PREPARING FOR 2020

DEFINING LEARNING OUTCOMES
AS A KEY FACTOR FOR QUALITATIVE REFORMS OF THE CURRICULUM

ASSOCIATIE K.U.LEUVEN

FACTS

- More students than ever before are entering HE
- The world is realigning
  - Globalisation
  - Power shifts
  - New Renaissance?

QUESTIONS

- What is expected of HE?
- What are we doing?
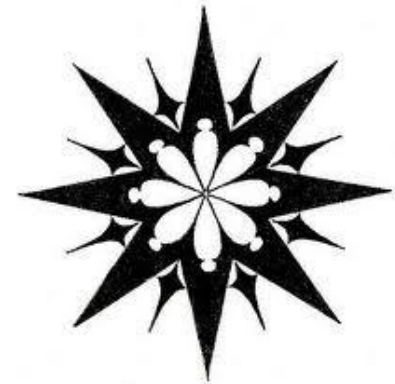- What are our instruments?

DANGERS

- Lack of pedagogical/didactical theoretical awareness with academics/teachers, policy makers and management
- What are the skills we should be training for?

SETTING THE STAGE

- What are the challenges we are facing?
- Order from Chaos? The Bologna Process.
- Defining the parameters.
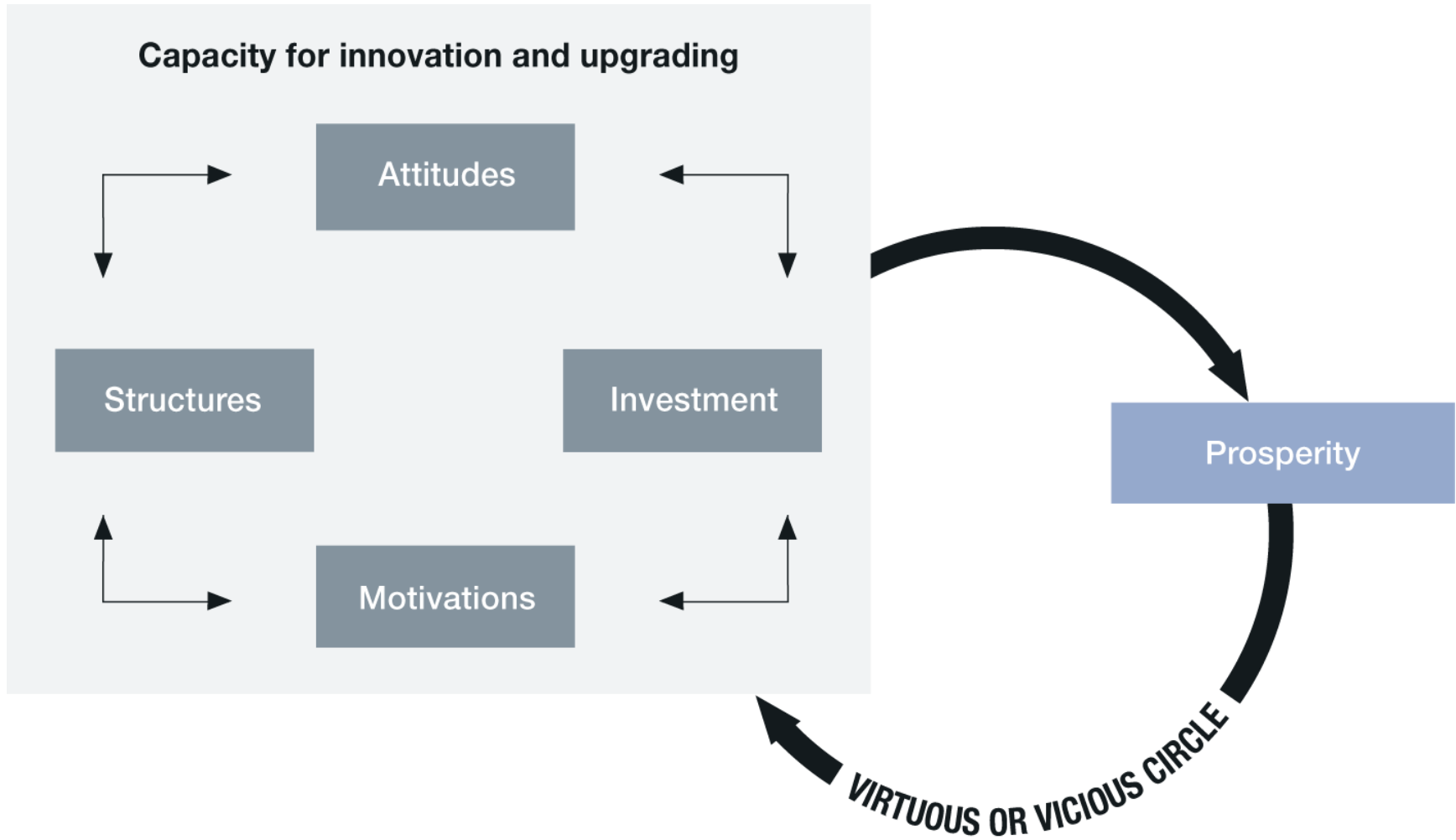- Learning Outcomes as central tool

FOCUS:
- HE and Place Management
- Employability and competences for the new century.

CRISIS IN HIGHER EDUCATION?

- Academic education
  - Research based
  - Care for undergraduates
  - Focus on PhD and post docs
- Professional HE
  - Handbook based
  - Unrelated
  - Context issues

Are the old models no longer suited for the future?

CREATION OF PROSPERITY

Capacity for innovation and upgrading

Attitudes

Structures

Investment

Motivations

Prosperity

VIRTUOUS OR VICIOUS CIRCLE

CHALLENGES

"Higher education is a **major driver** for **social** and **economic development** and for **innovation** in an increasingly knowledge-driven world"

Budapest-Vienna Declaration, March 2010

"All **students and staff** of higher education institutions **should be equipped to respond** to the changing demands of the fast evolving society"

"HE should equip students with the **advanced knowledge, skills and competences** they need **throughout** their **professional life**"

Ministerial Meeting in Leuven, April 2009

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EVOLUTION IN HIGHER EDUCATION

- Bologna: Reforming our Higher Education
  - Alignment and Transparency
  - Student-centred approach and Outcome Based Learning
- Quality: Internal and external
  - Setting up internal systems
  - External control and accreditation
- Ranking
  - Blessing or curse?

BOLOGNA TARGETS (Berlin)

1. Adoption of a system of easily readable and comparable degrees

2. Adoption of a system essentially based on two cycles

3. Establishment of a system of credits

4. Promotion of mobility

5. Promotion of European co-operation in quality assurance

6. Promotion of the European dimension in higher education

7. Lifelong learning

8. Higher education institutions and students

9. Promoting the attractiveness of the European Higher Education Area

10. Doctoral level (third cycle).

EHEA

European Higher Education Area
Eligible countries

http://www.ehea.info/
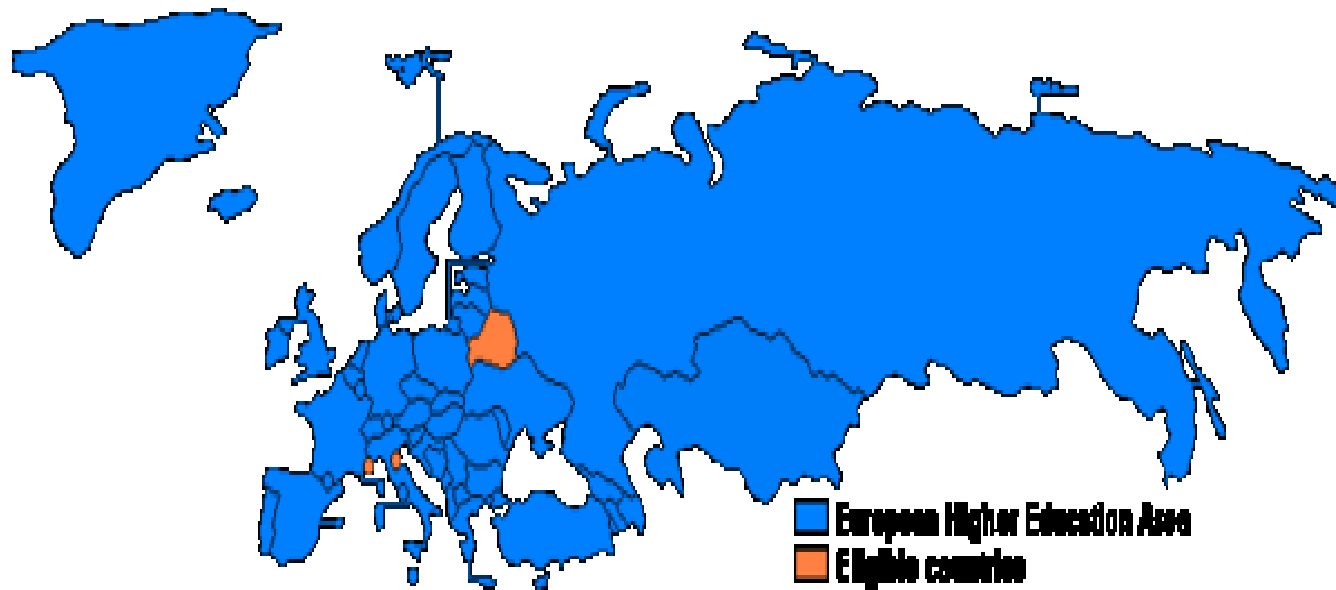
CONCLUSIONS AND PRIORITIES FOR "BEYOND 2010"

- The pursuit of excellence in all aspects of higher education
- Social dimension
- Lifelong Learning
- Employability
- Student-centred learning

- Education, research and innovation
- International openness
- More mobility
- Multidimensional transparency tools and data collection
- Resourcing
- The organisational structure and follow-up

TASK SETTING

Social contract between community, stakeholders and HEI

Creating Prosperity
– (Co-)creating social capital
– (Co-)creating intellectual capital
– (Co-)creating knowledge
– Engaging the community
  • Place management
    – Co-identifying needs and resources
    – co-developing programmes
  • Active citizenship
 • HE as catalyst and partner for Modern Renaissance

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PLACE MANAGEMENT

- The places where we live and work change; there is evolution

- The evolution can be steered by means of proactive intervention in the form of processes, such as
    - community development
    - regeneration
    - management
    - marketing
    - economic development
    - etc.

- Always meant to improve conditions for the users and inhabitants and make it a better place to be
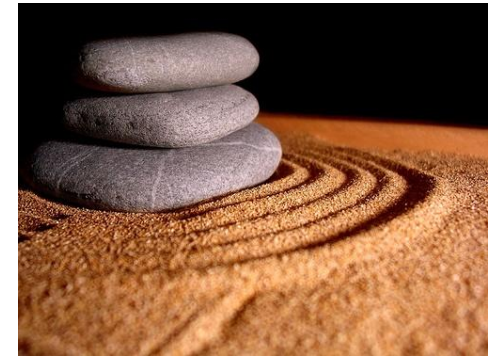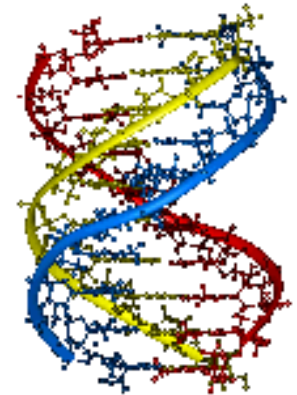
DEVELOPMENT PLACE MANAGEMENT

MANY USERS

MANY PARTNERS

CHALLENGES

SUSTAINABILITY

SUPPORT
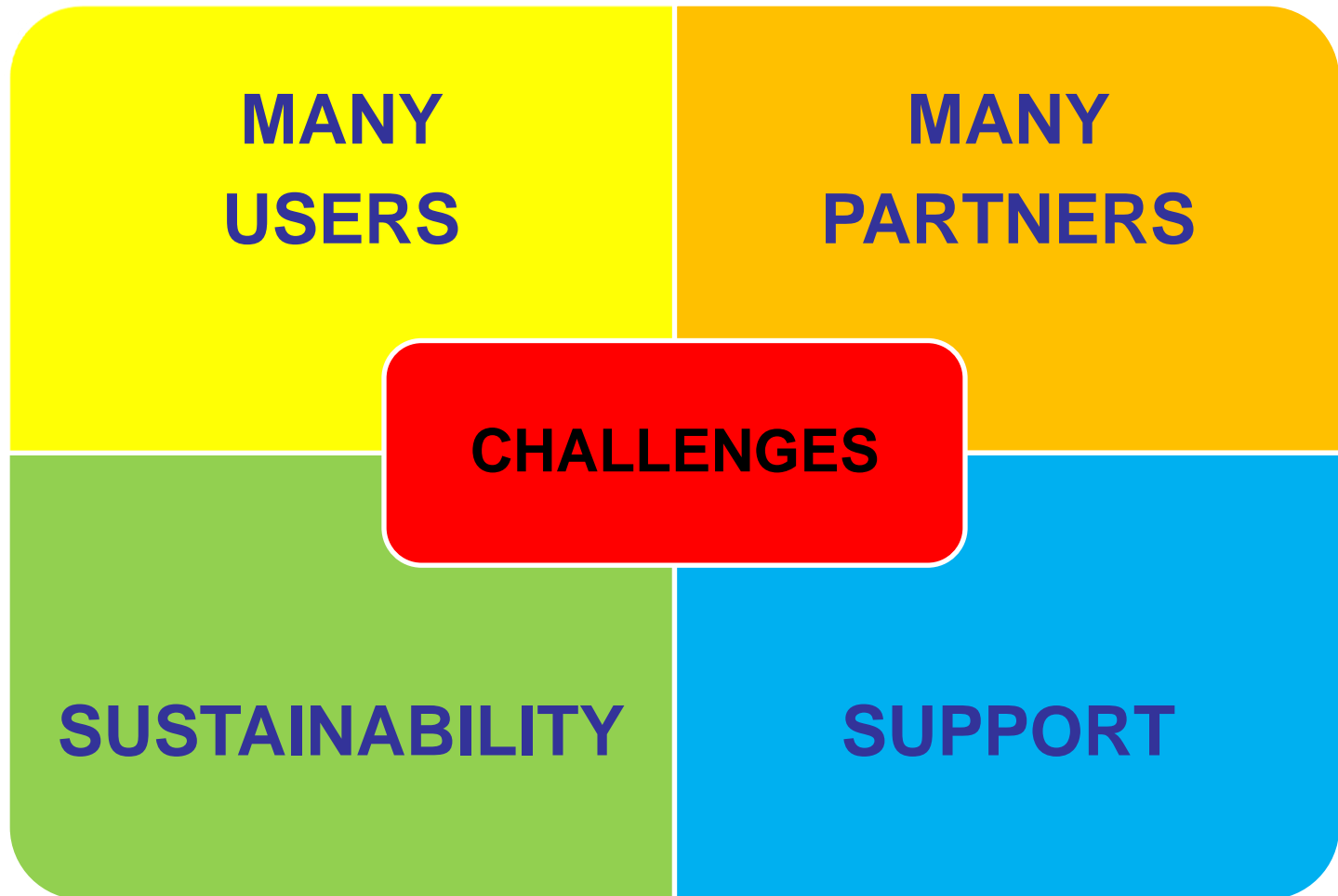
HE AND PLACE MANAGEMENT
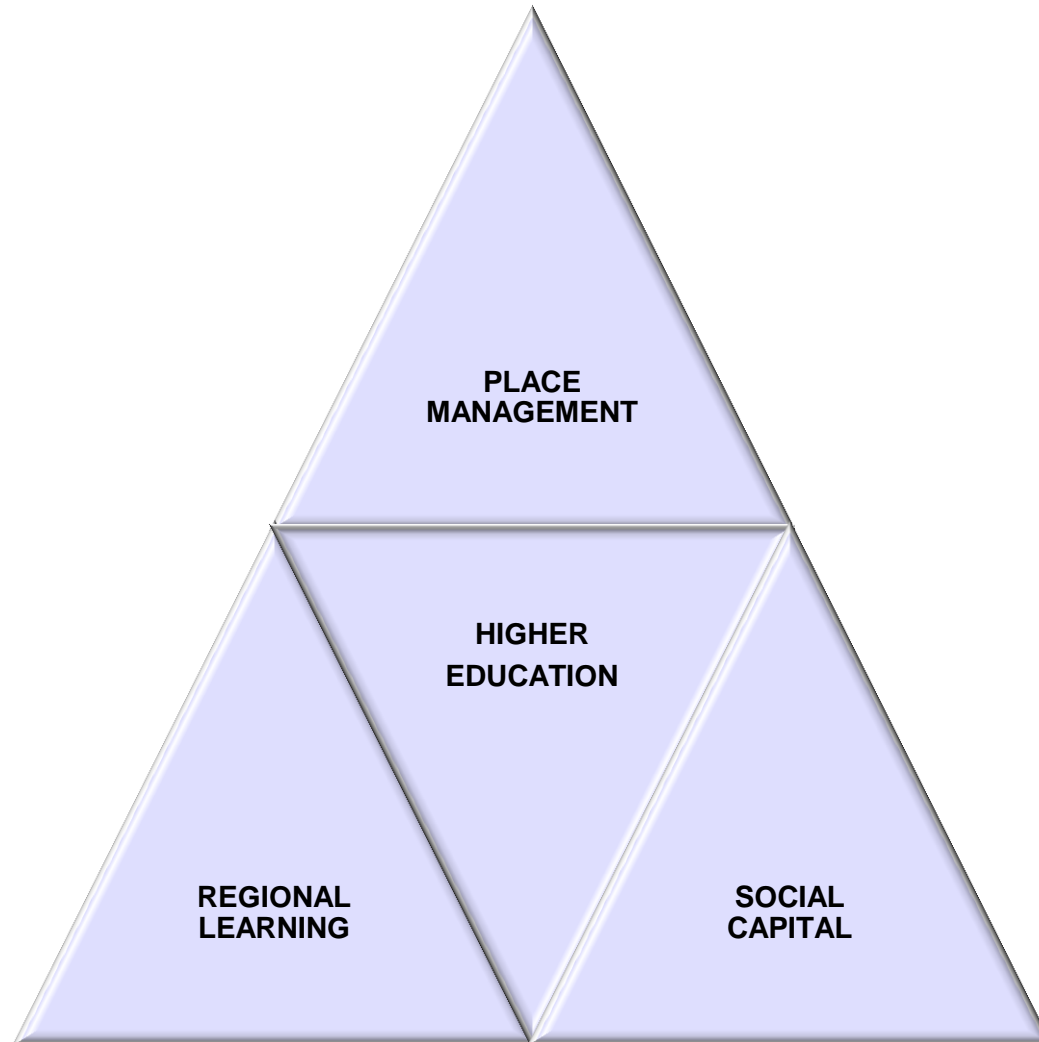
DNA OF THE INSTITUTION

What do we chose and what is our ambition?

COMMUNITY

R&D

EDUCATION
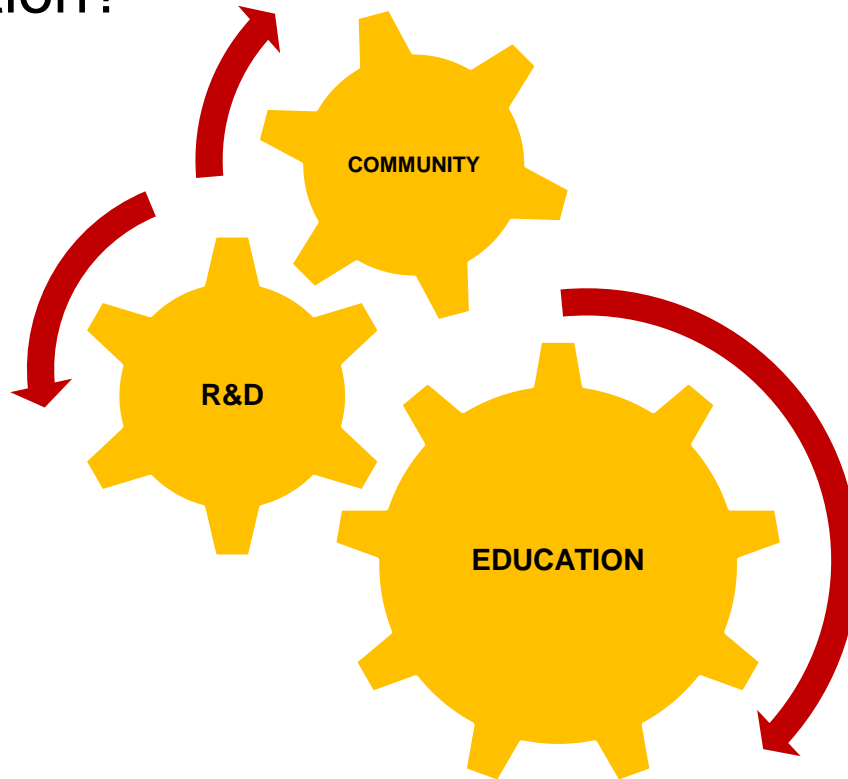
KNOWLEDGE TRIANGLE

The knowledge triangle at the core of innovation

business

higher education

Entrepreneurship

Actors in the knowledge triangle are at the core of the **innovation web**

research & technology
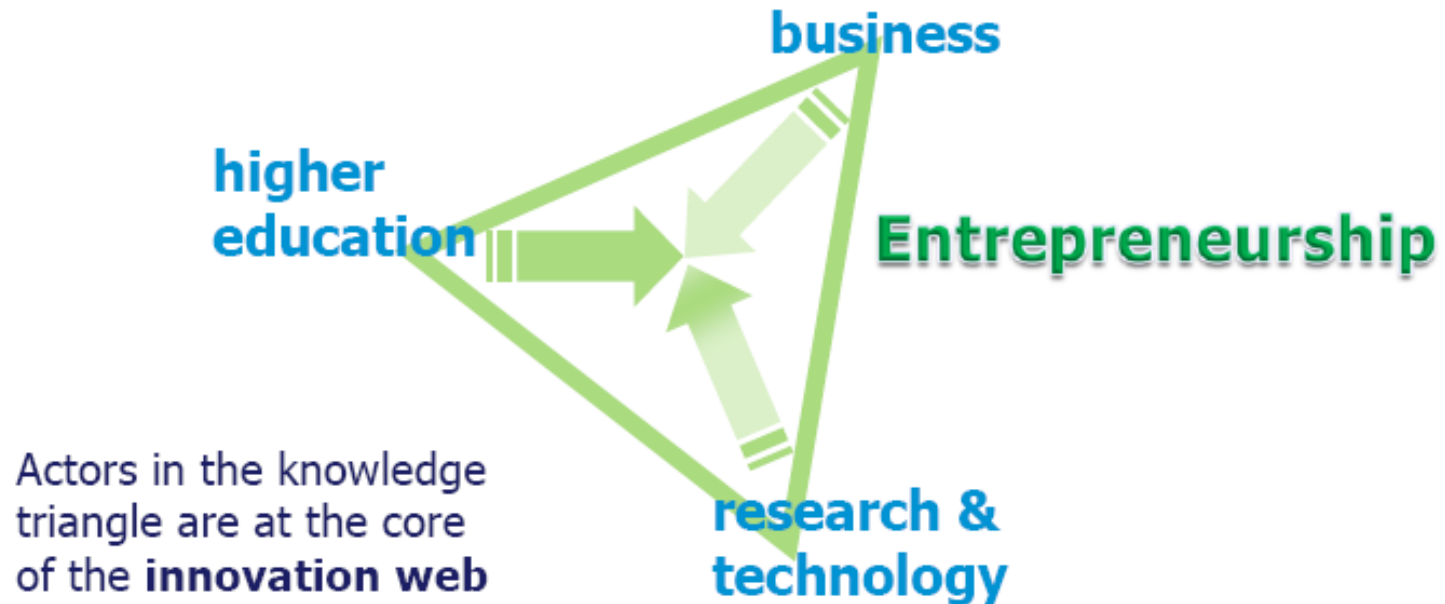
CHANGING ENVIRONMENTS AND CONTEXTS

- The HEI is largely the product of technology, infrastructure and social circumstances of the past

- The landscape has changed; how can HEIs adapt **quickly** in response:

  - Placing additional emphasis on developing skills such as critical thinking, insight and analysis capabilities
  - Integrating new-media literacy into the curriculum
  - Including experiential learning to develop competencies (skills and knowledge) in a range of subjects
  - Work Based Learning (WBL)
  - Validating Student Experience

Figure 1: Past and likely future qualification structure of jobs, shares in %, EU-25
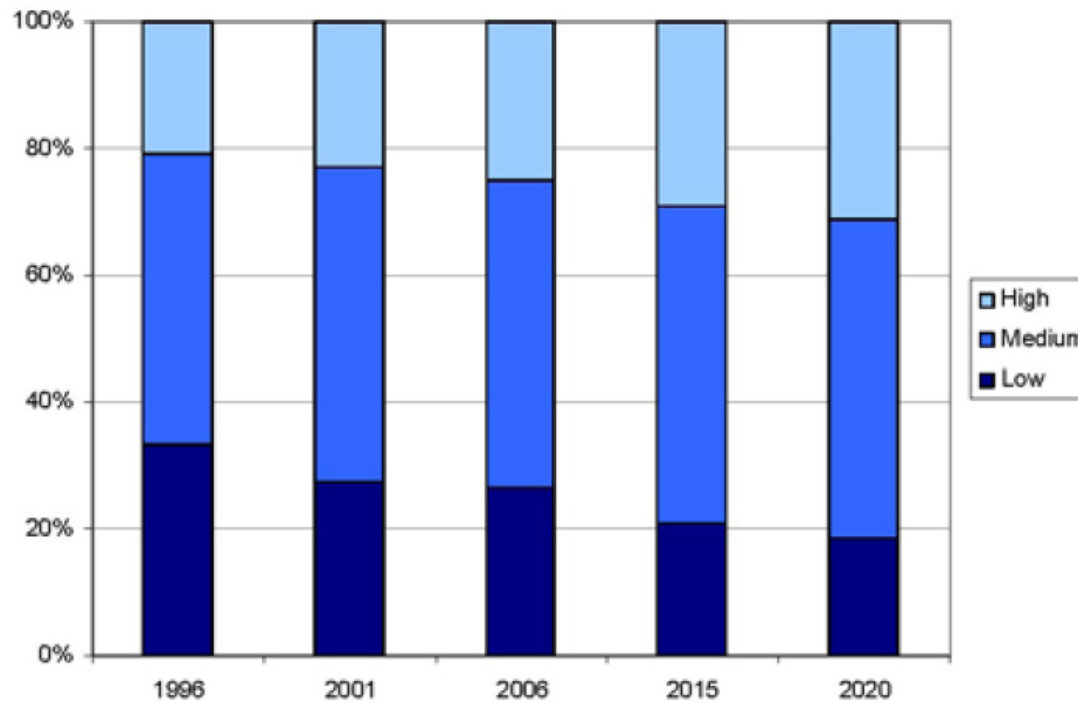
Source: Cedefop, Skill Needs in Europe. Focus on 2020. Luxembourg, 2008, p. 12.

Change in employment by occupation, 1979-2009
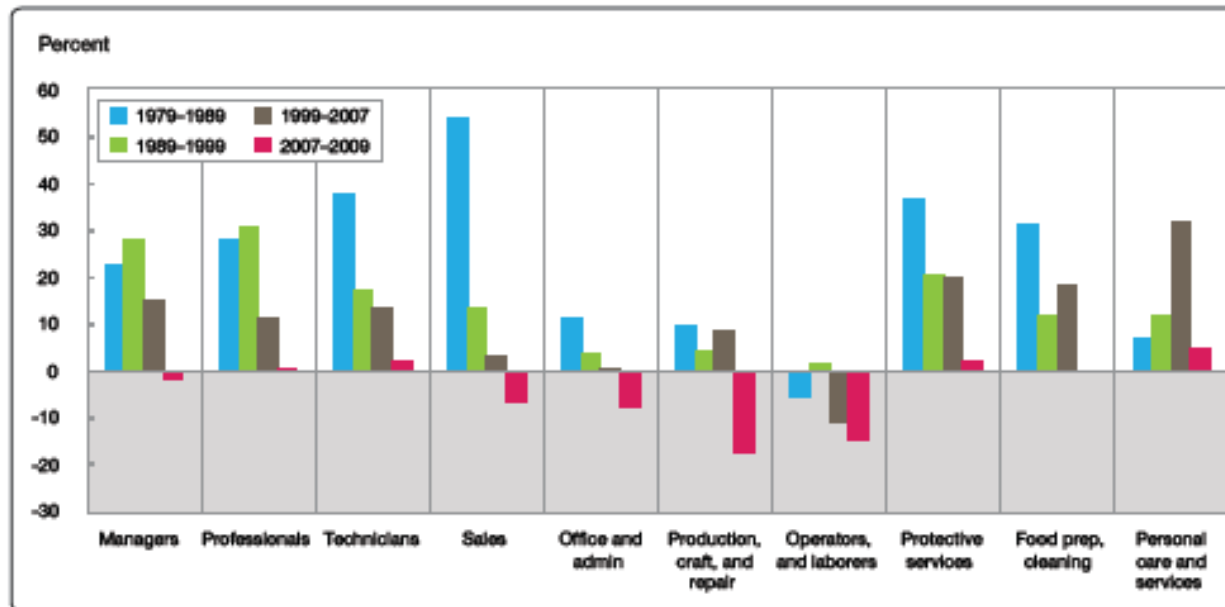
Employment growth in the United States is polarizing into high-skill and low-skill jobs, both of which require capacity for novel thinking.

David Autor, *The Polarization of Job Opportunities in the US Labor Market*. Center for American Progress and The Hamilton Project, April 2010

GENERIC COMPETENCES

Figure 2: Relative importance (1= most important) employers, graduates and academics attach to a selection of generic competences

Employers	Graduates	Academics
n = 944	n = 5183	n = 998
1. Capacity to learn	2	3
2. Capacity for applying knowledge in practice	3	5
3. Capacity for analysis and synthesis	1	2
4. Capacity to adapt to new situations	5	7
5. Interpersonal skills	6	14
10. Elementary computing skills	4	16
12. Basic general knowledge	12	1

Source: Tuning Educational Structures/ Universities' contribution to the Bologna Process: An introduction (2007), pp. 38-39.
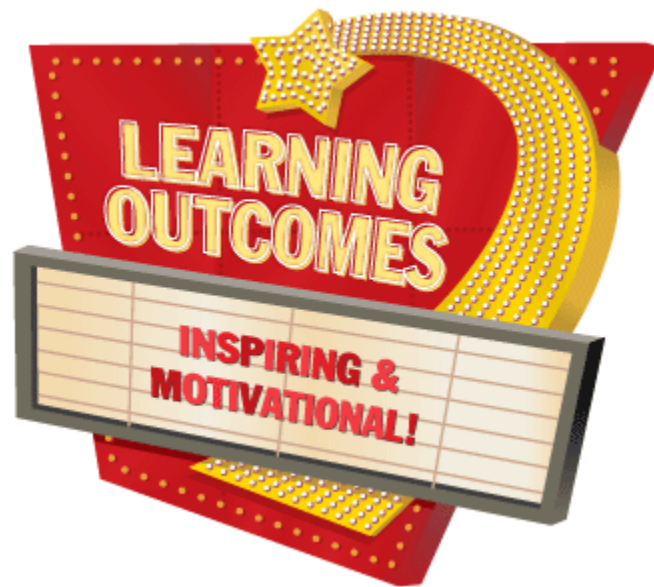
FROM THE LEUVEN DECLARATION
BOLOGNA BEYOND 2010

"**Learning outcomes** are **central** to the development of qualifications frameworks, systems for credit transfer and accumulation, the diploma supplement, recognition of prior learning and quality assurance.

In effect, the success of the Bologna Process depends on the **comprehensive implementation of a learning outcomes approach** in higher education. …

Learning outcomes encapsulate a **learner-centred approach** and shift the focus in higher education away from the traditional teacher-centred or institution-centred perspective."

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THE TUNING MODEL
FOR EUROPEAN COMPARABLE DEGREES

© Tuning Project

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Tuning definitions

Tuning
Tuning
Educational Structures
in Europe

TUNING DEFINITIONS:

Competences: The Tuning Project focuses on subject-specific competences and generic competences. These competences represent a dynamic combination of attributes, abilities and attitudes. Fostering these competences are the object of educational programmes.

Competences will be formed in various course units and assessed at different stages.

[competences are obtained by the student]

Tuning definitions

TUNING DEFINITIONS:

Learning outcomes: Statements of what a learner is expected to know, understand and/or be able to demonstrate after completion of learning. They can refer to a **single course unit or module** or else to a period studies, for example, a **first or a second cycle** programme. Learning outcomes specify the **minimum requirements** for award of credit.

[learning outcomes are formulated by academic staff]

Tuning
Educational Structures
in Europe

Tuning definitions

T ning

Tuning
Educational Structures
in Europe

How are competences and learning outcomes related?

- **Learning outcomes according to Tuning methodology should be formulated in terms of competences.**

- **Learning outcomes are minimum requirements of a unit or a programmes and are expressed in terms what the learner knows and is able to do at the end of the learning experience.**

- **Competences may be developed to a greater degree than the level required by the learning outcome.**

Do **Learning Outcomes** Kill Originality and Creativity?

Alternatives?

EUROPE: EMPLOYABILITY

- Three levels to be achieved
  - Level 1: immediate employability
  - Level 2: LLL
  - Level 3: making growth and development possible
- Learning:
  - Formal learning
  - Non-formal learning
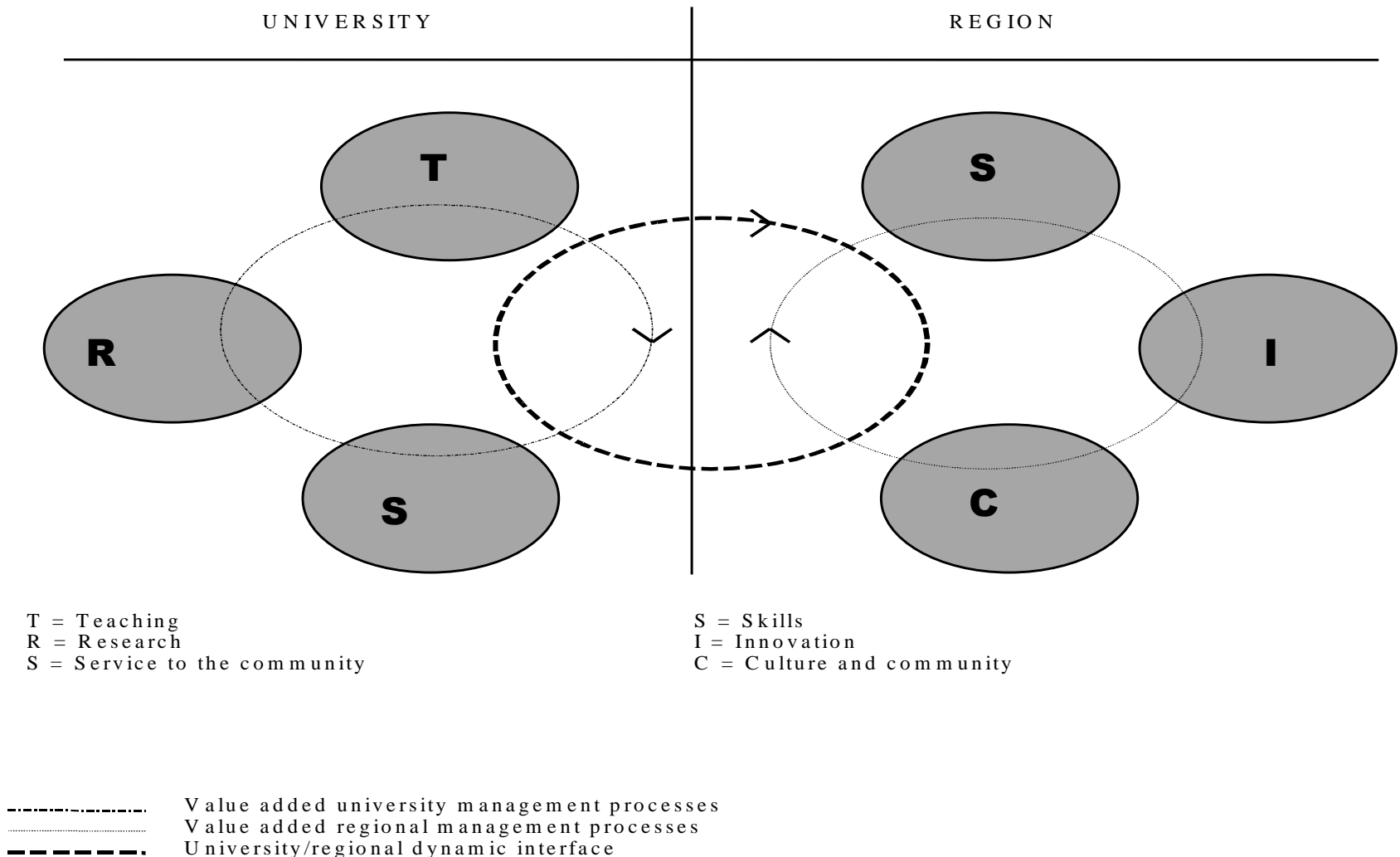 - Informal learning
- Student experience?

  An experience is just that, an experience, if there is no reflection
- Knowledge portal for cooperation:
  - *PUMR*
  - *European Commission: Thematic Forum on Curriculum Development and Knowledge Alliances (Peter Baur)*
  - *EU Drivers: www.eu-drivers.eu/*

HE NEXUS

- Research
  - Research and development
  - Research and demonstration
- Education and training
  - Competencies: knowledge, skills, attitudes and ? Leadership
  - Bildung
- Community Engagement
  - PUMR – Pascal Universities for Modern Renaissance
    http://pascalobservatory.org/projects/development/pumr
- Integration in the Student Experience is of paramount importance

University/region value added

T = Teaching
R = Research
S = Service to the community

S = Skills
I = Innovation
C = Culture and community

- - - - - - Value added university management processes
.... Value added regional management processes
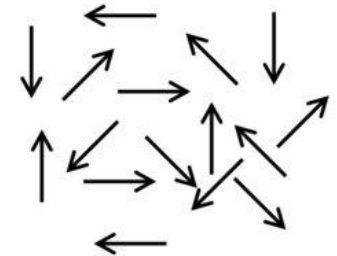- - - - - University/regional dynamic interface

EU FLAG SHIP INITIATIVES TO BOOST GROWTH AND JOBS

- SMART GROWTH
  - Digital agenda for Europe
  - Innovation union
  - Youth on the move

- SUSTAINABLE GROWTH
  - Resource efficient Europe
  - An industrial policy for the globalisation era

- INCLUSIVE GROWTH
  - An agenda for new skills and jobs
  - European platform against poverty

http://ec.europa.eu/europe2020/tools/flagship-initiatives/index_en.htm

SIX DRIVERS FOR THE FUTURE

- University of Phoenix and the Institute for the Future

- Research Report "**Future Work Skills 2020**"

  – 6 Disruptive shifts that will reshape the workforce landscape
  – 10 key skills for the future

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globally connected world

Increased global interconnectivity puts diversity and adaptability at the center of organizational operations

DRIVERS

- extreme longevity
- rise of smart machines and systems
- new media ecology
- computational world
- superstructed organizations
- globally connected world

Trans-disciplinarity

Design Mindset

Sense-Making

New Media Literacy

Virtual Collaboration

Social Intelligence

Cognitive Load Management

Cross Cultural Competency

Novel and Adaptive Thinking

Computational Thinking

COMPETENCIES FOR THE 21ST CENTURY
KNOWLEDGE, SKILLS AND ATTITUDES NEEDED IN THE FUTURE WORK FORCE

- extreme longevity
- rise of smart machines and systems
- new media ecology
- computational world
- superstructed organizations
- globally connected world

1 SENSE-MAKING

DEFINITION: *ability to determine the deeper meaning or significance of what is being expressed*

2 SOCIAL INTELLIGENCE

DEFINITION: *ability to connect to others in a deep and direct way, to sense and stimulate reactions and desired interactions*

3 NOVEL & ADAPTIVE THINKING

DEFINITION: *proficiency at thinking and coming up with solutions and responses beyond that which is rote or rule-based*

4 CROSS-CULTURAL COMPETENCY

DEFINITION: *ability to operate in different cultural settings*

- extreme longevity
- rise of smart machines and systems
- new media ecology
- computational world
- superstructed organizations
- globally connected world

5 COMPUTATIONAL THINKING

DEFINITION: *ability to translate vast amounts of data into abstract concepts and to understand data-based reasoning*

6 NEW-MEDIA LITERACY

DEFINITION: *ability to critically assess and develop content that uses new media forms, and to leverage these media for persuasive communication*

7 TRANSDISCIPLINARITY

DEFINITION: *literacy in and ability to understand concepts across multiple disciplines*

8 DESIGN MINDSET

DEFINITION: *ability to represent and develop tasks and work processes for desired outcomes*

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9 COGNITIVE LOAD MANAGEMENT

DEFINITION: *ability to discriminate and filter information for importance, and to understand how to maximize cognitive functioning using a variety of tools and techniques*

10 VIRTUAL COLLABORATION

DEFINITION: *ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team.*

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EXAMPLE: PARTICIPATIVE DEVELOPMENT
Model of BC Pretoria

- Industry
  - Skills required
  - Profiles required
  - Context work environment
- Student
  - Academic profile
  - Intellectual profile
  - Personal profile
- Academia
  - Defines curriculum, learning outcomes and competencies
  - Close contact with society and work field
  - follow progress and evolution of R&D

- Place
  - Regional and national context and goals
  - Benefit all stakeholders
 - place management
  - Today's and future skills

RIGHT INGREDIENTS

The Participative Development Model requires
a mind-set and a culture
which needs to have a careful balance between
following components:

1. Academic content
2. Work based environment content
3. Workplace content
4. The individual student
5. Workplace training

To be encompassed in a never-ending PDCA-cycle

THE TUNING DYNAMIC QUALITY ASSURANCE CIRCLE
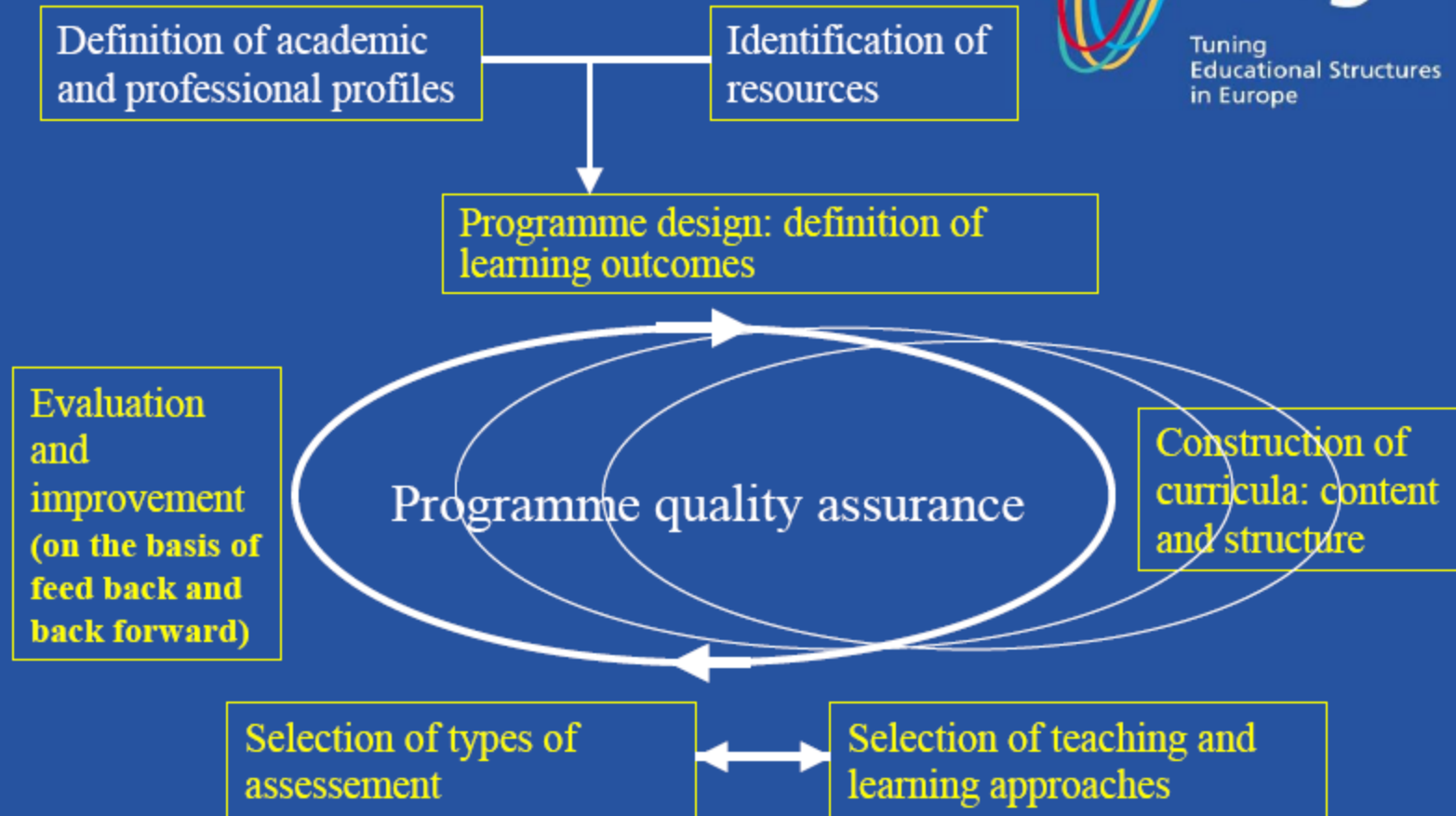
THANK YOU

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