From Cluster Policy to Smart Specialisation: The Challenge of Implementation
What is the Issue?

- **Emergence of Smart Specialisation** concept (Foray et al. 2009)
- Adoption by **EU cohesion policy**
  - 2007-2013: **Cluster policies** ⇒ bandwagoning, imitation, inflation
  - 2014-2020: Sharpening the edge through RIS3 as **ex-ante conditionality** (European Commission 2011b)

- Alliance of **academics** and **policymakers** (technocrats), but how about **practice**?!
  ⇒ Challenges of **implementation** (plus monitoring, evaluation)
The Policy Cycle Model (Anderson 1975)

![Policy Cycle Model Diagram](https://www.researchgate.net/profile/Marie_Claire_Brisbois/publication/281824295/figure/fig1/AS:613444596297764@1523267997533/The-policy-cycle-model-after-Howlett-and-Ramesh-1995_W640.jpg)
The Challenge of Implementation

the proof of the pudding is in the eating

https://i.ytimg.com/vi/zwh6eTn1AMM/maxresdefault.jpg [11.06.2020]

From Cluster Policy to Smart Specialisation: The Challenge of Implementation
BMR Innovation Talk „Smart Specialisation“ • 18 June 2020
Outline

1) Cluster Policy and Smart Specialisation
2) Three Conceptual Perspectives
3) RIS3 Implementation: Experiences So Far
4) Conclusion & Outlook
Weaknesses of previous regional innovation strategies

- **Neglect of regional contexts** when copying best practice examples (cf. Hospers 2005, 2006)
  - "In the past, regions [...] often tried to set similar or identical priorities as other leading regions, even if these were not adapted to the existing regional conditions and potentials and they had little or no chance of establishing a strong competitive position here. (European Commission 2011: 5 – own translation)

- **Analysis** of regional innovation potential
- „picking winners syndrome“
- **Inward-looking** = lack of interregional dimension
- Lacking **business involvement** and correspondence with regional economic structure
  - „weak correlation between the R&D and training specialisation and the structure of [...] economic activities“ (Foray et al. 2009: 28)
Smart Specialisation: Goals and Principles

Integrated, place-based economic transformation agendas that...

1) focus policy support and investments on key national/regional priorities, challenges and needs for knowledge-based development = (tough) choices

2) build on each country/region’s strengths, competitive advantages and potential for excellence
   - Strengthen diversity across regions (cf. Foray et al. 2009: 25)
   - „Leader“ vs. „follower regions“ (ibid: 27)
   - Substitute lacking potential through insourcing and co-operation (cf. European Commission 2011a: 5)

3) support technological as well as practice-based innovation and stimulate private sector investment.

4) get stakeholders fully involved and encourage innovation and experimentation = collective leadership
   - „entrepreneurial process of discovery“ (Foray et al. 2009: 26)

5) are evidence-based and include sound monitoring and evaluation systems.
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Strategic Management: Competing to be Unique

Territorial Value Proposition

What is the **distinctive competitive position** of the nation, region or place given its location, legacy, existing strengths, and potential strengths?

- What unique strengths as a business location?
  - What roles in the broader neighborhood?
  - What types of activities and clusters?

Developing Unique Strengths

- What **elements of the business environment** can be unique strengths relative to peers/neighbors?
- What **existing** and **emerging clusters** can be built upon?

⇒ **Priorities** and **sequencing** are essential to building competitiveness

Achieving and Maintaining Parity with Peers

- What **weaknesses** must be addressed to remove key constraints and achieve parity with peer locations?

Porter 2013, p. 11 (modified), cf. Porter/Ramírez Vallejo 2014

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## Role of the State: Neoclassical vs. Evolutionary Economics

<table>
<thead>
<tr>
<th></th>
<th>Neoclassical</th>
<th>Evolutionary</th>
</tr>
</thead>
</table>
| **Justification of intervention** | • Institutional framework  
• Correct market failures                                 | • Uncertainty on desirable trajectories  
• Increase probability of experimental behaviour  
  \[ \Rightarrow \text{diversity} \uparrow \]  
• Monitor & encourage innovation                                       |
| **Context of intervention**    | • Imperfect information (esp. asymmetries)  
• Risky or uncertain universe  
• Substantive rationality                                                | • Imperfect information (esp. asymmetries)  
• Radical uncertainty in an open-ended world  
• *Bounded rationality, State as learning actor*  
• Distributed knowledge base**                                        |
| **Advantage vs. market**       | • Power to tax, prescribe & punish  
• greater ability to reduce transaction costs and to facilitate and support networking activities and cooperation | • Coordination across institutions  
• Greater ability to influence the economic system                          |
| **Pitfalls**                  | • Incentive problem (bureaucratic capture, lobbying, rent seeking)             | • Incentive problem (bureaucratic capture, lobbying, rent seeking)  
• Knowledge problem (Hayek)  
• Irreversibility, past and path dependency                               |
| **Decision criteria**          | • Welfare maximisation  
• Static efficiency (Pareto optimum)                                       | • Problem identification and search for possible improvements in the sense of public interest  
• Adaption and *satisficing behaviour*  
• Dynamic efficiency                                                       |


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Warnings from Public Choice Theory

- Political and bureaucratic rationality (cf. Niskanen 1971, 1975; Williamson 1964, 1997)
- Theory of groups (Olson 1965)

“Even if the public authority that oversees the cluster is highly competent and attempts to maximise local welfare, an optimal cluster policy looks like something extraordinarily difficult to achieve.“ (Duranton et al. 2010: 59; emphasis added)

“Cluster policies that already look fraught with difficulties in a world of benevolent governments look extremely unappealing when political agency is explicitly taken into account.“ (ibid.: 61; emphasis added)
Outline

1) Cluster Policy and Smart Specialisation
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RIS3 Implementation: Overview

- EU: Diverse pattern of institutional arrangements ⇒ locally contingent policy challenges, depending on
  - regional governance capacities
  - techno-economic potentials.

- Main merit = contribution to changing routines and practices of governance (Kroll 2015)

<table>
<thead>
<tr>
<th>To what degree has the RIS3-inspired consultation process generated novel insights not available before? (2014)</th>
<th>To what degree are bottom-up consultation processes new to the planning tradition of your region? (2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low degree</td>
<td>2</td>
</tr>
<tr>
<td>Low degree</td>
<td>12</td>
</tr>
<tr>
<td>Moderate degree</td>
<td>39</td>
</tr>
<tr>
<td>High degree</td>
<td>18</td>
</tr>
<tr>
<td>Very high degree</td>
<td>5</td>
</tr>
<tr>
<td>n =</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>13</td>
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<tr>
<td></td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>78</td>
</tr>
</tbody>
</table>

- Germany: long tradition of regional innovation policies (cf. Kroll et al. 2016)

⇒ Meta study of all federal states shows a strengthening of regional innovation policy as a strategic cross-sectional task (Kramer/Bornemann 2017)
## NRW Policy Evolution: From Clusters to Lead Markets

<table>
<thead>
<tr>
<th>Year(s)</th>
<th>Programme</th>
<th>Policy &amp; Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td><em>Zukunftsinitiative Montanregion (ZIM)</em></td>
<td><strong>Regionalised Structural Policy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- EC: Endogenous potential</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Consensus-led regional conferences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1991-1993 regional development concepts</td>
</tr>
<tr>
<td>1989</td>
<td><em>Zukunftsinitiative für die Regionen Nordrhein-Westfalens (ZIN)</em></td>
<td><strong>Regional innovation networks</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Combining regional &amp; sectoral structural policy</td>
</tr>
<tr>
<td>1993-1999</td>
<td><em>PROFIS</em></td>
<td></td>
</tr>
<tr>
<td>2000-2005</td>
<td><em>Kompetenzfeldpolitik</em></td>
<td>Implicit <strong>cluster policy</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 fields of competence for the Ruhr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Focus of ERDF funding (objective 2, cf. Rehfeld 2006)</td>
</tr>
<tr>
<td>since 2007</td>
<td><em>Cluster policy</em></td>
<td>16 ⇒ 14 NRW-clusters defined as managed state-wide networks, grouped into 5 lead markets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ open RegioCluster contest (2007-2010)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Competitive <strong>ERDF funding</strong> (cf. Kiese/Kahl 2017)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strategy adapted &amp; refined; € 640 m for <strong>cluster contests</strong> 2014-2020 (MWIDE-NRW 2020)</td>
</tr>
</tbody>
</table>

NRW: Lessons from Regionalised Structural Policy

- **Pioneer** and role model among federal states in Germany
- Limited progress in co-ordination (Rehfeld 2004: 224):
  - non-binding, **very similar mission statements** with insufficient consideration of endogenous potentials (Goch 2002: 437)
  - predominantly traditional projects in conventional areas: "Innovation by consensus is nonsense!" (Staudt 1993)
  - broad consensus often not reached, instead domination of state and association-based actors (chambers of commerce) – lack of business involvement and trade union representation
  - Lack of policy co-ordination, e.g. spatial planning, sectoral structural policy
- Large **differences** between sub-regions in capacities and efficiency (cf. Potratz 2000, Rehfeld et al. 2000)
  - effective institutional structures only in few sub-regions
  - dependence on leadership by key individuals (Goch 2002: 439)

⇒ Limited contribution to structural change, fading out in the mid-1990s
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BMR Innovation Talk „Smart Specialisation“

18 June 2020

Institute of Geography
Matthias Kiese ● Urban and Regional Economics


- Energy and new energy technologies
- Information technology
- Medical devices & healthcare
- Microsystems & microelectronics
- Water & sewage technologies
- Mining technologies
- Chemicals
- New materials incl. steel
- Mechanical engineering
- Logistics
- Design
- Leisure & tourism

Rehfeld 2006, p. 250; Kiese 2012, p. 147

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Kompetenzfeldpolitik: Assessment

- “very diffuse and usually clearly exaggerated expectations” (Rehfeld 2006: 251)
- Lack of critical mass and stamina to create sustainable structures (Koschatzky et al. 2004: 157)

- mainly uses the institutional framework of regionalised structural policy, which is based on equity, consensus and endogenous potential ⇒ can lead to blockades and undesirable developments (Rehfeld 2006: 252 f.)

- Tying the allocation of structural funds to fields of competence softened the profile-building approach ⇒ "reintroduction of the watering can through the back door"

⇒ No discernible economic profile for the Ruhr (Budde et al. 2006)
NRW: Lead Markets and Clusters (2020)

Media & Creative Industries

New Materials

Mechanical, plant & process engineering

Life Sciences

Energy & Environment

Health

Mobility & Logistics

ICT

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### Lead Markets: Different Interpretations

<table>
<thead>
<tr>
<th>Context</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management &amp; innovation studies</td>
<td>Technologically <strong>sophisticated customers</strong> foreshadowing future demand ~ demand conditions in diamond model of the business environment (Porter 2008, p. 190-192)</td>
</tr>
<tr>
<td></td>
<td>Countries that <strong>first adopt</strong> an innovation before it spreads globally (Beise 2004)</td>
</tr>
<tr>
<td>NRW policy</td>
<td><strong>Field of strength</strong> in the NRW economy with expected <strong>international market growth</strong> (MWEBWV 2010: 14).</td>
</tr>
<tr>
<td></td>
<td>products that offer <strong>solutions to global challenges</strong>, e.g. demography, health, climate and environmental protection, urbanization, mobility, secure energy supplies, and the knowledge and information society (MWIDE-NRW 2020, own translation)</td>
</tr>
<tr>
<td>Ruhr policy (since 2011)</td>
<td>“Markets which <strong>respond to the major challenges and trends in socio-economic development</strong> with new offers, services and business models” (Lehner et al. 2014, p. 4; own translation)</td>
</tr>
</tbody>
</table>
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Lead Markets = RIS3 in NRW

• “The focus of the measures on lead markets meets the requirements of smart specialisation and concentration.” (EFRE.NRW 2014: 7; own translation, emphasis added)

Assessment

• Continuity instead of profiling: All important areas that have been supported previously are represented = no ‘tough choices’
• Strong similarity with portfolio of other federal states
• Breadth reflecting large & diversified regional economy ⇒ profile?!
• Bureaucratic competition over responsibilities for clusters
  • Healthcare management vs. medical research
  • Energy industry vs. energy research (cf. Kiese 2012: 158)
• Competitive funding predominantly absorbed by universities – SMEs underrepresented due to slow and bureaucratic process (cf. Kiese/Kahl 2017)
RIS3 in NRW: Process and Assessment

Process

- RIS3 = research, lead market & transfer strategy
- Consultation & **stakeholder** feedback
  - Substantive participation often limited to organizations already involved in earlier processes.
- No specific **new instruments**
- Clusters reoriented from technology fields to **lead markets**
- Many activities would have been carried out **without RIS3**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Shortfalls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved <strong>integration &amp; co-ordination</strong> of ministries</td>
<td><strong>Evidence base</strong> only partially improved</td>
</tr>
<tr>
<td>Shift to lead markets ⇒ new focus on <strong>cross-cluster innovation</strong></td>
<td><strong>Prioritisation</strong> still predominantly a <strong>political</strong> process</td>
</tr>
<tr>
<td></td>
<td><strong>Limited mobilisation</strong> of new stakeholders</td>
</tr>
</tbody>
</table>
## Ruhr’s Lead Markets: Size, Growth and Specialisation (2013)

<table>
<thead>
<tr>
<th>Lead Market</th>
<th>Employment*</th>
<th>Share Ruhr</th>
<th>Location Quotient</th>
<th>Growth (2012-2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing core and business services</td>
<td>298,806</td>
<td>18.8%</td>
<td>1.14</td>
<td>3.3%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>271,066</td>
<td>17.1%</td>
<td>1.11</td>
<td>1.7%</td>
</tr>
<tr>
<td>Urban construction &amp; living</td>
<td>178,818</td>
<td>11.3%</td>
<td>0.97</td>
<td>2.0%</td>
</tr>
<tr>
<td>Mobility</td>
<td>160,137</td>
<td>10.1%</td>
<td>0.86</td>
<td>0.9%</td>
</tr>
<tr>
<td>Sustainable consumption</td>
<td>116,047</td>
<td>7.3%</td>
<td>0.87</td>
<td>1.8%</td>
</tr>
<tr>
<td>Resource efficiency</td>
<td>94,364</td>
<td>6.0%</td>
<td>1.71</td>
<td>0.7%</td>
</tr>
<tr>
<td>Leisure &amp; events</td>
<td>79,988</td>
<td>5.0%</td>
<td>0.79</td>
<td>-1.7%</td>
</tr>
<tr>
<td>Education &amp; knowledge</td>
<td>76,694</td>
<td>4.8%</td>
<td>1.02</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Digital communication</td>
<td>44,825</td>
<td>2.8%</td>
<td>0.76</td>
<td>-0.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,320,745</strong></td>
<td><strong>83.2%</strong></td>
<td><strong>1.02</strong></td>
<td><strong>1.4%</strong></td>
</tr>
</tbody>
</table>

Data: Lehner et al. 2015, p. 7; LQ: own calculation; *) covered by social insurance

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Conclusion: The Challenges of RIS3 Implementation

- **Conceptually demanding**
  - complexity and abstraction

- **Politically ambitious**
  - collaborative leadership vs. tough choices (Kroll et al. 2016: 1460)

- **Resource constraints**
  - Public sector (cf. Kroll 2015)
  - Intermediaries
  - SMEs!

- **Policy co-ordination**
  - Horizontal & vertical
  - Multi-stakeholder

- **Spatial scale**

⇒ Different **regional capabilities** threaten to **increase disparities** across EU.
(COVID-19: New) Challenges for Smart Specialisation

- Short-term **race to recovery**
- Stronger focus on **diversification** based on **technological** relatedness (cf. Belland et al. 2018, Iacobucci/Guzzini 2016)
- Shifting focus: **competitiveness \(\Rightarrow\) resilience** (cf. Kiese/Hundt 2016)
- Accelerated shift from **S&T paradigm** to **social and ecological innovation**
- More focus (‘tougher choices’) needed, e.g. through **open intraregional contests**
Specialisation: Clever & Smart?

Jeff Smart (left) & Fred Clever (right)
English: Mort & Phil
Spanish original: Mortadelo y Filemón

Sophisticated complex strategies fail due to banal practical inadequacies!

Thank you for your attention!