Institut für Öffentliche Dienstleistungen
und Tourismus

Universität St.Gallen

The role of knowledge and learning for regional development

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Kaunas, 5th November 2007

Central issues

- What are the key factors contributing to the positive economic development of a region?
  - paradigm shift in the regional development theories
  - concept of the "learning region"
- The importance of knowledge and learning for regional development
  - explicit and tacit knowledge
  - formal, non-formal und informal learning
- Examples for different kinds of learning
- Conclusion
  - how to initiate and improve learning processes in a region?
  - how can learning processes lead to a successful regional development process?

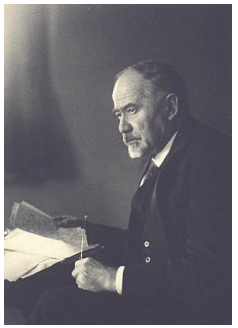
The current research status

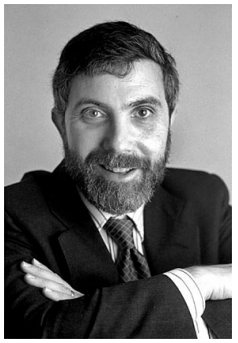
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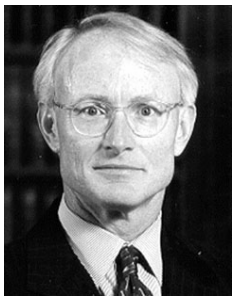
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History of the regional development theories

- Traditional location theories
  - Transport costs, work costs, ground rent
  - by Thünen, Weber, Christaller (1950‘s)
- Polarisation theories
  - Sectoral areas of growth, agglomeration effects, availability of work and capital
  - Perroux, Myrdal, Krugman
- Territorial innovation models
  - Cluster approach, milieu approach, „learning regions“, network relationships, process orientation, capacity for innovation and learning
  - Porter, Morgan







Paradigm shift in regional development theories

- Basic paradigm shift in the regional development theory :
  - The theoretical perspective changes from an exogenous to an endogenous point of view.
  - The theories move away from production factors in a strict sense, to an interactive correlation between institutions and/or actors.
  - The focus of the theories shift from a static view of location factors to development processes.
- Today there is no longer the one and only predominating development theory. There is a range of diverse theoretical approaches that can clarify the success of regions and locations.

The predominant regional development strategies

- **Endogenous regional development**
  - Return to regional resources and skills show the necessity of using these, in order to generate development impulses and ideas.
- **"Learning Regions"**
  - Importance of knowledge, qualification and competence aquisition as a basis for the economical development of a region
- **"Social capital approach"**
  - Relationships between people as a resource also for the economic development of a region and/or borough.
- **"Capacity Building"**
  - Setup of institutions, which use the organisational and individual knowledge of a region for (economical) development.

Defining the Learning region

"To be effective in this increasingly borderless global economy, regions must be defined by the same criteria and elements which comprise a knowledge-intensive firm: continuous improvement, new ideas, knowledge creation and organisational learning.

Regions must adopt the principles of knowledge creation and continuous learning; they must in effect become knowledge creating or learning regions"

(R. Florida)



The central elements of „Learning Regions“

- The concept of the learning region distinguishes between three basic approaches:
  - **Human capital orientated approaches**, in which the development of a regional knowledge base, as well as co-ordination of further education opportunities in the region are the focus („learning by coordinating“).
  - **Innovation orientated approaches**, in which learning by interacting as well as exchange of information and diffusion of innovations are the focus („learning by interacting“)
  - A **policy network approach**, which deals with new co-operation processes through networks in the region („learning by networking“)

Knowledge and Regional Development

- For regions as an overall system, innovation and innovative ability are the central requirement, so that they can adjust in the long term to the constantly changing endogenous and exogenous terms and conditions.
- Only „learning regions“ can survive in the future.
- Knowledge and learning will be the central factors in the competitiveness of a location.

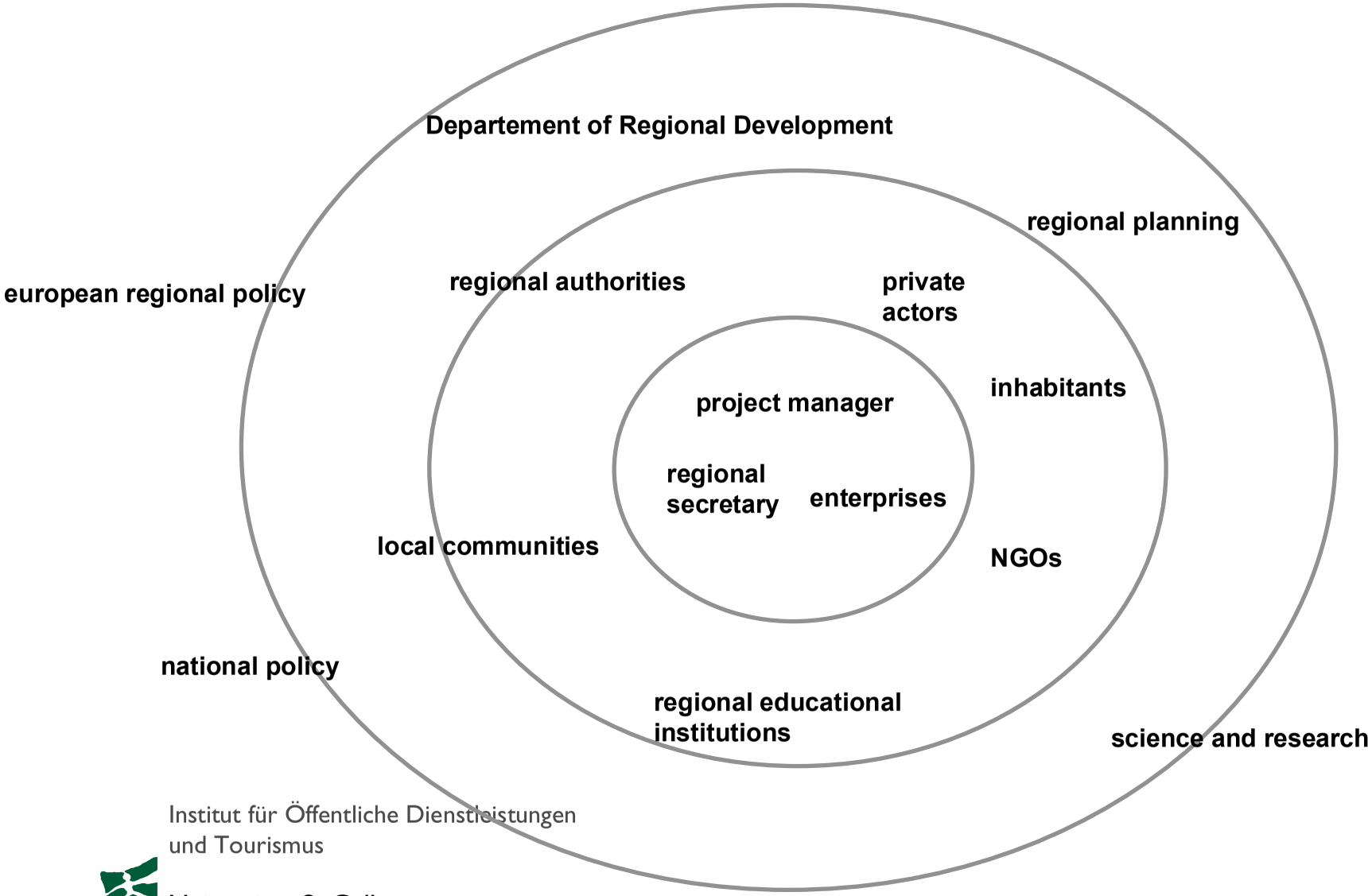


The importance of knowledge and learning

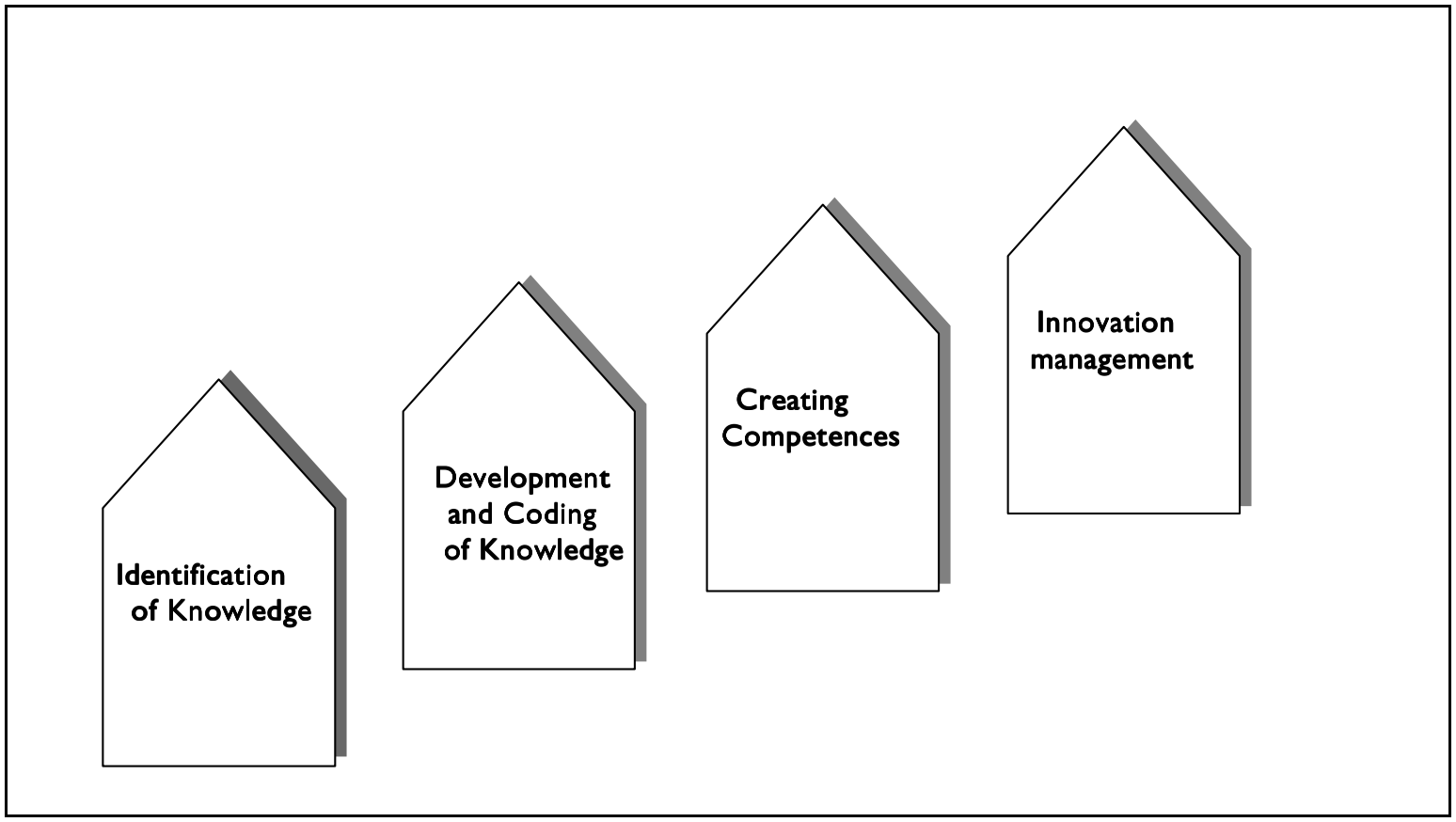
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Regional repository of knowledge



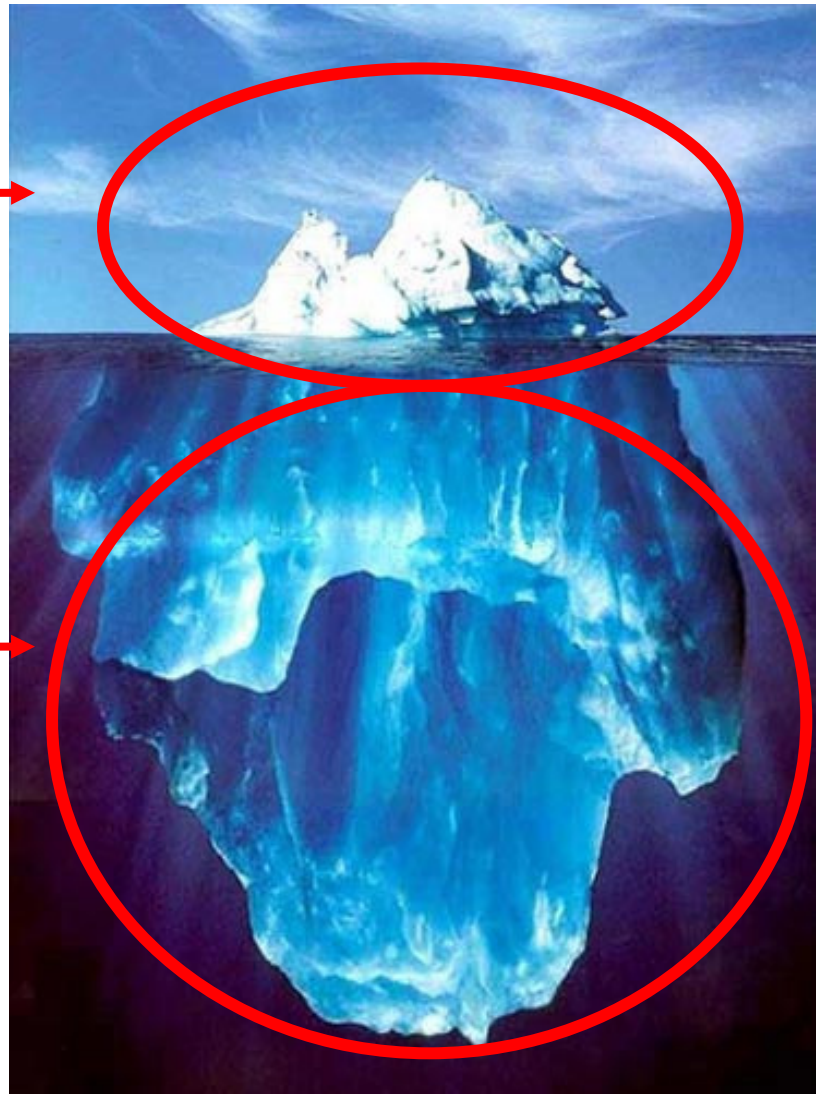
The way from knowledge to innovation



Source: after von Krogh 1995

Different kinds of Knowledge

- Explicit knowledge,
  - contained in manuals and procedures and
- Tacit knowledge,
  - learned only by experience, and communicated only indirectly, through metaphor and analogy



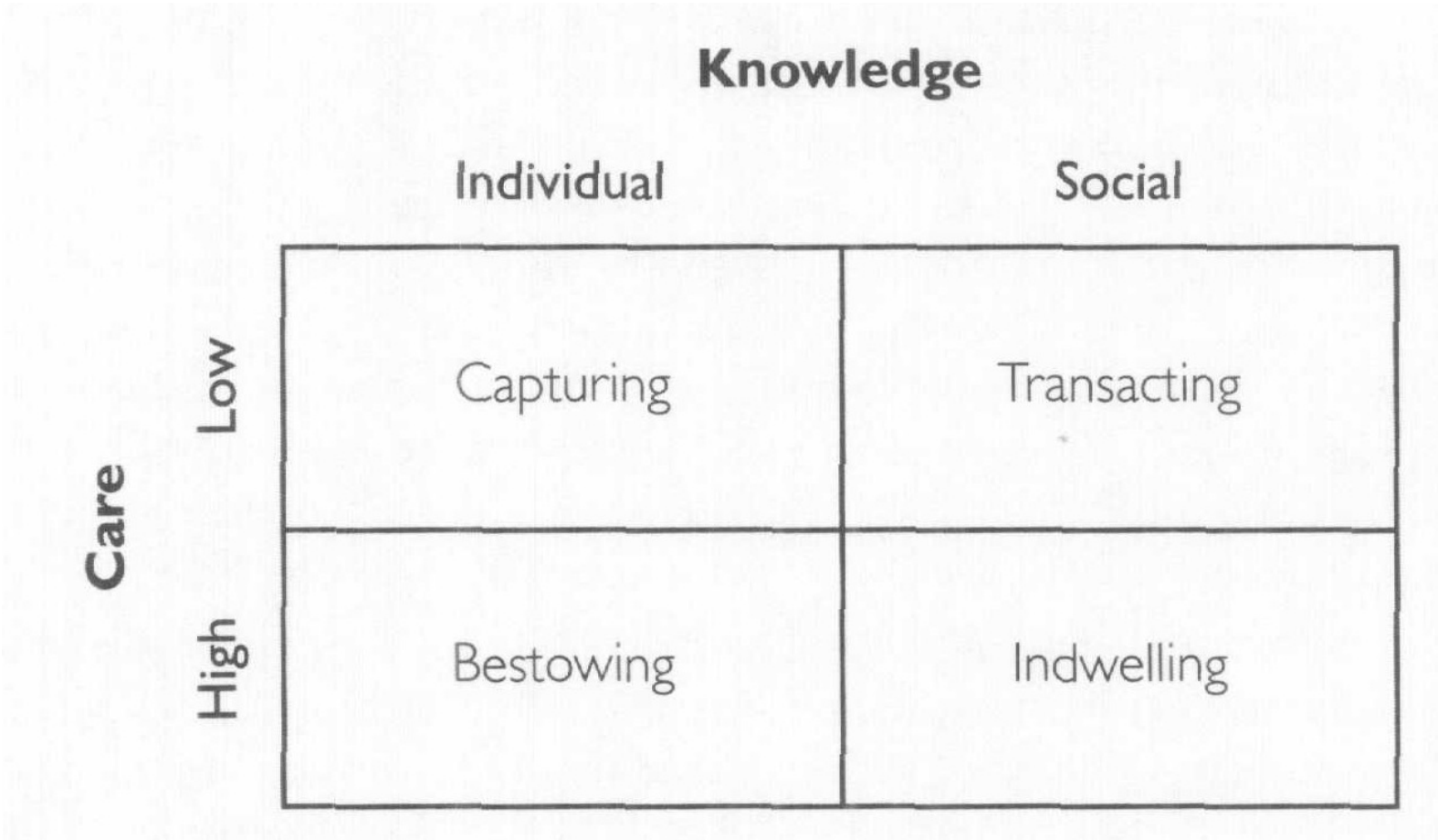
Source: Nonaka, Takeuchi 1997

Characteristics of explicit and tacit knowledge

	Explicit knowledge	Tacit knowledge
Context	Connected with intellectual experiences	Connected with sensory experiences
Transfer	Communication of knowledge	Common application of knowledge
Explicitation	Documentation in words, numbers, pictures	Complex process of externalisation
Adoption	By common learning	By common experience

Source: Wilke 1997

The Process of Knowledge Creation



Source: von Krogh 1998

Characteristics of Knowledge Creation

Process	Level	Characteristics
Capturing	Individual	• Individual search for "maximum grip" • No interest/attempt to share knowledge • Limited feedback from others • Isolation of individual
Transacting	Social	• "Experts" transacting their knowledge • Minimizing risk of conveying non-legitimate knowledge • Sharing based on expected returns • Knowledge shared is the end result of a "maximum grip" learning process
Bestowing	Individual	• Knowledge created in a supportive environment ("maximum leverage") • Strong intent to share knowledge on the future • Feedback from others • Integration of individuals into the team
Indwelling	Social	• "Equals" creating knowledge • Questioning and changing the basis for legitimate knowledge • Sharing to help the team grow • Attempts to "look with" not "look at" other teammembers

Source: von Krogh 1998

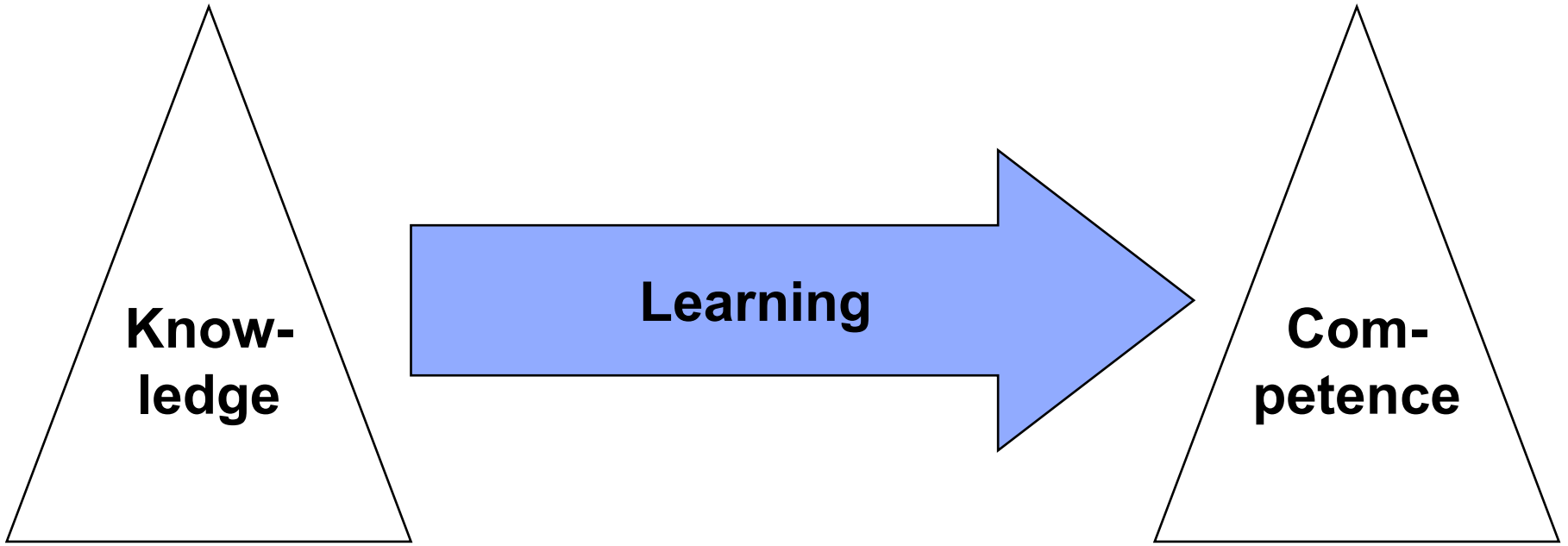
From knowledge to learning

„If you use the classification of tacit and explicit knowledge, learning is first of all the transfer of explicit or tacit knowledge into tacit knowledge. It‘s a process which causes an inner personal change and leads to a more or less sustainable increase in competences and skills.“

(Source: Back et al. 2001)

➔ Knowledge is the content, which is communicated by learning as a concrete process and activity

From Knowledge to Competence via Learning



Definitions of different kinds of learning

- **Formal Learning:**
  - Learning typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification. Formal learning is intentional from the learner's perspective.
- **Non-formal Learning:**
  - Learning that is not provided by an education or training institution and typically does not lead to certification. It is, however, structured (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner's perspective.
- **Informel Learning:**
  - Learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification. Informal learning may be intentional but in most cases it is non-intentional (or "incidental"/random)

Source: European Commission 2001

Recognition of Competencies

1. The overall process of granting official status to competences, (this is *formal recognition*), gained either
   - formally (by awarding certificates) or
   - in a non-formal or informal setting (by granting equivalence, credit units, validation of gained competences);

   and/or
2. The acknowledgement of the value of competences by economic and social stakeholders (this is *social recognition*).

Source: European Commission 2001

Examples of the three kinds of learning

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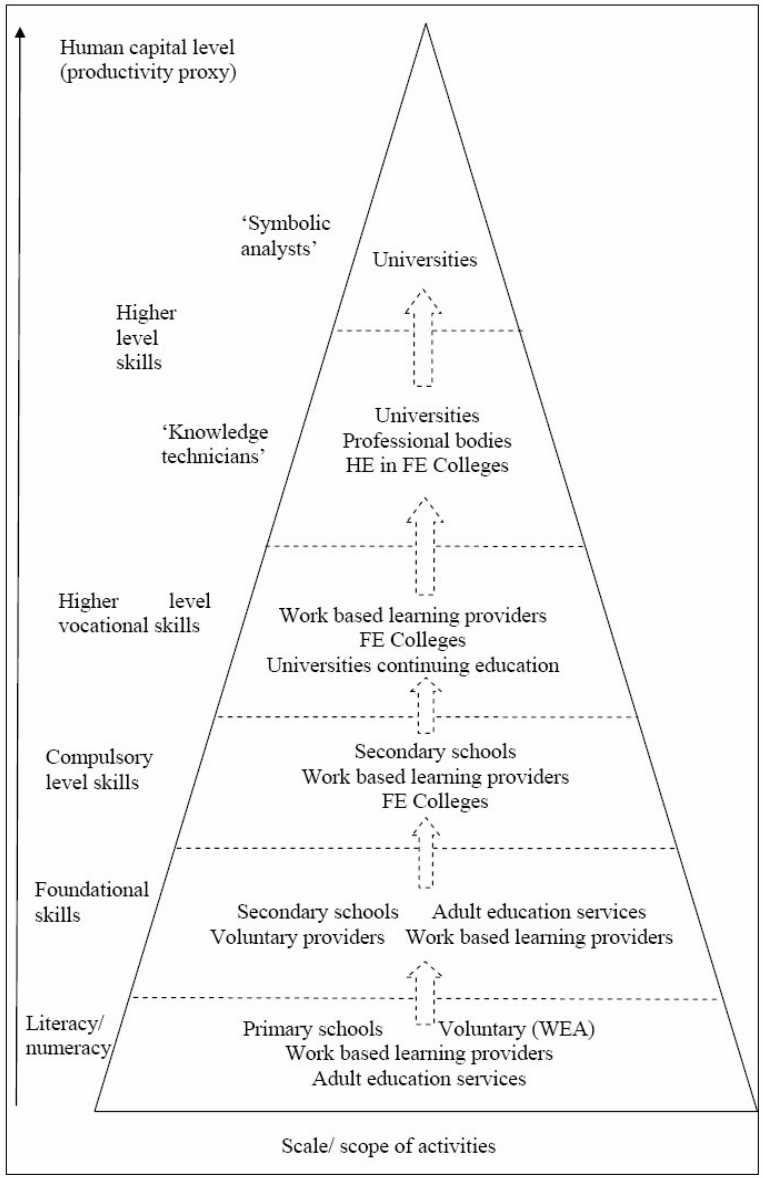
Main topics of formal and non-formal Learning

- Aneignung des explizitem Wissen durch formalisierte und nicht-formalisierte Lernprozesse

  - zielt primär auf die Vermittlung von explizitem Wissen
  - ist systematisch in Bezug auf Lernziele, Lerndauer und Lernmittel
  - und damit ein zielgericheter Lernprozess
  - zwischen Lehrendem und Lernenden
  - der aber nicht zwingend personengebunden sein muss

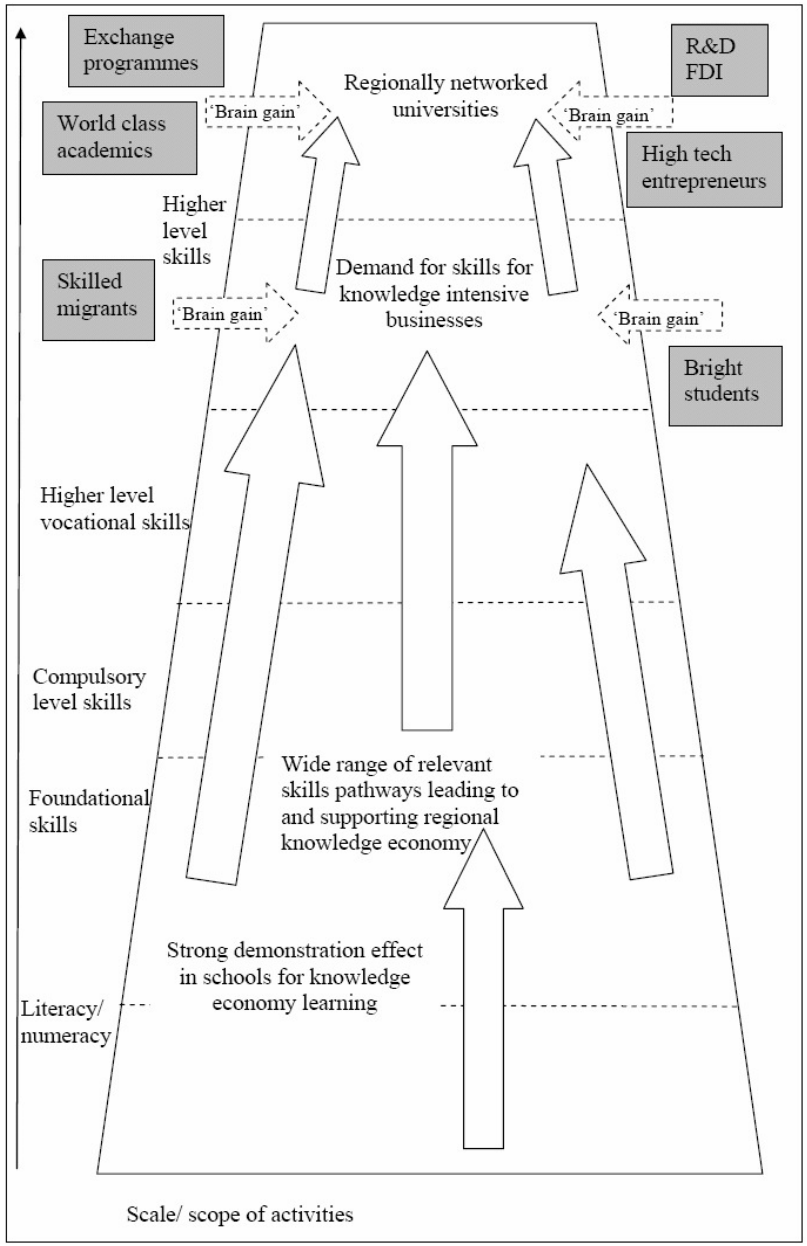
  - Zertifizierung des Lernprozesses als Unterschied zwischen dem fomalisierten und dem nicht-formalisierten Lernprozess

Formal learning: e.g. the educational system



Source: Benneworth 2006

Universities at the heart of the human capital upgrading process

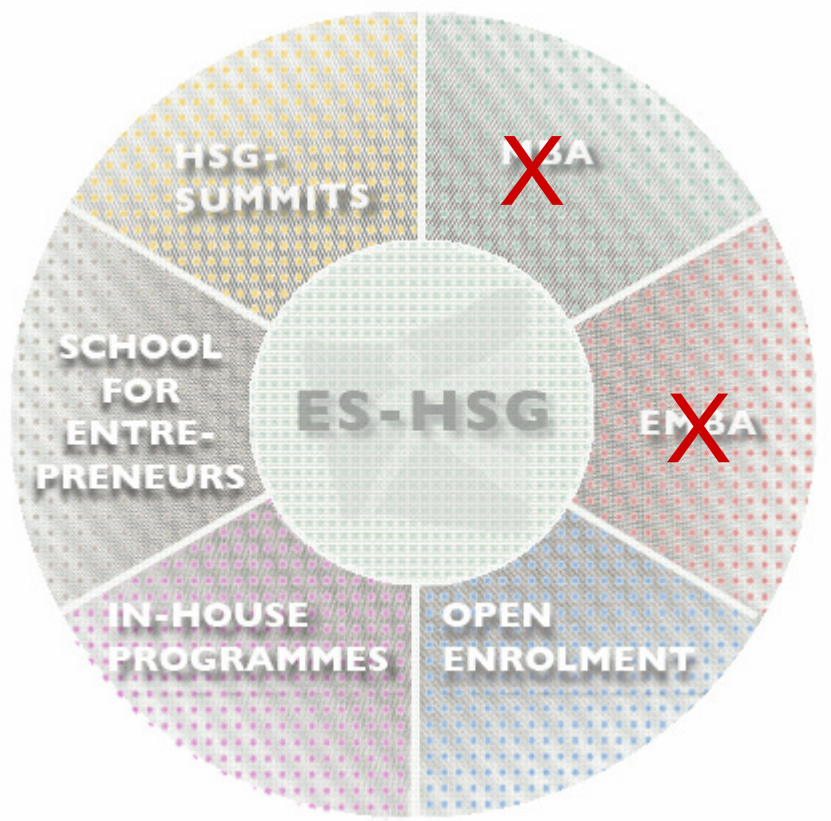


Source: Benneworth 2006

Non-formal Learning in Regional Development

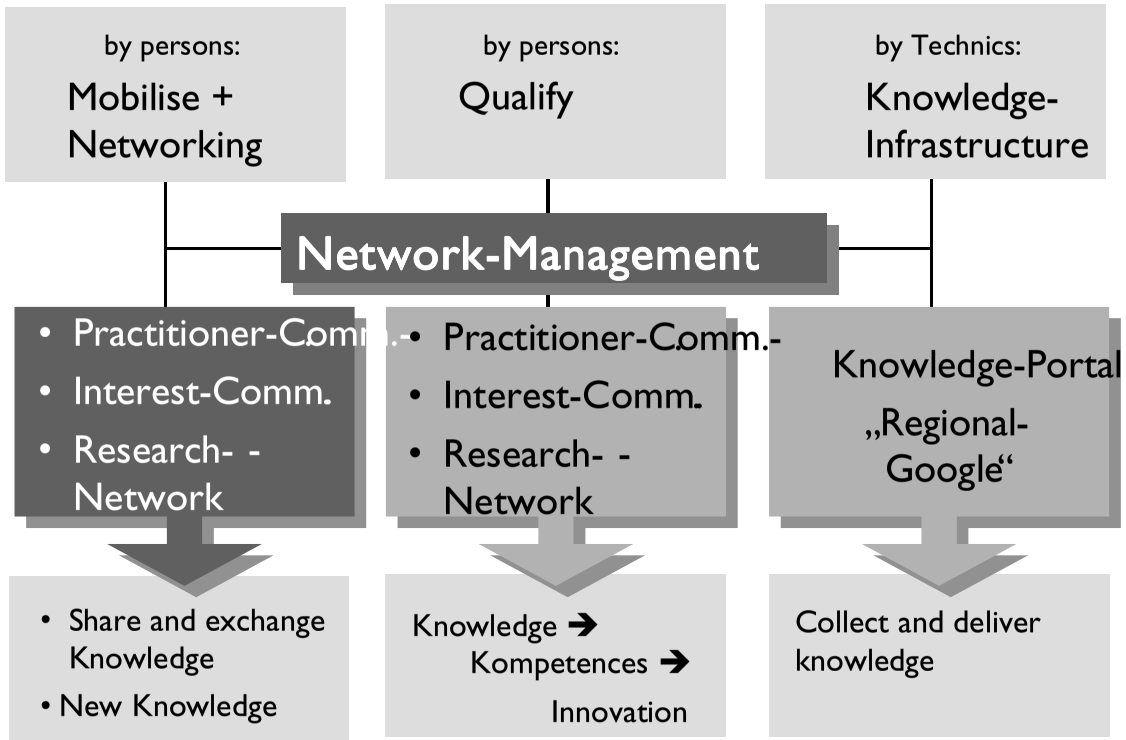
- classical events on job-related or private further education
- learning objectives differ in the learning intensity
- different kinds of learning processes

- *besides of explicit knowledge the dissemination of tacit knowledge is also important and intended*



Informal Learning in Regional Devlopment

e.g.: Knowledgemanagement Regional Development Switzerland



Informal Learning in Regional Devlopment:

e.g.: Exchange of experiences



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Characteristics of different kinds of learning

	Formal Learning	Non-formal Learning	Informal Learning
Exchange of explicit knowledge	+ + +	+ +	- - -
Exchange of tacit knowledge	- - -	+ + / - -	+ + +
Formalisation	+ + +	- -	- - -
Individualisation	- - -	+ + / - -	+ + +

Universities as a repository of knowledge in a Learning Region

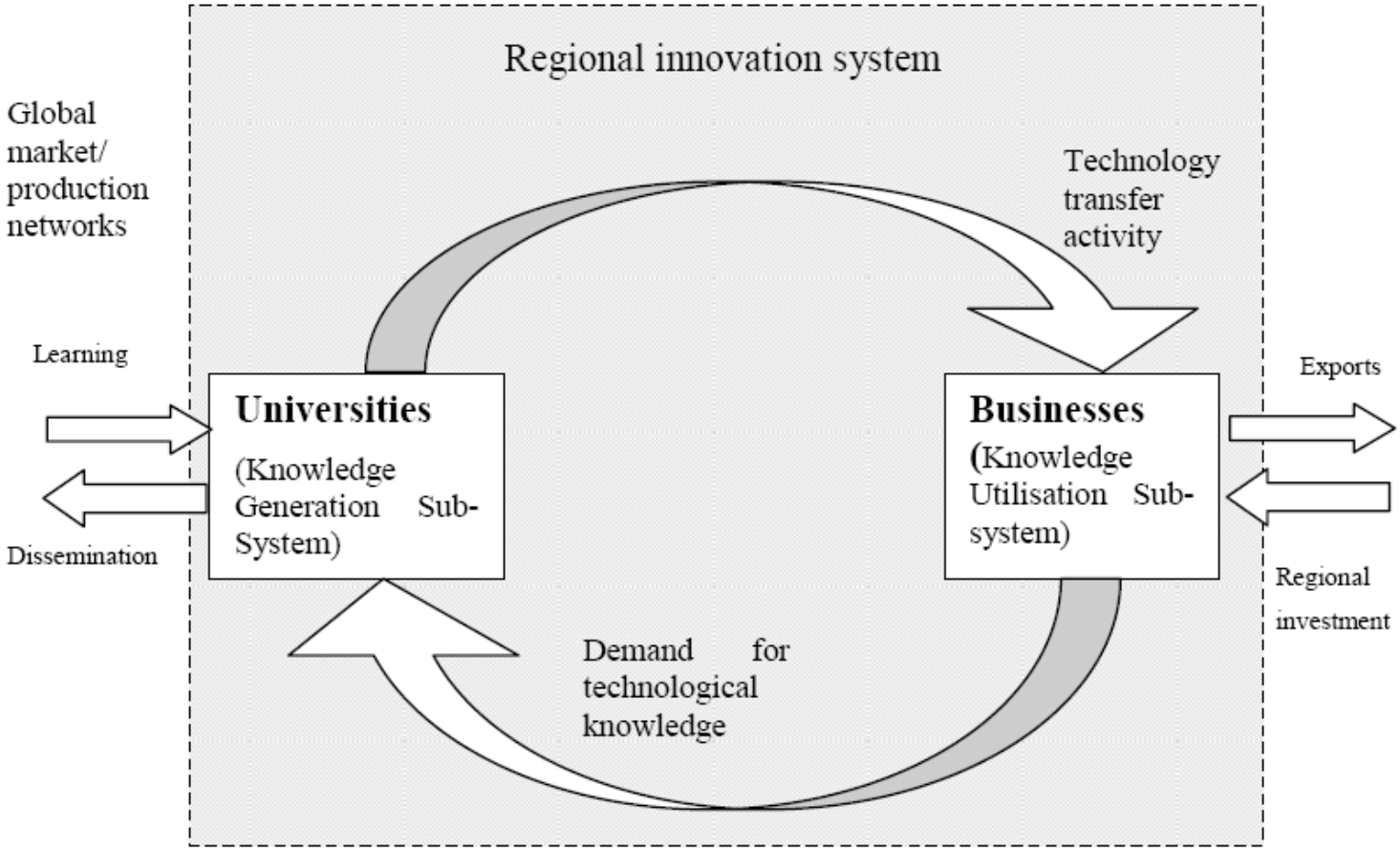
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Universities and Regional Development

Formal Learning	• Education and Learning • PhD-Studies • *Job-oriented Education*
Non-formal Learning	• Further Education • Conferences, Congresses, Meetings • Public lectures, speeches etc.
Informal Learning	• Exchange of Experiences • Alumni • Mentoring-Programmes

Universities and Regional Development



Source: after Cooke (2004); in Benneworth (2004)

Conclusion

Requirements for universities and regional players

- Universities have more to offer than education and research
  - Updating skills of employees
  - Identifying and solving social problems
  - University expertise is needed in an increasingly large range of professional and political fields
- Research results have to be transferred into innovation processes, incorporation into regional action plans and programmes
- Take the universities seriously as a player and partner, mind map
- Using universities as a repository of knowledge
  - help the region to understand itself
  - gateway to global information to meet the needs of different sectors of the regional economy
- Creating a mechanism through which the resources of universities can be mobilised to contribute to the regional development process

Perspectives

- Why is explicit and tacit knowledge important for the development of our region?
- How can we create explicit and tacit knowledge in our region?
- How can regional learning processes be developed?
- How can regional learning processes be designed to contribute to a positive and sustainable regional development process?

„Stets sorge, daß das Volk ohne Wissen und Wunsch sei. Und sorge zugleich, daß die Wissenden nicht zu handeln wagen“

Lao-tse, chinesischer Philosoph (um 300 v. Chr.)

“All men by nature desire knowledge”

Aristotle (384-322 BC), Greek philosopher Metaphysics, Book 1, Chapter 1

but

„There is much pleasure to be gained from useless knowledge.“

Bertrand Russell (1872-1970)