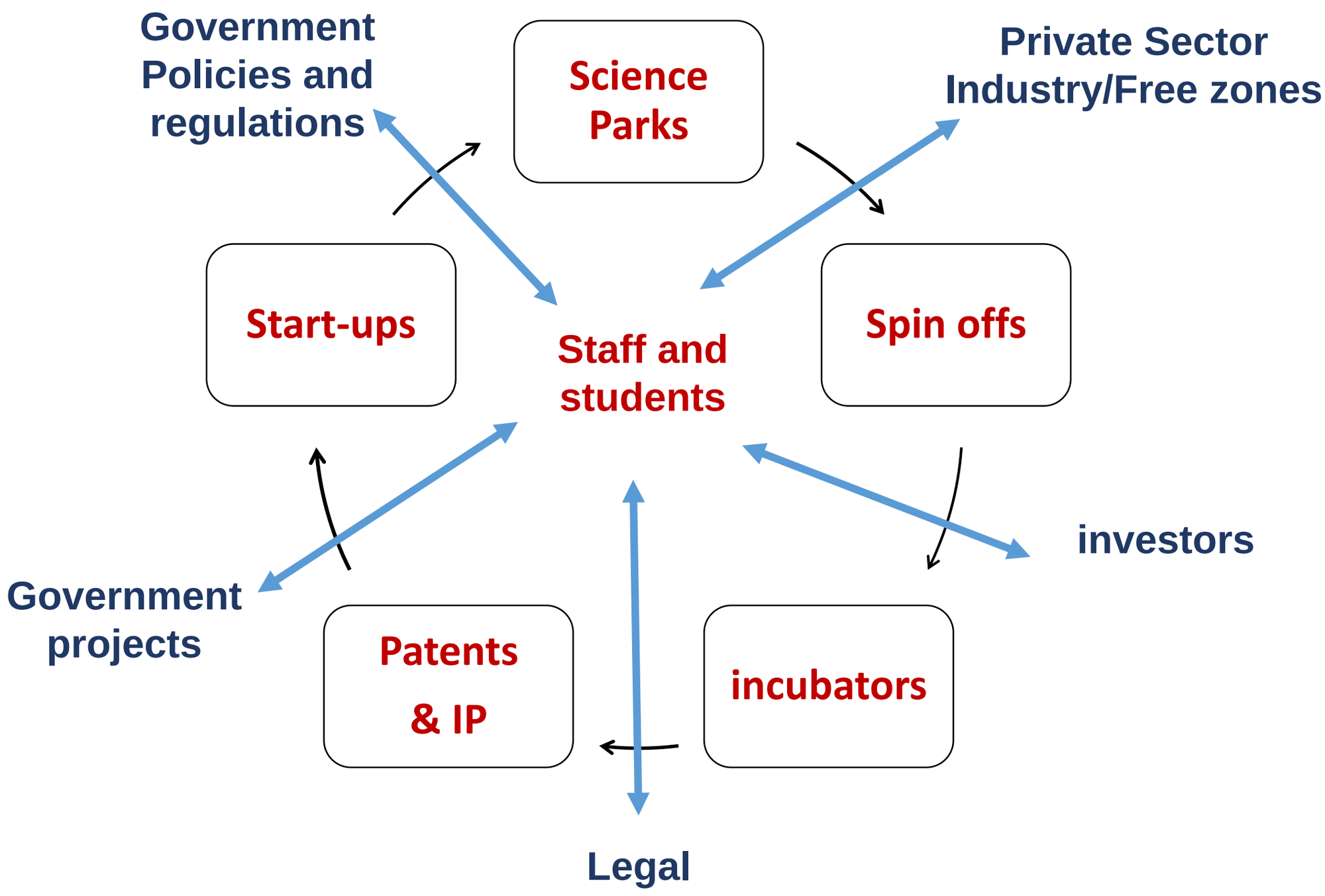
With,

Joint collaboration between academia, industry and government,

The Concept of Triple-Helix-Model (THM)

This concept is very popular in USA, S. Korea, Japan, Germany, etc

Sector of Innovation and Entrepreneurial



Post Graduate Programmes

Doctorates of Philosophy

Creation of knowledge

Professional Doctorates

Improvement of practice

Masters

Other PG activities

Scholarships

Research

Locally focused,

Internationally recognized

Applied research

Publications

Staff &
Students

International links

Links with Entrepreneurial Hubs and PG programmes

Internal and external funds

Other activities

Social Responsibility

PD

Established links with Industry

Local partnerships

International Student activities, Inbound and outbound student

Part four
Summary and More

Summary

GII indicates that UAE gets less than half of its input, a losing Scenario

Increase Post Graduate education sector with emphasis on research students

Transforming UG programmes in quality, quantity and experience with more international links like inbound and outbound students

Re-direct and optimize research funds on the national level

A new sector of Entrepreneurial activities in universities is to be initiated and supported nationally with strong links with industry and government

Expand on local partnerships and Social Responsibility activities

Questions for the further dialog

Means of Raising Research Funds and Methods of Funding Academic Research, How?

Research Students; Funding, Training, etc. What is the role of Government and Industry?

Councils and Entities for Cooperation Between Academia, Industry and Government to Promote Innovation and Entrepreneurship. Who should take the lead?

National Academic Partnerships, Public and Private Institutions. How to improve the trust and overcome the conception of competition?

Incentivizing international collaborations, the role of MoE and CAA?

Thank you