



# Conference highlights

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*Ottawa, 7th TCI Conference*

*October 1, 2004*

# Outline

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- TCI objectives
- Next steps after Gothenburg
- What have we achieved during this conference
  - ▶ Issues solved
  - ▶ Issues still subject to debate
  - ▶ New themes that emerged
  - ▶ Areas where we have left ourselves be side-tracked
- Themes for future research
- TCI's potential contribution
- Conclusions

# TCl objectives

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The objectives of The Competitiveness Institute are:

- To improve the methodologies for enhancing the competitiveness of clusters
- To promote cluster-based competitiveness and development strategies
- To raise the professional level of cluster development practitioners and policy makers

# Achievements from Gothenburg

## New themes – New focus

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- Greater attention was paid to innovation as a factor of competitiveness
- More reference to HR development, skill training
  - ▶ Role of education system
  - ▶ Role of universities
- Renewed focus on « local » (regionally based) clusters (as opposed to the development of virtual clusters)
- Introduction of the time dimension:
  - ▶ Companies have short term focus, whereas governments have long term focus?
- Cluster policies as a new form of general economic policy:
  - ▶ Cluster policies as integrator of traditional economic policy?

# 'Next steps' identified in Gothenburg

## Future agenda

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- Apply cluster concept to ourselves and learn from failure ... (M. Enright)
- Define methods to evaluate clusters and clustering processes :
  - ▶ New models / methods for broader performance analysis
- In the triple helix model, who should lead, under what condition or circumstance?
- Organisation of cluster governance
  - ▶ Role of lead firms?



# What have we achieved here :

## Ottawa viewed from Gothenburg

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- ✘ Apply cluster concept to ourselves and learn from failure ... (M. Enright)
- ✘ Evaluating clusters and clustering processes :
  - ▶ New models / methods for broader performance analysis
- ✓ In the triple helix model, who should lead under what condition or circumstance?
- ? Organisation of cluster governance
  - ▶ Role of lead firms?



# Other achievements

## Lessons learned, progress made (1)

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- Harmonised vocabulary
  - ▶ Speak the same language
    - *Example: PPP, regional innovation systems, regional innovation networks, clusters, centres of excellence, innovative clusters, national innovation systems*
  
- A lot more focus on cultural features
  - ▶ Toolkit of « how to » develop clusters becomes more sophisticated
  - ▶ Takes into account people, cultures, different stages in the process
    - *T. Chamberlain, Whitebook, ....*
  
- A lot more on the links between universities and companies
  - ▶ Triple helix concept is spreading

# Other achievements

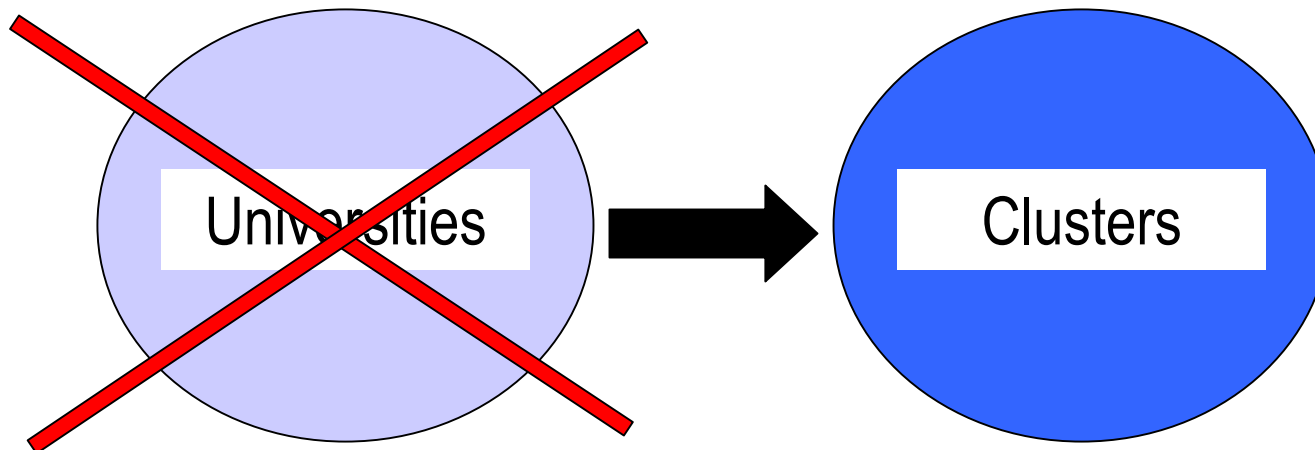
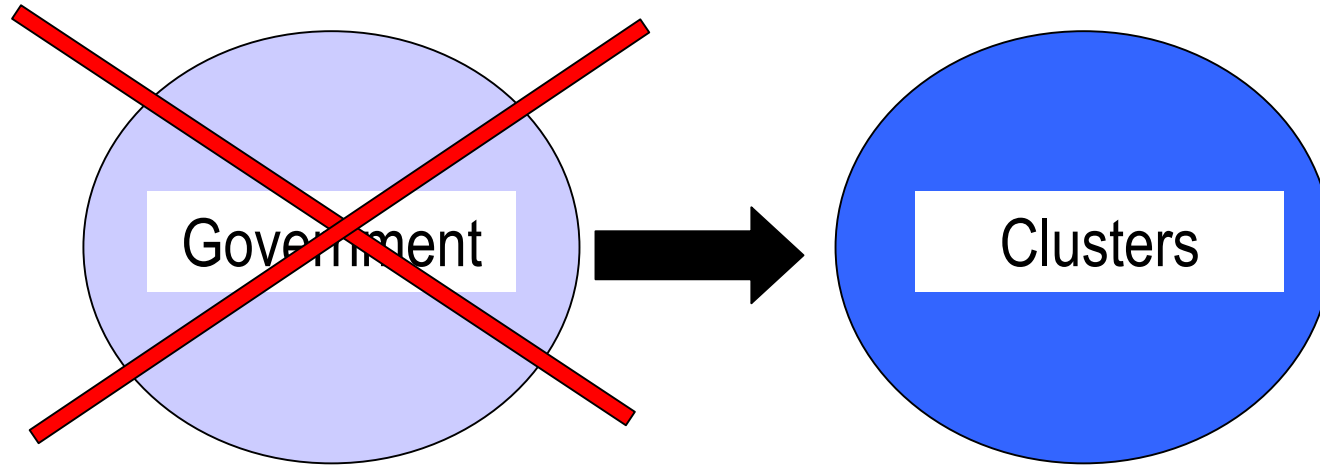
## Lessons learned, progress made (2)

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- Many practical examples of how institutions/organisations that are designed to support clusters are **organised** and **linked together**
  - ▶ Responsibilities
  - ▶ Missions
- Consensus on level at which cluster policies ought to be implemented
- Interesting suggestions for evaluation purposes:
  - ▶ Networking quality measured by demands put on government
  - ▶ Measured by the focus of attention of companies in the cluster:
    - *Cost cutting?*
    - *Value creation*
  - ▶ Assess the success of people in the organisations:
    - *Give visibility to region*
    - *Increase leverage vs parent company*
    - *Career path... Quality of demands put on policy makers/public institutions*

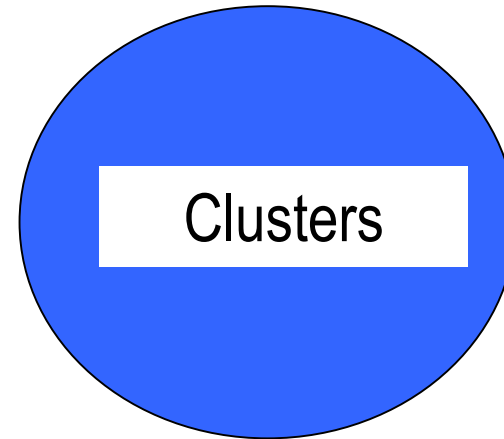
# Our thinking has evolved...

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# Our thinking has evolved...

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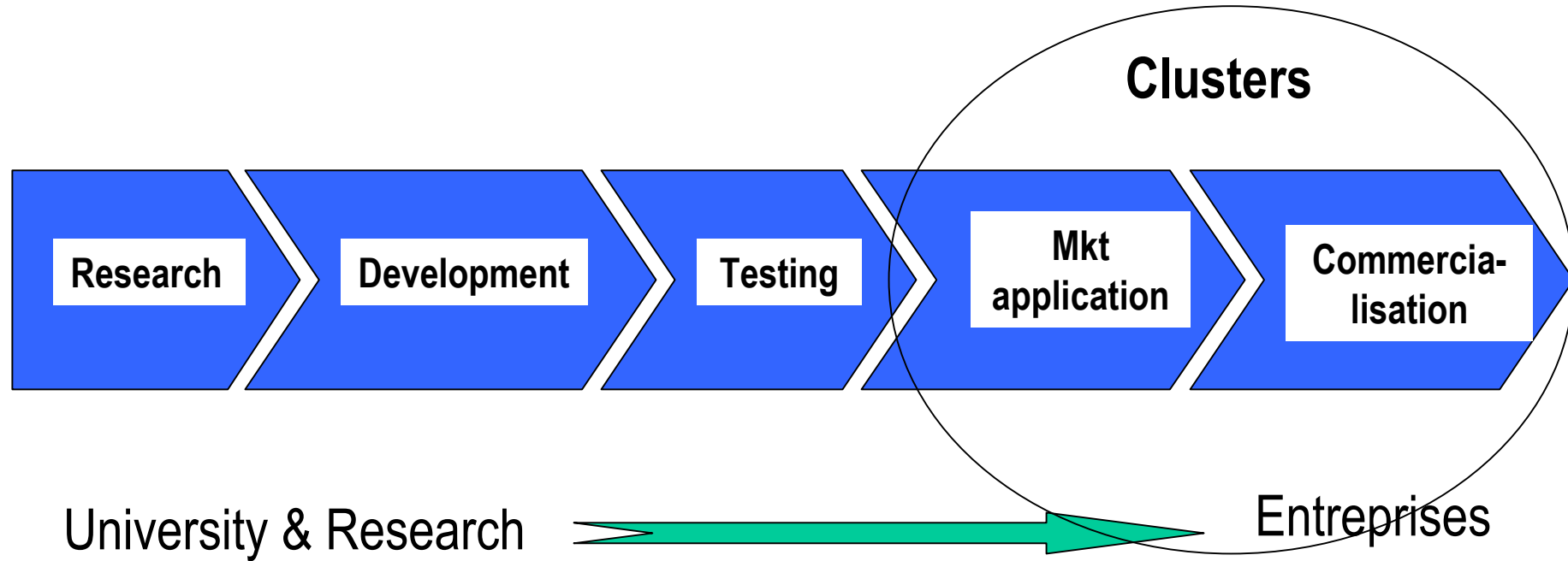


We have become more modest and pragmatic....

# Our thinking has evolved....

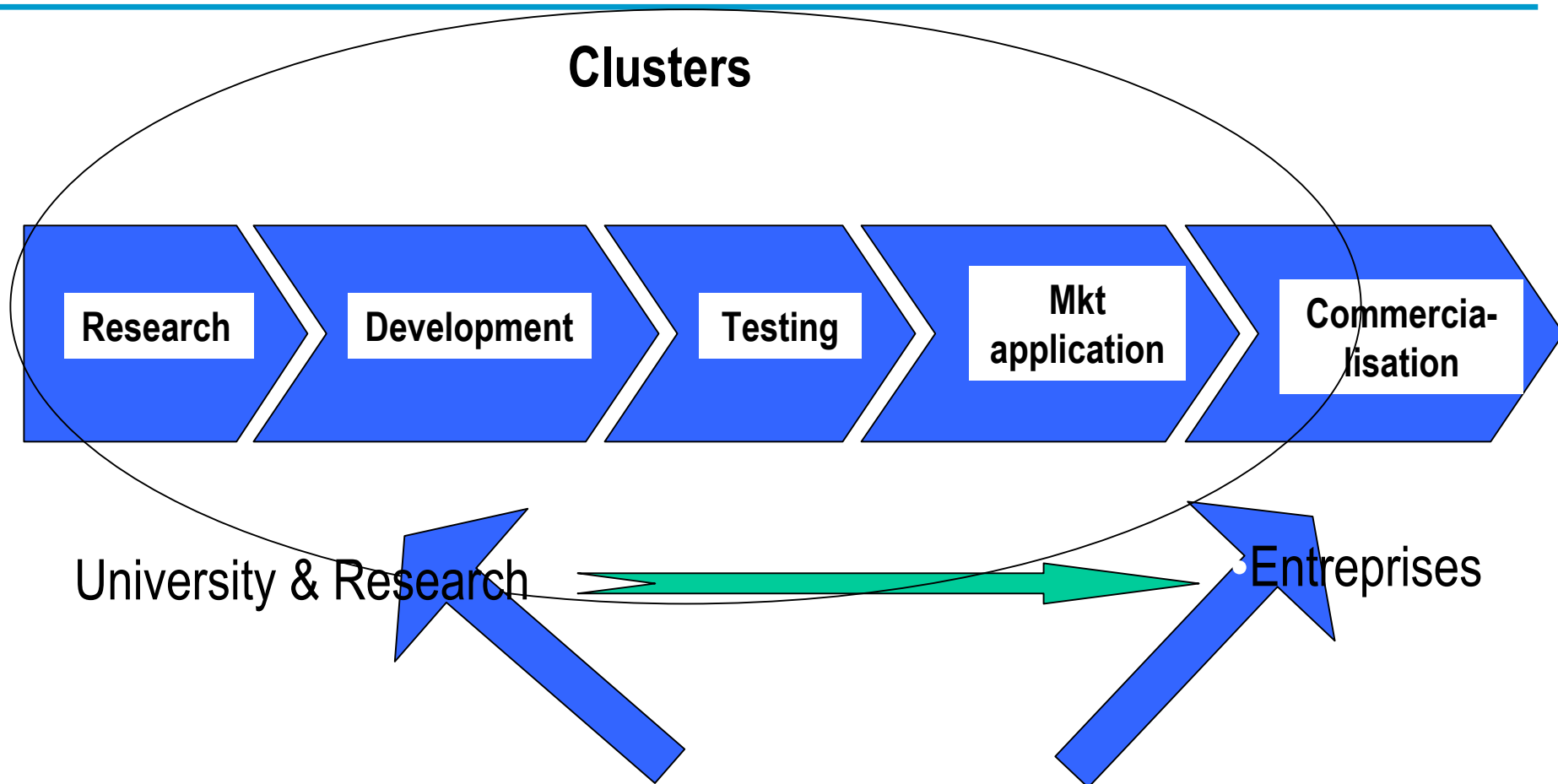
## The focus of interest has changed

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# Our thinking has evolved....

## The focus of interest has changed



# Eight areas of consensus

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1. Clustering is ever more important for SMEs
2. Clusters are not just about transferring knowledge
3. Cluster policies are a good framework to bring about change
4. Universities don't make clusters but can be a catalyst
5. Clusters and innovation systems are complementary
6. Cluster policies are best organised at local level
7. The focus of attention has to be context specific
8. Agreement on the success factors of cluster initiatives



# Area of consensus #1

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- Negative impact of the changing competitive environment on the internal capabilities of firms make clustering more important:
  - ▶ Innovation is a key to success / survival, yet:
  - ▶ Investments in strategic assets are more difficult :
    - *Expectation of quick return on R&D limits scope of R&D*
    - *Use of advanced technology less efficient in a world of customised products, not justified by small volumes*
    - *Use of advanced manufacturing practices less effective for same reasons*
    - *Knowledge is embodied in personnel yet emphasis on labour flexibility is in contraction with retainment & development of knowledge within firms*
  - ▶ The externalities of clustering can reduce some of these drawbacks...



# Area of consensus #2

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- Clusters are not just about **transferring** knowledge, but are about:
  - ▶ **Competition**
  - ▶ **Creating** knowledge
  - ▶ Transferring **relevant** knowledge
  - ▶ **People**
    - *Within cluster*
    - *Outside cluster (markets...)*

# Area of consensus #3

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- Clusters are a good framework for policy makers to bring about change
  - ▶ So are innovation policies
  
- Helps to move away from the linear model:
  - *Forges public private partnerships around a concept*
  - *Process is +/- defined*
  - *The concept is a good tool to bring people around the table and get communication started*

# Area of consensus #4

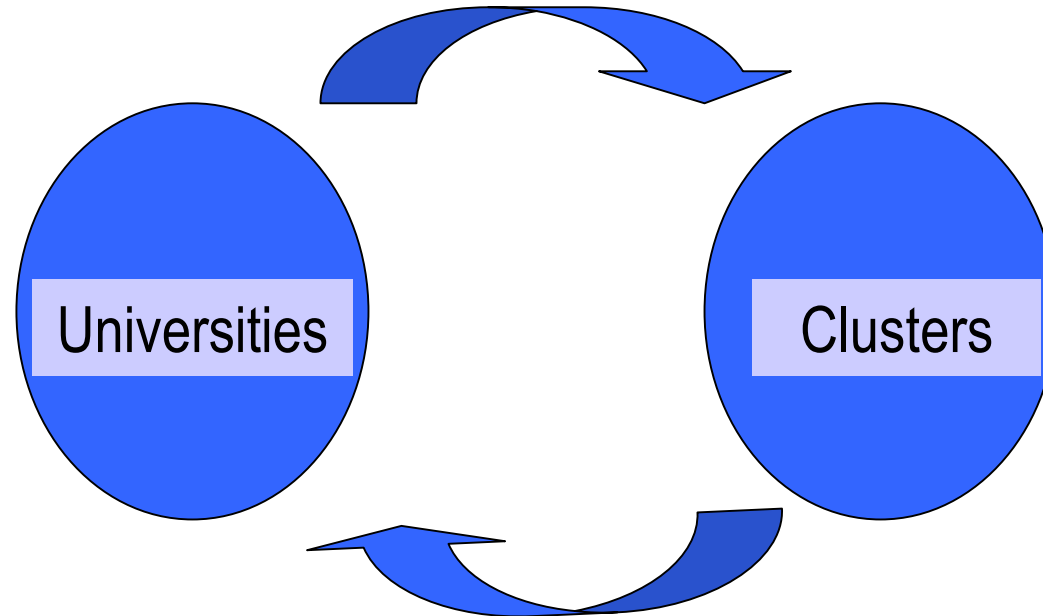
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- Universities don't make clusters; it takes entrepreneurship to make clusters
- Universities are a catalyst, not in the driver seat

# Universities and clusters mutually support each other

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Silicon Valley, Cambridge



Austin, Aveiro

# Area of consensus #5

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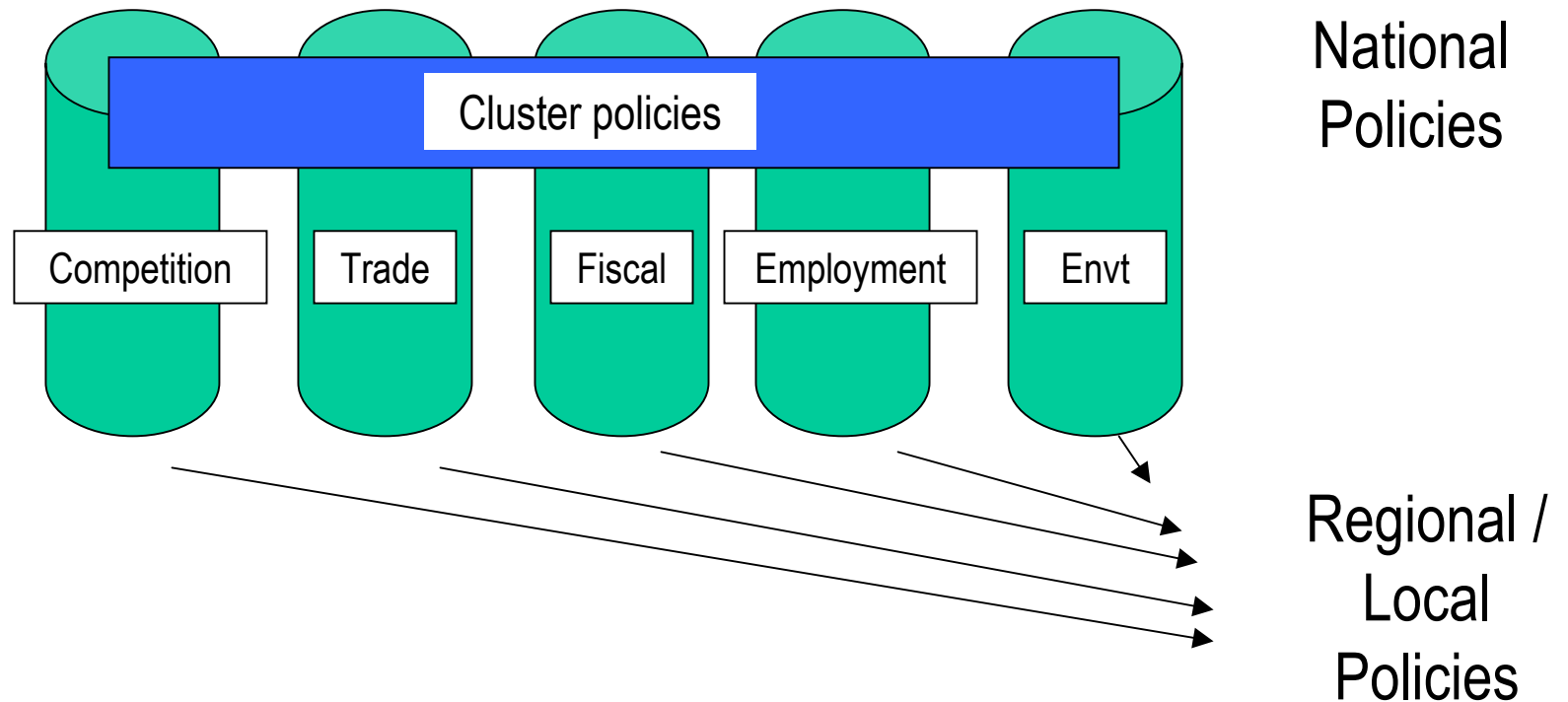
- Information systems and clusters are complementary
  - ▶ Innovation systems and clusters are nested concepts
  - ▶ Innovation systems help foster the CREATION, DIFFUSION and TARGETING of knowledge
  - ▶ Innovation systems need clusters, and vice versa
    - *Innovation systems can help revitalise clusters, help them to regenerate, become more innovative (second life)*
    - *Innovation systems can outgrow the clusters so much that there is no market for the results of research*



BIPE

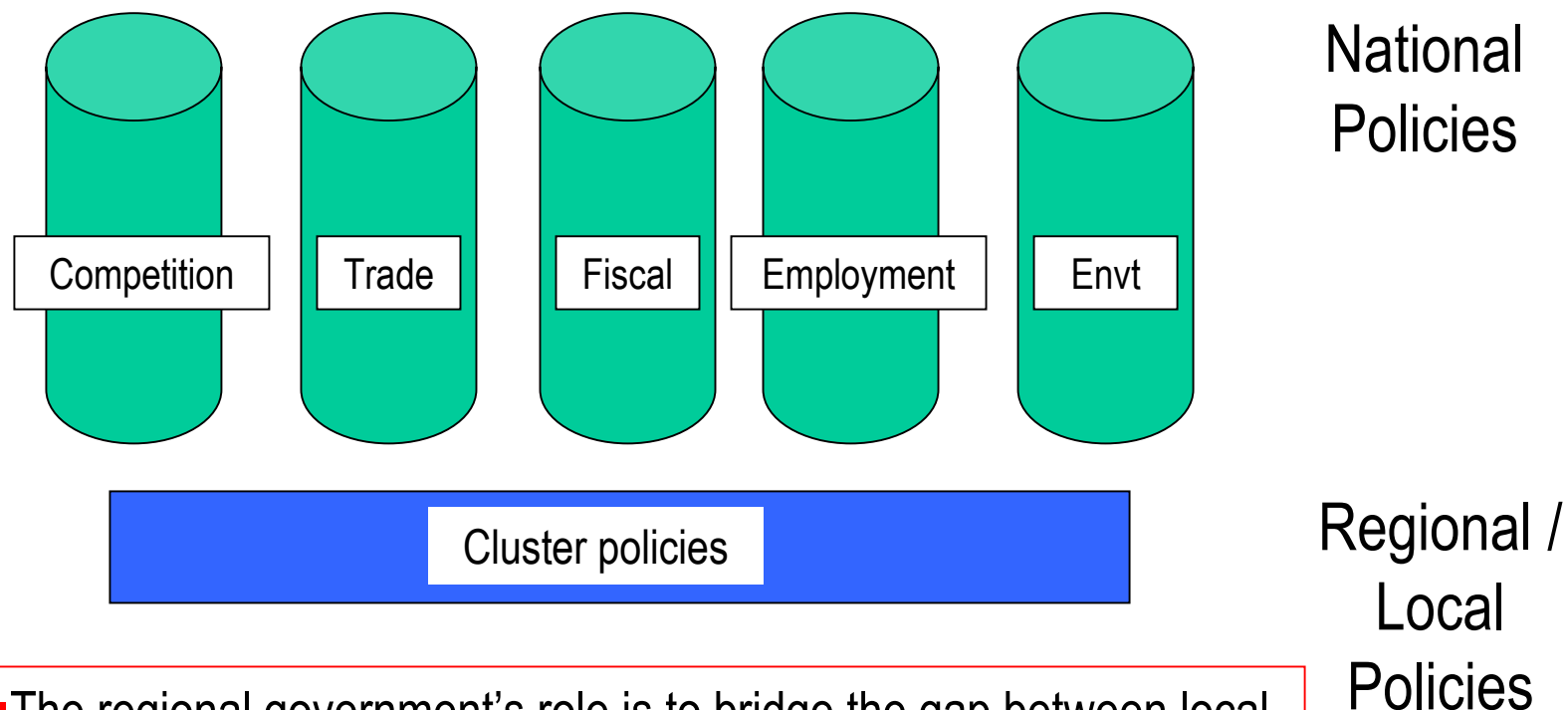
# Area of consensus #6

## Cluster policies as « integrator » of national policies?



# Area of consensus #6

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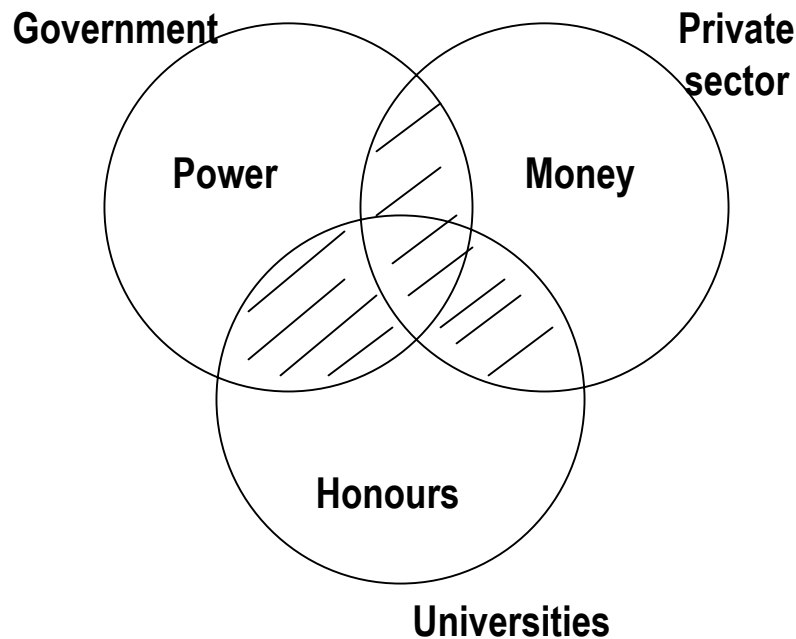


- The regional government's role is to bridge the gap between local companies' problems and needs and national policies
- National government's role (in S&T) is to bridge the gap between technological push and demand pull

# Area of consensus #7

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- The problems of developing countries are different from those of industrialised economies
- Building social capital is the first priority



# Area of consensus #8

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## ■ Success factors of cluster initiatives:

- ▶ 1. Don't overpromise, manage expectations
- ▶ 2. Create urgency, threat
  - *More of a driver than 'opportunities'*
- ▶ 3. Ensure credibility, legitimacy
  - *Impacts choice of 'leading actors'*
- ▶ 4. Carefully construct leadership group
  - *Should offer broad support*
- ▶ 5. Understand « ripple effect » / negative reactions from other regions
- ▶ 6. Overcome ancient rivalries
- ▶ 7. Have funding structure
  - *For implementation*

# Area of consensus #9

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- Crisis helps

# We have been usefully reminded of a number of things...

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- Innovation is not just about new technology
- Clustering is not about cooperation, but about competition
- The objective of clustering is not just competitiveness, but to meet client expectations (A. Potorowski)
  - ▶ What's the market for squared-wheeled bicycles?
- Clusters are also about creating sophisticated customers

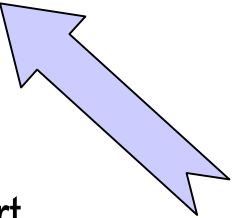
# Still un-resolved issues

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- How to improve or build social capital ?
- How to avoid picking winners ?
- Methodologies to assess and evaluate cluster performance :
  - ▶ Three domains for evaluation:
    - *Cluster*
    - *The cluster initiative*
    - *The business environment*
  - ▶ Measure effectiveness of clustering compared to absence of clustering
    - *Is the objective of clustering just to feel good about oneself ?*
  - ▶ What about measuring the externalities of clusters?
- Adapt to local conditions: yes but HOW ?

# What we seem to have forgotten along the way...

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- How to get companies' (and society) buy-in...
  - Clustering is not just about competitiveness, but about **MARKETS**
    - ▶ Clusters
    - ▶ → Innovative clusters
    - ▶ → How to foster / support innovation
    - ▶ → How to organise research support
  - The actors in a cluster can suffer from collective myopia...
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# Supporting the development of clusters is like raising children

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- You're never sure that you're doing it right
- You always think you're not doing enough (guilt....)
- You never know when you're done
- You do it all for their own good....
- Yet often they don't seem to realise or accept it!
  
- Do we create crises to convince them that they need us ?



# Companies can easily feel left out....

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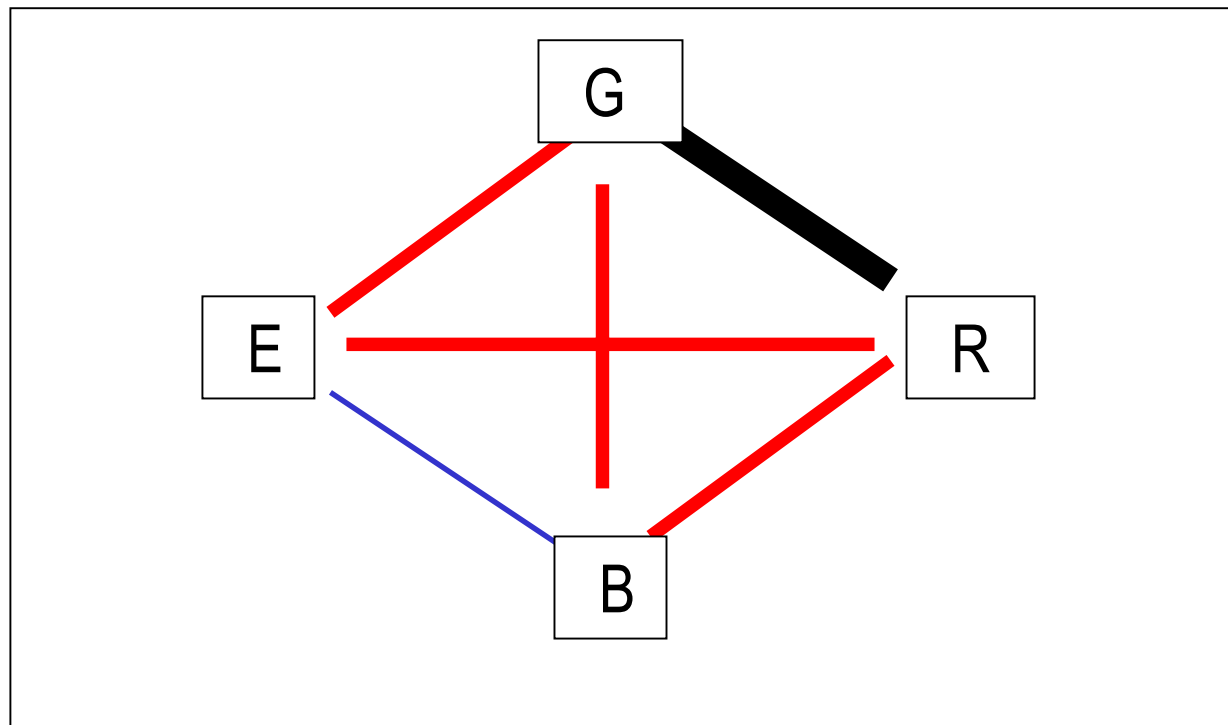
## ■ Assume four types of agents :




- ▶ National government (G)
- ▶ Regional government ( R)
- ▶ Entreprises (E)
- ▶ Financing institutions (banks...) (B)

## ■ Objectives of each agent :

- |  |            |
|--|------------|
| ▶ Attract investment / FDI   | G, R, B    |
| ▶ Develop new products / applications                                    | G, R, E    |
| ▶ Foster regional growth   | G, R, B, E |
| ▶ Support the development of knowledge that can diffuse to other regions | G          |

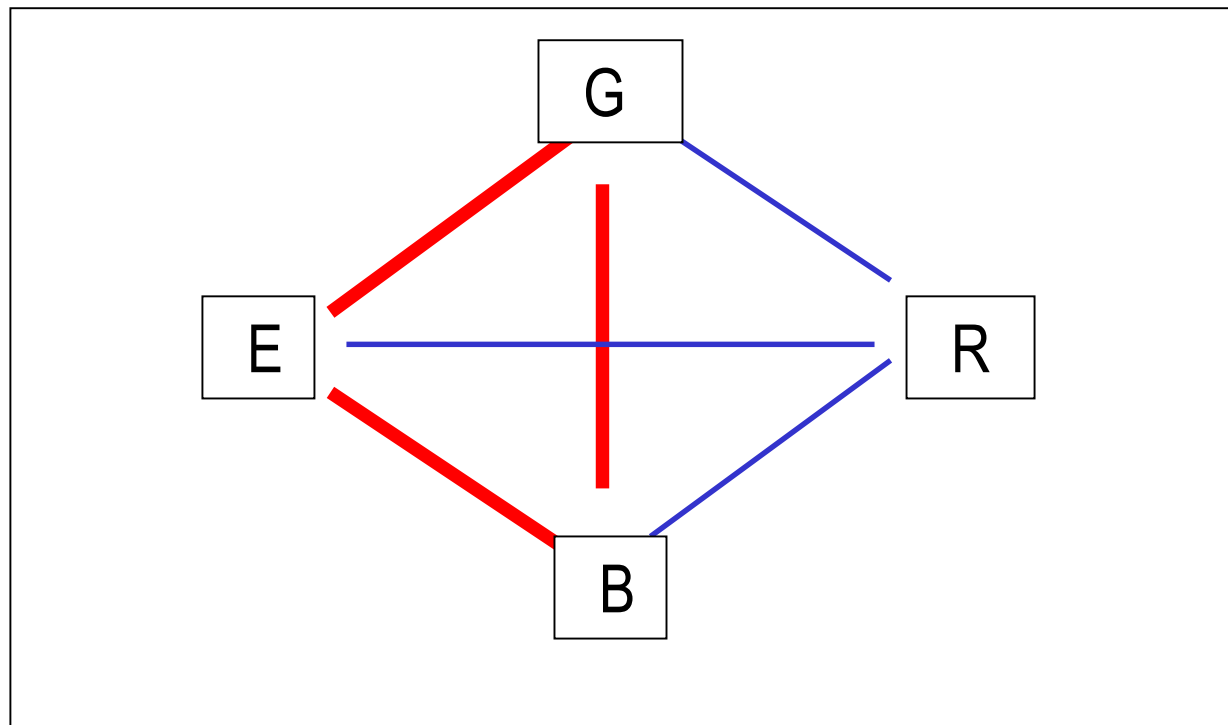
# Convergence mapping






-  Convergence forte
-  Convergence moyenne
-  Convergence faible

Source: BIPE

# Divergence mapping



-  Divergence forte
-  Divergence moyenne
-  Divergence faible

Source: BIPE

# Preliminary conclusions

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- Lesson #1: Strong convergence between National and Regional government
  
- Lesson #2: Divergence between banks/entreprise
  - ▶ One needs to find ways to get banks more interested in the development of **existing** companies in the region
  
- Lesson #3: Convergence Bank-Region and Region-Enterprise, but not Bank-Enterprise
  - ▶ Can the region be an intermediary?
  
- Lesson #4: How can one mobilise enterprises?
  - ▶ Add an objective that everyone would share



# Influence / dependence matrix

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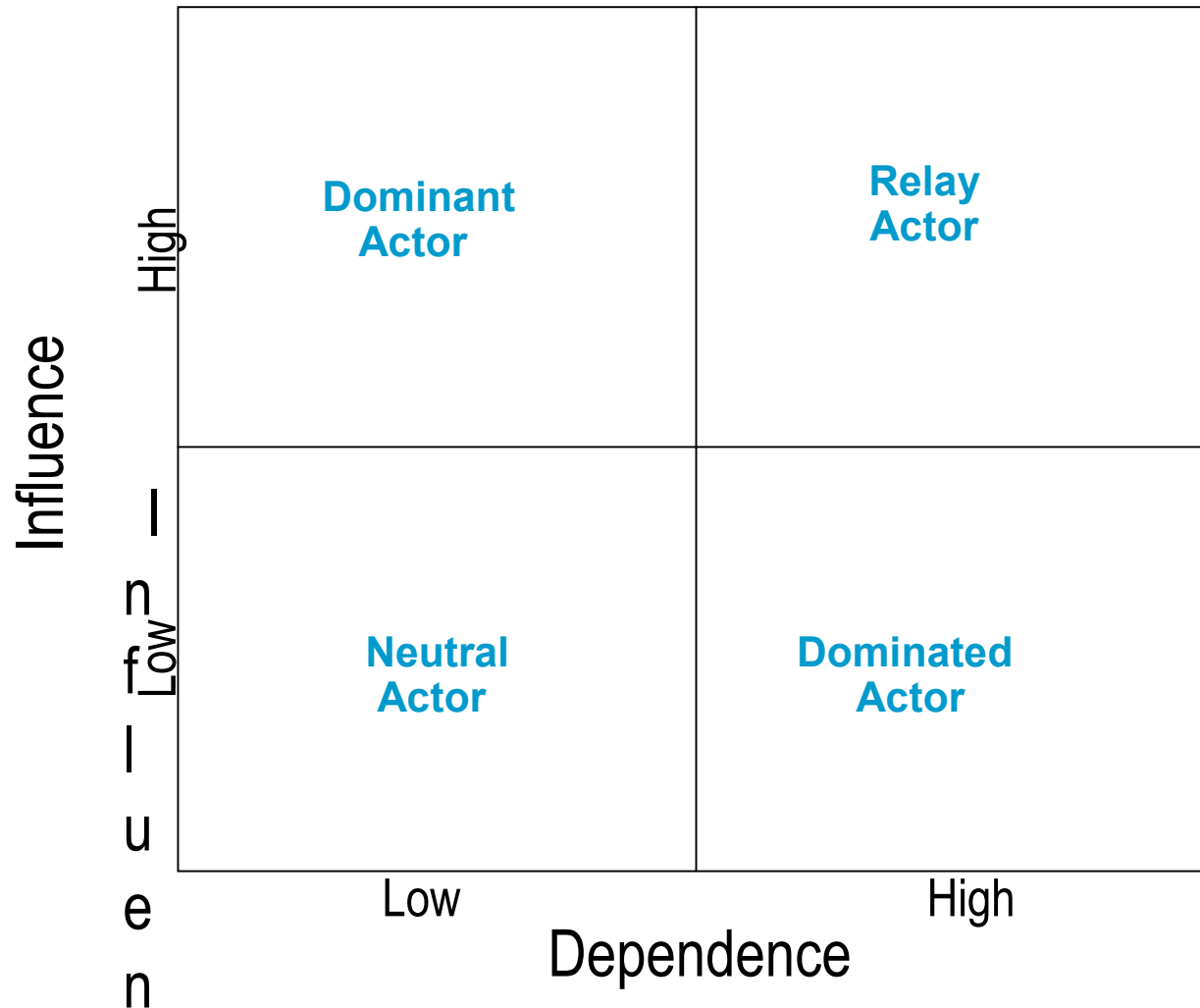
Influence	G	R	B	E	Indep Lab
G		3	1	1	1
R	1		2	3	1
B	0	2		3	1
E	1	2	0		1
Indep Lab	1	0	0	1	

Rating from 0 à 4

4= strong influence; 0 = no influence

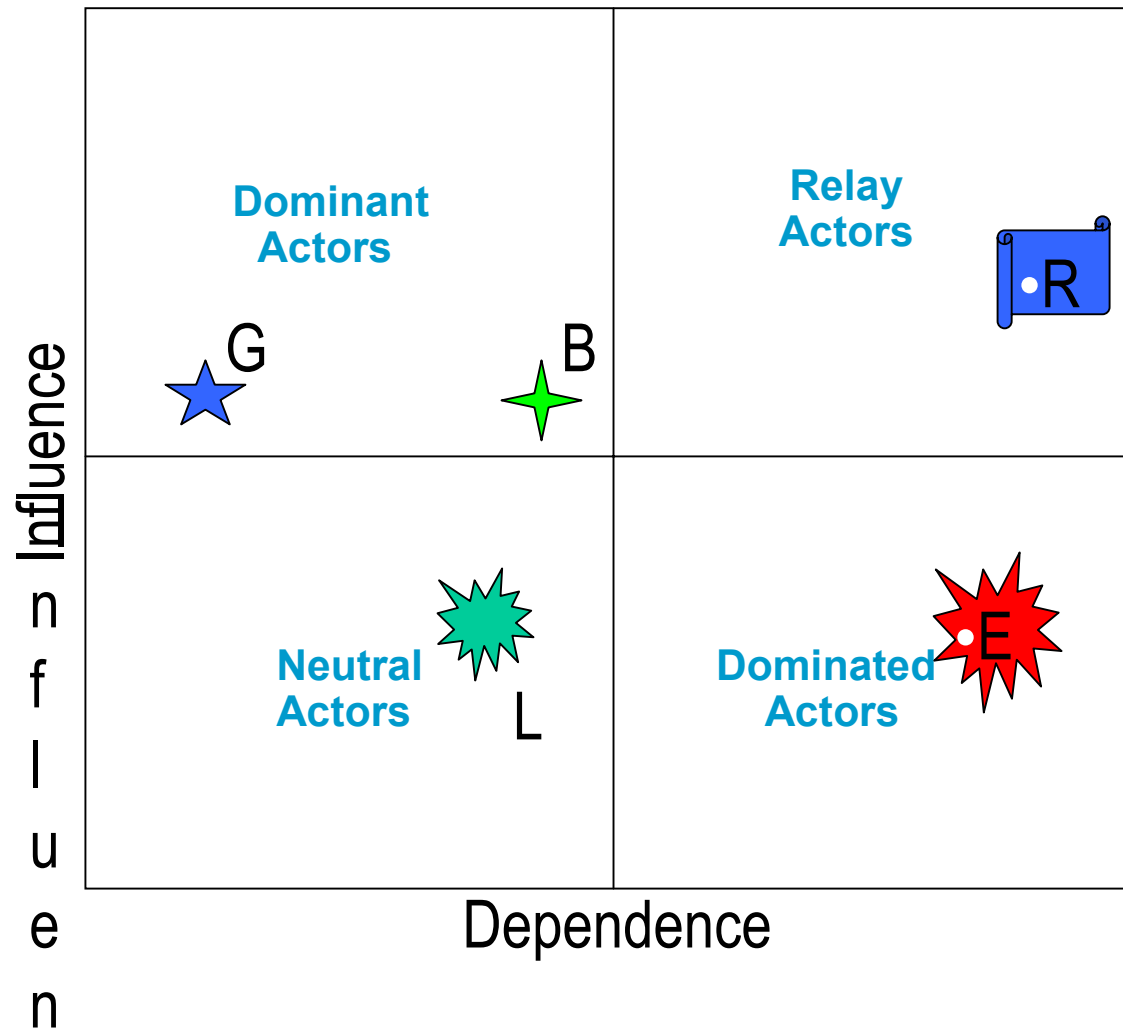
Source: BIPE

# Influence/dependence mapping



Source: BIPE

# Influence/dependence mapping



Source: BIPE

# Conclusions from this « game theory approach »

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- The regional government draws its influence from its capacity to attract companies into the region
- Companies are feeling left out although everyone thinks they are acting in the companies' interests...
- The creation of a governance structure has to take account of the intrinsic objectives or vested interests of each player
- The outcome (attainable vision) is strictly tied to the way the governance has been set up
- The objectives and priorities of all types of agents have to be clearly identified and positioned
- The « analysis » grid helps raise awareness of differences in objectives and interests ... allowing to correct it where necessary

# What the cluster can become depends on who's involved

## Example of an optics cluster in France

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- Scenario 1:
  - ▶ Focus on emerging technologies
  - ▶ Key actors : large companies, SMEs, some of the research organisations (optique structurante)
- Scenario 2:
  - ▶ Technological excellence
  - ▶ Key actors : University laboratories, large companies and start-ups
- Scenario 3:
  - ▶ Industrialisation
  - ▶ Key actors : large companies and industrial SMEs
- Scenario 4:
  - ▶ Focus on (integrated) technological systems
  - ▶ Key actors : large companies, applied research centres, start-ups, innovative SMEs

# Homework

## There are many diverse actors in a cluster...

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- Central government
- Regional government
- Local government
- Independent and / or public laboratories (linked to universities)
- Large enterprises
- SMEs
- Development agencies
- Trade associations, chambers of commerce, etc.
- Investors, financial institutions, venture capitalists, ...
- Education & training institutions
- Etc.

# Homework

**... each of whom may have different objectives**

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- Reduce costs through resource sharing
- Increase the client base
- Have access to technologies
- Attract new companies into the region
- Job creation
- Reduce / Control competition
- Increase competition
- Know customers (-suppliers) better
- Improve basic economic infrastructure
- Image creation
- Improve access to financing and/or financing conditions
- Improve quality of HR
- Co-financing of R&D programmes
- Etc...

# Homework

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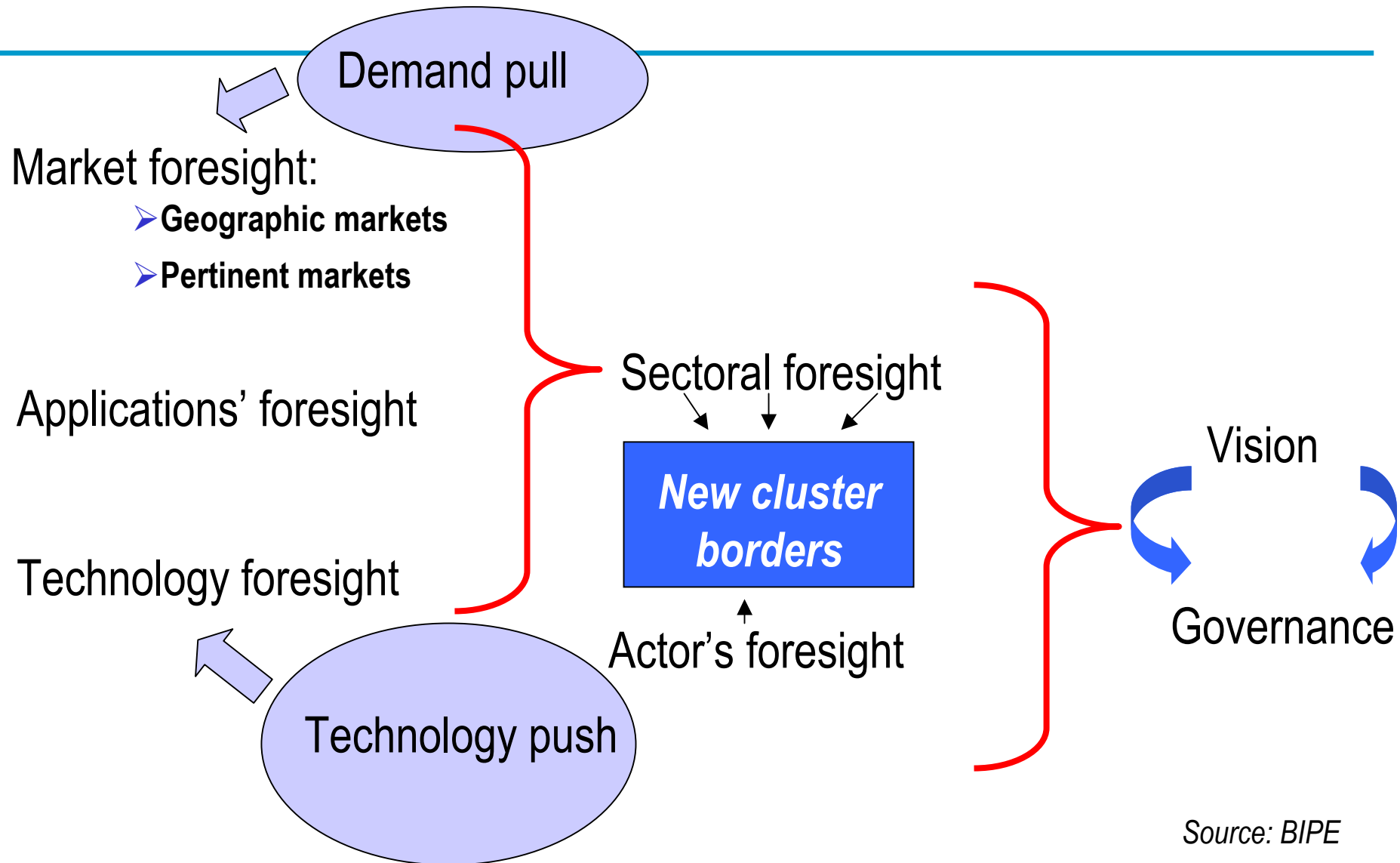
- What does the mapping show in your case?
- Are companies likely to buy-in, must the objectives be redefined?

# Research themes for the future

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- Role of the media in cluster processes
- Where do trade unions fit in clusters?
- Measuring the quality of interaction
- Explore new methods from social sciences
  - ▶ Qualitative approaches applicable to clusters
  - ▶ Foresight approaches – beyond technology foresight !
- More focus on territorial equity – balanced development
- Methodologies to measure externalities from clustering
  - ▶ Start by building a typology of externalities?
    - *Second generation versus first generation entrants?*

# Example: the different fields of foresight analysis



Source: BIPE

# Recommendations

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- Apply to ourselves what we ask of others:
  - ▶ Open to new fields, learn from methodologies of other social sciences
    - *Sociology, attitude based research*
    - *Game theory*
    - *Foresight approaches*
      - Foresight is not just about technological foresight...
  - ▶ Open to new players
  - ▶ **But.... Get companies in first !!!!**



# Role of TCI – Where TCI can help...

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- Enhance knowledge, awareness, understanding of issues
- Share best practices
- Develop and present models
- Strengthen the links between nodes:
  - ▶ Government
  - ▶ Research
  - ▶ Companies
  - ▶ Etc.
- Facilitate (organise?) links between similar or complementary clusters at international level
- Network of networks
- Provide contact list for members



# **Review of conference highlights**

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*Dr. Elisabeth WAELBROECK-ROCHA*

*Ottawa, 7th TCI Conference*

*October 1, 2004*