

Clusters, Cluster Initiatives, and Regional Competitiveness: What Have We Learned?

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The Current Policy Challenge

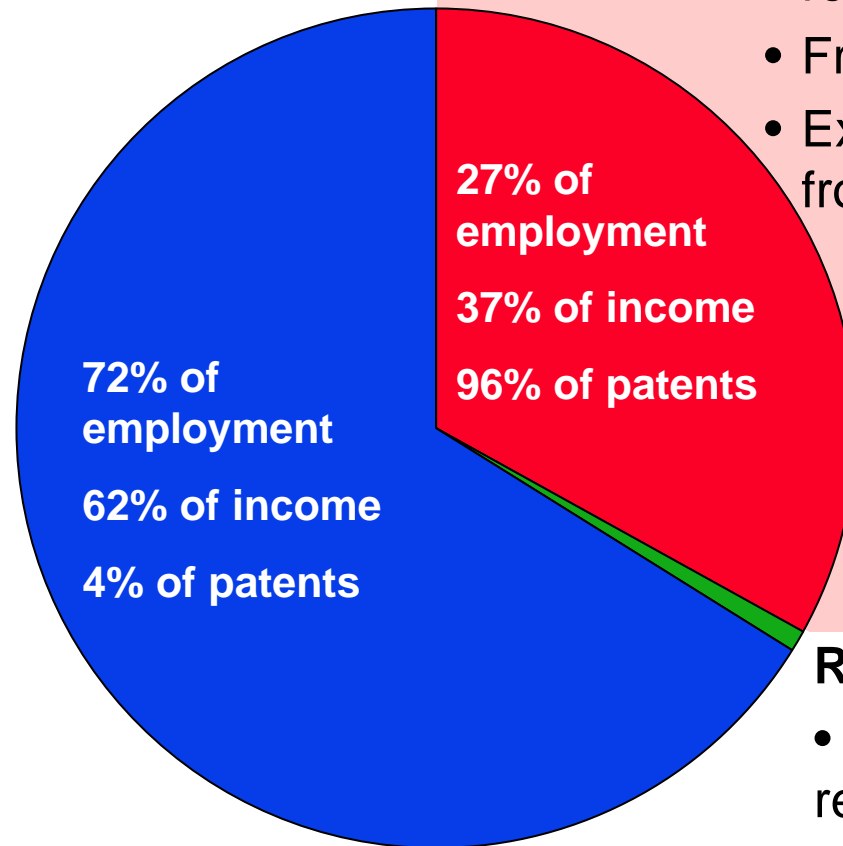
- Severe **macroeconomic challenges** in many economies
- Macroeconomic reactions **necessary...**
 - Fiscal consolidation
 - Counter-cyclical measures
- ...but **not sufficient** to achieve sustainable growth
 - Higher prosperity ultimately driven by higher competitiveness, not demand

- Microeconomic growth agenda critical for higher competitiveness
 - Much of the action is in **regions**
 - Much of the action is sector- (or **cluster-**) specific
 - Much of the action requires voluntary **collaboration** between a broad range of actors

Composition of Regional Economies, United States

Local Cluster

- Serve almost exclusively the local market
- Not exposed to cross-regional competition for employment



Traded Cluster

- Serve markets in other regions and countries
- Free to choose location
- Exposed to competition from other regions

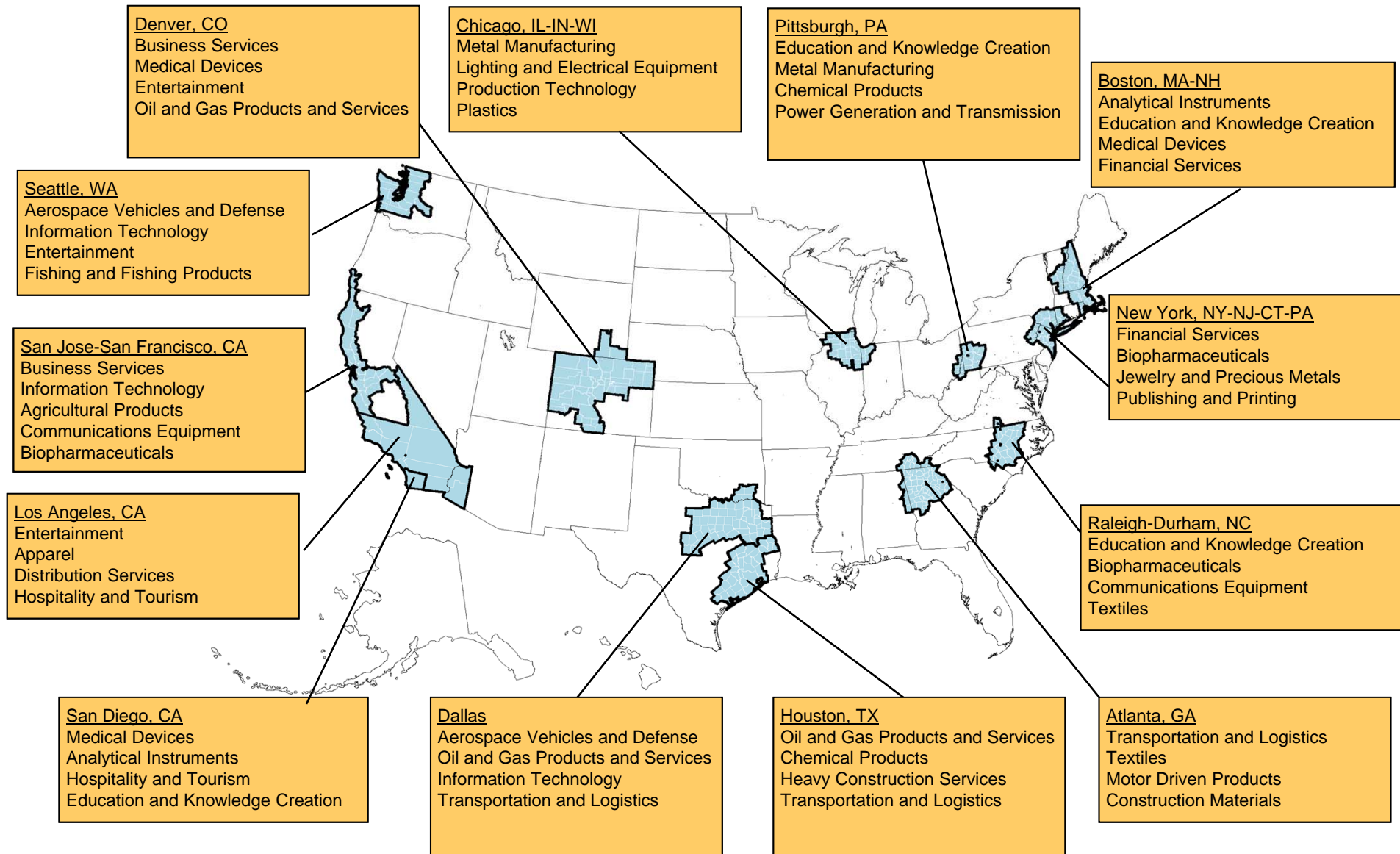
Resource-based Clusters

- Location determined by resource availability
- 1% of income, employment, and <1% patents in the U.S.

Source: Michael E. Porter, Economic Performance of Regions, Regional Science (2004), Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

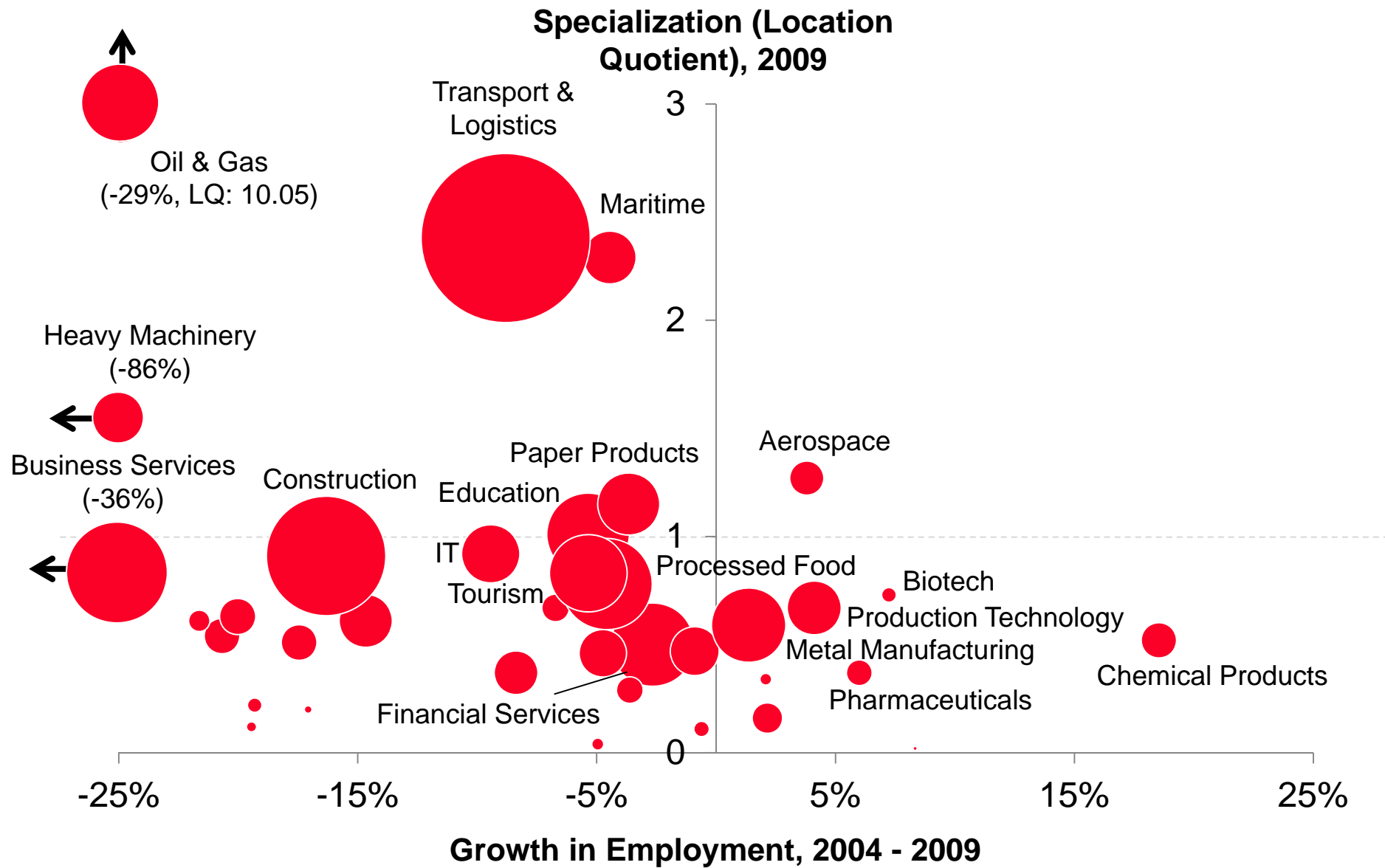
Specialization of Regional Economies

Leading Clusters by U.S. Economic Area, 2008



Source: Prof. Michael E. Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director.

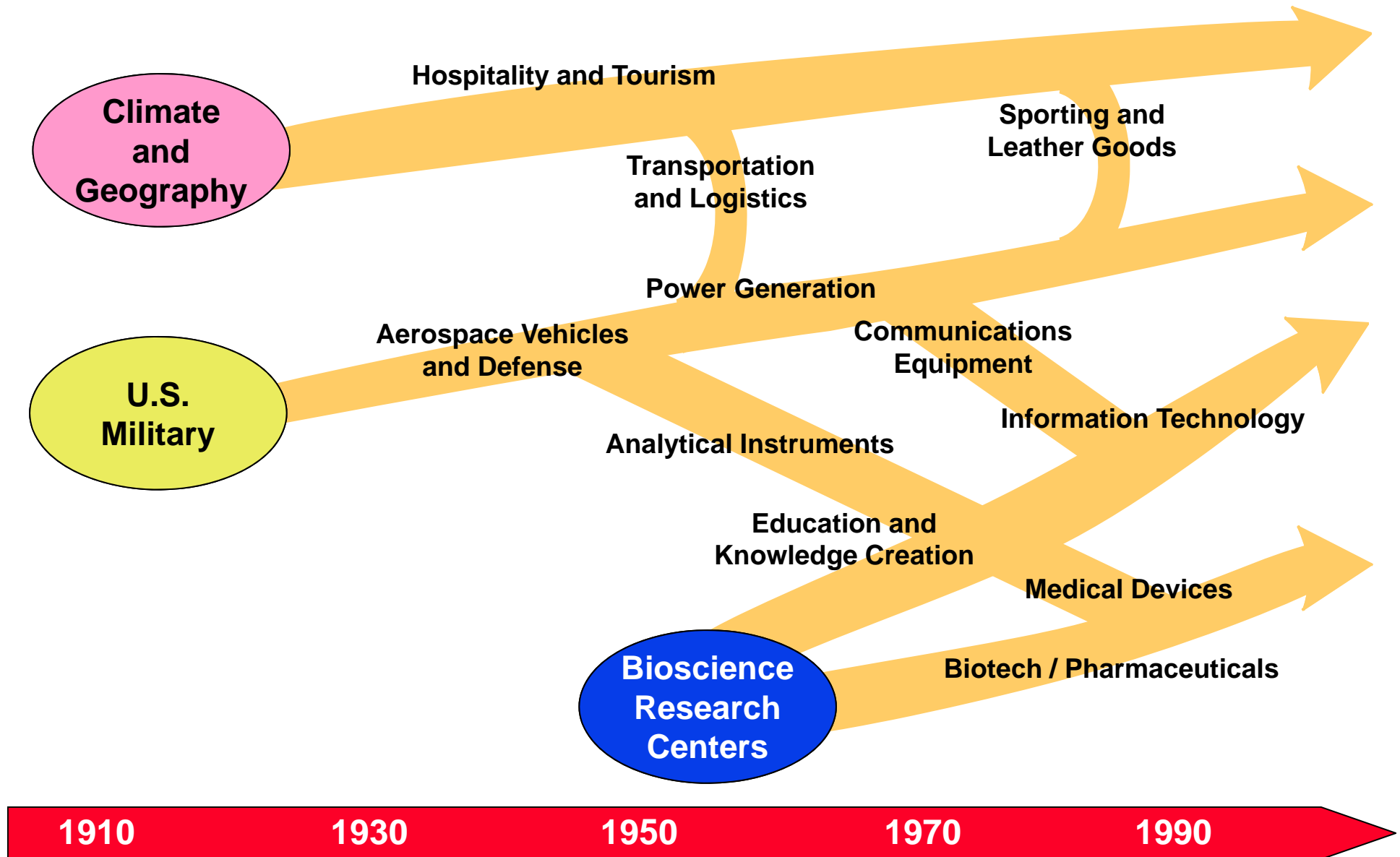
Stavanger (Rogaland) Cluster Portfolio



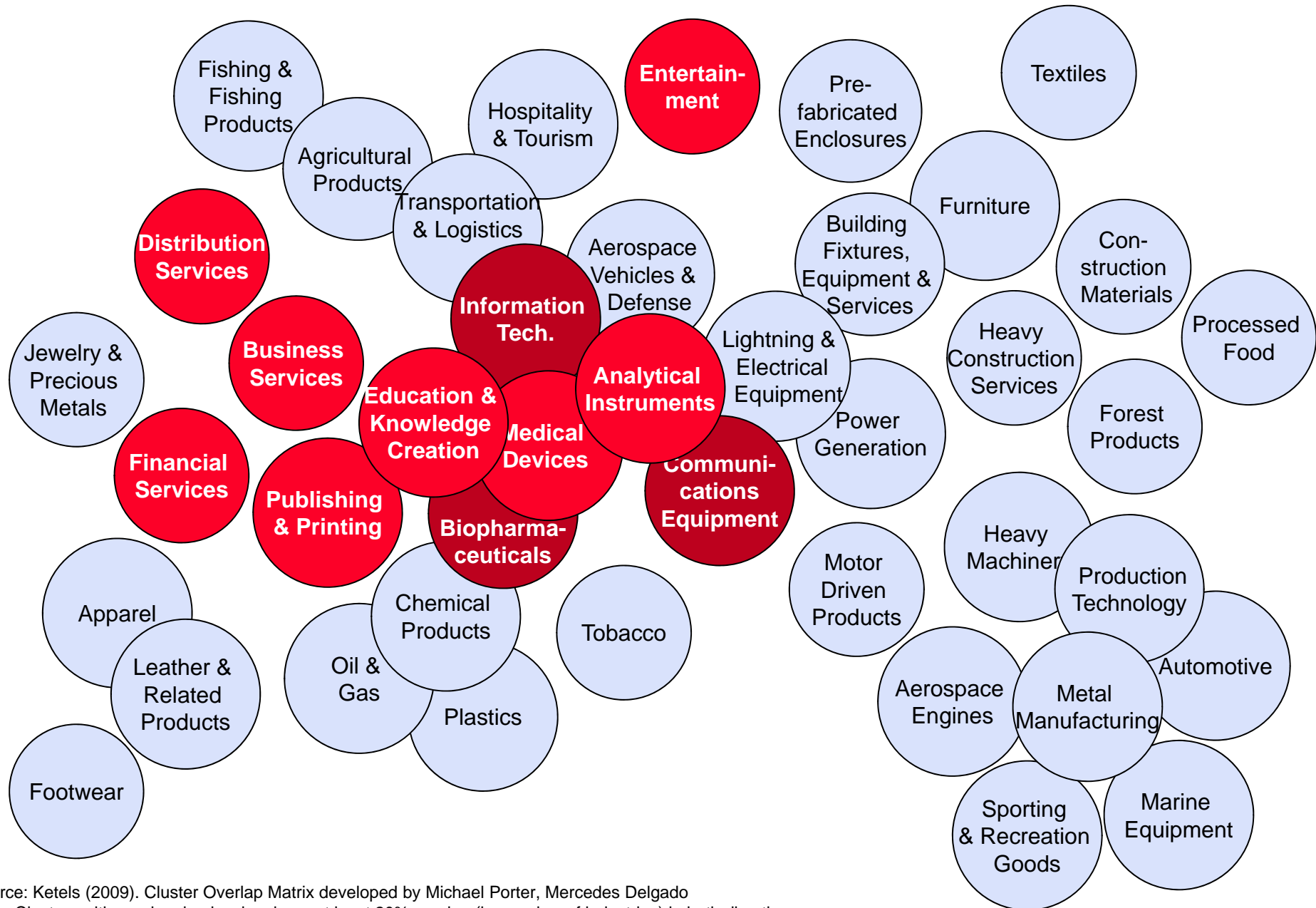
Note: Bubble size reflects absolute employment in 2009
 Source: European Cluster Observatory, (2011)

The Evolution of Regional Economies

San Diego

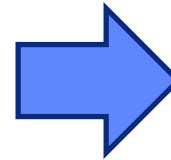


Cluster Overlap Matrix: Stockholm

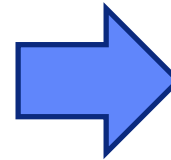


Source: Ketels (2009). Cluster Overlap Matrix developed by Michael Porter, Mercedes Delgado
 Note: Clusters with overlapping borders have at least 20% overlap (by number of industries) in both directions.
 Red shading indicates clusters with LQ > 1, dark red with LQ > 2

Drivers of Cluster Emergence



Productivity



**New
Business
Formation**



Innovation

Clusters and Regional Prosperity

Recent Findings

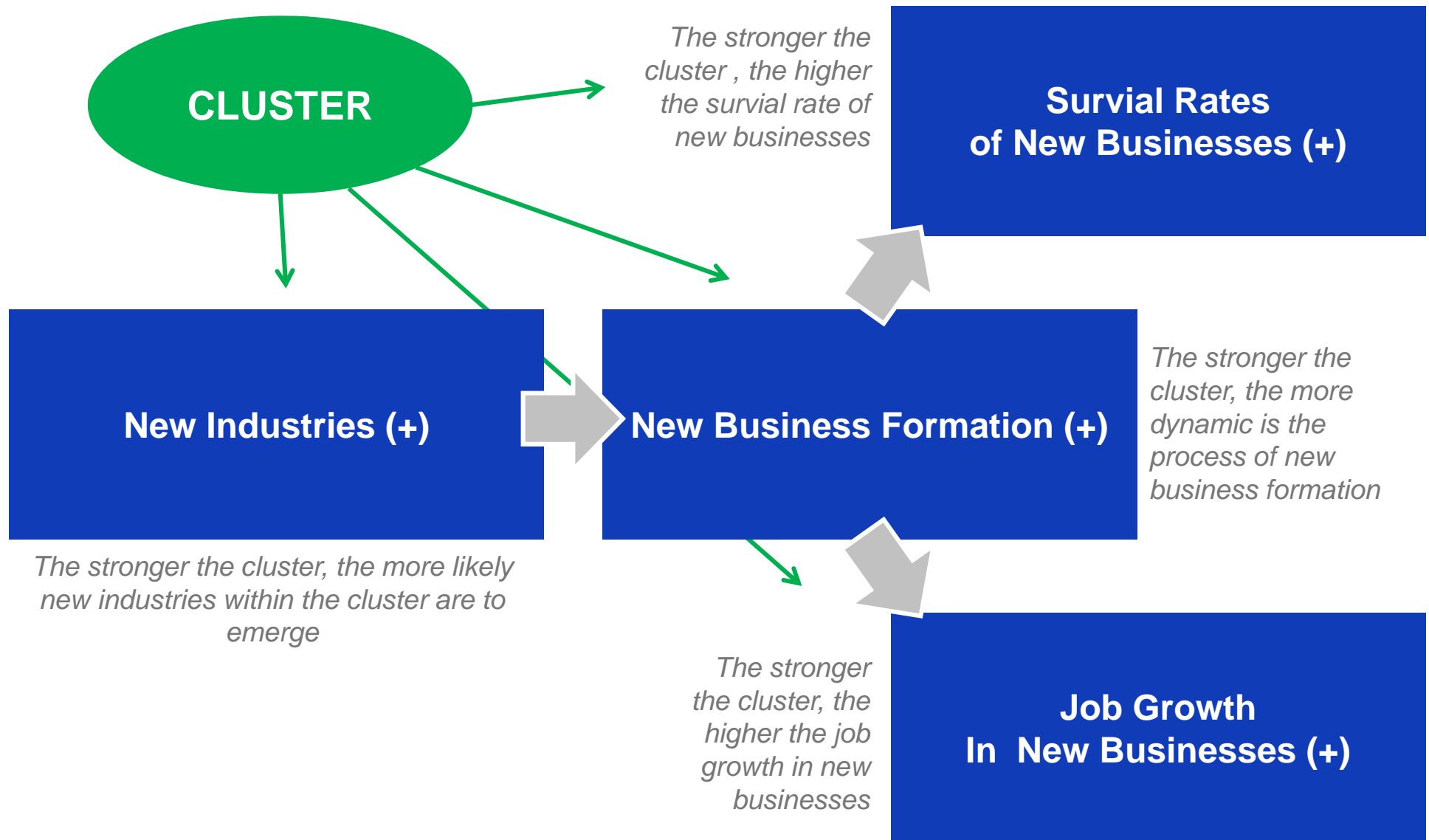
Determinants of Regional Job Growth, Wages, and Patenting

- Specialization in **strong clusters**
- **Breadth** of position within each cluster
- Positions in **related clusters**
- Presence of a region's clusters in **neighboring regions**

Not significant

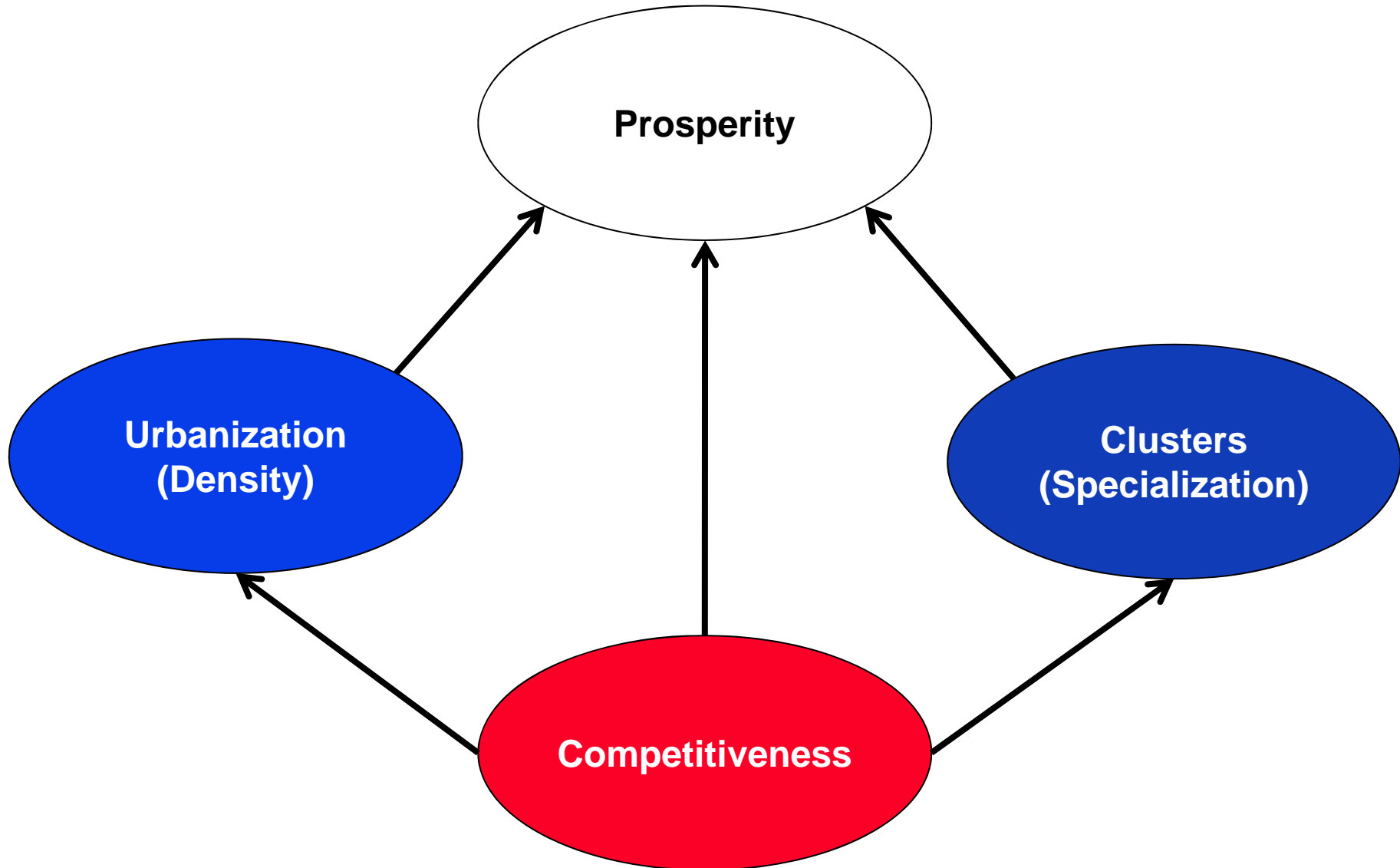
- Positions in “high-tech” versus other clusters

Clusters and New Business Formation



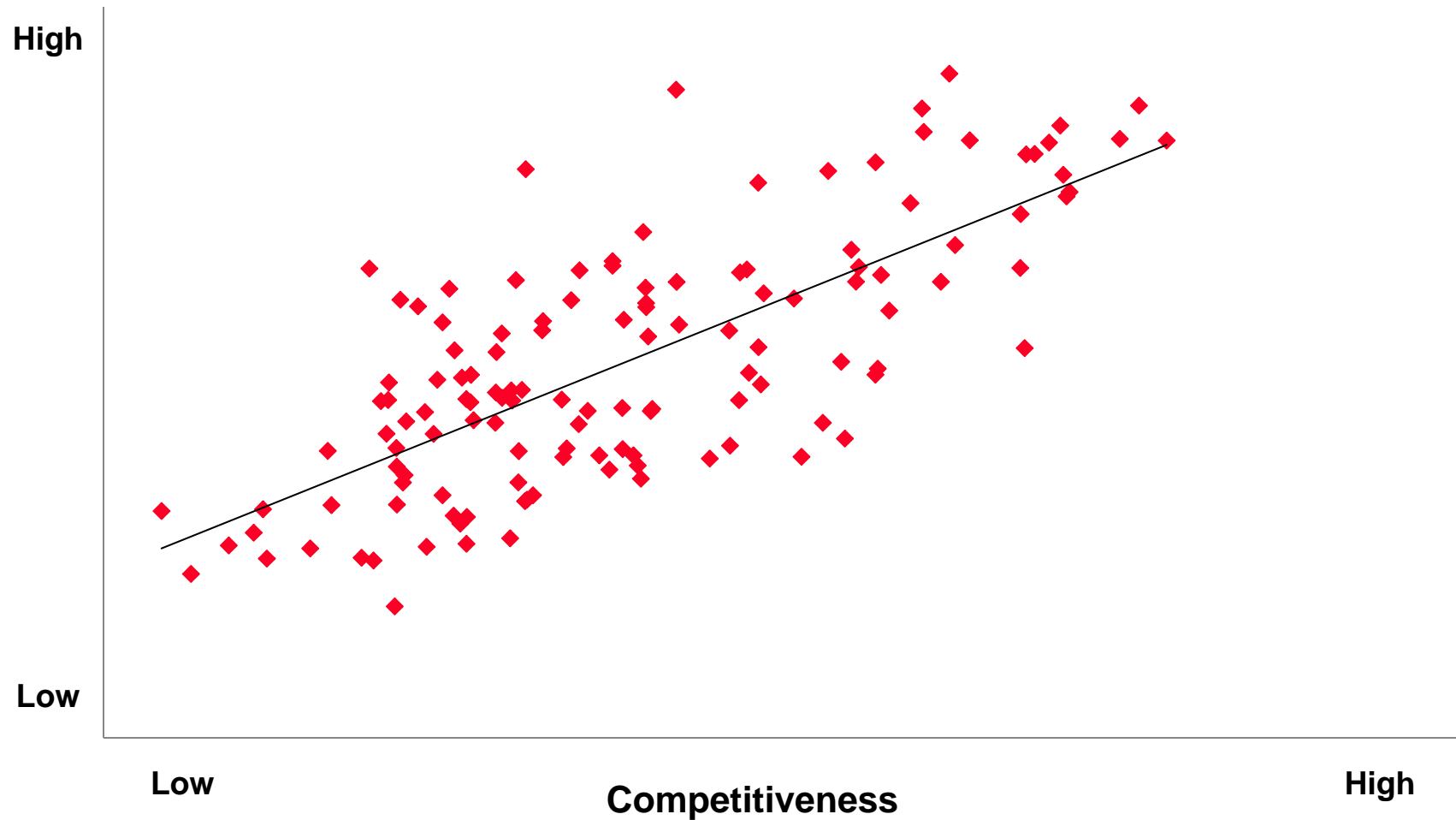
Drivers of Prosperity

Revisiting the Role of Location



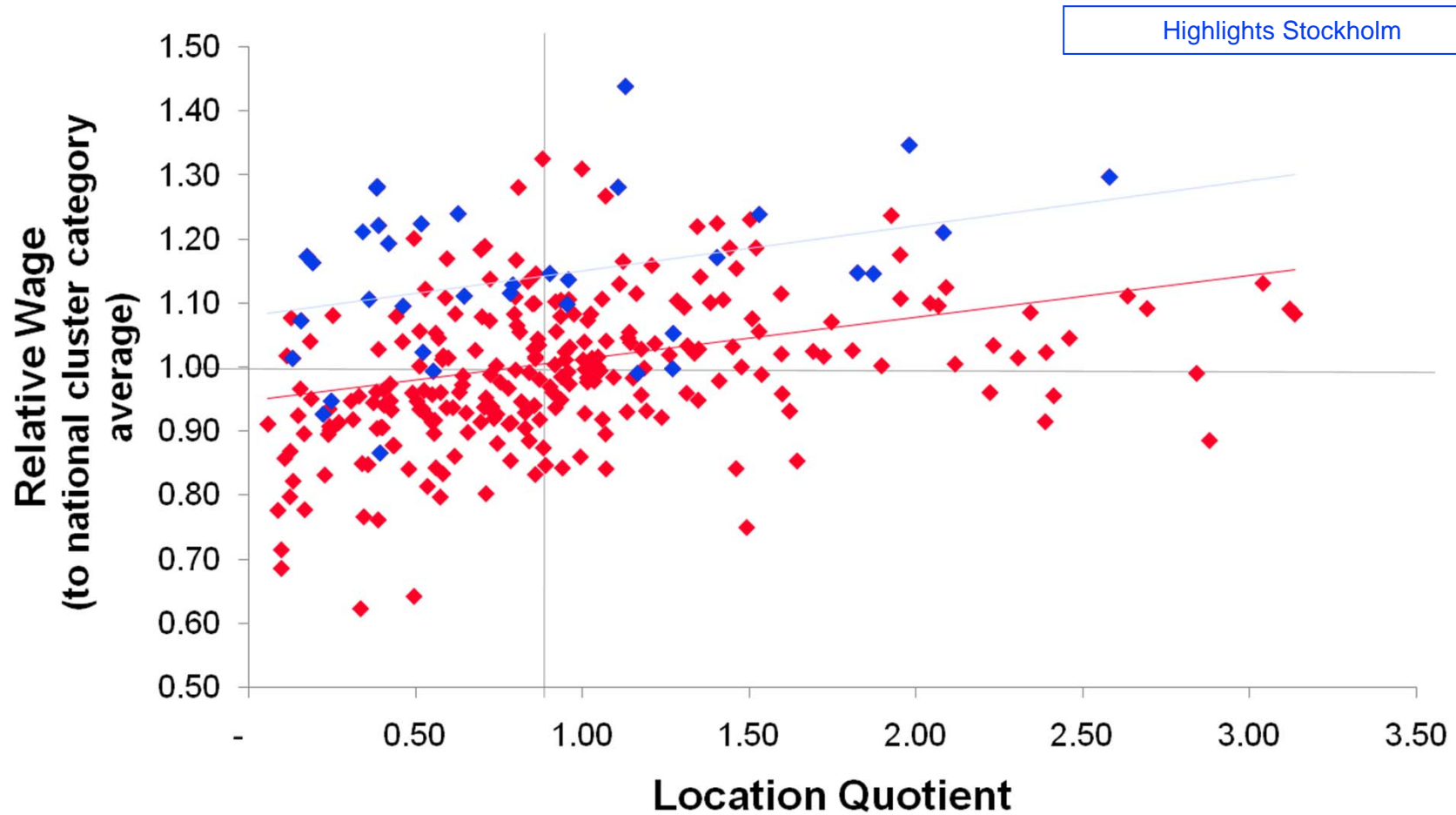
Clusters and Competitiveness

State of Cluster
Development



Clusters, Urbanization, and Regional Economic Performance

Swedish Regional Clusters, 2006



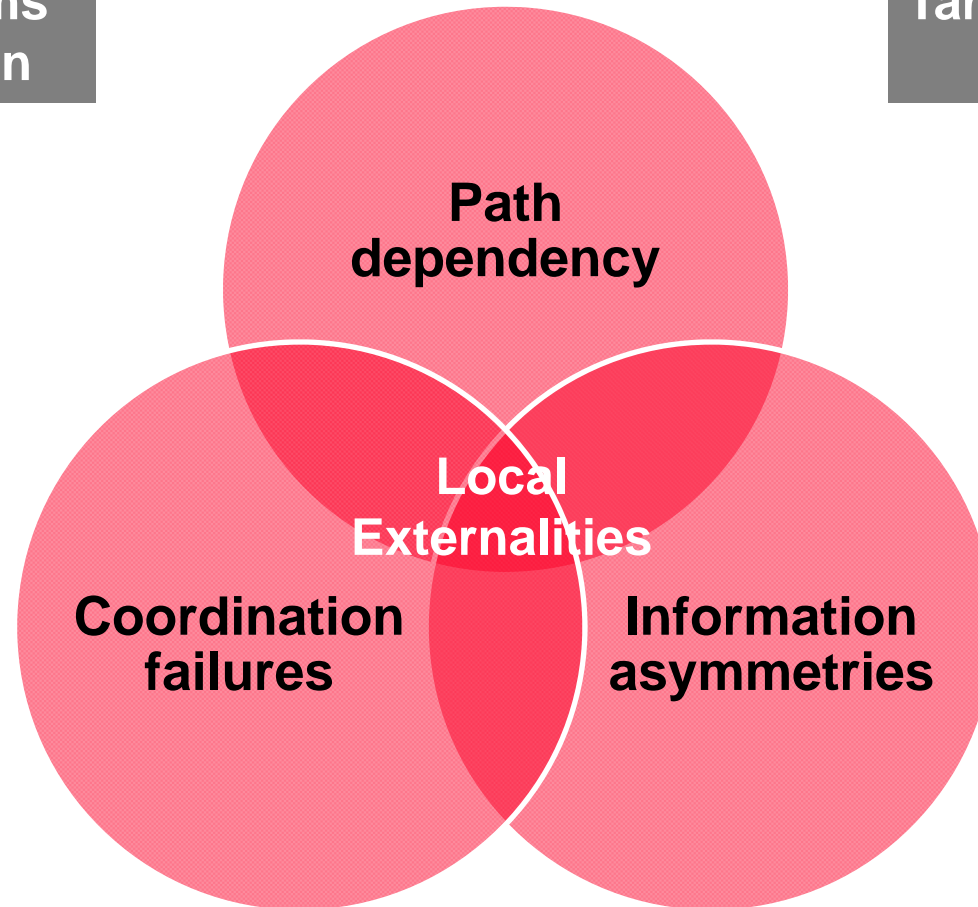
Clusters: What Do We Know?

- Clusters are an **important feature of modern economies**; there is no evidence that their relative importance is declining
- Regional cluster portfolios develop in a highly path-dependent process of **diversification across related clusters**
- The presence of strong clusters is associated with **higher levels of economic performance**
- Regional economic performance emerges in the interplay of **competitiveness, cluster presence, and urbanization**

The Case for Cluster Policy

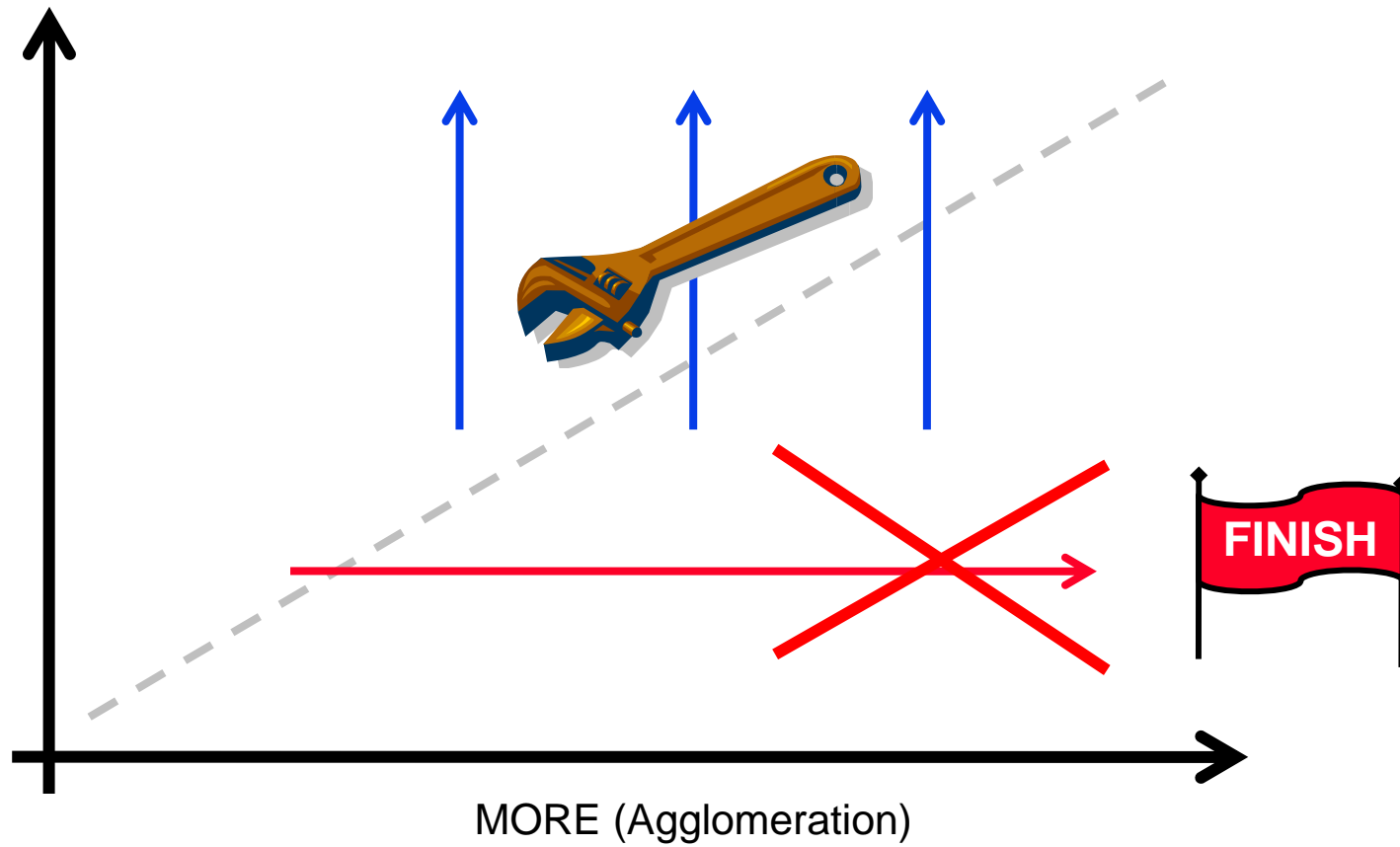
**Create Platforms
for Joint Action**

**Target Public Policy
at Clusters**



Two Opposing Approaches to Cluster Policy

BETTER (Competitiveness)



Agglomeration Approach

- Economic geography roughly in line with fundamentals

- Moving a cluster to a new location has a small impact on productivity

Weak case for cluster policies

“California dreaming” meets “Big Push”

- *If you do it,*

Competitiveness Approach

- Agglomeration largely driven by business environment conditions and 'automatic' cluster effects

- Exploitation

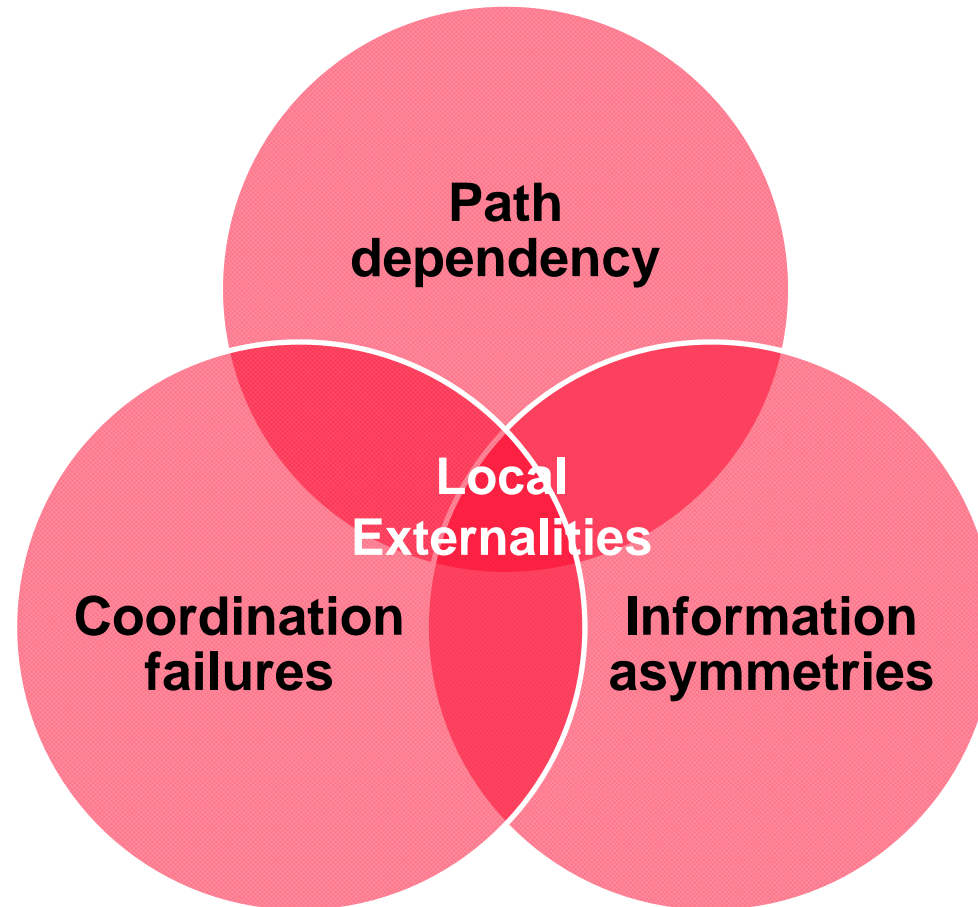
Solid case for cluster policies

“Smart government” meets “coopetition”

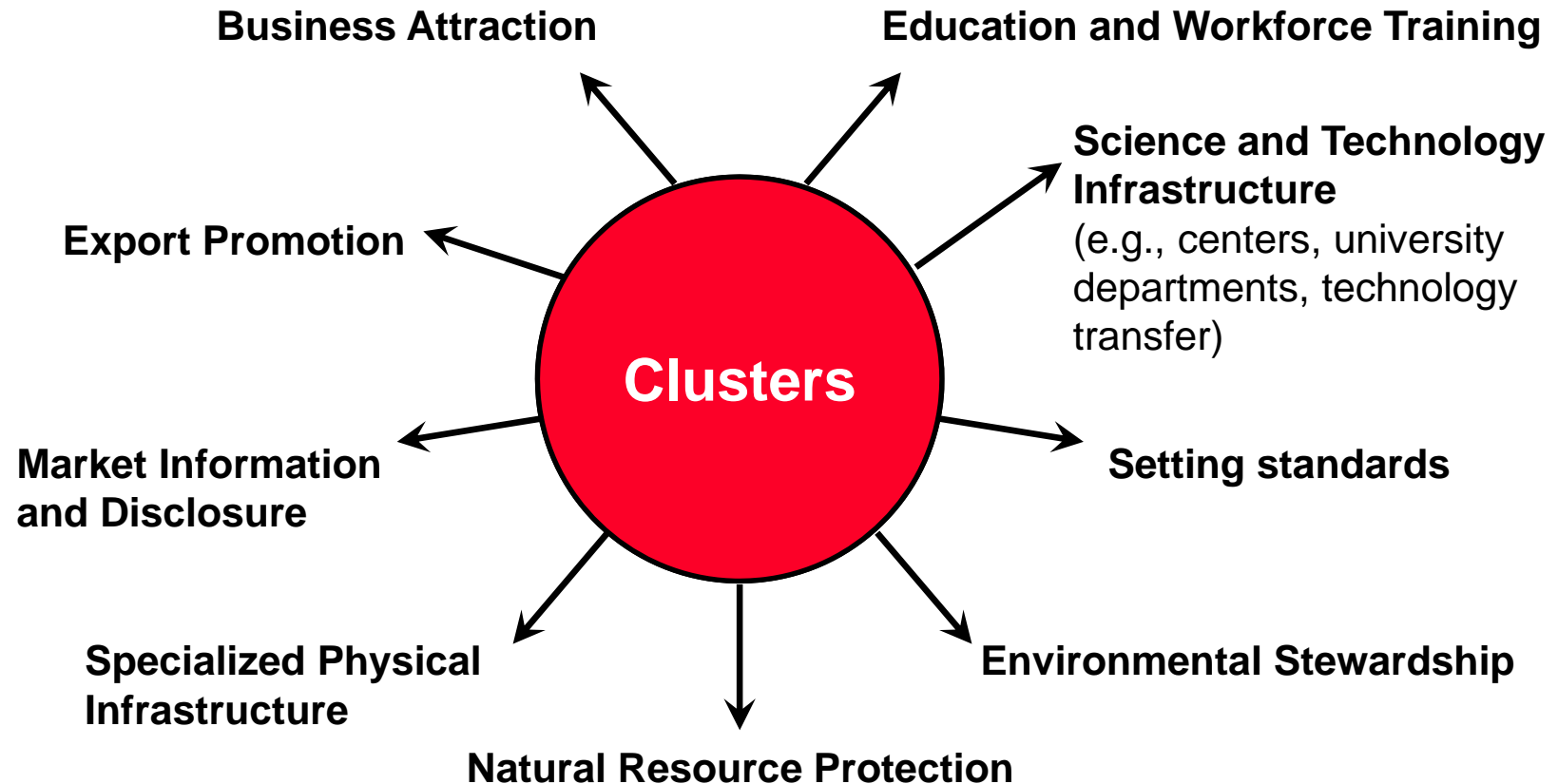
- Exploration

- *If you do it, be patient and develop existing agglomerations and qualities*

The Case for Cluster Policy

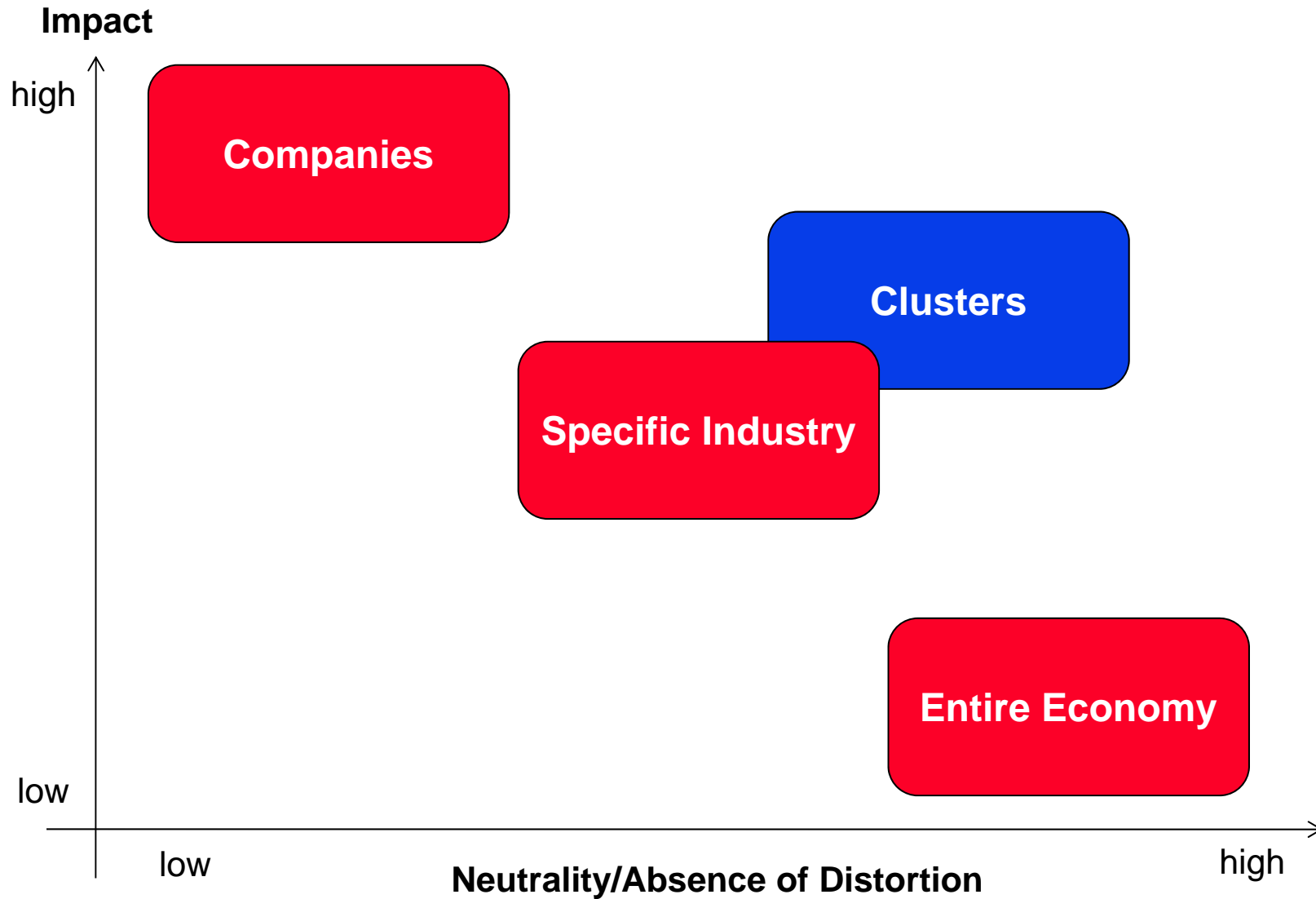


Target Public Policy at Clusters



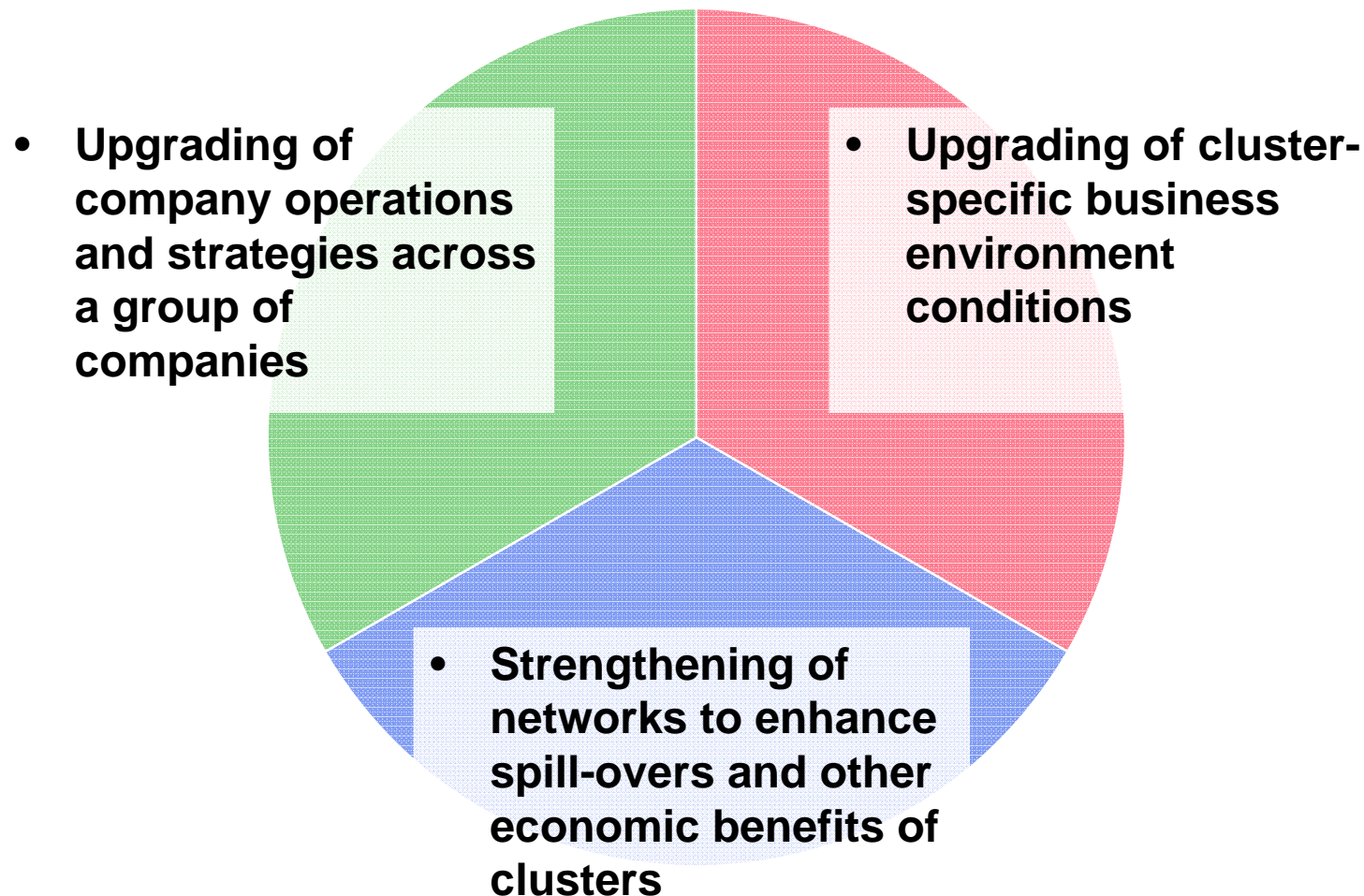
- Clusters provide a framework for **organizing the implementation** of public policy and public investments towards economic development

Impact and Neutrality of Government Policies



What are Cluster Initiatives?

Cluster initiatives are **collaborative activities** by a **group** of companies, public sector entities, and other related institutions with the objective to improve the competitiveness of a group of **interlinked economic activities in a specific geographic region**



Drivers of Cluster Initiative Success

Setting

- Strong business environment
- Trust in government
- Strong regional government
- Cluster strength

Objectives

- Broad range of objectives
- Objectives selected based on cluster's specific needs
- *No significant effect of special objectives*

Process

- CI Facilitator with cluster insight
- CI has office and significant budget
- CI has clear strategy and measurable goals
- *No negative effect of government financing*
- *Negative effect of limiting participation*

The Role of Government in Cluster Initiatives

Government should

- Support *all* existing and emerging clusters
- Participate
- Enable data collection and dissemination at the cluster level
- Be ready to implement recommendations

Government may

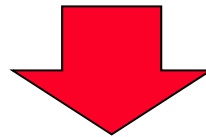
- Initiate/
Convene
- Co-Finance

Government should not

- Pick favored clusters
- Pick favored companies
- Subsidize or distort competition
- Define cluster action priorities

Cluster Policy: The Track Record So Far

- Increasingly clear evidence on the economic benefits of **cluster presence**
- Evaluations of cluster programs generally **positive**, especially in comparison with traditional policy tools
- Economic benefits of cluster programs so far **limited to active participants**
- Quality of cluster initiatives is **heterogeneous**



- How can the benefits of clusters and cluster initiatives be **improved**?

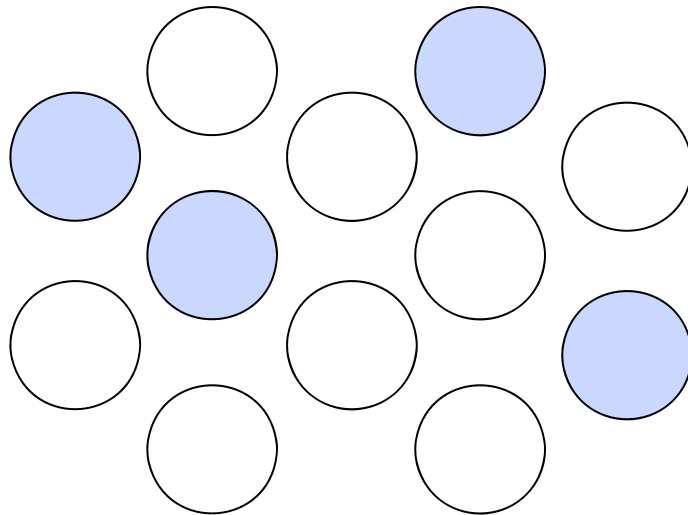
Key Issues for Cluster Mobilization

**Increase the *impact* of
cluster-driven policies**

**Enhance the *quality* of
cluster initiatives**

Cluster Policy: Breaking the Glass Ceiling

*From a few successful
cluster islands...*



*...to a more
competitive economy*

- Systematic use of clusters as a **delivery channel** for microeconomic policies
- Active management of regional **cluster portfolios** that engage many clusters and harness cross-cluster linkages
- Design of **feed-back mechanisms** from cluster efforts to general business environment upgrading

Locations will only be able to harness the full potential of cluster efforts, if they match a **bottom-up operational approach** with a **clear top-down concept** for the use of clusters in economic policy

Cluster Portfolio Policy

- **Existing clusters**
 - Already meeting the market test with significant economic activity
- **Emerging clusters**
 - Becoming visible around individual companies and at borders of existing clusters
- **New clusters**
 - Start-ups and chance events create the seeds of emerging clusters

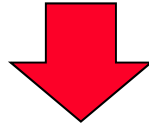


Clusters and Structural Change

- Cluster policy is most effective if it focuses on **existing clusters**

BUT

- For many economies the challenge is to **broaden** or **change** the portfolio of clusters they are in



Direction of structural change

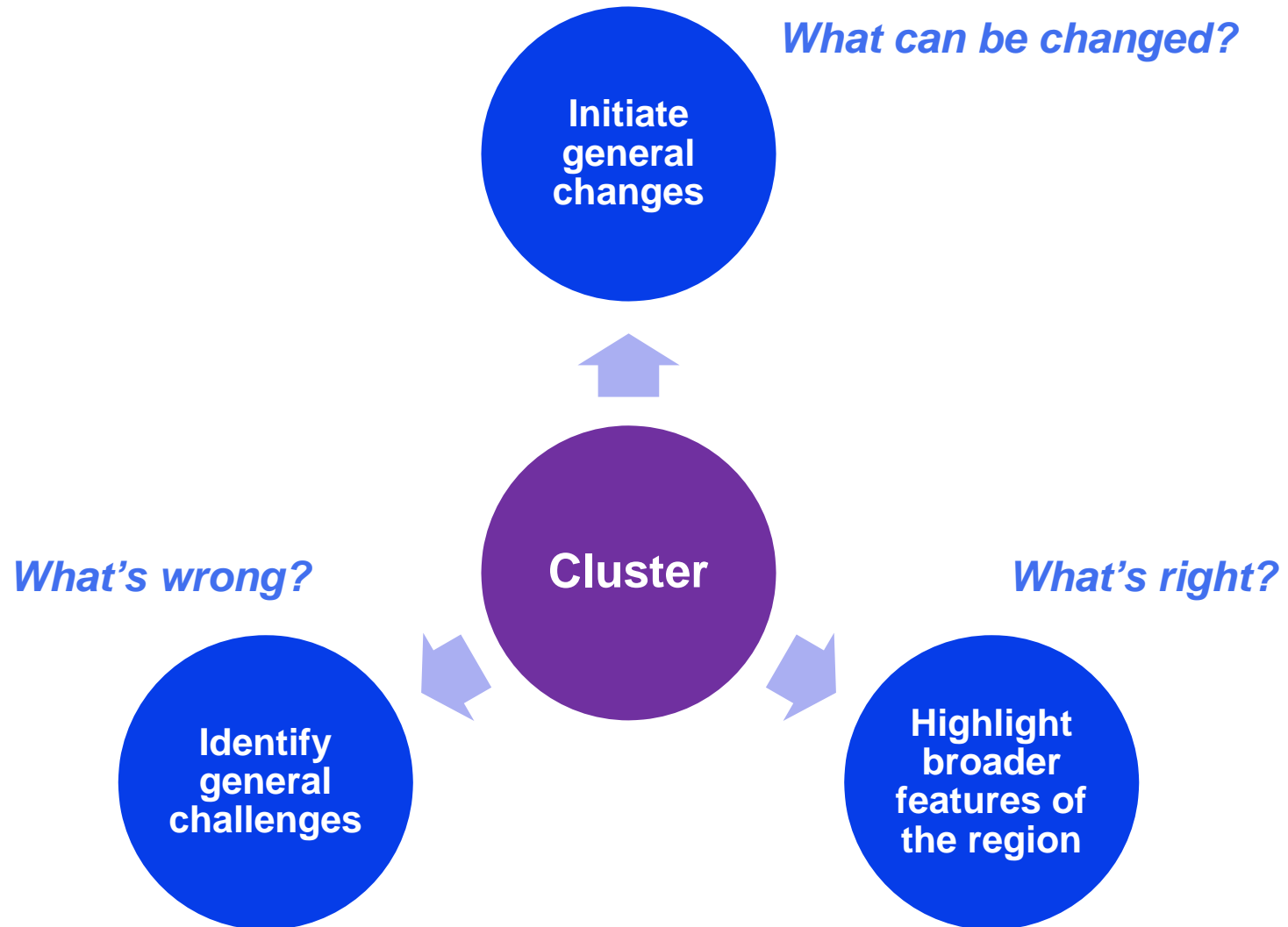
- **Natural structural change** occurs through growth in fields related to activities already present
- *Encourage diversification into **related** clusters*



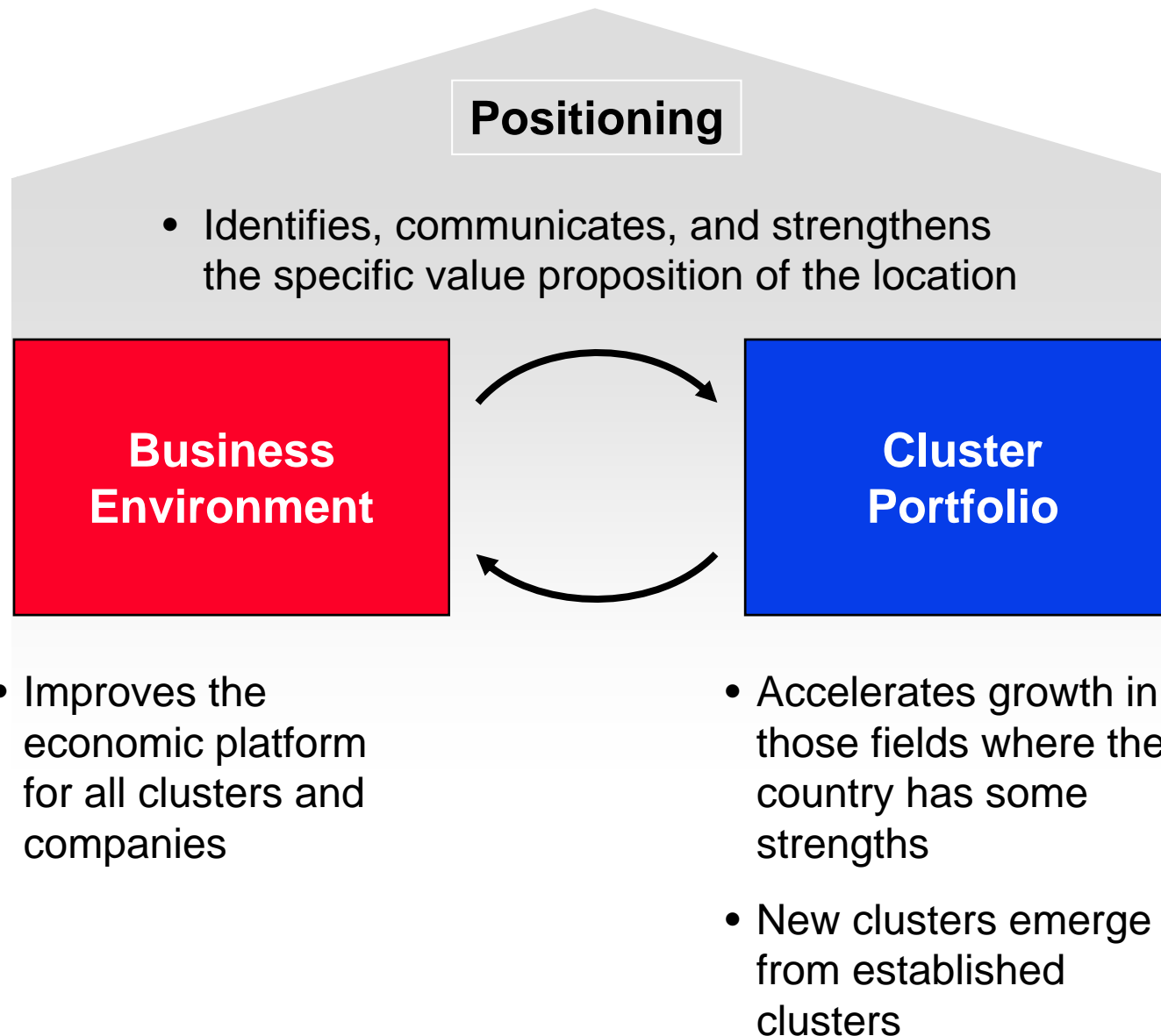
Management of structural change

- Depending on their **maturity**, clusters differ in their likelihood of success and policy needs
- *Manage clusters as a **portfolio***
 - *Existing clusters*
 - *Emerging clusters*
 - *New clusters*

Feed-back Mechanisms



Clusters and Economic Strategy



Regional Economic Strategy



Positioning

Defining a unique overall position

- What roles in the world and regional economy?
- What is the unique value as a business location?
- For what range or types of business activities?

Priority Policies

Developing unique strengths

- What elements of the business environment are critical to the regional value proposition?

Best Practices

Maintaining parity on necessary qualities

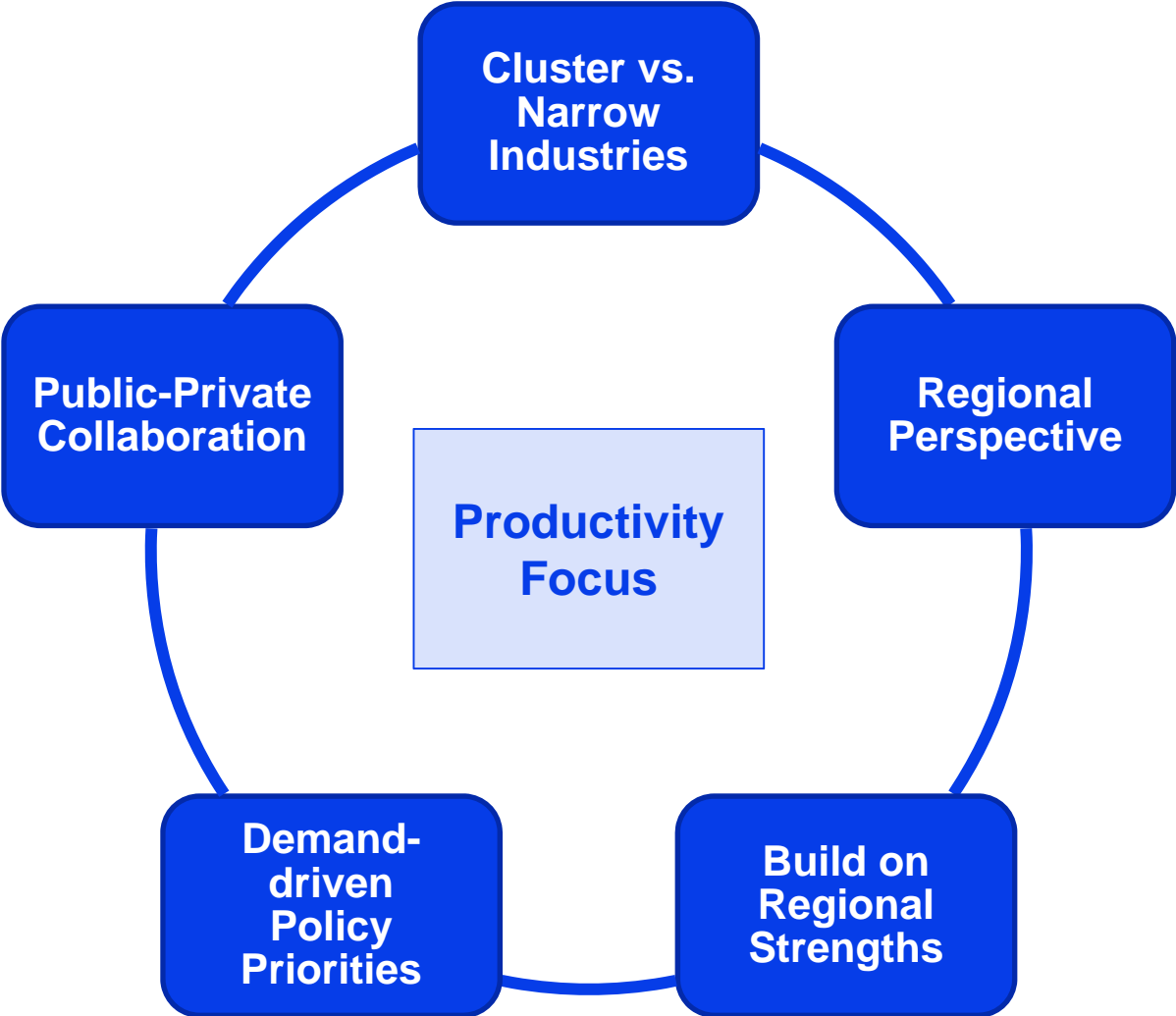
- What policy improvements are necessary to maintain parity with peer regions?

Others

Putting low emphasis on the rest

- What aspects of the business environment are currently of limited relevance?

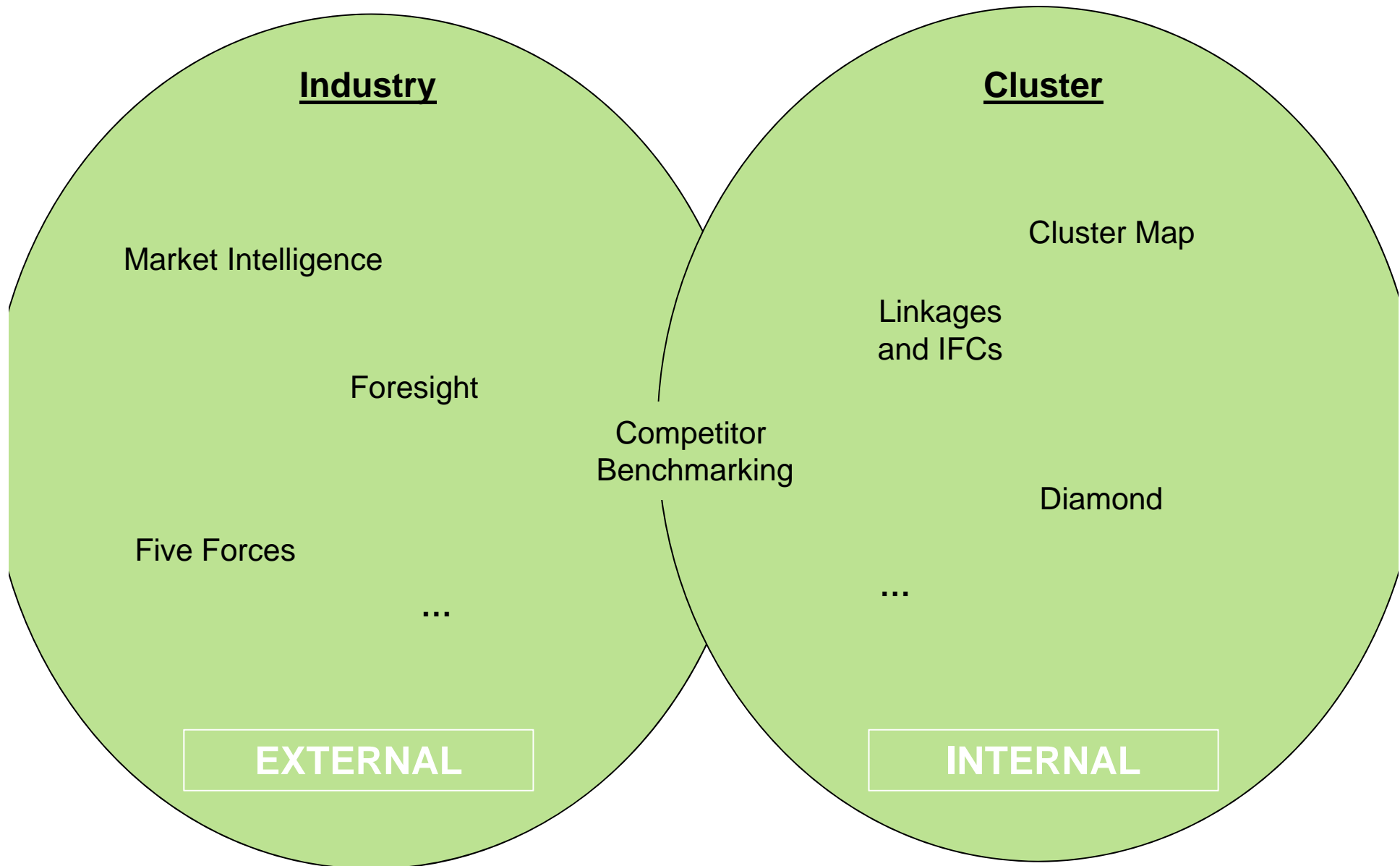
What is Different about Cluster-Based Policy?



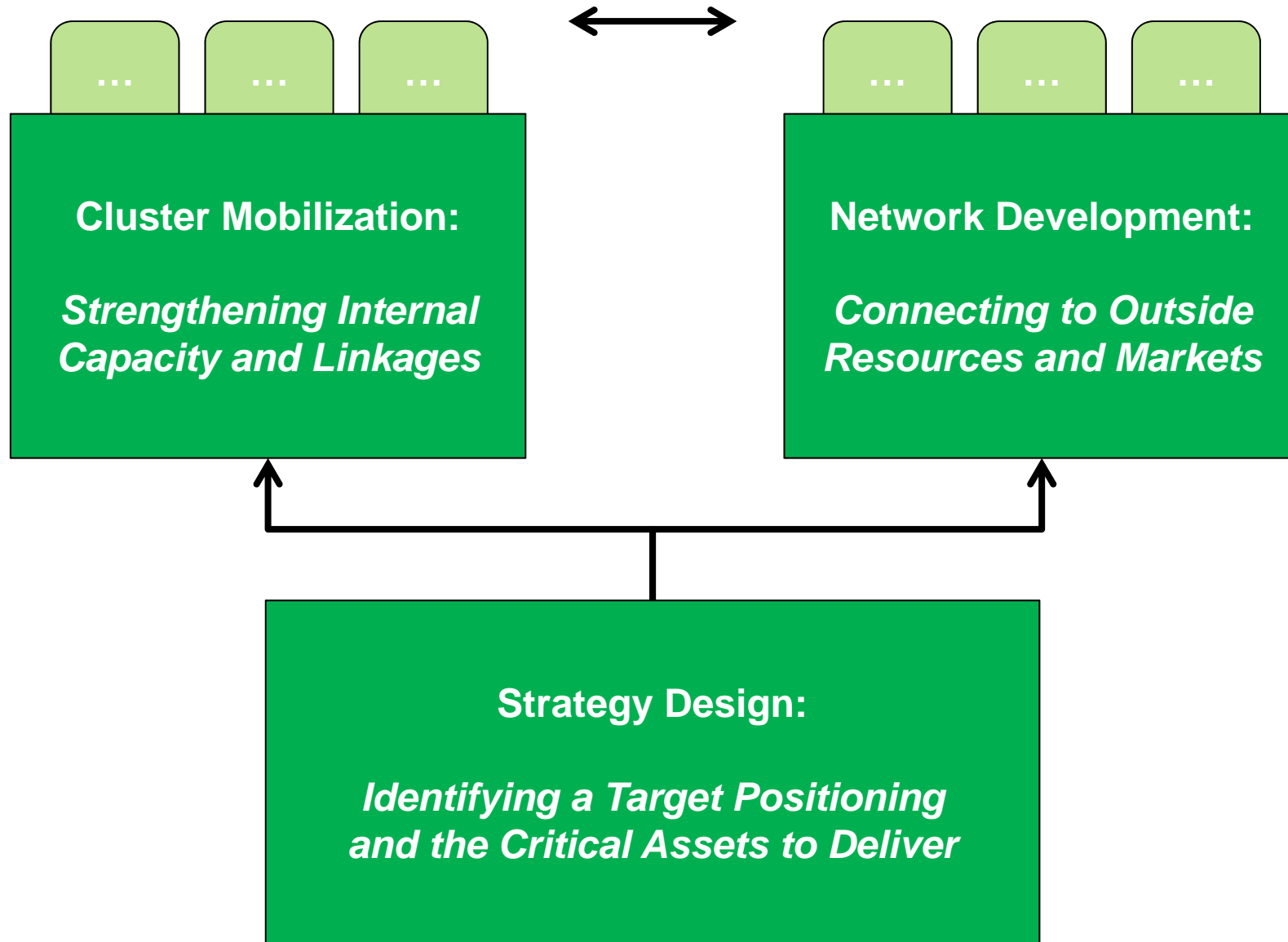
Cluster Management: Professionalizing Practice

- Strategy Design
 - Combine existing tools to analyze the industry, the cluster, and the region
- Activities
 - Combine international with external collaboration
- Services
 - Cluster organization as the management of complex collaborations
- Management systems
 - Systematic impact assessment

Analytical Tools for Strategy Design



Activities



Key Points

- Clusters are a **critical element** of modern economies
- Clusters **emerge naturally** in market processes, but cluster policies and initiatives can **enhance and leverage** these dynamics
- Clusters policies need to **broaden their scope** to achieve meaningful regional and national impact
- Cluster initiatives need to **broaden their toolkit** to effectively support companies and research institutions in their clusters