

The role of Higher Education Institutions (HEIs) in providing knowledge workers for the future development of the regional economies: A review

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RSA Winter Conference 2018
New Horizons for Cities and Regions in a Changing World
15th - 16th November 2018, London, UK



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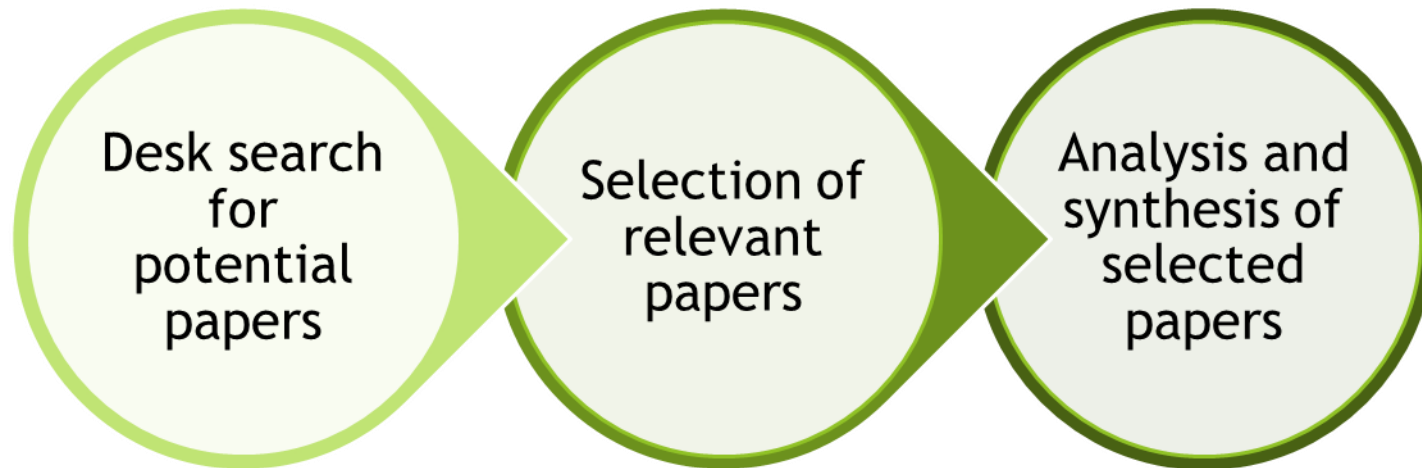
Agenda:

- Contextualisation of the growing demand for knowledge workers
- Key determinants of regional competitiveness
- The relevance of Knowledge Workers
- Challenges faced by HEIs (in light of current skills shift, credential inflation and the mismatch between skills supply and demand)
- The regional engagement of HEIs
- The role of HEIs in the development of knowledge workers

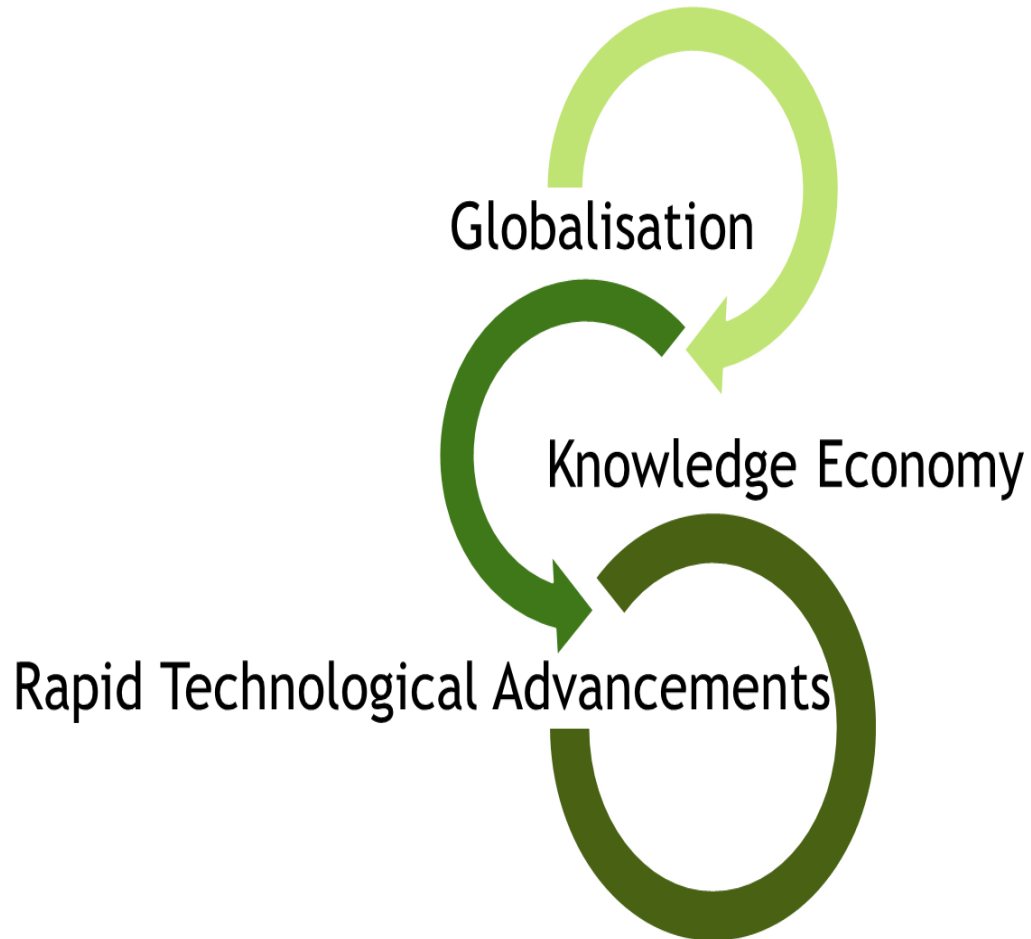
Research Objective:

To explore, to what extent HEIs within a given region are successful in contributing to the growth of their host region through their role of providing knowledge workers.

Research Methodology



Contextualisation



- **Globalisation**

- Increasing global competition (Emanoil, Alexandra, and Mihaela, 2014).
- Innovation is the key competitive weapon (Cooke, 2002)
- Hence, the need for competent workers (Damoc, 2017)

- **Knowledge Economy**

- An economy that is directly dependent upon the production, dissemination, and utilisation of knowledge and information (OECD, 1996).
- The drive for continuous and relentless innovation (Schwab, 2017).
- E.g. Europe 2020 “*smart growth*” strategy

- **Technological Advancement**

- Labour market is now more knowledge intensive (Dijkstra, 2017)

Two key determinants of regional competitiveness

Innovation

- Interactive learning process through collaboration
- Knowledge intensive production
- Better profitability and market position of firms
- Drives employment and regional growth

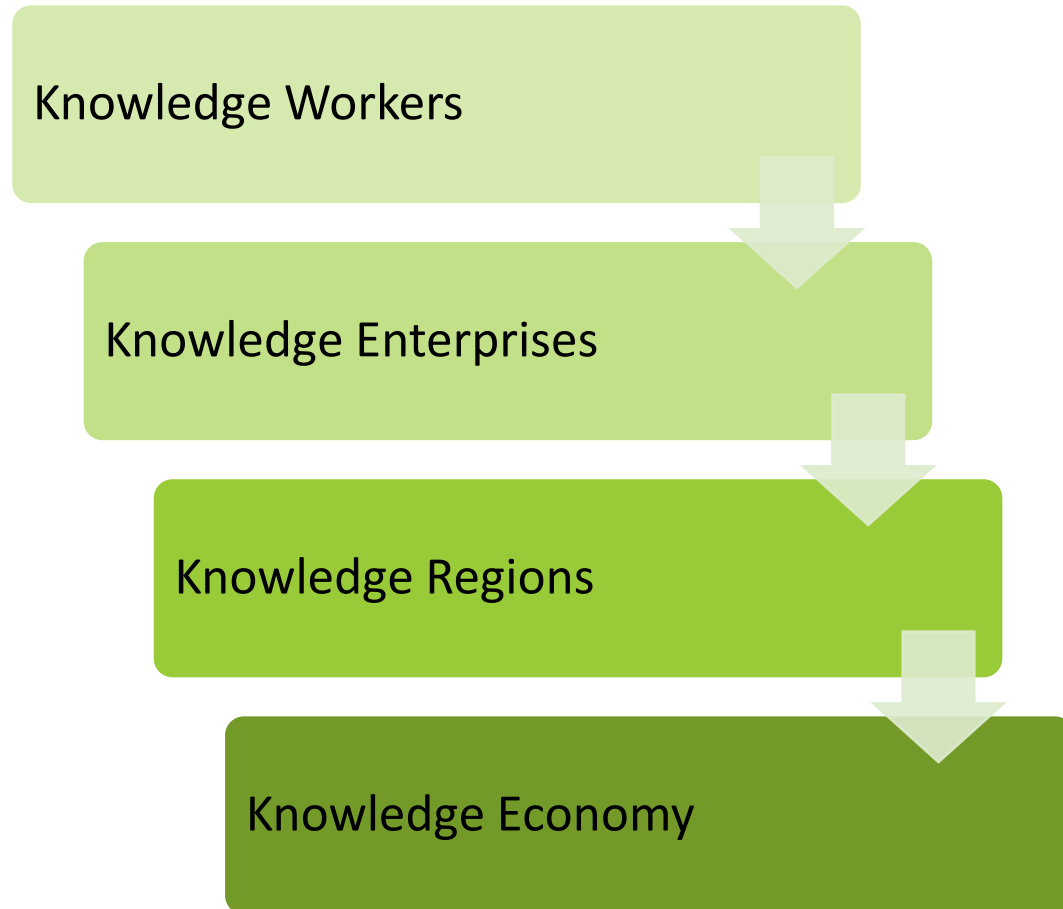
(Dijkstra, 2017)

Knowledge Workers

- Increased stock of highly educated people in the region
- Enhanced employee productivity
- Improved business efficiency and innovation capability
- Growth potential of regional firms
- Investments attraction into the region

Human Capital Theory, Schultz (1961), Becker (1962; 1994)

The relevance and importance of Knowledge Workers



- Knowledge workers embody the key factor of production - Knowledge (Bontje et al., 2017)
- Knowledge workers are key enablers of businesses' innovation prospects (Emanoil and Alexandra, 2013)
- The future development of regional economies will occur in areas with high concentration of talent. (Faggian, Comunian, and Li, 2014)
- If economies are to prosper, the jobs of many of the workers must be particularly knowledge-intensive. (Davenport, 2005)

The challenge for HEIs - Knowledge worker skills shift

- **Impact of technology**

- Creating new roles that require new skills.
- Rapid rate of skills churn in the labour market
 - On average, a third of the skillsets required to perform today's jobs will be completely new by 2020. (WEF: Future of skills report 2018)
- Routine cognitive skills are declining, while the demand for information-processing skills and other high level cognitive and interpersonal skills is growing (OECD, 2013)

The challenge for HEIs - Knowledge worker skills shift

Comparing the 10 Ten skills demand in 2018 vs. 2022

Today, 2018

Analytical thinking and innovation
Complex problem-solving
Critical thinking and analysis
Active learning and learning strategies
Creativity, originality and initiative
Attention to detail, trustworthiness
Emotional intelligence
Reasoning, problem-solving and ideation
Leadership and social influence
Coordination and time management

Declining, 2022

Manual dexterity, endurance and precision
Memory, verbal, auditory and spatial abilities
Management of financial, material resources
Technology installation and maintenance
Reading, writing, math and active listening
Management of personnel
Quality control and safety awareness
Coordination and time management
Visual, auditory and speech abilities
Technology use, monitoring and control

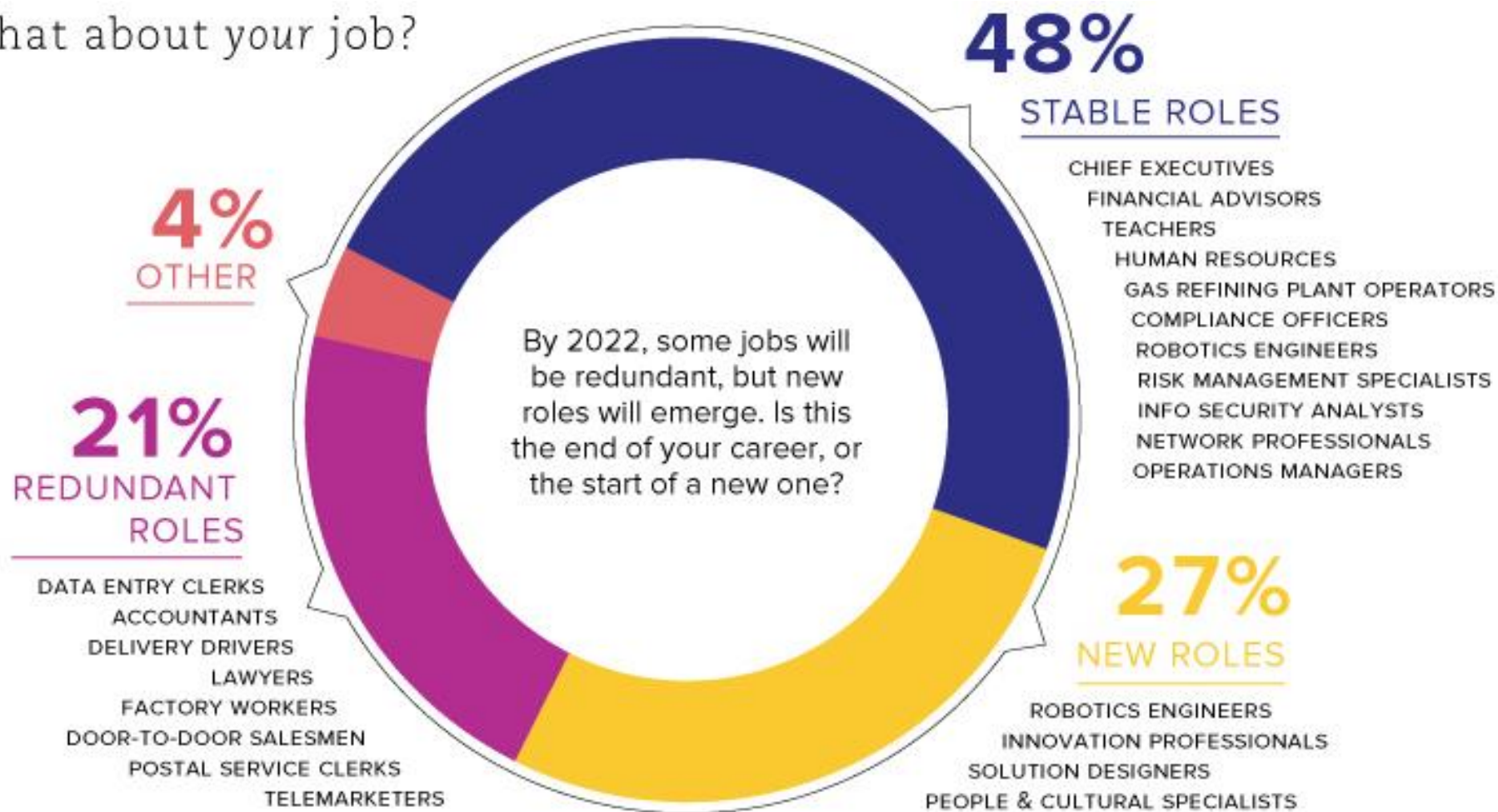
Trending, 2022

Analytical thinking and innovation
Active learning and learning strategies
Creativity, originality and initiative
Technology design and programming
Critical thinking and analysis
Complex problem-solving
Leadership and social influence
Emotional intelligence
Reasoning, problem-solving and ideation
Systems analysis and evaluation

The challenge for HEIs - Knowledge worker skills shift

- 65% of the jobs that today's children will perform in the future do not exist yet – Manpower (2018)

What about your job?



Source: Future of Jobs report (2018) WEF

The challenge for HEIs – Skills demand and supply mismatch

- Skills gap
 - the demand for and supply of skills in the local economy
- Can be detrimental to the region's innovation potential and economic development (Schubert and Kroll, 2016)
- Growing call to make higher education more relevant to the workplace (Tran, 2016)

The degree is no longer enough

- **Credential inflation**

- Employers are seeking to separate the 'wheat' (scarce talent) from the 'straw' (abundance of higher education graduates) Velasco, 2012
- Some graduates assume the status of 'knowledge workers' more than others (Tomlinson, 2012)
- Graduates must develop a range of personal and intellectual attributes beyond those traditionally made explicit in higher education programmes (Harvey, 2000)
- Employers are increasingly seeking 'job knowledge' in favour of 'graduate knowledge' (Docherty and Fernandez, 2014)

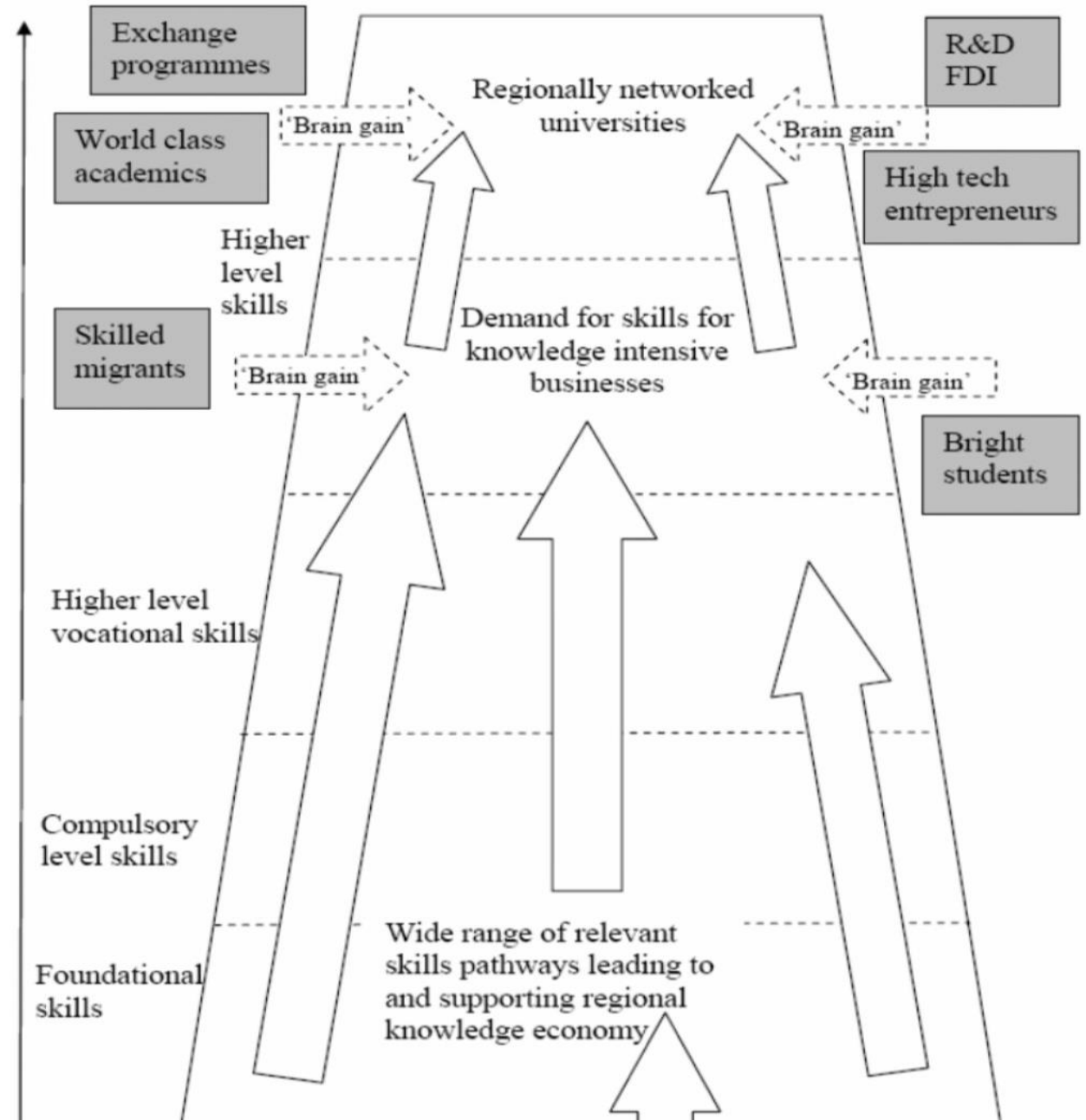
Regionally engaged HEI

- The HEI mandate has since evolved into a stronger focus on regional development – **The third mission** (Chatterton and Goddard 2000; Uyarra 2010)

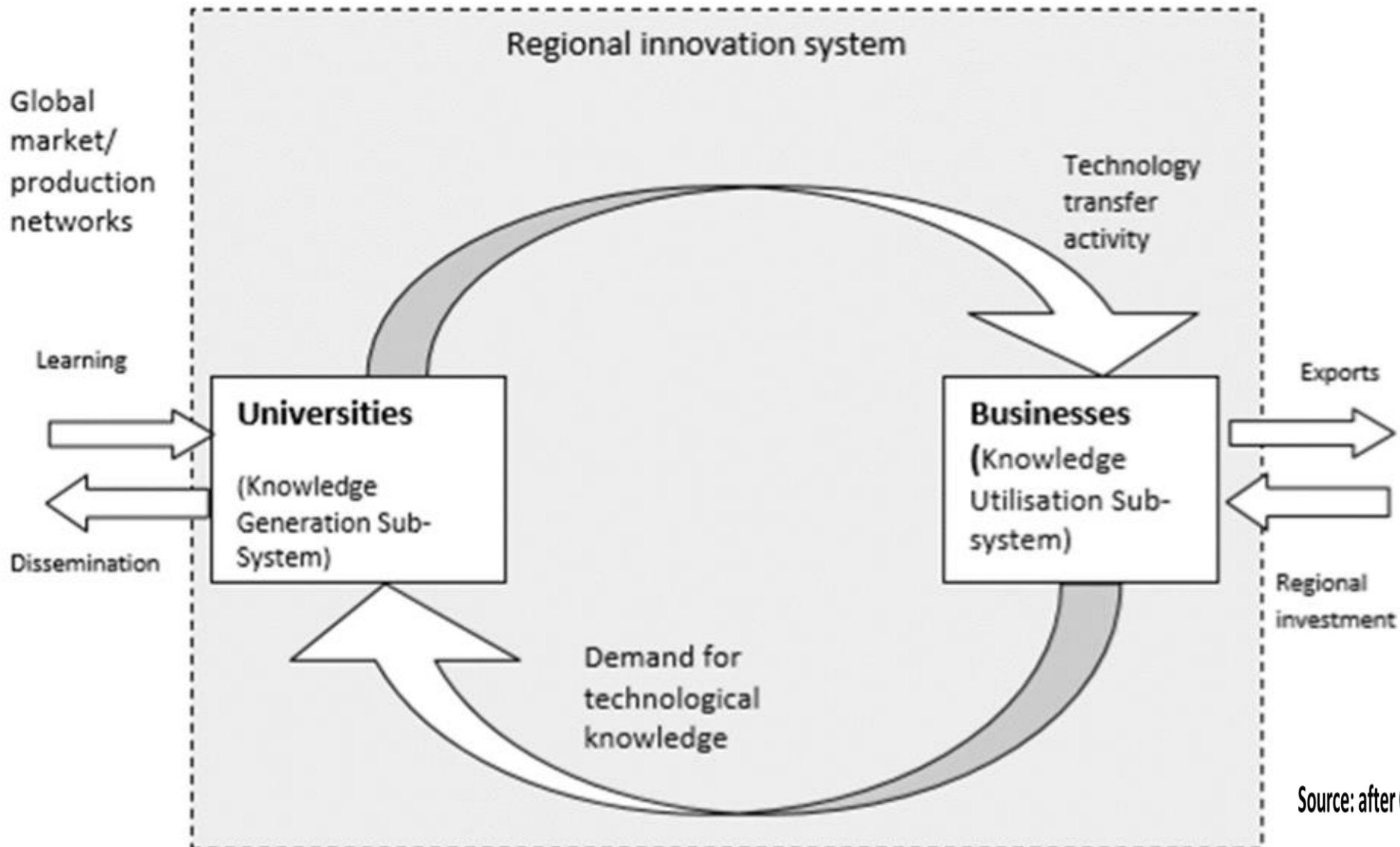
- **The Engaged University model**

- Understand industry and regional needs
- Align functions with industry and regional needs

Source: Arbo and Benneworth (2007)

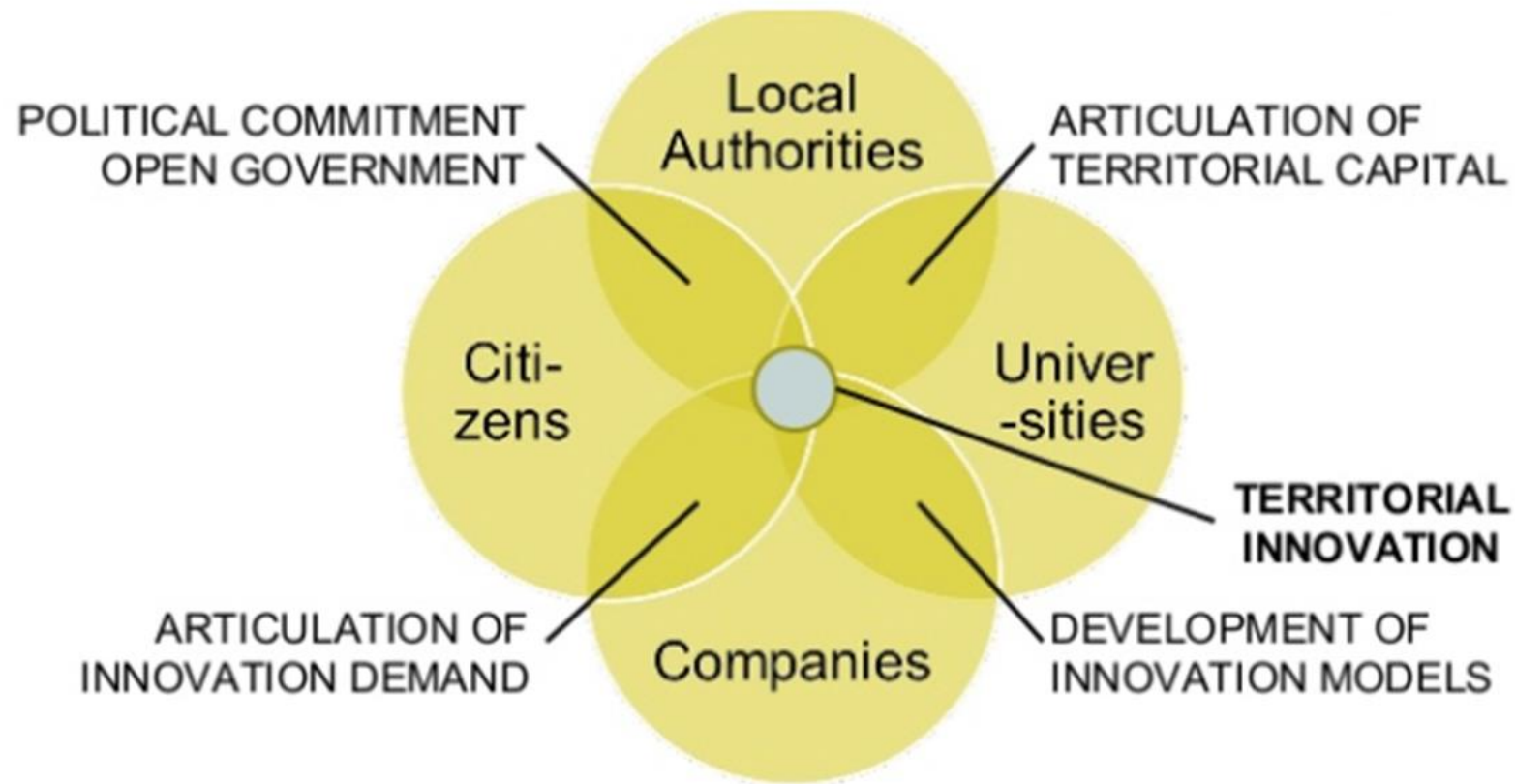


Regionally engaged HEI - Regional Innovation Systems (Cooke, 1992)



Source: after Cooke (2004); in Arbo and Benneworth (2007)

HEIs' contribution in the Quadruple Helix



Source: Apulian ICT Living Labs

The role of HEIs in the development of knowledge workers

- Develop new education programmes to meet industry needs
 - Aligned with skills deficit in the region (Goddard and Kempton, 2011)
- New teaching models
 - Work integrated learning model (Tran, 2016)
 - Flexible learning models (
- Life-long learning
 - Discontinuous education (Costin, 2015)
- Blurring the boundaries between industry and HEIs
 - Better communication and partnership between the demand and the supply of the labour market (Damoc, 2017)



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THANK YOU

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