**Theory led by Policy? The Case of Regional Cluster Policies in Germany**

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**Motivation**

“Over the years, *geographers* have developed a disturbing - even dysfunctional – habit of **missing out on important intellectual and politically significant debates**, even those in which geographers would seem to have a major role to play.” (Dicken 2004, p. 5; emphasis added).

**Academic Research and Regional Policy in Germany**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Key Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960s to 1970s</td>
<td></td>
</tr>
</tbody>
</table>
  > Decentralisation of growth, export-base theory  
  > Indicators and areas eligible for subsidies; evaluation |
| late 1970s to 1990s |  
  > Endogenous potential  
  > EU taking over conceptual leadership  
  > Regional science ⇒ moderation, strategic agents |
| since 1990s |  
  > Cluster approach  
  > Case studies, typologies, *best practice*  
  > „losing orientation and not keeping track anymore“ |

Based on Rehfeld 2005, p. 133-136
Motivation • Cluster Policy • Model • Findings • Conclusion & Outlook

Guiding Questions

• How relevant are cluster theories and scientific methods for cluster identification in cluster policy and practice?
• How do cluster strategies evolve through the political process and practical implementation?
• Who advises policy, and how?
• What does this mean for academia, and economic geography in particular?

Outline

1. Motivation
2. What is cluster policy?
3. A public choice model of action spaces and rationalities
4. Preliminary findings
5. Conclusion and outlook
Regional Cluster Policy

- „efforts of government to develop and support clusters in a particular region“ (Hospers/Beugelsdijk 2002, p. 382)
- Industrial, structural, technology or innovation policy for the promotion of specific regional strengths
- Development of industrial agglomerations or network elements into clusters, or promotion of existing clusters (Bruch-Krumbein/Hochmuth 2000, p. 69 f.)

Cluster initiative = “an organised effort to increase the growth and competitiveness of a cluster within a region, involving cluster firms, government and/or the research community” (Sölvell/Lindqvist/Ketels 2003, p. 31)

Seven Dimensions of Cluster Policy (1/2)

<table>
<thead>
<tr>
<th>Agency1</th>
<th>public</th>
<th>PPP</th>
<th>private</th>
</tr>
</thead>
<tbody>
<tr>
<td>(incl. initiation, funding)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cluster reference1</th>
<th>implicit</th>
<th>specialised agglomeration</th>
<th>explicit</th>
<th>“cluster”</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Complexity</th>
<th>single</th>
<th>LED toolkit</th>
<th>holistic cluster promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>e.g. innovation centre, industry networks and directories, business plan competitions</td>
<td>location development program integrated location management</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cluster content</th>
<th>low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. share of projects targeting clusters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) cf. Fromhold-Eisebith/Eisebith 2005, p. 1256; Kiese, forthcoming
Seven Dimensions of Cluster Policy (2/2)

**Coherence**
- coherent ↔ incoherent
  - comprehensive strategy ↔ isolated efforts
  - broad support from agents ↔ single agent

**Institutionalisation**
- weak ↔ strong
  - memoranda ↔ cluster management organisation (CMO)
  - informality, low commitment ↔ organisation

**Maturity**
- embryonic ↔ completed
  - e.g. age of CMO

Motivation • Cluster Policy • Model • Findings • Conclusion & Outlook

Cluster Policy and Varieties of Capitalism

**Liberal market economies**
- More business-led initiatives
- Stronger focus on export promotion

**Co-ordinated market economies**
- Public agency more prevalent
- More personnel employed
- More initiatives at national level
- More trust / ‘thicker’ social capital
- Stronger focus on innovation

Second Global Cluster Initiative Survey (GCIS), Ketels/Lindqvist/Sölvell 2006, p. 22
Cluster Policy as Multi-Scalar Governance

- European Union
  - Lisbon Strategy
  - Reorientation of structural funds for 2007-2013 period, new Objective 2 ‘regional competitiveness and employment’
- German federal government
  - BioRegio contest (*1995)
  - InnoRegio contest ⇒ *Unternehmen Region* family (since 1999, new Ländere only)
  - Conventional regional policy instrument (joint federal/state task force) also funding cluster management
  - High-tech Strategy with leading-edge cluster contest (2007)
- Most of 16 federal states (Ländere) devising cluster strategies
- Sub-state level (regions & municipalities)
  - Few bottom-up strategies from mid-1980s
  - Increasing top-down pressure on regions to position themselves

Action Spaces of Cluster Policy: A Public Choice Perspective

Based on Feser 2006, p. 6
Conceptual Action Space

- **Economic rationality** = maximising social welfare (Vanberg 1996, p. 6 f.)

- But: functions of policy advice
  - information
  - legitimacy

- And: Academic and professional policy advisors may also pursue their own interests.

⇒ Convergence of interest between politicians and advisors during selection process (Frey/Kirchgässner 2002, p. 449 f.)

Political Action Space

- **Public Choice Theory**
  - Politicians maximise their individual utility (opportunism, political rationality)
  - Imperfect information
  - Bounded rationality
  - Rational ignorance of voters

- Incremental, cumulative and **path-dependent learning** by doing

- **implicit theories** (Hofmann 1993)

- **Principal-agent problems** between action spaces and vis-à-vis advisors

- **Lobbyism** and **rent seeking** by organised minorities
Practical Action Space

- **Public Choice Models of Bureaucracy**: Maximising budget or own economic benefit (Niskanen 1971), or discretionary power (Williamson 1964)

- Aim: Maintaining/growing competence/office/department
  - Power struggles between and within bureaucratic organisations
  - Excessive supply of public goods ⇒ cluster policy!

- Incremental, cumulative and path-dependent learning by doing
  - Learning by doing and implicit theories
  - Structural inertia (preference for known solutions)

Case Study Regions

- Three federal states in West Germany
  - North Rhine-Westphalia ~ mature industries facing structural change
  - Bavaria ~ late industrialisation, high-tech
  - Lower Saxony ~ ‘grey mass’ region

- Regional typology ⇒ structural, institutional & political variance

- Seven sub-regional cases

- 107 semi-structured face-to-face interviews with 130 practitioners, observers & consultants
Preliminary Findings: Overview

- Dimensions of cluster policy
- Understanding of clusters in policy and practice
- Methods of cluster identification
- Industry focus
- Role of consultants

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### Dimensions of Cluster Policy (1/2)

<table>
<thead>
<tr>
<th>State/Region/City</th>
<th>Agency</th>
<th>Cluster reference</th>
<th>Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRW</td>
<td>public, countercurrent (competitions)</td>
<td>explicit</td>
<td>not yet clear</td>
</tr>
<tr>
<td>Lower Saxony</td>
<td>public, countercurrent (offer to regions)</td>
<td>implicit</td>
<td>high (growth concepts)</td>
</tr>
<tr>
<td>Bavaria</td>
<td>public, top-down</td>
<td>explicit</td>
<td>medium</td>
</tr>
<tr>
<td>Dortmund</td>
<td>public, bottom-up initiative by large firm private foundation</td>
<td>explicit (leading industries)</td>
<td>high (⇒ urban development)</td>
</tr>
<tr>
<td>Bergian</td>
<td>public, bottom-up</td>
<td>explicit (areas of competence)</td>
<td>medium</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>PPP: 50% VW, 50% city of W. bottom-up</td>
<td>explicit</td>
<td>high (⇒ urban development)</td>
</tr>
<tr>
<td>Hannover</td>
<td>public with private sponsorship for projects countercurrent</td>
<td>explicit (focus industries)</td>
<td>high</td>
</tr>
<tr>
<td>Brunswick</td>
<td>corporatist, countercurrent</td>
<td>explicit</td>
<td>high</td>
</tr>
<tr>
<td>Nuremberg</td>
<td>corporatist, bottom-up</td>
<td>explicit (areas of competence)</td>
<td>medium</td>
</tr>
<tr>
<td>Regensburg</td>
<td>public, countercurrent</td>
<td>explicit</td>
<td>medium</td>
</tr>
</tbody>
</table>
### Dimensions of Cluster Policy: Evaluation

- **Top-down ⇔ bottom-up**
  - States differ in governance approaches
  - Bavaria: centralist, top-down
  - NRW: regionalisation ⇒ cluster contest
  - Lower Saxony: non-interventionist, open offer to regions
  - Timeline: regional initiatives increasingly influenced top-down
- Various sets of regional actors: Purely public ⇔ PPP ⇔ corporatist
- Cluster reference and complexity commonplace, but differences in coherence and institutionalisation
- Decreasing cluster content ⇒ **diminishing expectations**
  - Too many clusters in focus ⇒ too little potential
  - Political pressure to achieve short-term results
  - Generic LED projects put in practice more easily

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### Dimensions of Cluster Policy (2/2)

<table>
<thead>
<tr>
<th>State/ Region/ City</th>
<th>Cluster content</th>
<th>Coherence</th>
<th>Institutionalisation</th>
<th>Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Saxony</td>
<td>not specified</td>
<td>low</td>
<td>Regional CMOs</td>
<td>2004</td>
</tr>
<tr>
<td>Bavaria</td>
<td>high</td>
<td>high</td>
<td>Cluster speaker, manager &amp; office</td>
<td>2006</td>
</tr>
<tr>
<td>Dortmund</td>
<td>high/diminishing</td>
<td>high</td>
<td>Project team ⇒ municipal LED office</td>
<td>2000</td>
</tr>
<tr>
<td>Bergian</td>
<td>high/diminishing</td>
<td>medium</td>
<td>Co-operation of municipal LED units</td>
<td>2001</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>high/diminishing</td>
<td>high</td>
<td>CMO</td>
<td>1999</td>
</tr>
<tr>
<td>Hannover</td>
<td>medium/diminishing</td>
<td>medium</td>
<td>CMO</td>
<td>2003</td>
</tr>
<tr>
<td>Brunswick</td>
<td>medium</td>
<td>medium</td>
<td>CMO</td>
<td>2005</td>
</tr>
</tbody>
</table>

CMO = Cluster Management Organisation; LED = Local Economic Development
'Official’ Interpretation of Clusters

<table>
<thead>
<tr>
<th>State/ Region/ City</th>
<th>Interpretation/ Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRW</td>
<td>Porter + value chains + cluster management</td>
</tr>
<tr>
<td>Lower Saxony</td>
<td>Regional coalitions should form according to value chains</td>
</tr>
<tr>
<td>Bavaria</td>
<td>Clusters = platforms for the networking of science and industry for accelerating technology transfer, plus reference to Porter</td>
</tr>
<tr>
<td>Dortmund</td>
<td>Spatial Agglomeration of firms and institutions in a particular industry</td>
</tr>
<tr>
<td>Bergstr.</td>
<td>Areas of competence, Porter reference</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>Cluster = Networking of all activities focusing on a specific topic in a particular location</td>
</tr>
<tr>
<td>Hannover</td>
<td>Porter with emphasis on Networking</td>
</tr>
<tr>
<td>Brunswick</td>
<td>Regional agglomeration of industry and networking (Porter reference)</td>
</tr>
<tr>
<td>Nuremberg</td>
<td>Networking of manufacturing, technology, services, R&amp;D; Synchronisation with state government’s understanding of clusters</td>
</tr>
<tr>
<td>Regensburg</td>
<td>no unified interpretation; variations of Porter’s</td>
</tr>
</tbody>
</table>

Understanding of Clusters in Policy and Practice

- Porter’s definition is only explicit link to theory
  - Cluster = “geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standards agencies, and trade associations) in particular fields that compete but also cooperate” (Porter 1998, p. 197 f.)

- Practical demands and experience governing action
- No differentiation between organic ‘clusters’ and ‘cluster initiatives’ ⇒ technocratic understanding, clusters are ‘made’
- Equating clusters with co-operative networks ⇒ institutionalisation
- Superficial reference to value chains ⇒ selectivity ⇒ rhetoric?!
### Academic vs. Professional Policy Advice

<table>
<thead>
<tr>
<th>Academic Advice (University)</th>
<th>Professional Advice (management consultancy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Complex interdependencies</td>
<td>- Simplification, reducing complexity</td>
</tr>
<tr>
<td>- Conditional clauses, differentiated recommendations, alternatives for action</td>
<td>- Action and implementation as guiding principles</td>
</tr>
<tr>
<td>- Weberian neutrality (?!?)</td>
<td>- Evaluation and strategic prioritising</td>
</tr>
<tr>
<td>- Methodological and factual knowledge</td>
<td>- Methodological &gt; factual knowledge</td>
</tr>
<tr>
<td>- Independence (?!?) and transparency</td>
<td>- Intransparency (methods as strategic assets)</td>
</tr>
<tr>
<td>- Long-term scientific discourse</td>
<td>- Short-term results</td>
</tr>
<tr>
<td>- Policy advice may undermine academic reputation</td>
<td>- Convergence of interests with politics</td>
</tr>
</tbody>
</table>

### Methods of Cluster Identification in Practice

<table>
<thead>
<tr>
<th>Methods</th>
<th>NRW</th>
<th>LSax</th>
<th>Bav</th>
<th>Dortm</th>
<th>Berg</th>
<th>Wolf</th>
<th>Hann</th>
<th>Brun</th>
<th>Nure</th>
<th>Reg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Expert interviews &amp; reports</td>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. Workshops with regional agents</td>
<td></td>
<td></td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. Measures of spatial concentration absolute/relative</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. Dynamic analysis, e.g. shift-share</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. IO-Tables</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>6. Functional value-chain analysis</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>7. Network analysis</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>8. Competitions</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Industry forecasts (Mega trends')</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Final decision by shareholders (politicians) or pre-defined</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>

### Evaluation of Cluster Identification in Practice

- **Identification is governed politically**, clusters sometimes pre-defined → policy advice sought for legitimacy, no open-ended process
- **Time and budget restrictions** limiting identification stage to a few months
  - Incomplete usage of methods at hand
  - Lack of methodological rigour, errors
- Strong emphasis on **mega trends**, neglect of **regional trajectories** ⇒ convergence of cluster portfolios
- Danger of sinking public money in ‘wishful thinking’ clusters (cf. Enright 2003, p. 104)
- Lack of theoretical grounding & sound methodology = danger of politics giving way to **vested interests**

### Overview of Consultants’ Contribution

<table>
<thead>
<tr>
<th>State/ Region/ City</th>
<th>Consultants</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Saxony</td>
<td>McKinsey &amp; Co. / Dr. Heuser AG 1</td>
<td>Method of regional growth concepts as business plans subject to controlling; phased process</td>
</tr>
<tr>
<td>Bavaria</td>
<td>McKinsey &amp; Co. / Arthur D. Little</td>
<td>Indirect, <strong>strategic counselling</strong>: Mega trends and visions, „Bavaria 2020“</td>
</tr>
<tr>
<td>Dortmund</td>
<td>McKinsey &amp; Co.</td>
<td>Concept and project development with business plans subject to controlling; metric governance by employment targets; start-up competitions; initially assisting <strong>implementation</strong></td>
</tr>
<tr>
<td>Bergian A</td>
<td>Dr. Vieregge GmbH</td>
<td>Areas-of-competence dossier: <strong>Analysis</strong> of pre-defined clusters, identification of potential activities</td>
</tr>
<tr>
<td>Wolfsburg</td>
<td>McKinsey &amp; Co.</td>
<td><strong>Concept and project development</strong> with business plans subject to controlling; metric governance by employment targets; initially assisting <strong>implementation</strong> (Wolfsburg only)</td>
</tr>
<tr>
<td>Hannover</td>
<td>McKinsey &amp; Co. / Dr. Heuser AG</td>
<td><strong>Concept and project development</strong> with business plans subject to controlling; metric governance by employment targets; initially assisting <strong>implementation</strong></td>
</tr>
<tr>
<td>Brunswick</td>
<td>McKinsey &amp; Co. / Dr. Heuser AG</td>
<td><strong>Concept and project development</strong> with business plans subject to controlling; metric governance by employment targets; initially assisting <strong>implementation</strong></td>
</tr>
<tr>
<td>Nuremberg</td>
<td>Prognos AG</td>
<td><strong>Assistance</strong>/ <strong>Moderation</strong> in revision of vision for regional economic development, 2005</td>
</tr>
<tr>
<td>Regensburg</td>
<td>Ramboll Management</td>
<td><strong>Assistance</strong>/ <strong>Moderation</strong> of strategic partnership for sensor technology; project development</td>
</tr>
</tbody>
</table>

1) McKinsey Spin-off
Industry Focus of Case Studies

Motivation

• Cluster Policy
• Model
• Findings
• Conclusion & Outlook

Motivation

• Cluster Policy
• Model
• Findings
• Conclusion & Outlook

Evaluating the Role of Consultants

• All case studies informed by professional management consultants and policy advisors

• Concept development largely internalised at state level (ministerial bureaucracy in Bavaria, NRW)

• Alternative modes of policy advice
  • Reports
  • Strategy, concept and project design
  • Moderation
  • Guidance in implementation

• Policy advice governed by commissioning institution and not independent ⇒ mingling of
  • information and legitimacy function
  • conceptual and political/practical action spaces
Fuzzy Action Spaces of Cluster Policy

No clear distinction between action spaces and rationalities:
- Concept development governed by politics and bureaucracy
- Purpose-led = unity of rationality? (Willgerodt 1994)

Political action space
- Implementation
- Bureaucratic rationality
- Practical know-how

Economic action space
- Consulting
- Conceptual action space
- Rationality

Outcomes: Regional innovation & growth

Conclusion

- Explicit influence of cluster theory limited to Porter’s definition; implicit impact hard to distinguish from accumulated learning by doing (experience)
- Methods at hand for cluster identification only partially employed in practice
  - Political pressure for action ⇒ short-term focus transfers costs of sloppy analysis into the future
- Cluster policies do not put objective analyses of cluster potential into practice ⇒ cluster policy with a capital P
- Consequently: Trend of losing/loosening cluster focus over time
Outlook (1/2)

- Cluster policy - “another missed boat“?!
- Cluster theory fails to explain why political agents rarely follow sound academic advice & act differently in reality
- Change of perspective: Theory of Cluster Policy
  - Explaining real phenomena
  - Basis for effective policy advice

Outlook (2/2)

- If they want to gain policy relevance, academics should...
  - **interact** with policy and practitioners without losing their independence ⇒ Weberian value neutrality vs. action-orientation
  - **anticipate** the rationality of political and bureaucratic processes ⇒ distinguish between indirect and direct policy advice (via public, Cassel 2001)
  - lend their voices for the pursuit of the public good
  - engage in critical but constructive dialogue with professional advisors (e.g. Martin/Sunley 2003)
  - overcome fragmentation within and between disciplines
- Economic geography is predestined to engage in interdisciplinary cluster policy research!
References (1/2)


References (2/2)


Online Resources (1/3)

Bavaria
Allianz Bayern Innovativ
http://www.allianzbayerninnovativ.de

North Rhine-Westphalia
Innovationsstrategie der Landesregierung
http://www.innovation.nrw.de/Ministerium/Innovationsstrategie/index.html

Lower Saxony
Niedersächsisches Ministerium für Wirtschaft, Arbeit und Verkehr
Referat 10: Strategische Ressortplanung, Regionale Strukturpolitik
http://www.mw.niedersachsen.de/master/C756509_N7440_L20_D0_I712.html

City of Regensburg
BioRegio Regensburg / BioPark Regensburg GmbH
http://www.bioregio-regensburg.de
Strategische Partnerschaft Sensorik
http://www.regensburg.se
Strategische Partnerschaft IT-Sicherheit
http://www.regensburg.it

Online Resources (2/3)

Central Franconia
Entwicklungsleitbild der Wirtschaftsregion Nürnberg
Nürnberger Initiative für die Kommunikationswirtschaft (NIK) e.V.
http://www.nik-nbg.de
CNA Center for Transportation and Logistics Neuer Adler e.V.
http://www.c-na.de
Kompetenziinitiative Medizin-Pharma-Gesundheit (Kl-MPG) Region Nürnberg
http://www.erlangen.de/Desktopdefault.aspx/tabid-159
EnergieRegion Nürnberg e.V.
http://www.energiregion.de
Initiative Umweltkompetenz Nordbayern c/o IHK Nürnberg für Mittelfranken
http://www.umweltkompetenz.net
Kompetenziinitiative Neue Materialien (KINEMA) c/o IHK Nürnberg für Mittelfranken bzw. Stadt Fürth
http://www.kinema.de
Kompetenziinitiative Automation Valley Nordbayern c/o IHK Nürnberg für Mittelfranken
http://www.automation-valley.de
### Online Resources (3/3)

**Dortmund**
- dortmund-project
- http://www.dortmund-project.de

**Bergian Triangle (Wuppertal-Solingen-Remscheid)**
- kompetenzhoch3
- http://www.kompetenzhoch3.de

**Wolfsburg**
- Wolfsburg AG
- http://www.wolfsburg-ag.com

**Hannover Region**
- hannoverimpuls GmbH
- http://www.hannoverimpulp.de

**Braunschweig Region**
- Projekt Region Braunschweig GmbH
- http://www.projekt-region-braunschweig.de