



RUB

RUHR-UNIVERSITÄT BOCHUM

REGIONAL INNOVATION

**How to analyze a regions innovativeness?
Theories and methods of regional innovation**

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Lukas Zaghaw

Seminar, Summer 2020, Coaching 2, 04.05.2020

GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung



IAW
INSTITUT FÜR ARBEITSWISSENSCHAFT
Lehrstuhl für Arbeit, Personal und Führung



Contents of Coaching 2

Part 1 | Theory and Methods to the Regional Dynamic Capabilities View

Part 2 | Cluster Analysis and Porters Diamond: What Makes a Region Competitive?

Part 3 | It's OWL - Entrepreneurial Ecosystems

Learning Outcomes











You...

- Recognize three different approaches to regional analysis
- Receive the foundation to perform your own analysis
- Learn to distinguish different kinds of theory and methodology

General Q&A

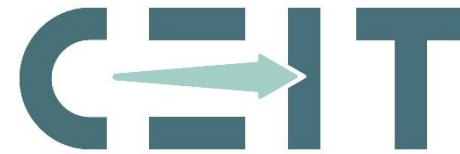


1 | Moodle and group finding

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1 | Partners

- Additional input, exchange and transfer
- For example...



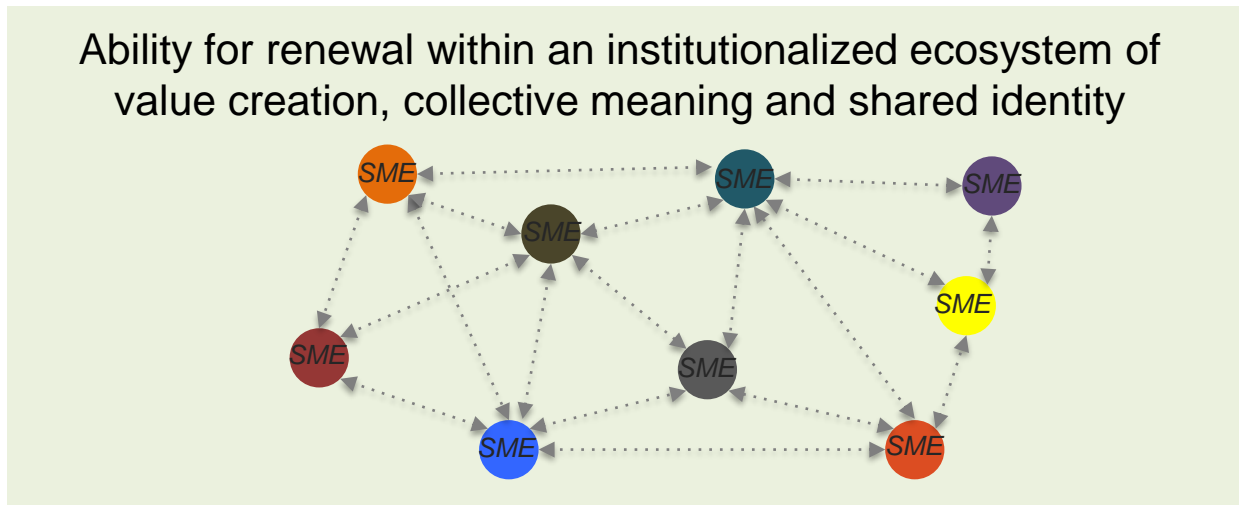
- IHKs
- Energieagentur.NRW
- Cube 5
- ruhr:HUB
- CEIT
- Handwerkskammer Düsseldorf
- Worldfactory
- InWIS
- Regionalverband Ruhr
- NRW.Bank
- Business Metropole Ruhr
- And probably many more....



What is the Regional Dynamic Capability View?

A multilevel perspective on the process of innovating a region

2 | Regional Capabilities



Regional capabilities

“capacity to create and provide collective competition goods and to stimulate and stabilize **communication** and **cooperation** between regional companies, schools, universities, technology transfer, research and development facilities and political and administrative actors. ... this is ‘the firm’s ability to integrate, build and reconfigure internal and external competences to address **rapidly changing environments**’”

(Heidenreich, 2005, p. 742 with reference to Teece et al., 1997, p. 516)

2 | Regional Capabilities

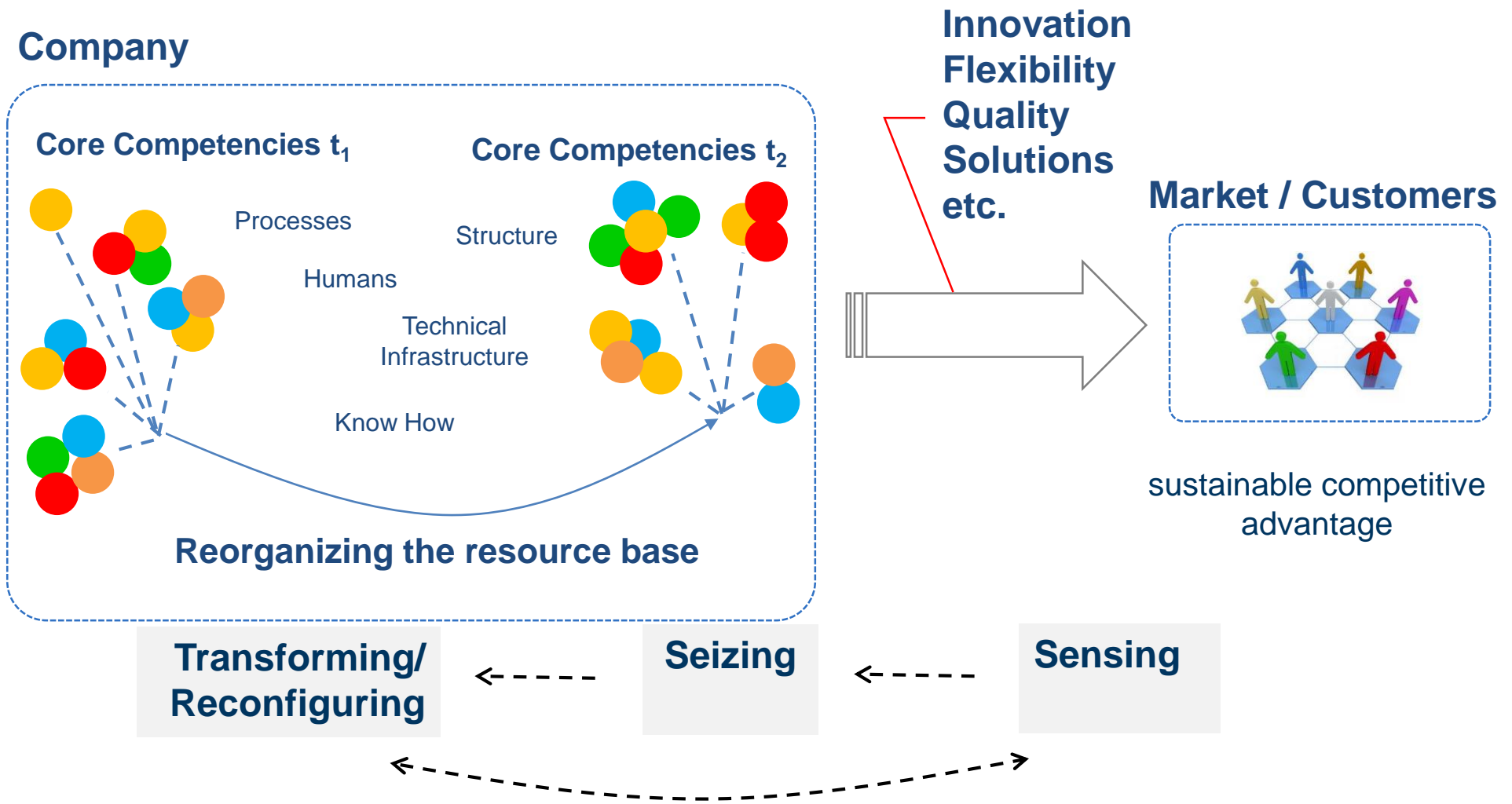
25. Oktober 2019, 9:10 Uhr Zulieferer-Branche

Ein Umbruch, wie ihn die Autoindustrie noch nicht erlebt hat

A yet unseen revolution in the automotive industries

→ A need for change that asks for reconfiguring the industries resource base

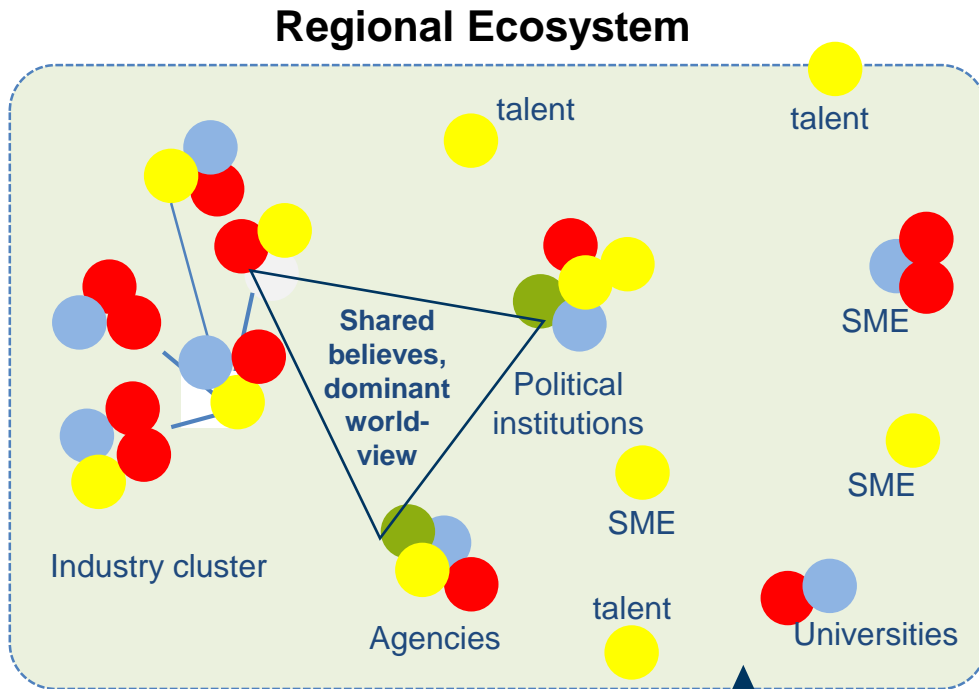
2 | 1 Perspective of the Dynamic Capability View



- ⇒ need for a contextualization in a region
- ⇒ combine DCV with new institutionalism and regional studies

2 | 2 Perspective of the New Institutionalism:

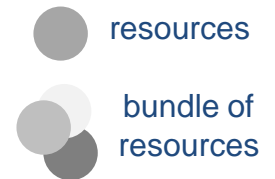
→ taken for granted practices, resistance to change and development in an ecosystem: All institutions follow the same routines



How to overcome this?

Meyer & Rowan, 1977
DiMaggio & Powell, 1983

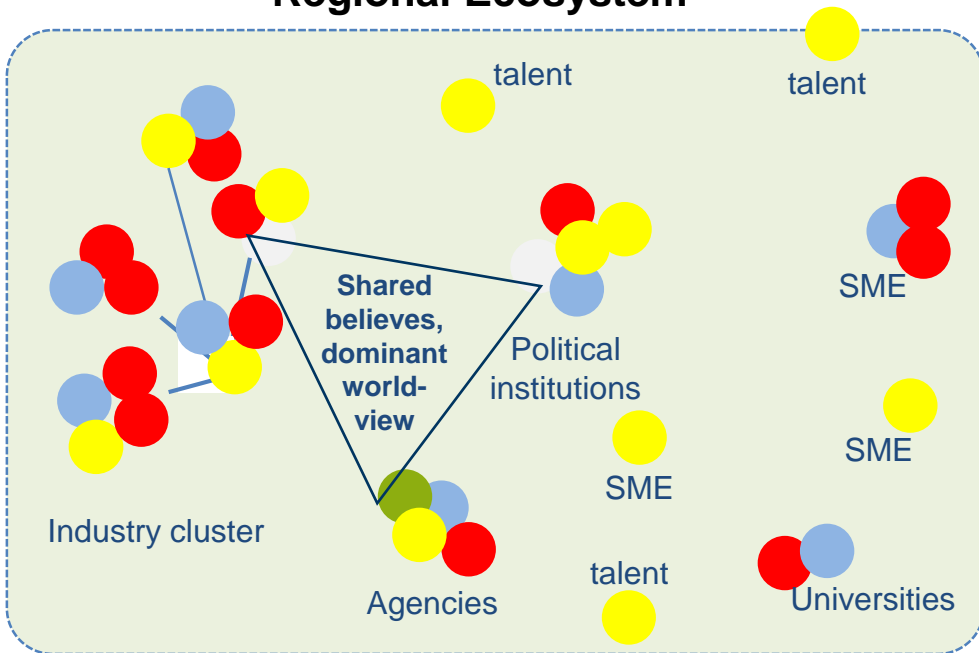
Oliver, 1991
Greenwood et al., 2008
Powell & Colyvas, 2008
Weick, 1995



2 | 3a Perspective of regional studies:

innovation resulting from the strength of weak ties and middleground projects

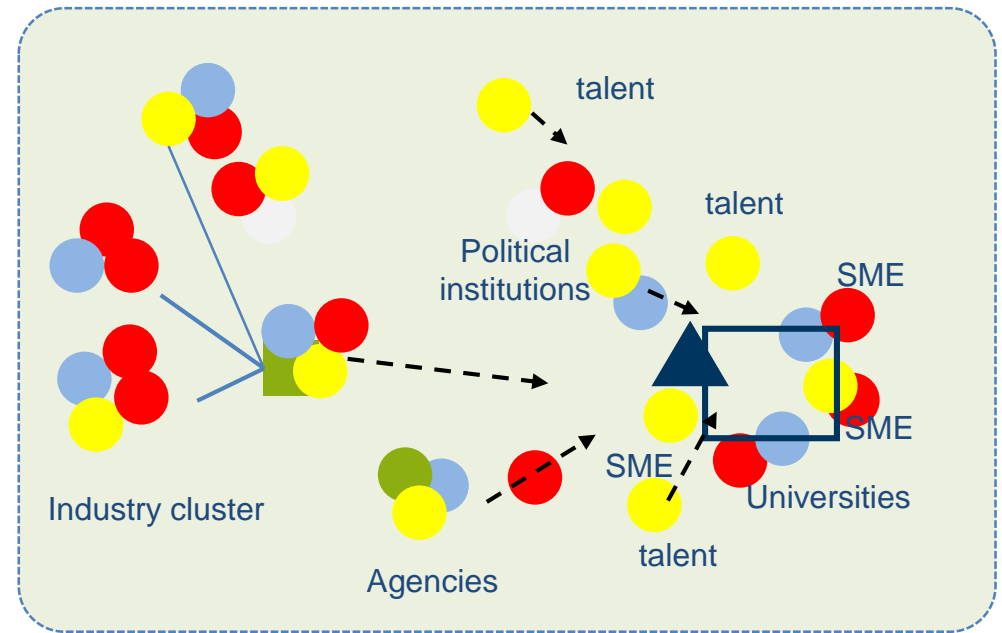
Regional Ecosystem






Meyer & Rowan, 1977
DiMaggio & Powell, 1983

Oliver, 1991
Greenwood et al., 2008
Powell & Colyvas, 2008
Weick, 1995

Regional Ecosystem under Renewal



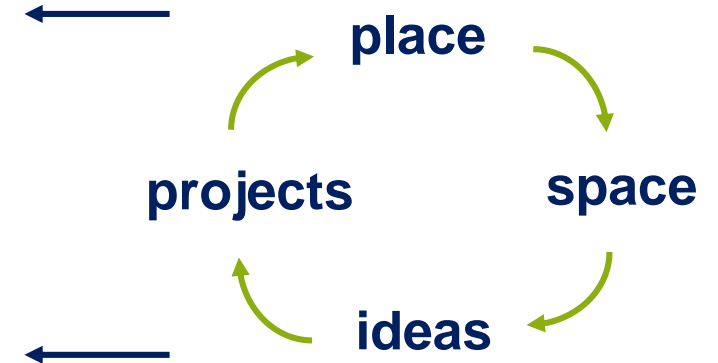
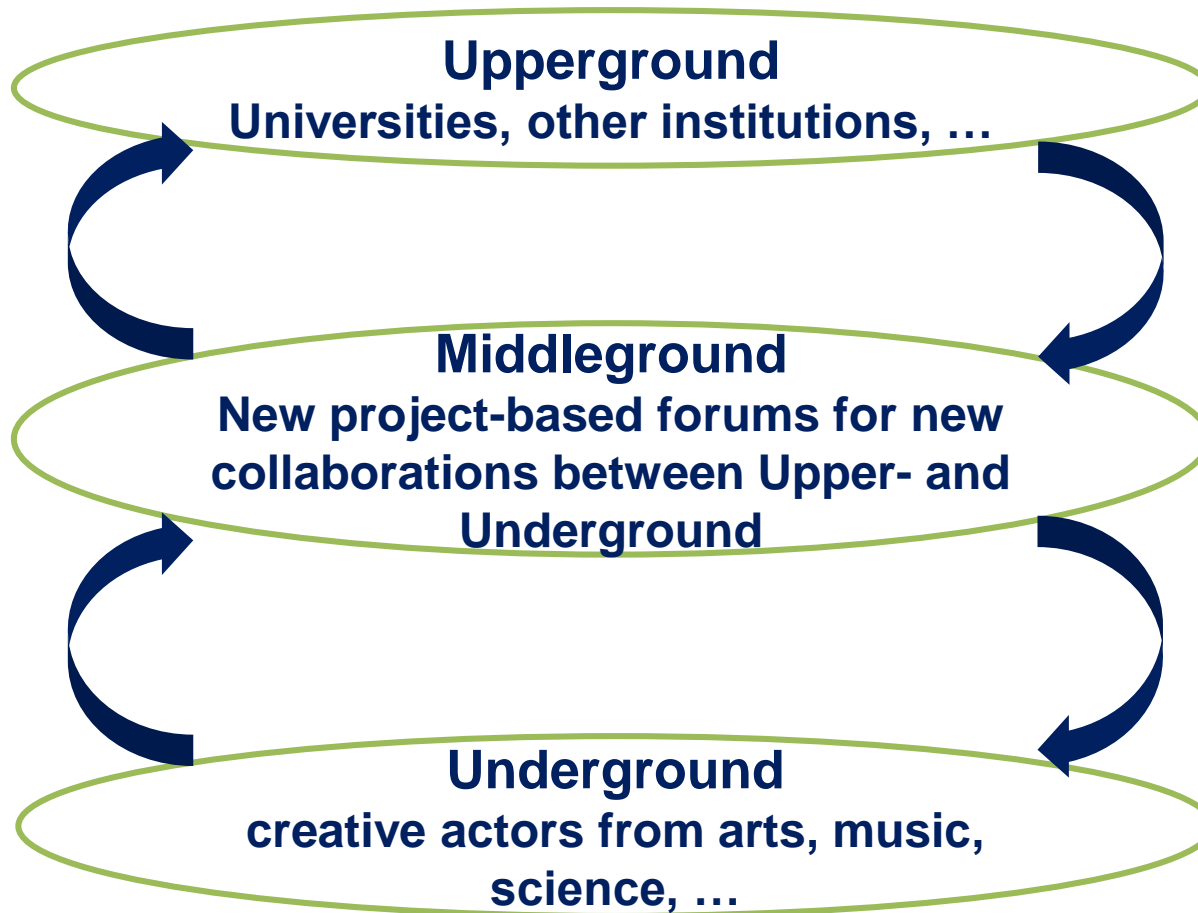
Granovetter, 1973
Grabher, 1993
Cohendet et al., 2010, 2014

-  resources
-  bundle of resources
-  institutional entrepreneur
-  middleground

**sensemaking
and enactment**

2 | 3b The anatomy of the creative city

Understanding the role of the middleground

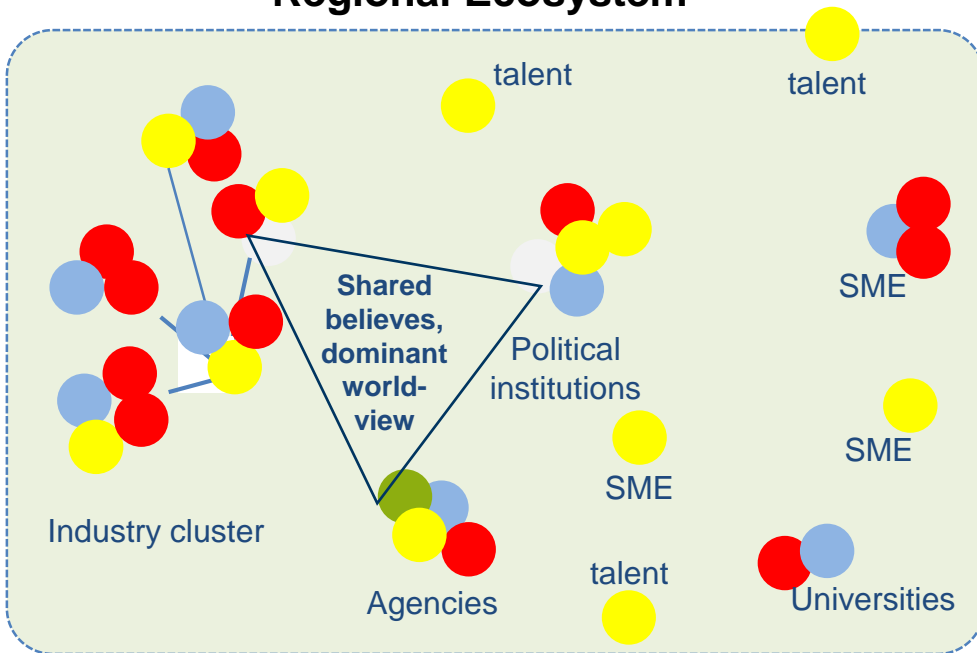


Grandadam, Cohendet & Simon, 2013

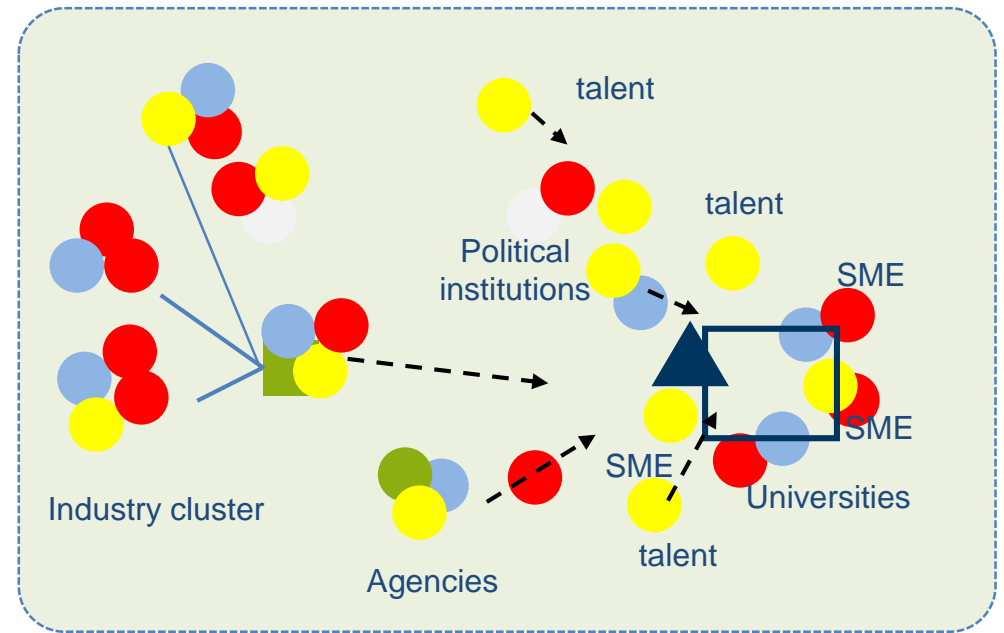
Cohendet et al., 2010

2 | Regional Dynamic Capability View (RDCV) – integration of components from three approaches

Regional Ecosystem







Regional Ecosystem under Renewal



Seizing regional resources
(firms and institutions)

crises – resilience – attractiveness

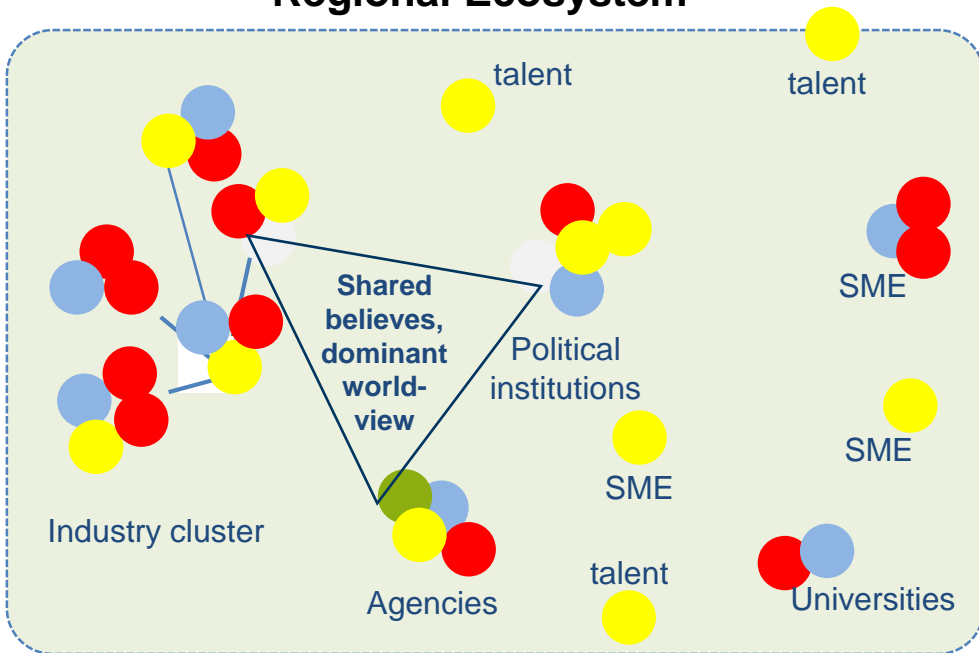
**sensemaking
and enactment**

-  resources
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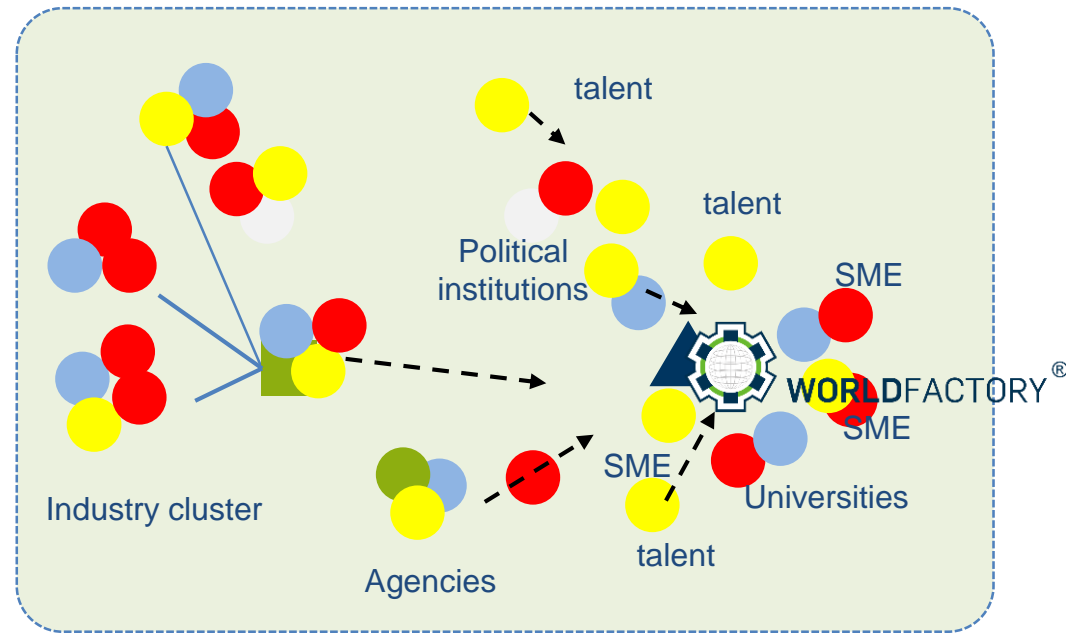
WILKENS, U. (2017): Towards a Regional Dynamic View – Components of Macrofoundation. In: Journal of Competences, Strategy & Management, Vol. 9: Approaching Dynamic Capabilities from a Multi-Level Perspective – Macrofoundations and Microfoundations, Hampp-Verlag, S. 33-56.

2 | The development of the Ruhr region in the light of the RDCV: WorldFactory® as middleground

Regional Ecosystem



Regional Ecosystem under Renewal



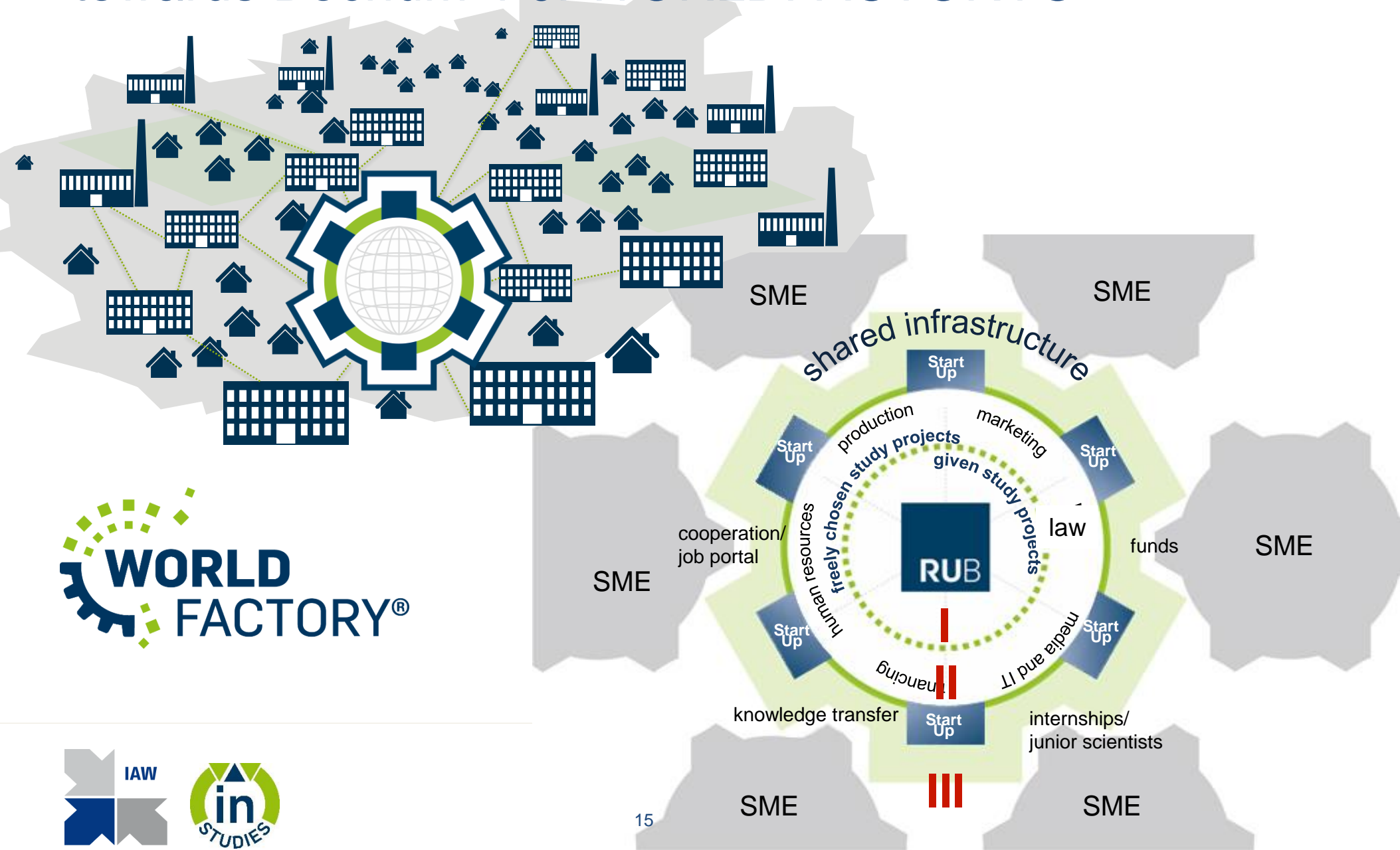
Seizing regional resources
(firms and institutions)

crises – resilience – attractiveness

**sensemaking
and enactment**

-  resources
-  bundle of resources
-  rector as institutional entrepreneur
-  middleground **WORLDFACTORY®**

2 | New institutional players in today's development towards Bochum 4.0: WORLDFACTORY®

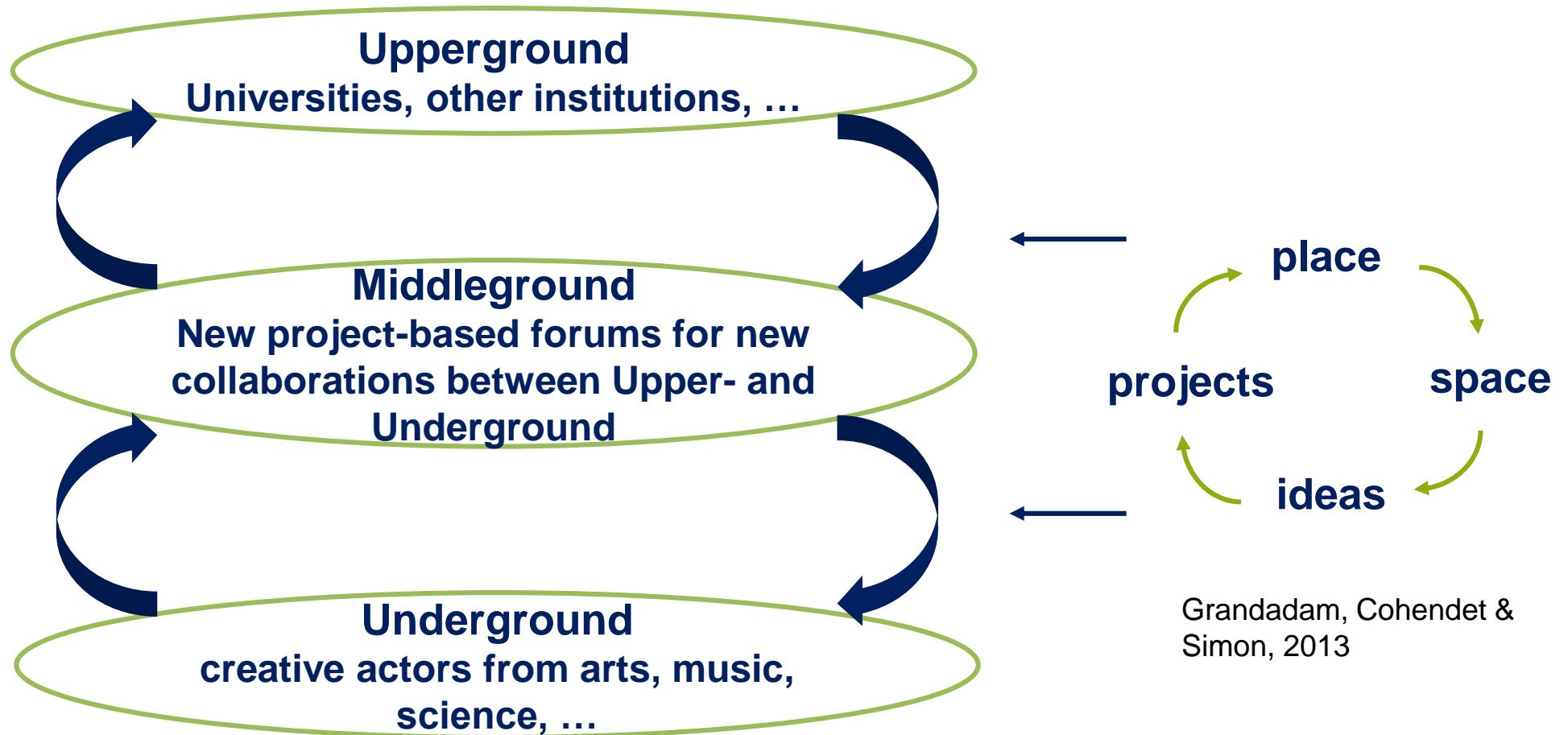


The process of Regional Innovation

**Analysing the process of regional innovation
according to the Creative City approach and
the RDCV**

2 | The anatomy of the creative city

Analyzing the effects of the middleground



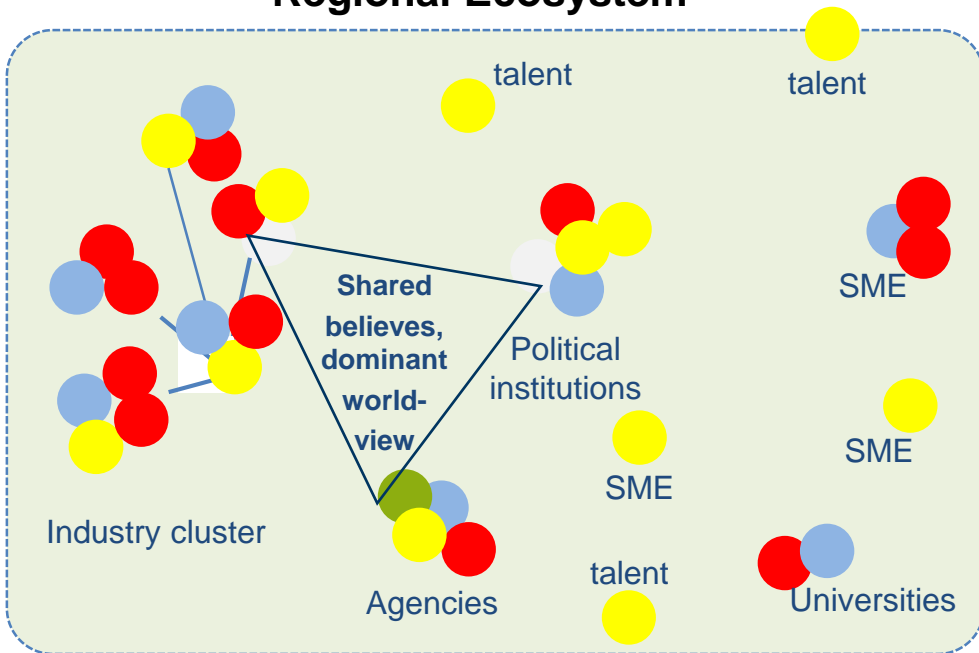
Cohendet et al., 2010

2 | Analyzing capabilities and events

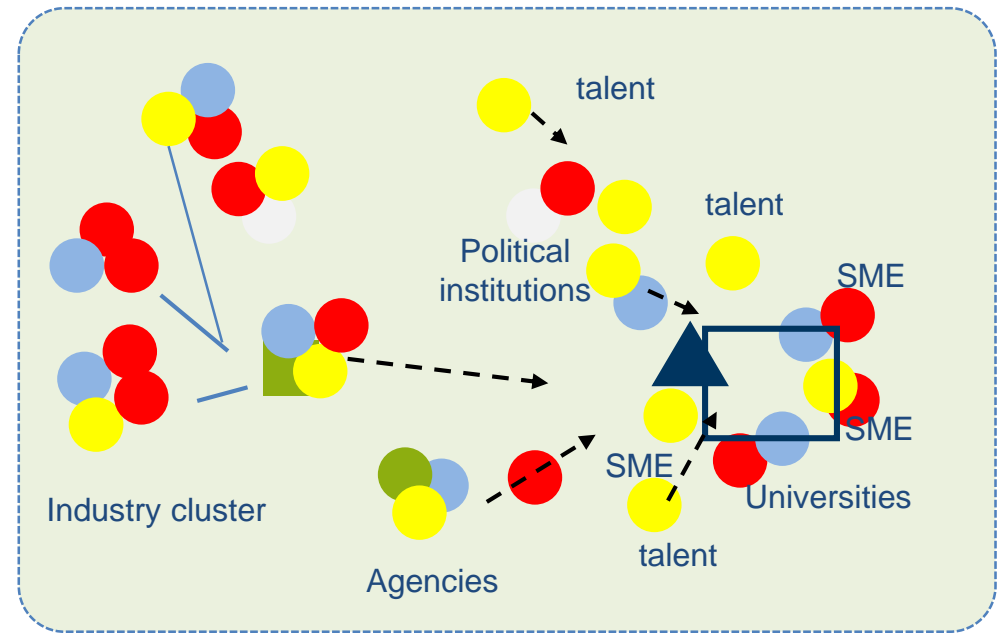
Variable	Operationalization / indicator	Research method
Upperground	<ul style="list-style-type: none"> • Number of institutions • Collaboration between institution (e.g. university cluster) 	Document analysis Search for contracts and their fulfilment (interviews)
Underground	<ul style="list-style-type: none"> • Creative scene (diversity of genres, percentage compared to other regions) • Creative class, talents (higher education) 	Document analysis Public statistics
Middleground	<ul style="list-style-type: none"> • What type of new ground • Uniqueness of new ground versus certain (competing) activities • Number and type of spaces • Number and type of places • Initiated new projects and their development • Participation rate in new projects over time • Participation rate of upperground and underground members in new projects 	Document analysis Interviews
Effects in regional innovation	<ul style="list-style-type: none"> • Number and development of start-ups • Number and development of public-private partnership • Development of B2B-cooperation between middleground participants • Patents related to middleground activities • New product or service development related to middleground activities 	Expert interviews <i>Statistics</i>

2 | Regional Dynamic Capability View (RDCV) – integration of components from three approaches

Regional Ecosystem







Regional Ecosystem under Renewal



Seizing regional resources
(firms and institutions)

crises – resilience – attractiveness

**sensemaking
and enactment**

-  resources
-  bundle of resources
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WILKENS, U. (2017): Towards a Regional Dynamic View – Components of Macrofoundation. In: Journal of Competences, Strategy & Management, Vol. 9: Approaching Dynamic Capabilities from a Multi-Level Perspective – Macrofoundations and Microfoundations, Hampp-Verlag, S. 33-56.

2 | Selected variables of the RDCV

Variable	Operationalization / indicator	Research method
Regional identity	Symbols and stories in use	Observation of representative events
Crisis	Perceived and communicated decline in a field of business	Industry reports; newspaper reports
Institutional entrepreneurs/ underground	Accentuation of formerly uninvolved actors	Participating observation of regional board meetings, storytelling in the regional community, attribution of influence among members of the regional community; newspaper reports
Sensemaking	New arguments and perspectives becoming dominant subjects in the regional discourse	Participating observation of regional board meetings, storytelling in the regional community, newspaper reports
Changes in resource allocation	<ul style="list-style-type: none"> • public spending for infrastructure related to new industries • number of public–private partnerships • start-up founding rate • Talent: Talent Index: percentage of academics/highly educated people among the regional population compared to the national index (see Florida 2005, 119) • Brain drain/gain index: percentage of university graduates grown up in the region compared to percentage of graduates working in the region after graduation • New technology: Share of digital industry, growth of digital industries in comparison to national development 	<p>Document analysis</p> <p>Regional statistics</p> <p>National statistics</p> <p>Regional statistics</p> <p>Industry reports</p>

3 | Content Summary

- RDCV integrates ideas from three quite different perspectives which are
→ DCV, new institutionalism and the creative city fork of regional studies
- Together they form a perspective which recognizes the region as an ecosystem
- Due to crisis or similiar circumstances like structural change that ecosystem is under pressure
- A possible answer is to reconfigure the regions (organisational) resources hence these resources become dynamic
- Dynamic means here ever-adopting to change
- As a result the region now can address problems appropriately

3 | RCDV Instrument Summary

- RDCV as an instrument for regional analysis aims at minor scale regions (e.g. a city)
- It conceives the ecosystem and the comprised actors and their resources or capabilities
- Most RDCV analysis look at which regional actor (organization) can be the middleground actor and what capabilities are available and may be reconfigured and adapted
- As an instrument for regional analysis it is more of an qualitative than a quantitative approach but it can utilize considerable amount of quantitative research and data