

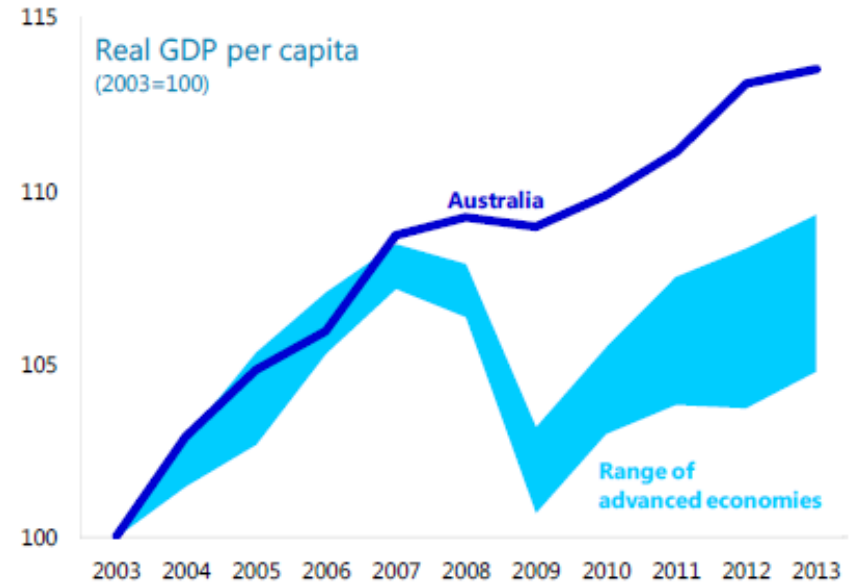
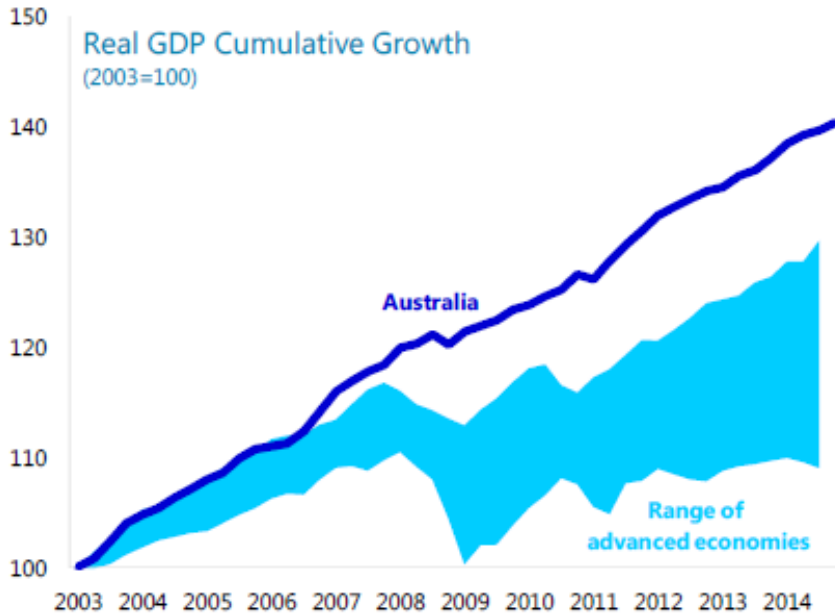
# **Upgrading Australia's Competitiveness: The Role of Cluster-based Economic Development**

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# The Lucky Country...



Source: IMF, 2016

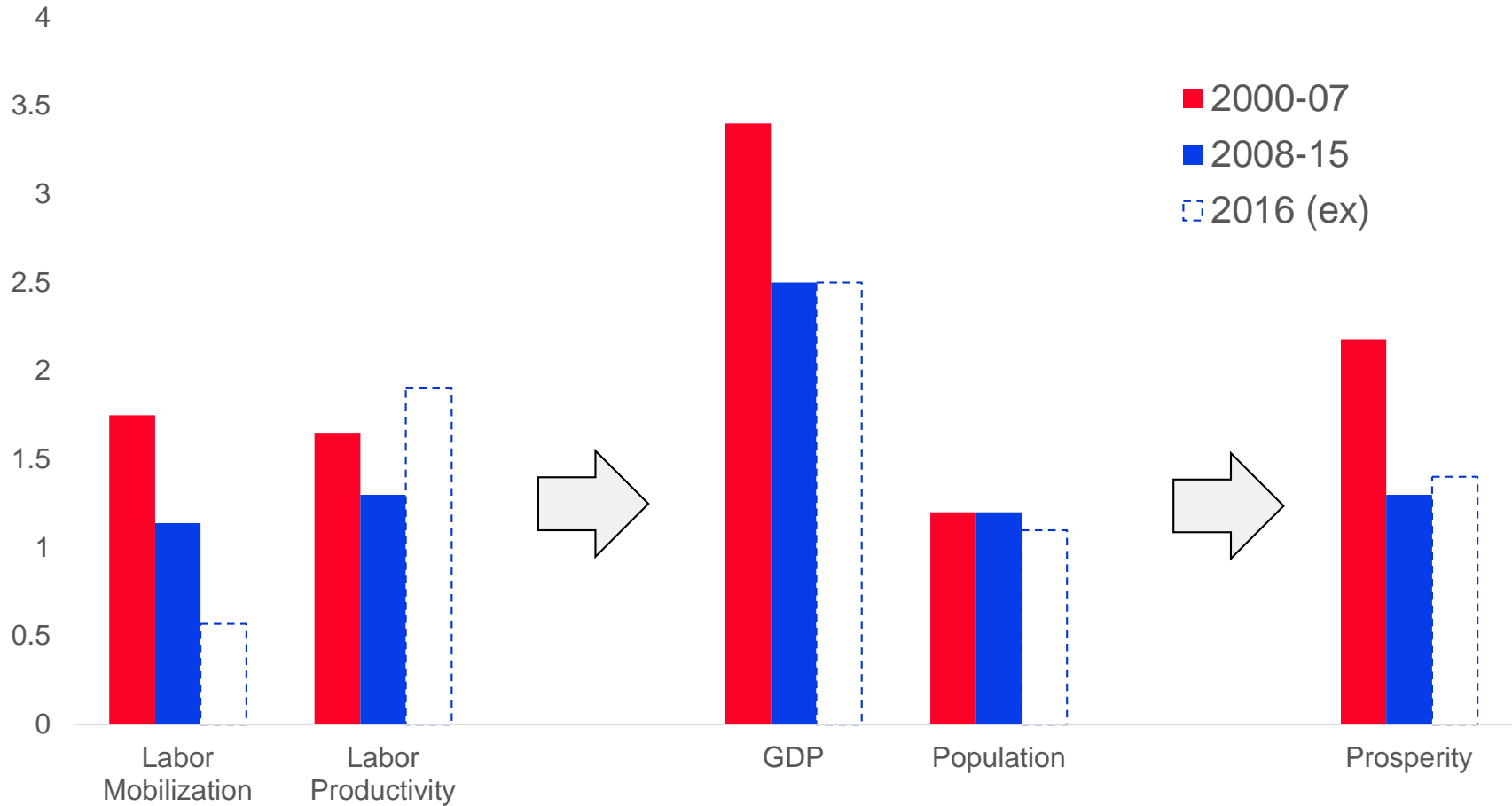
## Australia outperforming its peers, fueled by..

- Past policy reforms
- China-driven natural resource-boom
- (Partial) isolation from US/European crises

# ...Loosing Steam...

Average Annual  
Growth Rate, %

## Prosperity Decomposition, Australia, 2000 - 2016

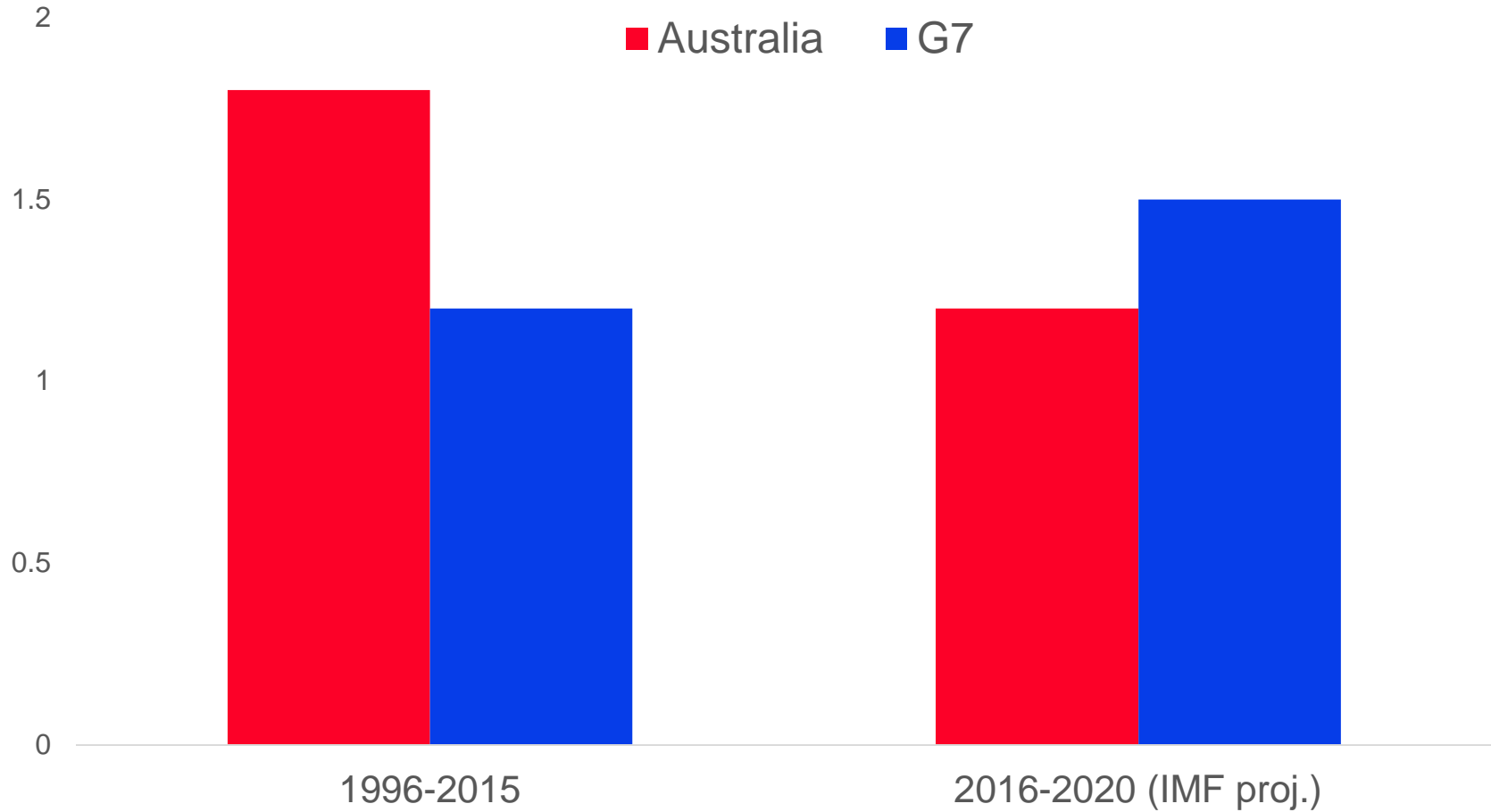


# ...and Even Falling Behind?

*Average Annual  
Growth Rate, %*

GDP per Capita Growth

■ Australia ■ G7



# Drivers

## External

- China's growth and natural resource demand is **slowing**, probably structurally
- Advanced economies are (slowly) working their way towards recovery

## Internal

- Australia has **few obvious new growth sectors**
- A combination of Dutch Disease and the effects of distance and modest absolute market size have **decimated traditional manufacturing**
- Australia has **solid but stagnant** competitiveness fundamentals

# Australia's Competitiveness Fundamentals over Time



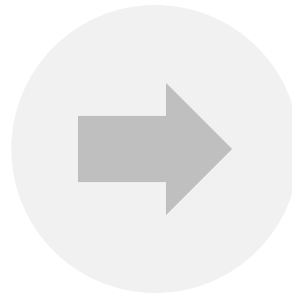
*Openness of  
Product Markets*



- 2008: Rank 13
- 2013: Rank 8



*Cost of  
Doing Business*



- 2010: 81%
- 2016: 80%

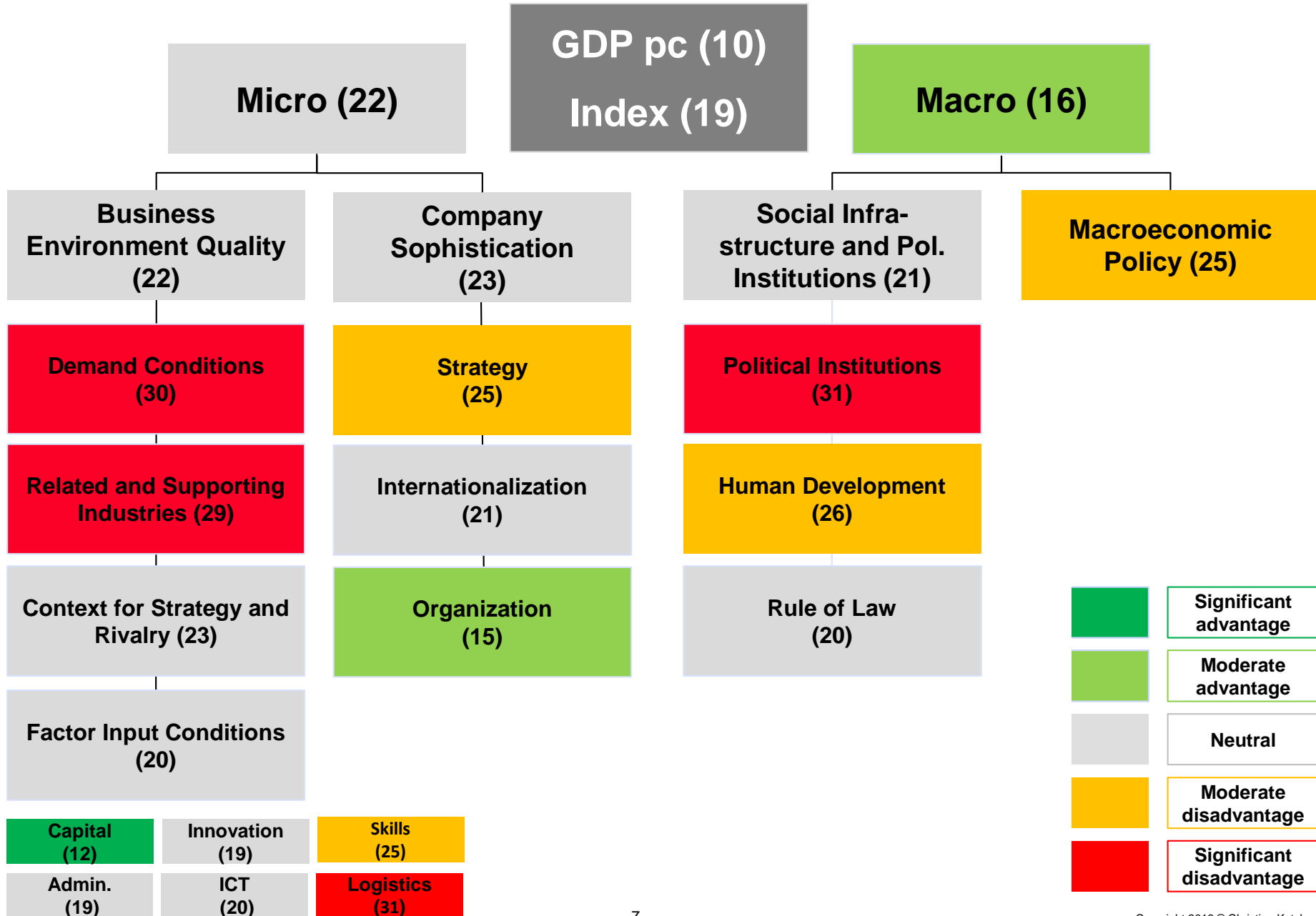


*Overall  
Competitiveness*



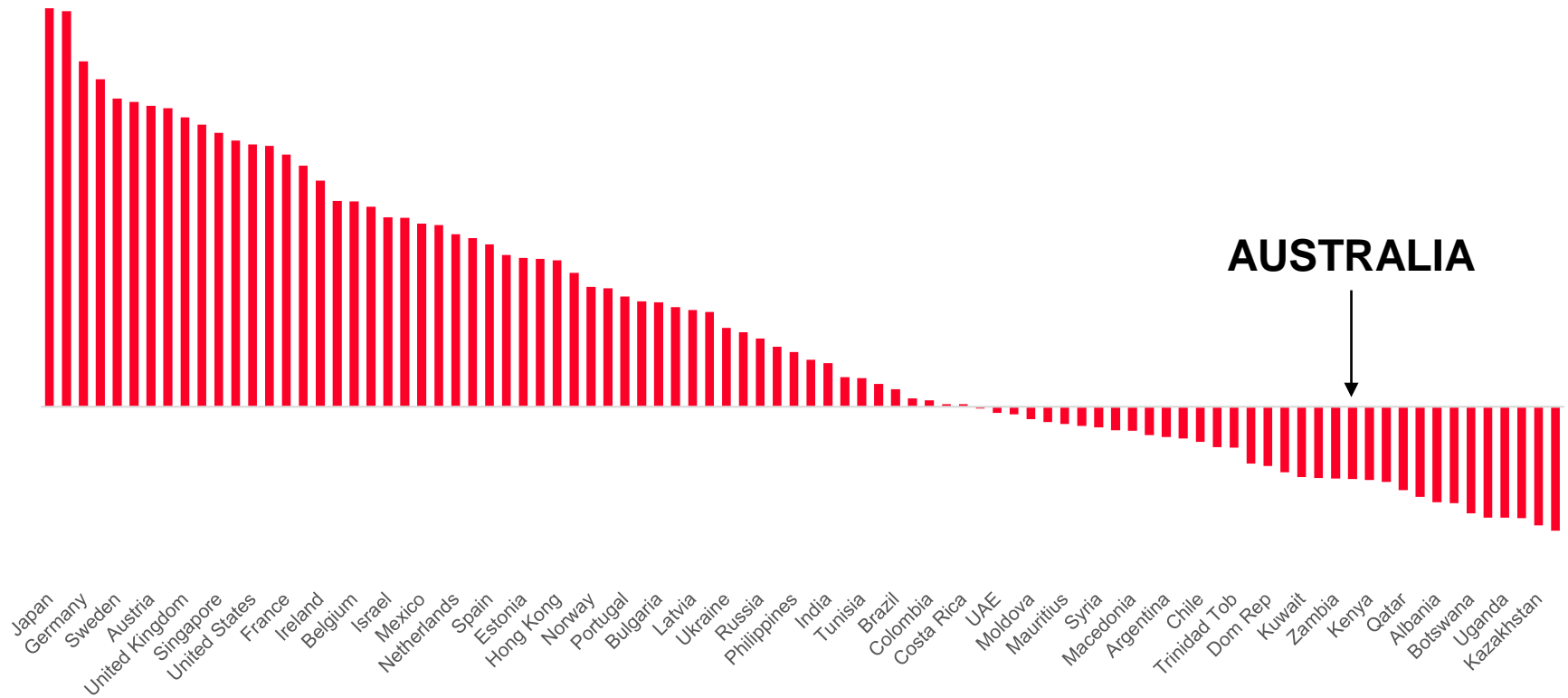
- 2010: Rank 15
- 2015: Rank 22

# A Closer Look at Australia's Competitiveness



# ...And How it Translates into Economic Composition

*HIGH* ← ----- **Economic Complexity Index, 2013** ----- → *LOW*





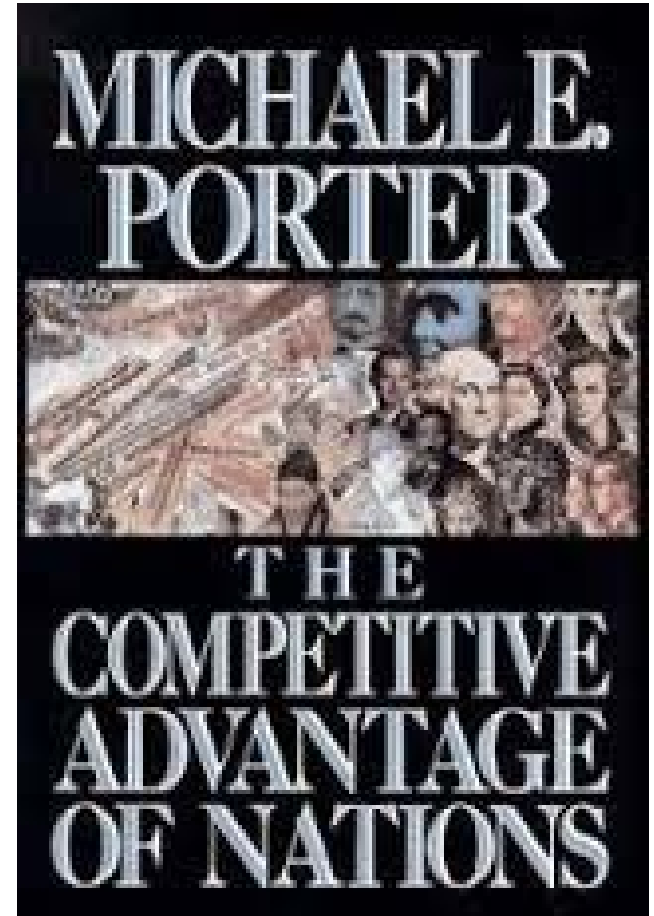
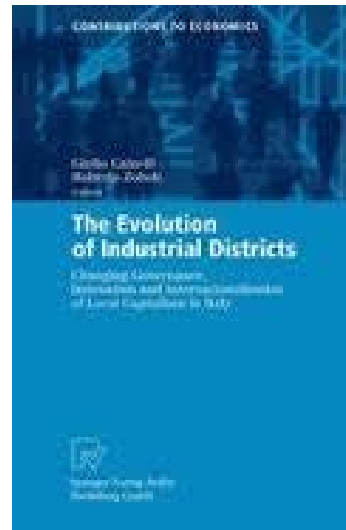
# Australia's Competitiveness Challenge 2016

- What will be Australia's **positioning** in the Asian/Oceanic and global economy in the future?
- In what **sectors and markets** will companies from Australia be able to successfully compete?
- What policies can help Australia build **sustainable competitive advantages** in specific areas?



- What role can **cluster-based economic development approaches** play in addressing these questions?

# Clusters: An Established Concept....



# ...with a Stable Set of Core Building Blocks ...

**Related Variety**

**Proximity**

**Critical  
Mass**

**Collaboration  
& Rivalry**

# ... in a Changing Economic Environment

Rising  
Knowledge-Intensity

Falling Transportation/  
Communication Costs

Lower Trade Barriers

**Agglomeration**

**Dispersion**

Accelerated  
Technological Change

Globalization of production sites

Globalization of markets

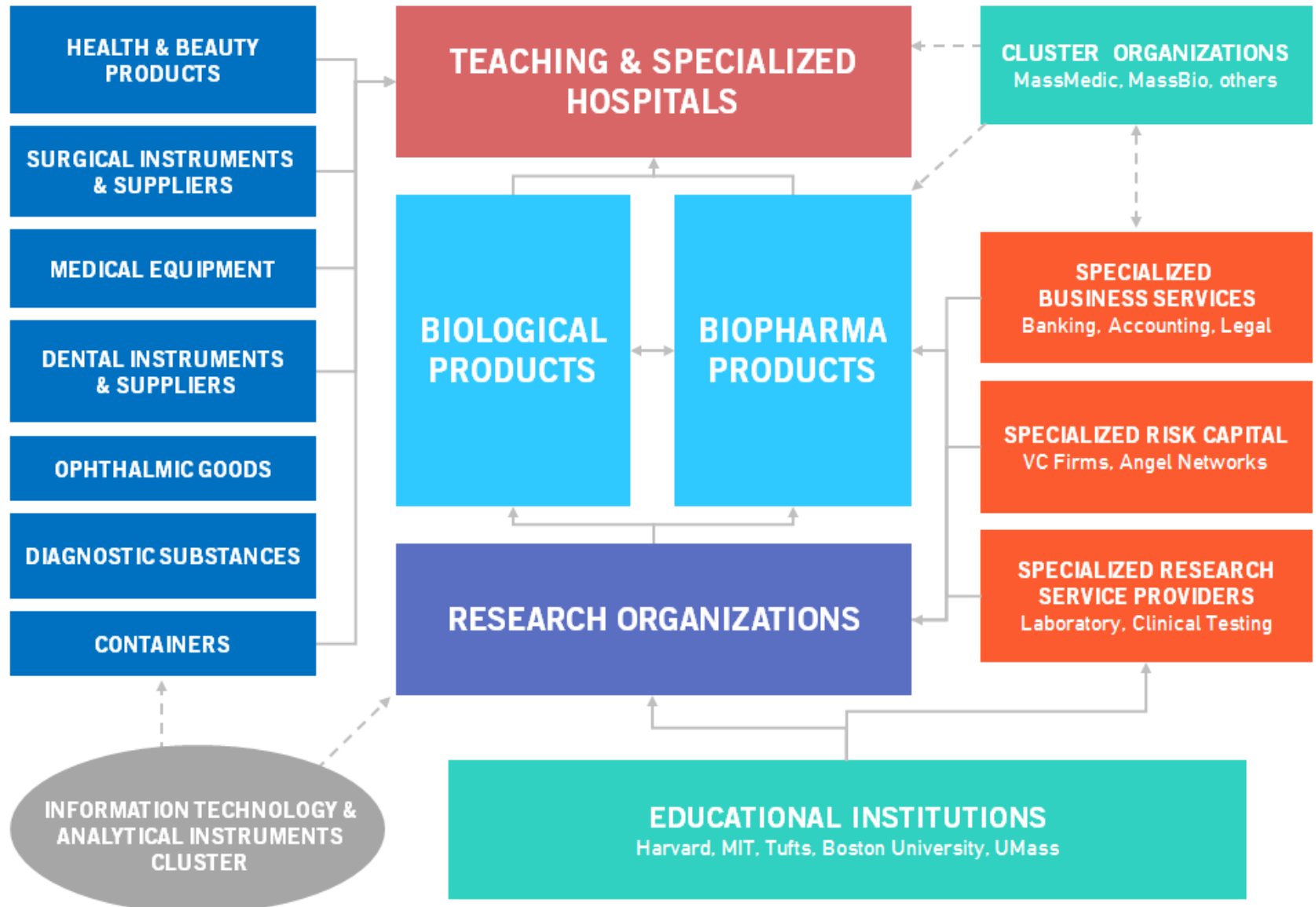
*Clusters are a critical facet  
of modern economies*

*Clusters are a key aspect of  
urbanization*

*Clusters are becoming more  
specialized*

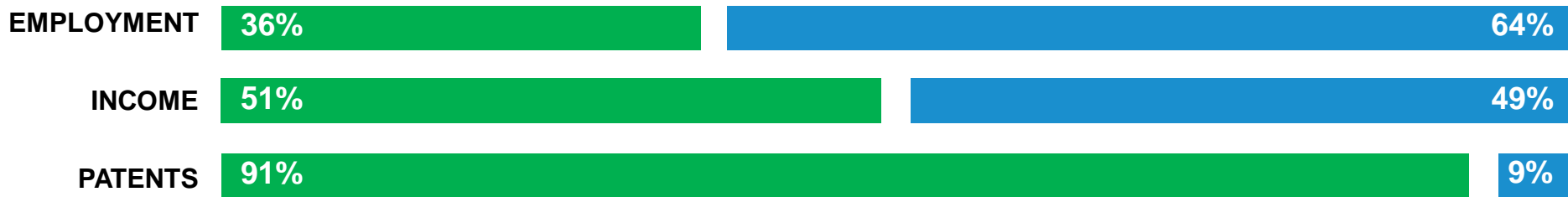
*Clusters are becoming more  
connected*

# The Boston Biopharmaceuticals Cluster



# Types of Industries and the Nature of Competition

## Traded vs. Local Share of the U.S. Economy



### Traded Industries

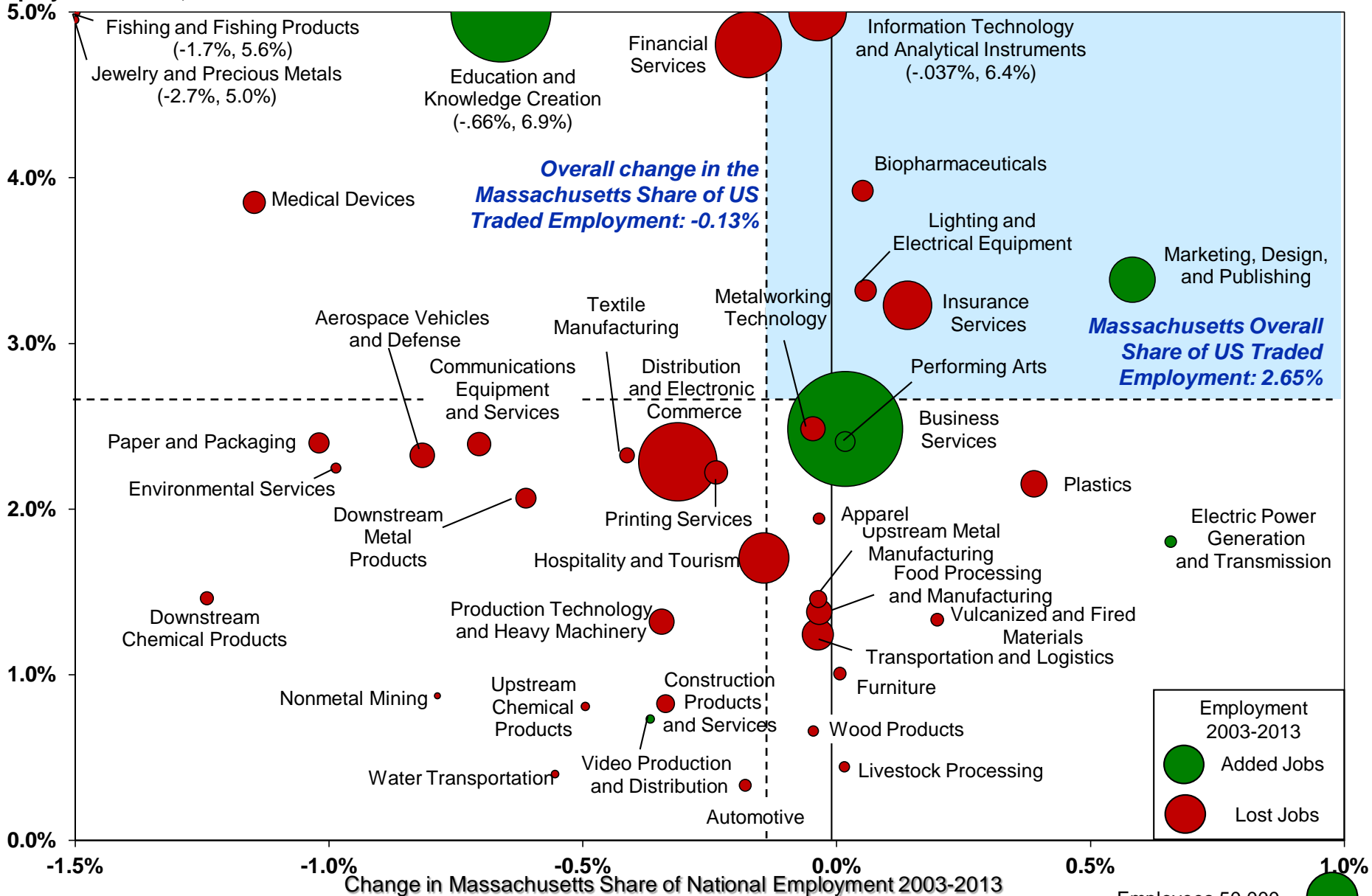
- ‘**Spiky**’ across space; 2/3s of all traded industry employment is in strong clusters
- Serve **national and global markets**
- Exposed to **competition** from other regions and nations
- Critical for **prosperity** through higher wages, productivity, and innovation; **growth potential** set by the global market

### Local Industries

- Present **everywhere** at similar levels
- Serve exclusively the **local market**
- **Little exposure** to cross-regional competition
- Important for **jobs**, but lower wages; **growth potential limited** by size of the local market

# Traded Cluster Composition of the Massachusetts Economy

Massachusetts National  
Employment Share, 2013



Note: Clusters with less than 1,000 employees not shown.

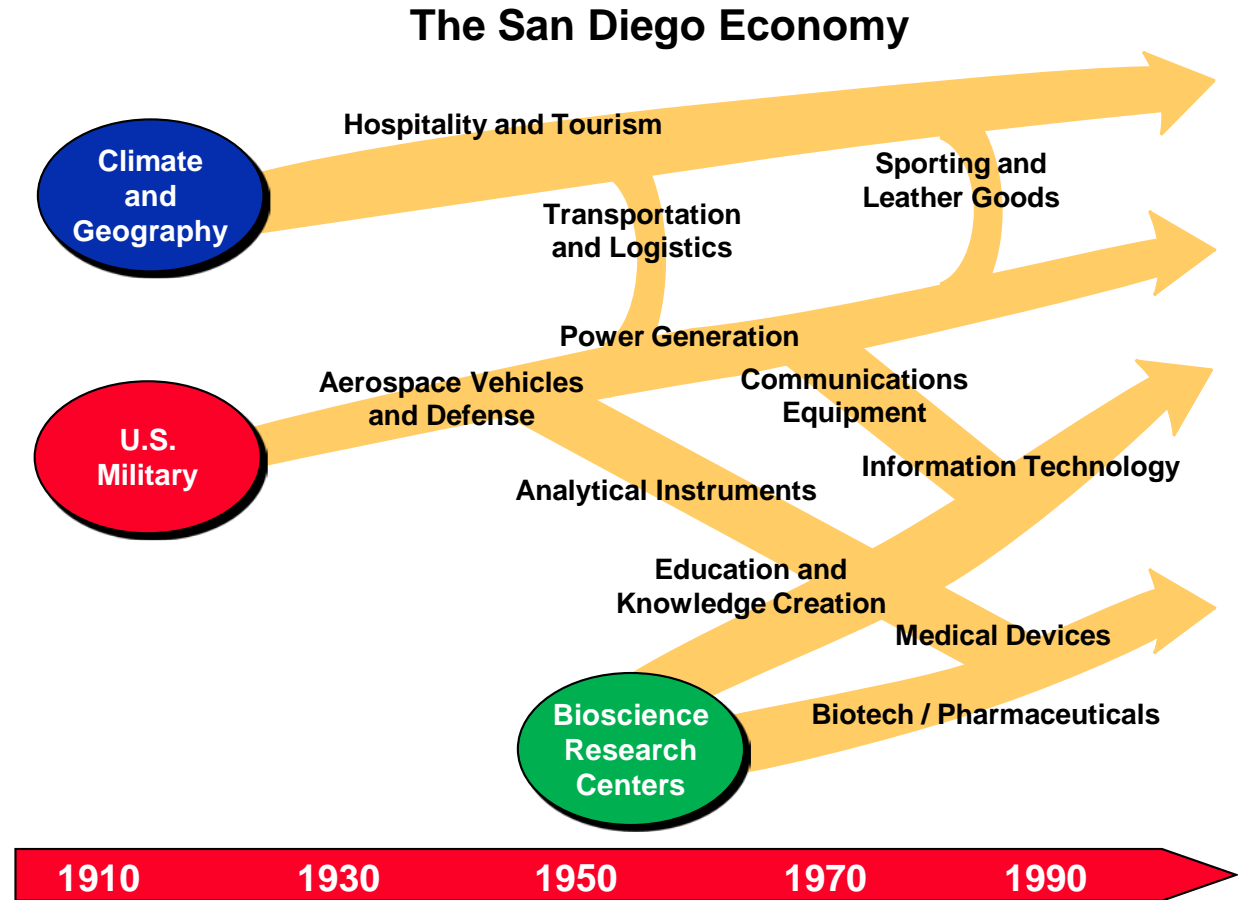
Source: Prof. Michael E. Porter, Harvard Business School; U.S. Cluster Mapping 2014 Benchmark Definitions (Delgado-Porter-Stern 2013), Richard Bryden, Project Director.





# Clusters Linkages and Regional Diversification

- Existing cluster portfolios have a significant impact on the **evolutionary path of regional economies** (Neffke et al, 2009; Boschma et al. 2011)
- Clusters provide a powerful analytical tool to understand **diversification** and the **emergence of new economic activities**



Source: Porter, Monitor Company, Council on Competitiveness (2003)

# Clusters and Economic Performance

## Presence of Strong Clusters



### Prosperity

- Wages
- Productivity
- Job growth
- Resilience
- Patenting



### Entrepreneurship

- New business formation
- Survival of new firms
- Job growth in new firms



### Structural Change

- Path of structural change(emergence of new clusters)

# Putting Clusters into Context

**Framework  
Conditions**

**Innovation  
Systems**

**(Creative)  
Skills**

**Clusters**

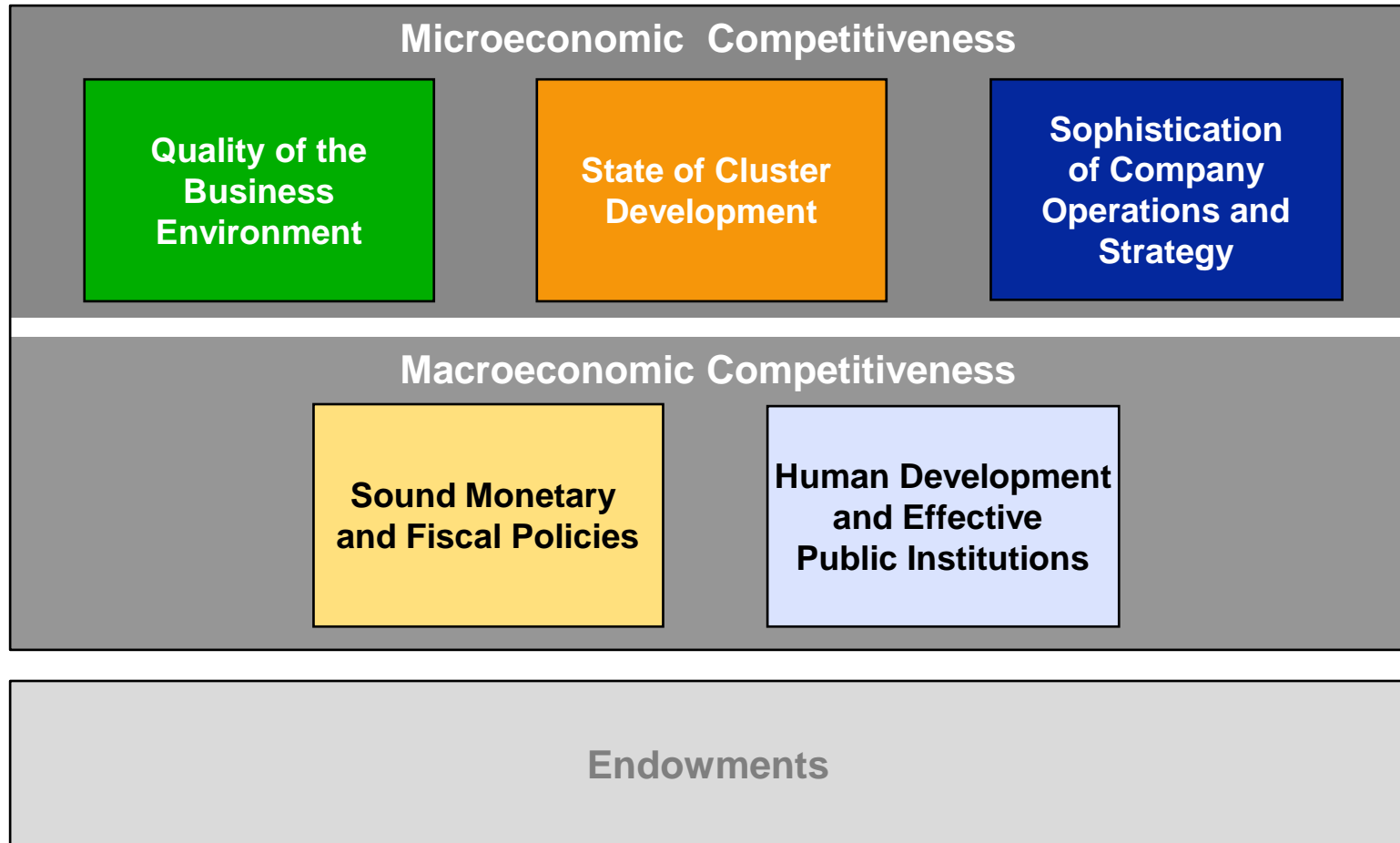
**Entrepreneurial  
Ecosystems**

**Social Capital**

**Complexity**

**Urbanization**

# A Comprehensive View at Competitiveness



# Microeconomic Drivers of Competitiveness

## Business Environment

- Skills, knowledge
- Infrastructure
- Efficient public services
- Access to capital
- Competitive markets
- Rules and regulations
- Demand conditions

## Cluster Presence

- Critical mass in specific groups of related and supporting industries
- Strengths of linkages and cluster dynamics

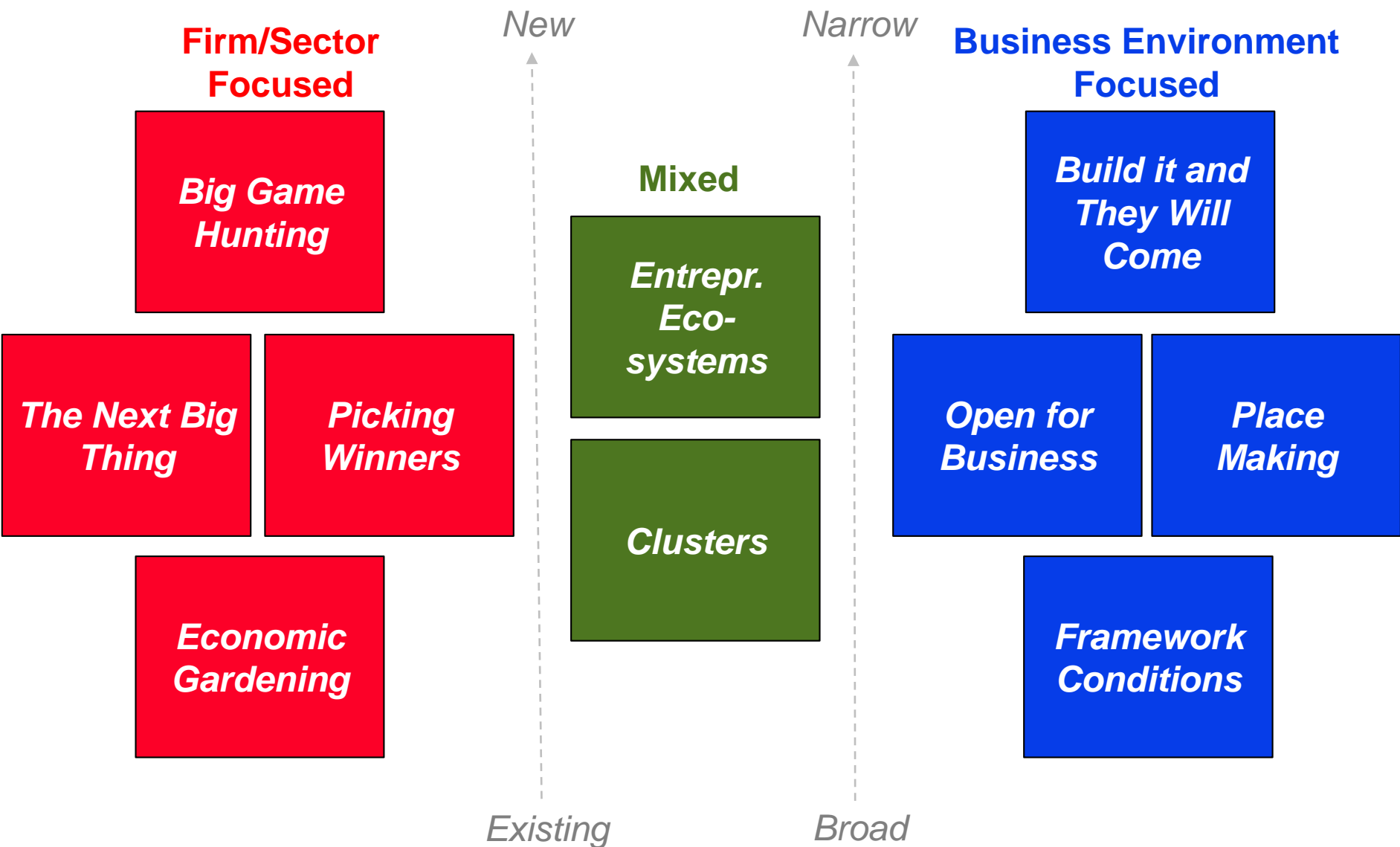
## Company Sophistication

- Quality of companies' operational practices
- Nature of companies' competitive advantages

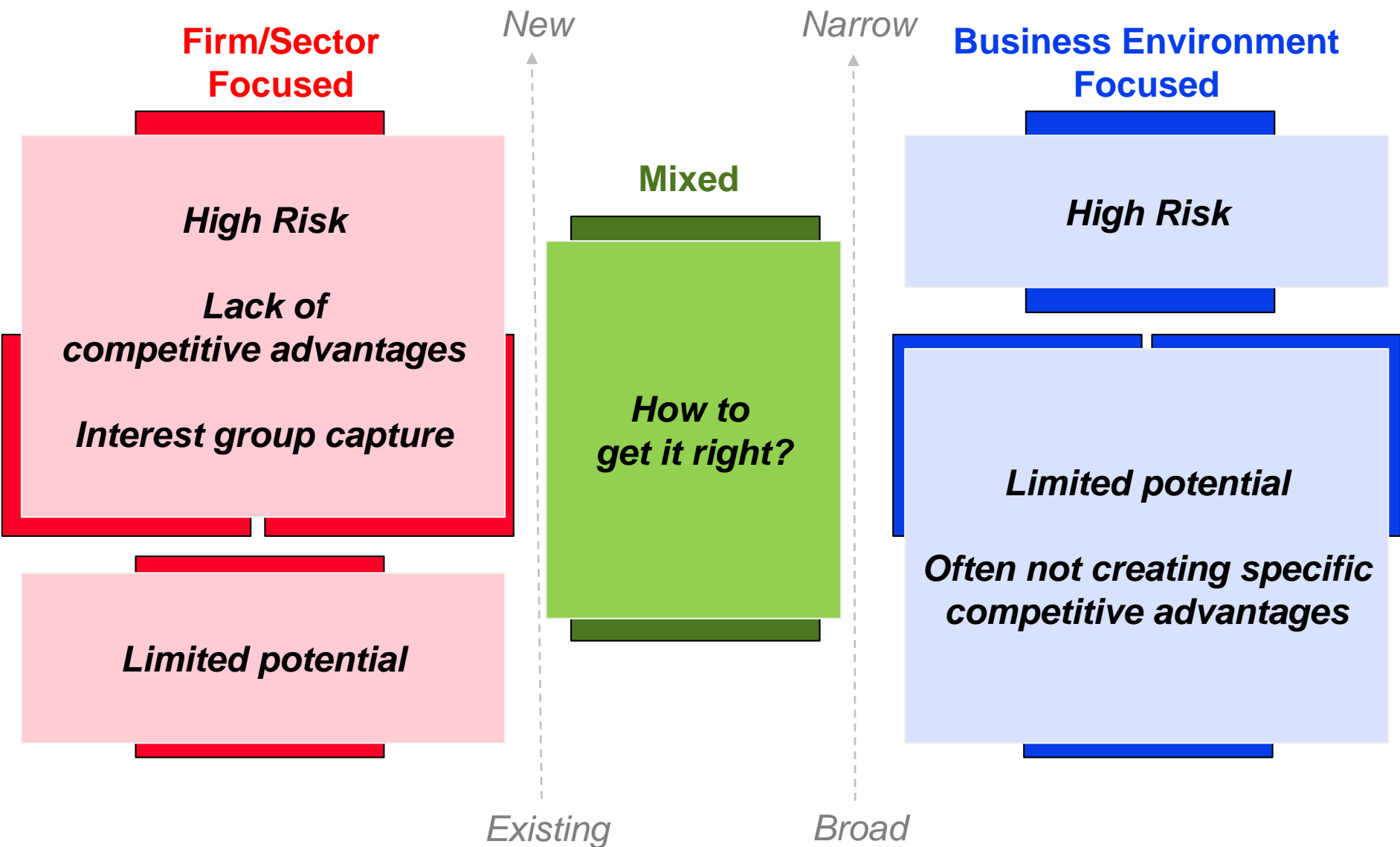
# Upgrading Competitiveness: Principles

- **There is no silver bullet**
- **Many things matter**
- **What matters most depends on what you already have**
- **Every location is different, but all adhere to the same economic principles and dynamics**
- **You can't change everything at once, even if all has to change eventually**
- **Change requires action by many**

# Economic Development: Prevailing Approaches

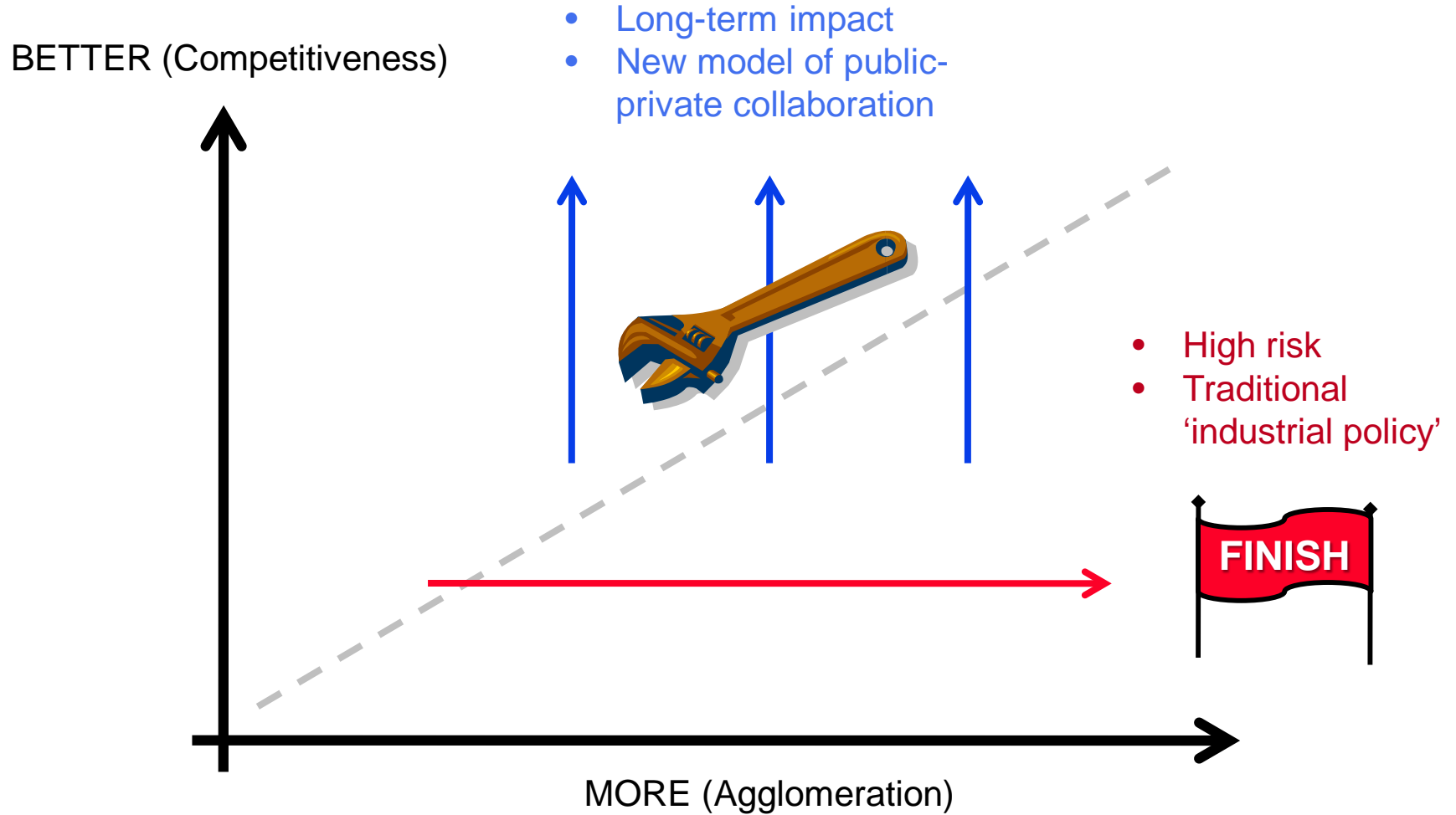


# Economic Development: Prevailing Approaches





# Two Opposing Approaches to Cluster Policy



# Types of Government Interventions in Clusters

- Direct intervention at the **firm level**
  - Attraction of firms
  - Subsidies, directed credit

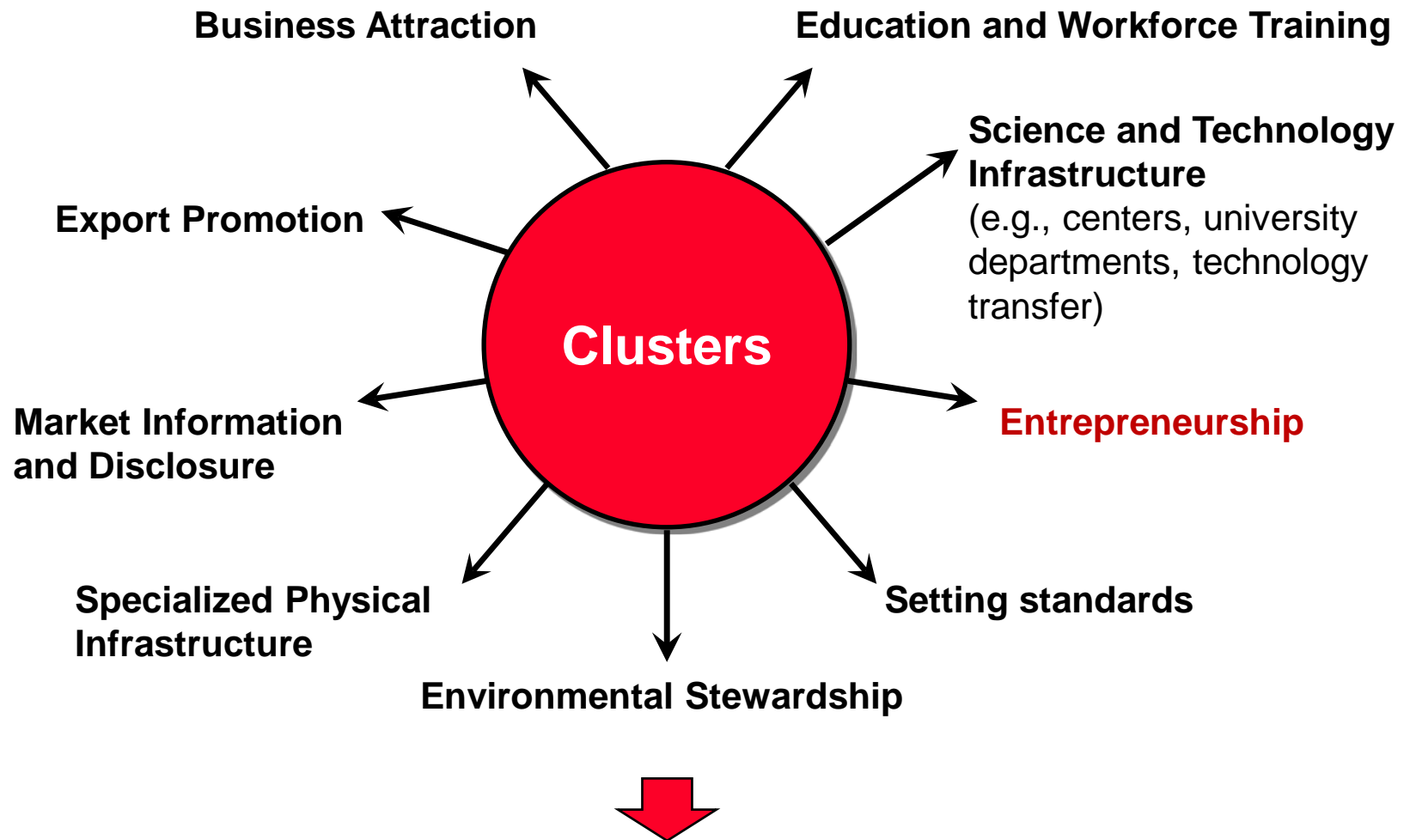
- Investments in the **cluster-specific business environment**
  - Specific to the cluster
  - Benefiting the cluster but part of a general upgrading strategy



- Intervention into the **market**
  - Provision of monopoly rights; Entry/trade barriers
  - Demand subsidies

- **Enable collaboration** with and within the cluster
  - Support for cluster initiatives
  - Active engagement with the cluster in setting and implementing policies

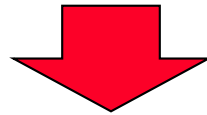
# Target Public Policy at Clusters



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

# Cluster-Based Entrepreneurship Policy

- A growing number of regions **support entrepreneurship** through incubators, risk capital, and other mechanisms
- Start-ups **share many needs** that such efforts can help address
- Linking them to clusters and cluster organizations can significantly **enhance their economic impact**



- Entrepreneurship is much more likely to spurn the emergence of **high-growth companies** if it occurs in clusters
- Clusters reflect location-specific advantages that enhance new firms' **likelihood of entry, survival, and growth** in related fields
- Cluster organization can enable **easier access** to the many types of industry-specific partners and assets that new companies need

# 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**

- **Upgrading of company operations and strategies across a group of companies**

- **Upgrading of cluster-specific business environment conditions**

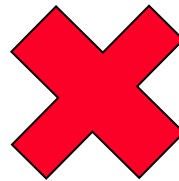
- **Strengthening of networks to enhance spill-overs and other economic benefits of clusters**

# Clusters, Cluster Initiatives, and Performance

**CLUSTER  
PRESENCE**

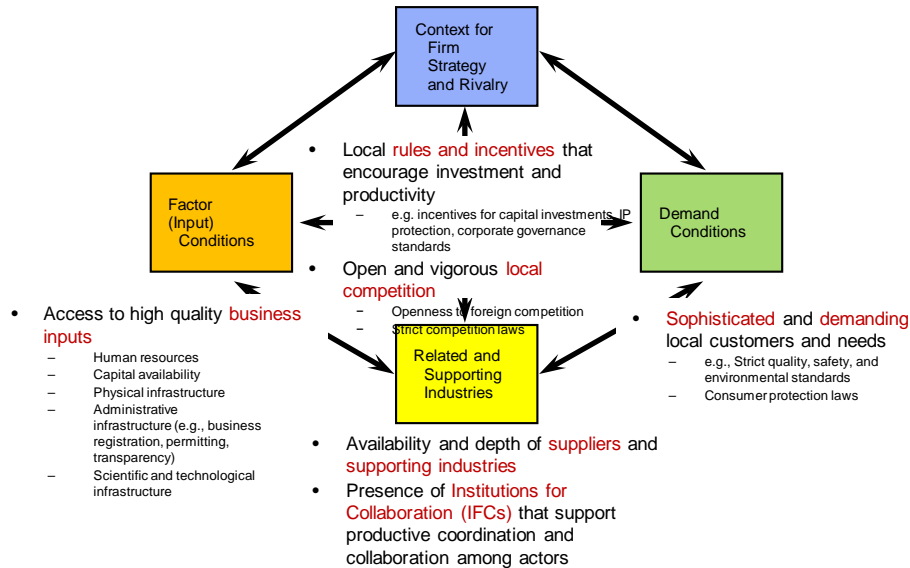
**CLUSTER  
EFFORT**

**ECONOMIC  
PERFORMANCE**

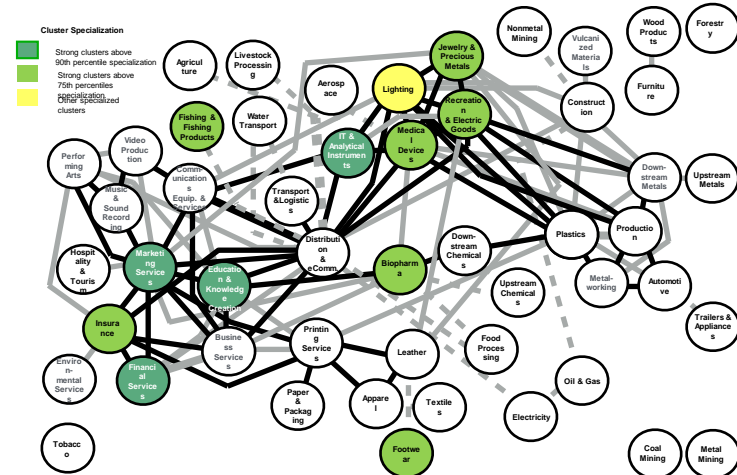


# Supporting Emerging Clusters: Identification

## Business Environment Strengths



## Existing Cluster Portfolio



- External intelligence (technology, market needs) is critical
- Choice under uncertainty

## Assessment criteria

- Existing bridgeheads, market opportunity, leadership

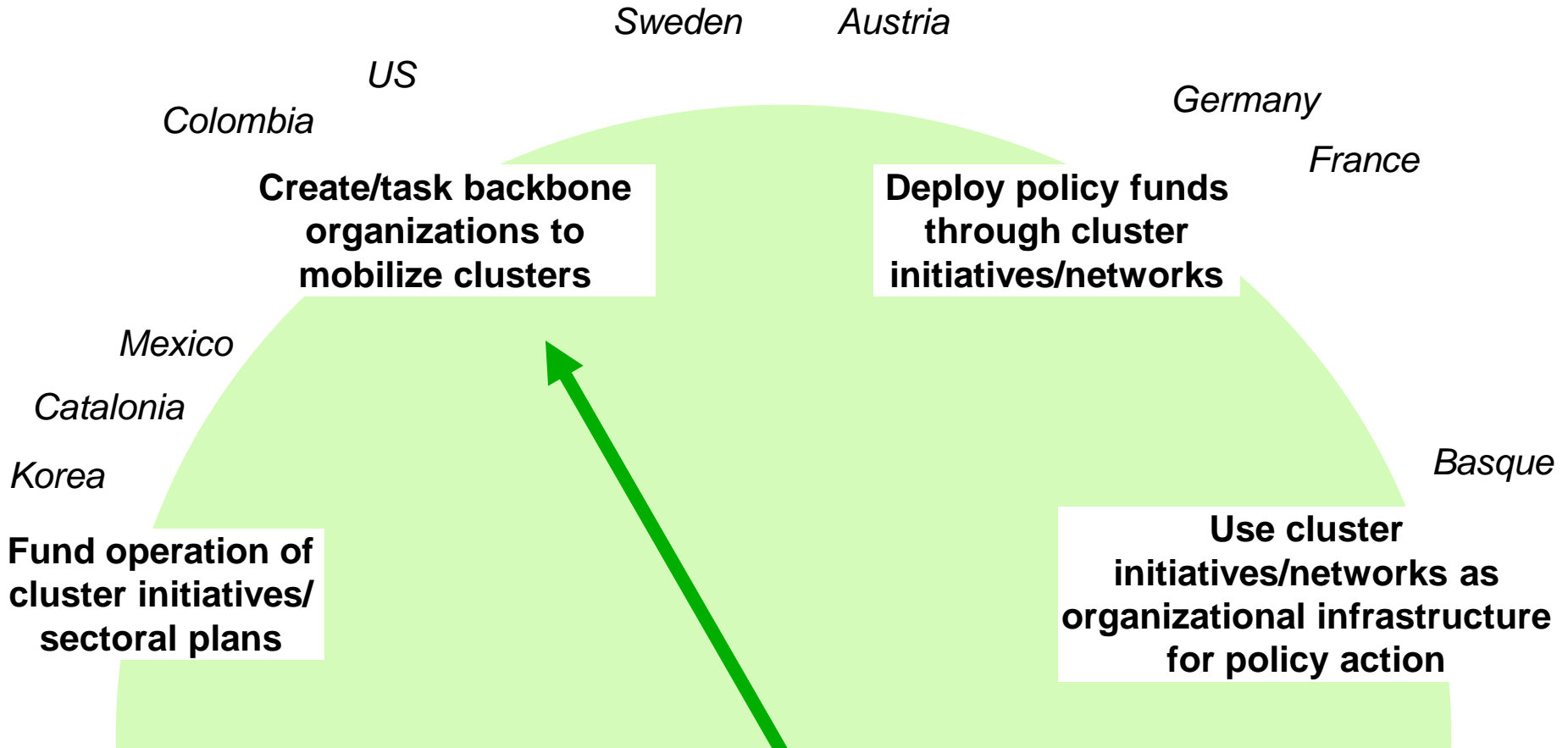


# Current Status of Cluster Policies and Programs

- Many countries and regions, especially within the OECD, have **cluster-related policy programs**
- Spending on cluster-related programs is **meaningful, but only a modest percentage of total spending** per policy area
- Funding is tilted towards **existing strengths**, but many efforts exist without established critical mass
- Cluster programs are often run by **a range of ministries or agencies**; there is limited coordination between programs
- Funding for **strengthening collaboration** is always a part; other elements differ significantly
- **Design principles differ widely** across many dimensions

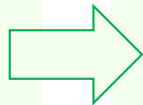


# Modes of Cluster Policy

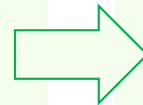


## Policy for Clusters

**Sporadic:**  
Create stronger linkages



**Tactical:**  
Deliver programs more effectively

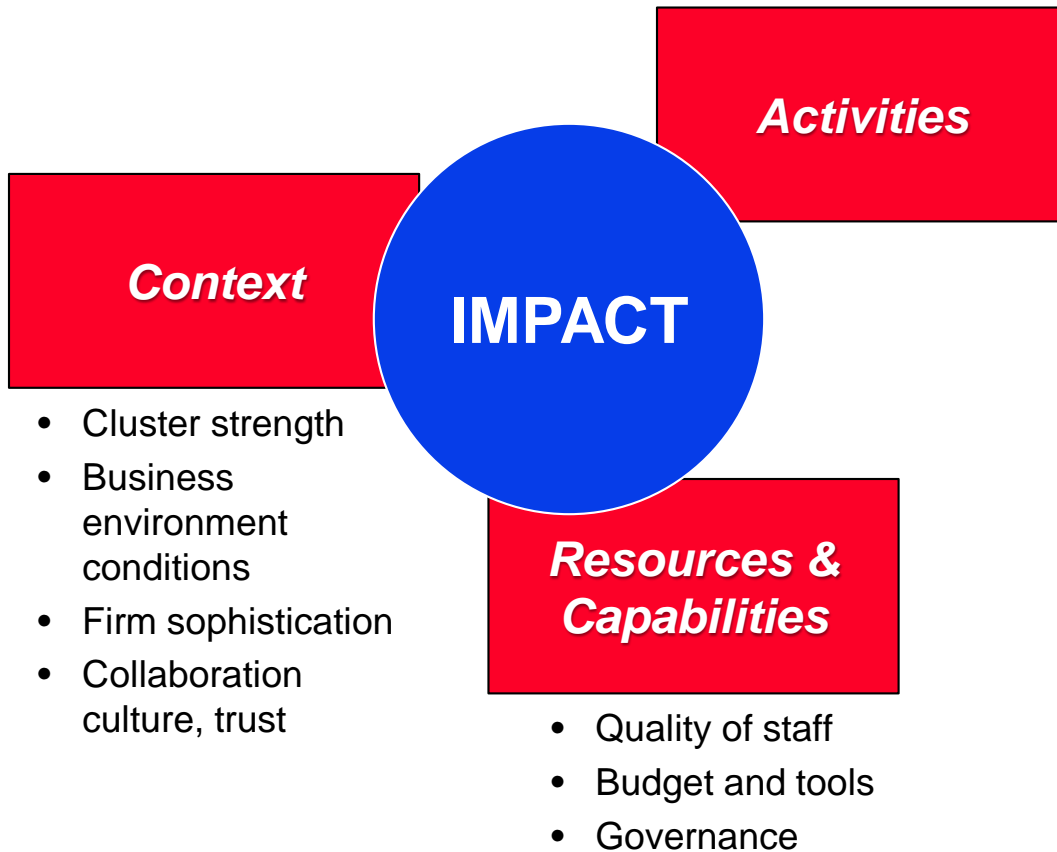


**Strategic:**  
Choose & design better policies

## Cluster-based Policy

# What Drives the Success of Cluster Initiatives?

- Activities aligned with the needs of firms
- Activities aligned with actions of partners
- Effectiveness of implementation



## Narrow model

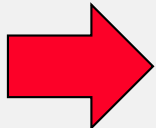
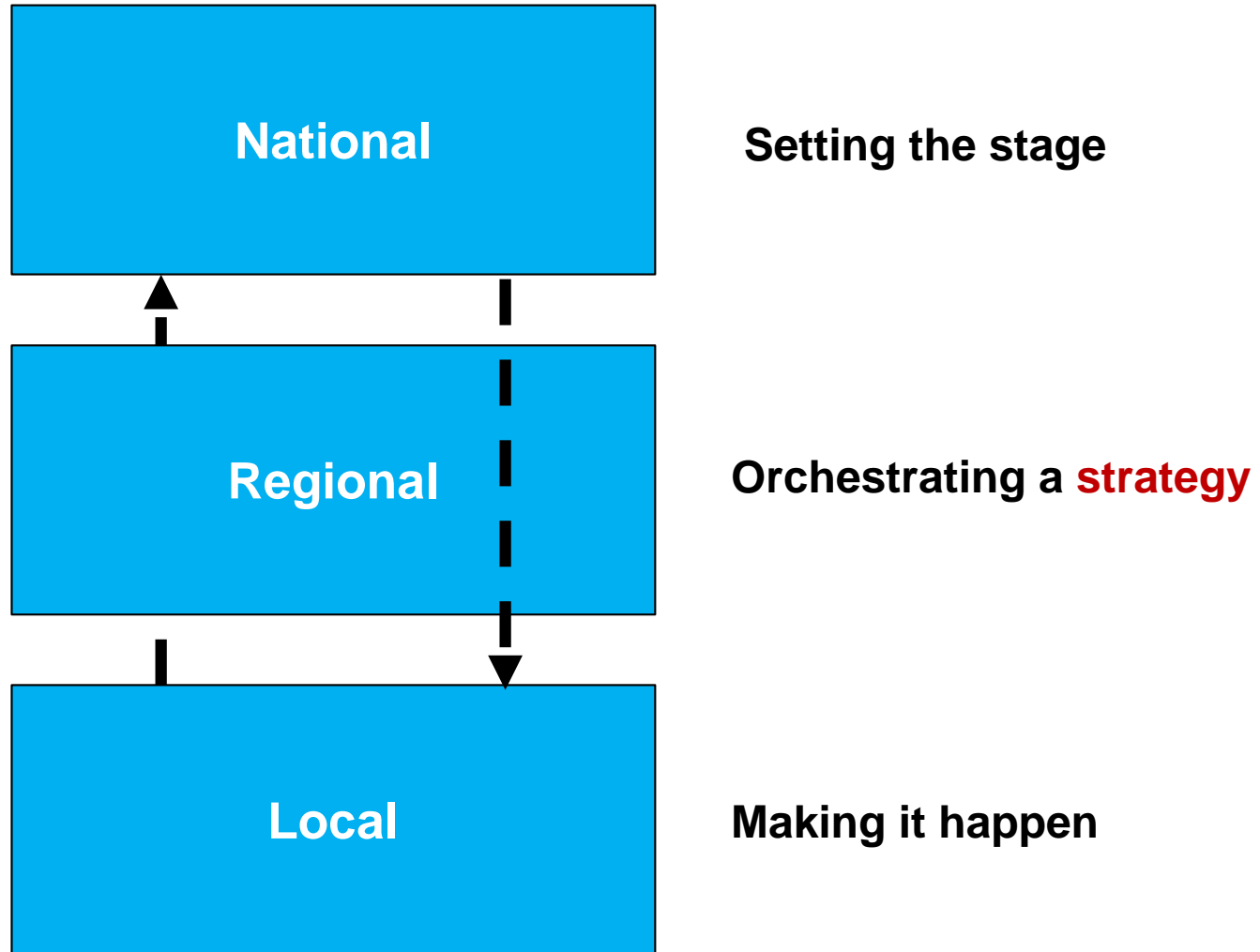
- Focus on networking
- Limited resources
- Limited impact



## Systemic model

- Cluster initiatives as key channel for delivering policy action
- Moderate operational resources, strong influence on other investment streams
- High impact possible

# The Role of Government at Different Levels



- Success is the result of **effective collaboration across different levels of government**, building on their respective roles and capabilities

# Towards an Economic Strategy for a Location

## Outcome Ambitions

### Positioning

- The specific value the location provides as a place to do business in the national and global economy

### Business Environment

- Activities to upgrade cross-cutting business environment conditions that are most critical for the location's value proposition

### Cluster Portfolio

- Activities focused on existing and emerging clusters that draw most benefits from and emphasize the location's value proposition

## Implementation Architecture

- Responsibilities, resources, capabilities, and coordination

# Developing a Cluster-Based Economic Strategy



## Diagnostics

- What is the profile of our performance?
- What business environment conditions do we offer?
- What clusters do we have? How are they positioned?



## Choice

- What business environment conditions do we want to offer?
- Which type of companies and skills do we aim to attract with these qualities?



## Action Plan

- What are the priorities for action?
- Who is going to do what?
- How do we deploy our resources?
- What channels and platforms can we use?



# Making it Happen: The Need for New Partnerships

## Old Model

- **Government** drives economic development through policy decisions and incentives



## New Model

- Economic development is a **collaborative process** involving government at multiple levels, companies, teaching and research institutions, and private sector organizations

- **Cluster organizations are effective tools to organize public-private dialogue**

# Implications for Australia

- Australia has a **strong economy**, rooted in **robust underlying competitiveness**
- The combination of strong demand for Australian natural resources and a policy focus on cross-cutting framework conditions, especially the openness of markets, has left the country **with few competitive advantages and clusters** outside a narrow range of areas
- The country would benefit from shifting towards the exploration and systematic development of **positions in a broader range of fields**
- A **cluster-based approach** is a powerful way for Australia to identify and implement such a strategy, based on a new model of public-private collaboration