Status and Outlook

21 March 2006

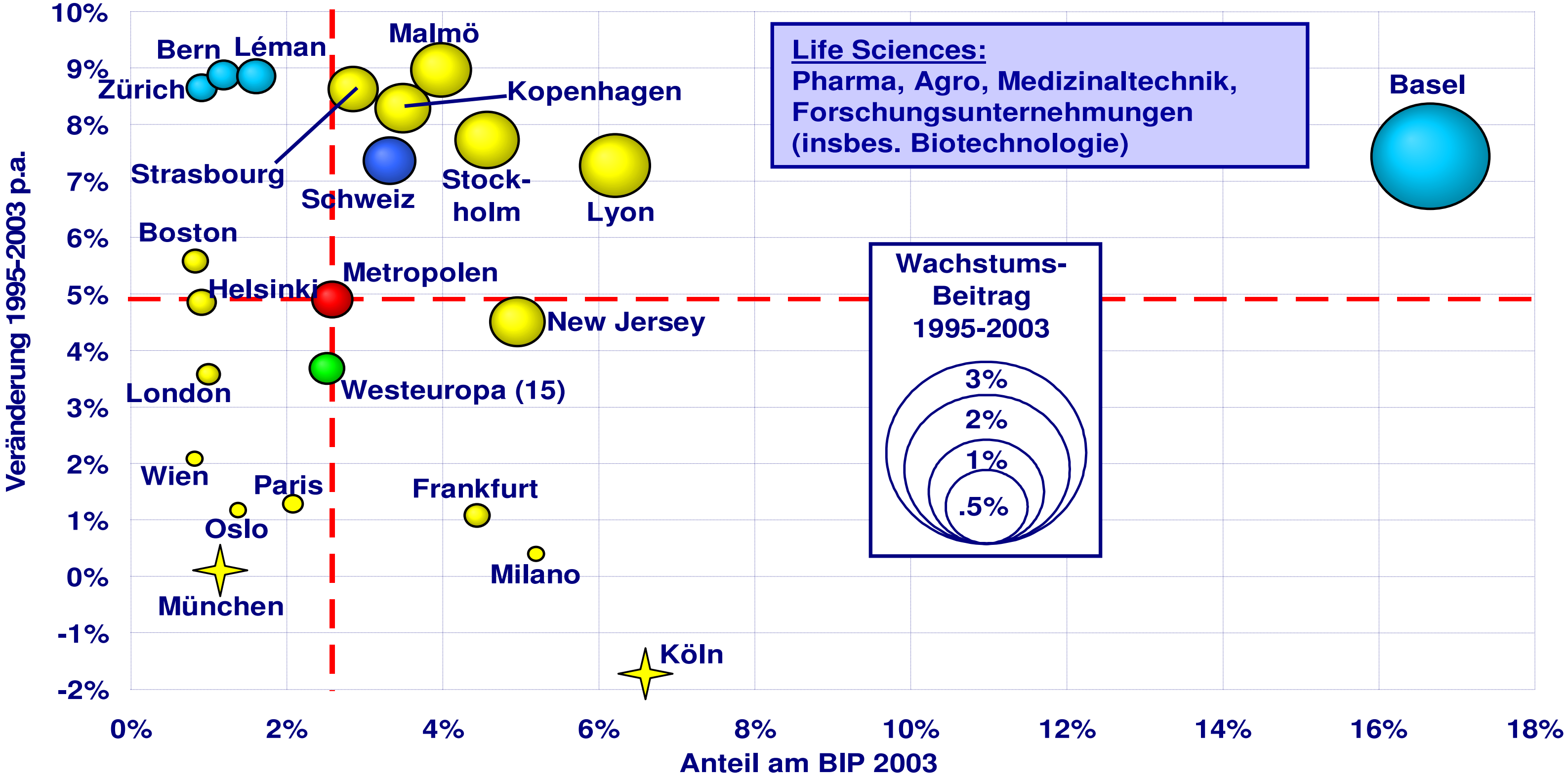
Dr. Beat E. Glatthaar
BioValley Interreg III Coordinator for Switzerland

Global companies in the BioValley trinational life science cluster

Grafik 01

Life Sciences*: Schweiz vorne – Basel Top – Metropolitanregionen Zürich, Bern, Genf und Lausanne holen auf

Beitrag des Life Sciences*-Sektors zum realen Wirtschaftswachstum 1995-2003



*temporärer Proxy: chemisch-pharmazeutische Industrie

Quelle: BAK, IBC Performance Database 2004

The History of the BioValley Initiative

End of 80ies

Dr h.c. Georg H. ENDRESS and Hans BRINER develop a concept to build a « Silicon Valley » of biotechnologies in the Upper Rhine Region.

1996

Merger of Ciba and Sandoz to form Novartis
Many highly qualified people in the Life Sciences leave the companies.
BioValley Promotion Team works to realize the BioValley Life Science Cluster.

1997

BioValley INTERREG II EU Program
Budget of € 2,1 million

1998

Foundation of the 3 national BioValley Associations and of the Central BioValley Association

2002 - 2007

BioValley INTERREG III EU Program with a budget of € 2.752.731
"BioValley, from Network to Trinational Life Sciences Cluster"

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BioValley – The Network

- Pharma and Biotechnology companies
- Companies offering services and products
- Universities and research centres
- Technology Transfer Agencies
- Technology Parks
- Banks, Investors, Venture Funds
- Economic Promotion Agencies

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Universities
in the BioValley area

Université Louis Pasteur Strasbourg
17,000 students

Université de Haute-Alsace Colmar and Mulhouse
8,000 students

Universität Freiburg:
19,500 students

Fachhochschule Offenburg:
2,000 students

Universität Konstanz:
8,000 students

Berufsakademie Lörrach:
1,000 students

Universität Basel: 9'500 students
Fachhochschule Nordwestschweiz /
University of Applied Sciences Northwestern Switzerland

Main Aims of BioValley

- **To become the most attractive and successful European biotechnology region (Biotech Cluster)**
- Support of existing and new companies
- Promotion of Start-Ups
- Technology Transfer
- Enhancement of new alliances with (inter)national partners, by organising “Partnering Congresses”
- Networking of the players in the Life Sciences
- **Building of a self-sustaining organisation**

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BioValley Interreg III Program

- ***Total costs of the program:*** € 2.752.731
- ***Program realization:***
  July 1, 2002 until June 30, 2007
- ***Project theme:***

BioValley – from network to trinational Biotech-Cluster

Establishment of a transnational European life sciences cluster on the upper Rhine with the aim to lead the BioValley-Initiative into a self-sustaining organisation

INTERREG III A

Oberrhein Mitte-Süd / Rhin Supérieur Centre-Sud

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Interreg Project Organisation until 2007

BioValley Interreg Board (BIB)
all cofinancers

BioValley Expert Team (BET)
5 experts per country

BioValley Management Team (BMT)
3 national coordinators

BioValley targets reached?

Life Sciences "Cluster" or Region

- BioValley, the Life Sciences Network, is known all over the world
- A BioValley culture has come to life
- Trinational information and communication networks have been built
- D und F are very "committed", because Basel is the flagship

Self-sustainability

- A self-sustaining organisation is only partially feasible, it has to be supported by private-public partnerships
- National BioValley associations have to take over more trinational tasks

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BioValley: A complementary innovation system

Factors	France	Germany	Switzerland
institutional	Significant public institutional backing in technology transfer, but few science-industry links	Some public institutions for technology transfer and patenting, not very visible	Network of private and public backing for innovation and patenting
technological	**Very strong basic research** *Less applied research, few innovations, no private R&D*	Strong basic research **Good public applied research and innovation** *No private R&D*	*Weak public research* **Very strong private R&D activities**
commercial	*Only very small number of R&D based companies*	Important number of SMEs of suppliers, few start-up companies	**Global market power through multinational pharma industry**

Strong
weak

Source: Call for Projects Study on "Comparison of the 3 National Innovation Systems within the BioValley"

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BioValley: How to continue ?

- Alsace-BioValley is very committed to continue building the trinational BioValley since its “pôle de compétivité“ heavily depends on it, hired consultant for support.
- “BioValley Germany“ uses BioValley mainly for positioning itself within Baden-Württemberg and its “BioPro“ initiative.
- Northwestern Switzerland uncertain about its strategy (competing economic agencies, Metrobasel, etc.).
- Public and private support only available with a convincing strategy and strong project proposals.
- FP7 appears to offer the possibility of obtaining funds from the EU.

→ A proposal is being elaborated to participate in the FP7 / Interreg IV program of the EU

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BioValley beyond 2007
The present situation

What we have:

- A strong **brand** with high **visibility and exposure**
- A strong **recognition** in the world life sciences market
- 10 years **experience** and investment in the network that can be mobilized
- Effective **communication tools**

What we need:

- Continue to capitalize on what we have - brand and network – the cornerstone of our capacity to act
- Beyond the brand, develop a shared trinational offer

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BioValley beyond 2007
The Vision

BioValley as a unique **one-stop shop**
for all life science resources
in the Upper Rhine Region.

Build up a **shared offer**
based in the **BioValley brand** in order to become
the **only territory in the world**
with such a **critical mass** accessible by a **single gateway.**

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BioValley beyond 2007
Projects to materialize the vision

a. The cornerstone of our action:
   brand and network promotion
   - Pursuing the efforts on what we have built up

b. Beyond the brand, a shared offer:
   New projects for 2007
   - Competencies Mapping
   - Information brokerage

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BioValley beyond 2007
Trademark / Network promotion

Communication:

- BioValley Website
- BioValley News
- BioValley E-newsletter
- BioValley promotion tools (brochures, mini-CD, stand, …)

Events:

- Annual Conference
- BioValley Life Sciences Week
- Congresses, trade shows, exhibitions
- Scientific and partnering events at trinational level
- “Cluster to cluster” cooperation to expand the network

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BioValley beyond 2007
New projects

> Build up a shared **trinational offer**

> Become the **one-stop shop** to access a structured, complete offer of the trinational region:

- **Competencies mapping:**
  research capabilities, available technological capacities and companies' scientific and innovation challenges
- **Information brokerage:**
  Information / documentation of the resources

Compile a complete package to:

➔ support the existing companies

➔ attract new companies for partnership and settling

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BioValley beyond 2007
Mapping

Strengths	Weaknesses
> High quality public research > Strong innovative companies network > Good network of partners of the innovation chain	> Availability of information > Communication between research and industry > Cooperation between the public/private interfaces organizations
Opportunities	**Risks**
> Offer a unique access point for all research and company needs > Develop the regional economy	> Lack of involvement of the actors

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BioValley beyond 2007
Information brokerage

Strengths	Weaknesses
> High quantity of information already available from BioValley > Strong partners network offering access to further information	> Access the right information when needed > Too much information kills the information!
Opportunities	**Risks**
> Offer a unique access point for information needs: the right information, on the right time for the right person > Enhance the competitiveness of BioValley members	> Little involvement of the members due to lack of time

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Interreg IV Timelines

March 2007	Interreg IV operational program submitted to EU
June – July 2007	BioValley project to be ready for submission
Sept - Oct 2007	Interreg IV working group
Nov – Dec 2007	Interreg IV committee
Beginning 2008	Interreg IV funds available

Financing retroactive from March 2007

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Which European Program is available to finance the trinational projects in BioValley?

Interreg IV A Rhin Supérieur / Oberrhein 2007-2013

- EU funds available for this program: 67 Million €.
- Global funds available for this program: 130 Million €

But who will provide the matching funds? (cofinancer)

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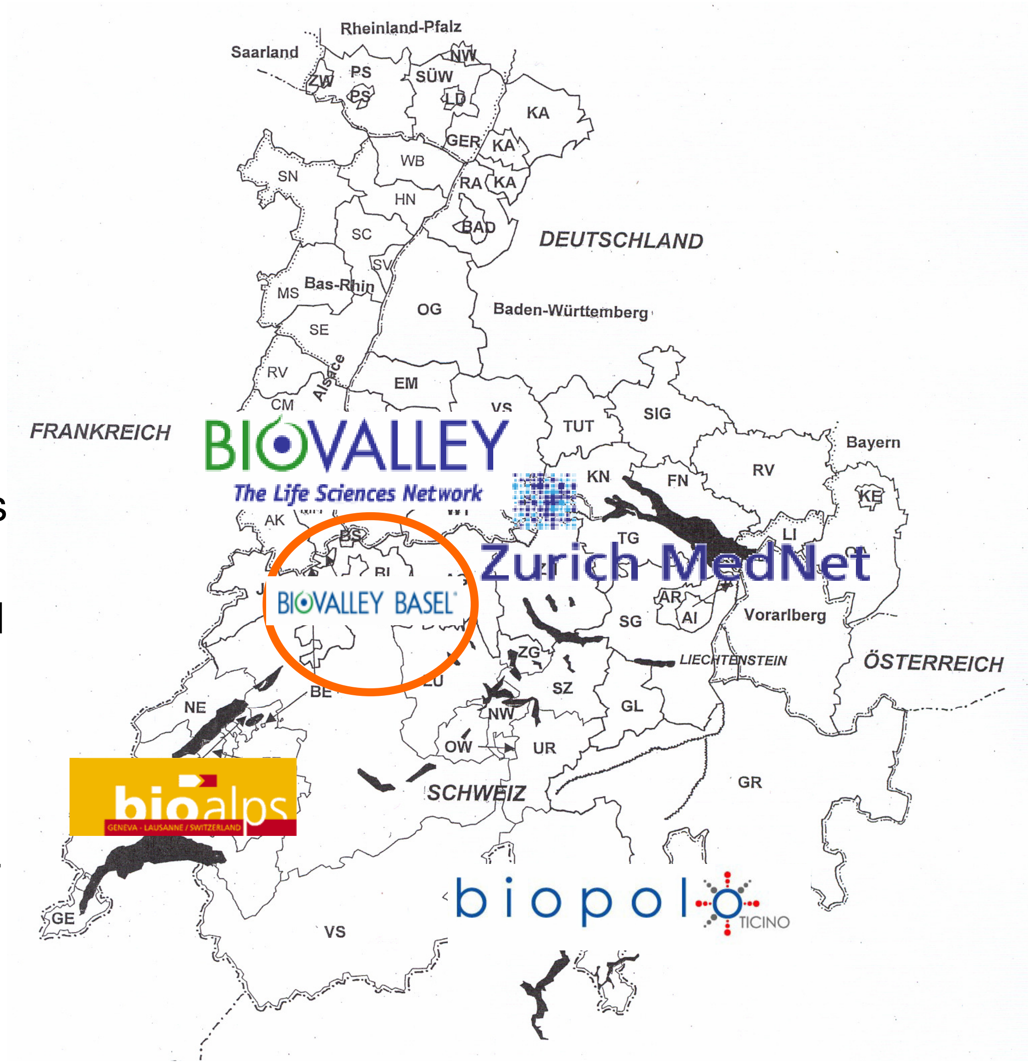
Cluster-Projekt Nordwest-CH

Welcher Raum?

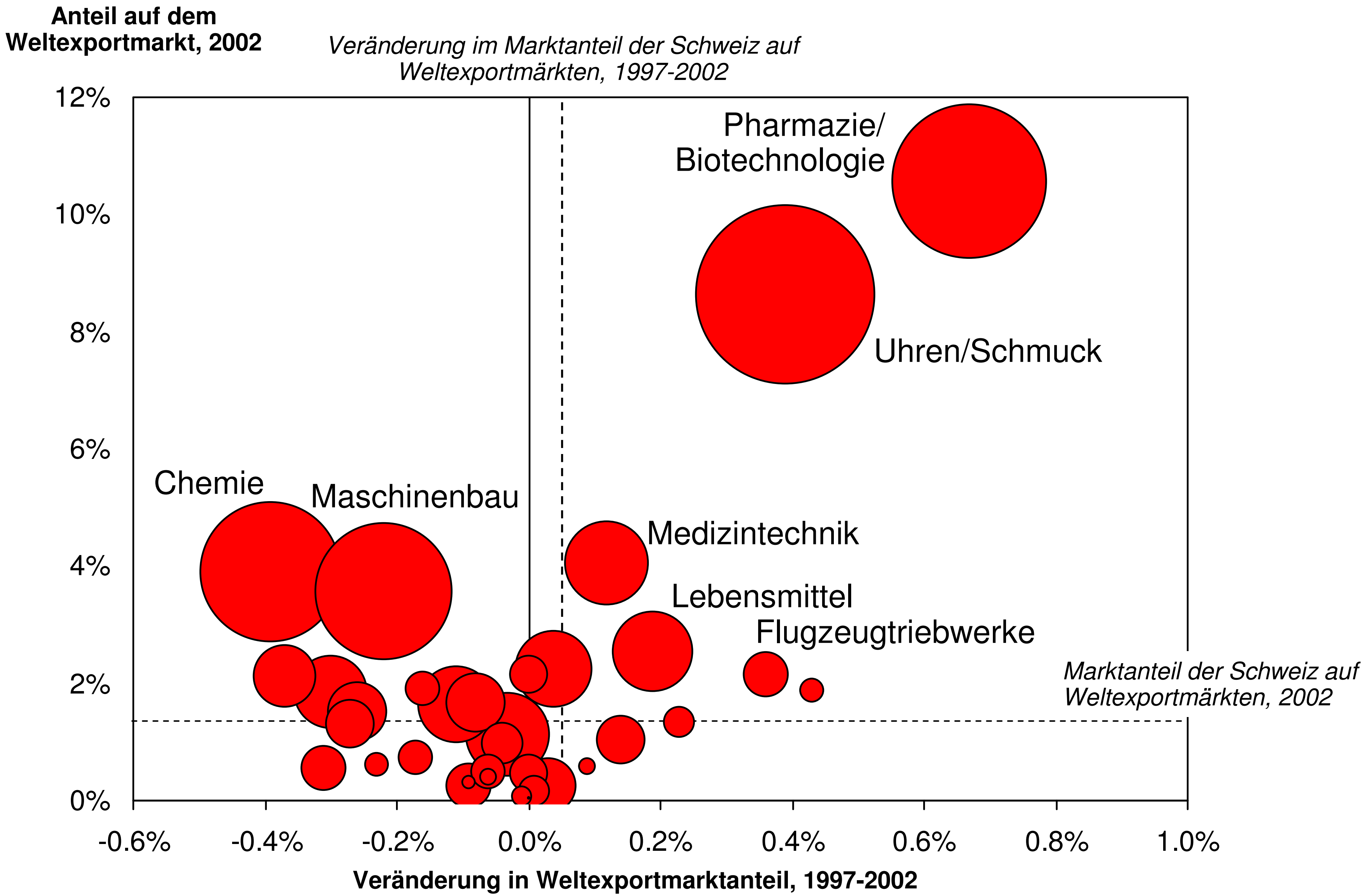
- NRWK: 6 Kantone
  - BS / BL / AG / SO / JU / BE
- „Wirtschaftsraum Nordwestschweiz“:
  - Zentrum Basel – Life Sciences
  - Regionen AG / SO / BE mit anderen Branchen, insb. MEM
  - trinationaler Raum

➔ Begriff „Cluster“ als „Ausweg“
  - Netzwerk von Unternehmen, Forschungsinstituten, Technoparks, Wirtschaftsförderungsstellen u.a.m. sowie deren Interaktion



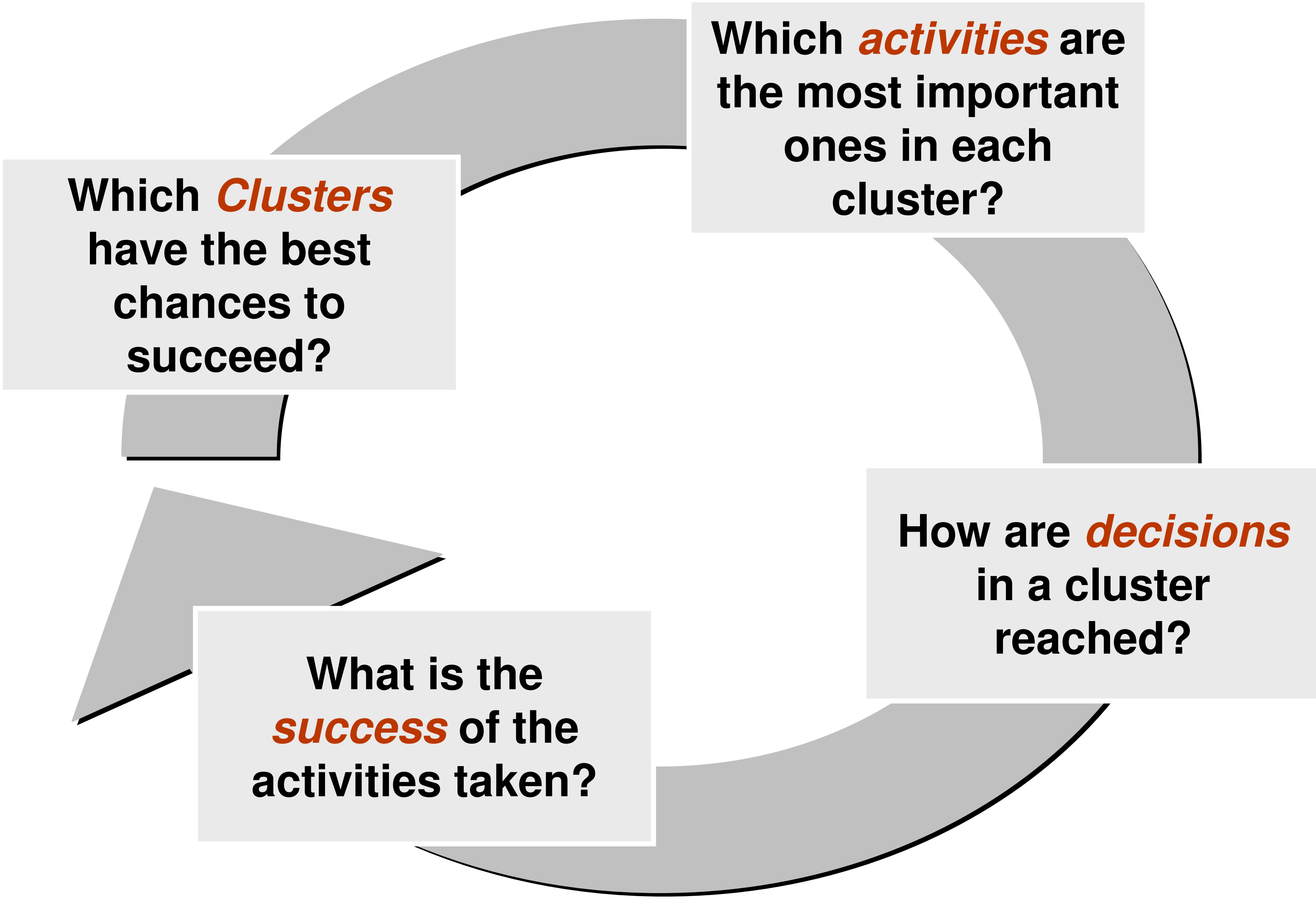
SWISS BIOTECH

Cluster im Schweizer Warenexport



Note: Bubble size is proportional to employment levels
Source: Statistics Sweden (2005), author's calculations

Key Questions of Cluster Initatives



Christian Ketels, Harvard University

Cluster und Cluster Initiatives

- Clusters are **critical engines** of regional economies whose success is vital for the success of the region
- The experiences of individual clusters provide clues for the **identification** of fundamental weaknesses of the regional economy
- Clusters offer a **platform** for the successful practice of a new, cooperative approach to economic policy

Christian Ketels, Harvard University

Different Models of Clusters

- Networks around key companies
- Traditional networks of SMEs
- New companies founded from universities

- US-Model: Clusters as magnets
- Nordic model: Clusters as mobilizers of social networks

Christian Ketels, Harvard University

Problems beyond the pragmatic view of clusters

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- What is the efficiency of investments? (**Benchmarking problem**)
  - What is the benefit to society by raising competition to a higher level?
- How large does a cluster have to be (**Scale problem**)
  - How many Biotech Clusters are required (tolerable)?
- Are clusters restricted to High-Tech (**Sector problem**)
  - How can cheese or shoe clusters be taken serious?
- What happens economically to NON-Clusters (**Reach problem**)
  - Do NON-Clusters have to be sacrificed economically? (Motiv: reenforce strengths)

- The Cluster Approach still lacks a consistent theoretical foundation!

Critical Success Factors for Cluster Initiatives

Environment

- High quality of the economic **Environment**
- **Confidence** to politics and public administration
- Regional administration enjoying high **autonomy**
- **Strong Cluster**

Aims

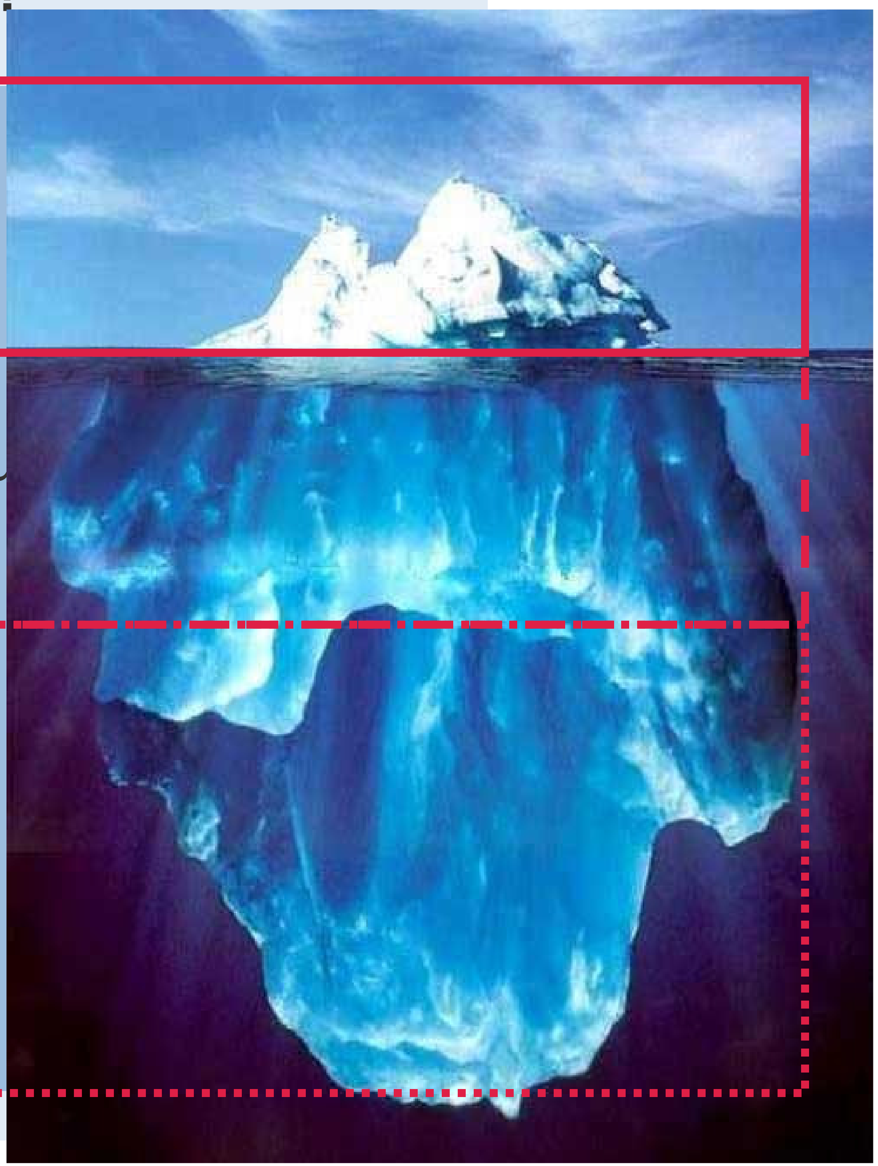
- **Broad definition of aims**
- Aims reflecting the **specific situation** of the cluster

Processes

- Cluster manager must be a **cluster expert**
- Cluster with own **office** and guaranteed **budget**
- Cluster with clear **strategy** und **measurable targets**

Quelle: Solvell/Lindqvist/Ketels (2003), The Cluster Initiative Greenbook, www.cluster-research.org

Conclusion
Do Clusters provide (the) solution(s)?



> Visible: ‚regional' level
> Network Level

> Invisible: national level
> Level of technological ressou

> Invisible: global level
> Commercial level

Commercial level not expolored

BioValley Cluster Organization

Partnerships
Economic promotion
= International
Marketing

Universities, industry
associations
= Technology transfer
and „Partnering“-
activities

Financing
= national public-
private partnerships

BioValley-Central Association
3 Presidents of the national associations + 3 committee members
Permanent Office

Tasks
Networking
Information brokerage
Communication
Public Relations
Promotion

Marketing
Products
Services for
BioValley members

BioValley Council
Consisting of experts from:
- Universities, R & D
- Industry
- Finances
- Economic promotion
- Technology transfer

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Typische Aktivitäten von Clusterinitiativen

- **Marketing** des regionalen Clusters
- Stärkung von **Netzwerken** innerhalb eines Clusters
- Verbesserung von **Unternehmensstrategien und –prozessen**
- Investitionen in das cluster-spezifische **Wirtschaftsumfeld**
- Definition einer **Strategie** für das regionale Cluster

- Clusterinitiativen sind ein Mittel zur optimalen **Integration** wirtschaftspolitischer Instrumente, nicht ein weiteres Instrument
- Die optimale Handlungsagenda unterscheidet sich von Cluster zu Cluster; es gibt **keine** einfachen „Patentrezepte“

Christian Ketels, Harvard University

Ziele von Interreg IV

- Grenzüberschreitend, innovativ, Mehrwert schaffend, dauerhaft
- Verbesserung der Attraktivität der Mitgliedstaaten, der Regionen und der Städte durch Verbesserung der Anbindung, Gewährleistung einer angemessenen Dienstleistungsqualität und eines angemessenen Dienstleistungsniveaus sowie durch Erhaltung der Umwelt,
- Förderung der Innovation, des Unternehmergeists und des Wachstums der wissensbasierten Wirtschaft durch Ausbau der Forschungs- und Innovationskapazitäten, auch unter Nutzung der neuen Informations- und Kommunikationstechnologien,
- Schaffung von mehr und besseren Arbeitsplätzen, indem mehr Menschen in ein Beschäftigungsverhältnis oder eine unternehmerische Tätigkeit geführt, die Anpassungsfähigkeit der Arbeitskräfte und der Unternehmen verbessert und die Investitionen in das Humankapital gesteigert werden.

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Schlussfolgerung
Sind Cluster die Lösung?

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- Graduelle Adoption des Clusteransatzes durch öffentliche Akteure im Biotech-Bereich
- Steigende Investitionsbereitschaft der öffentlichen Akteure
- Gute CH Stratifizierung der Investitionskompetenzen zwischen nationaler und regionaler Ebene
- Cluster Paradoxon: Der Staat als Wettbewerbshelfer
- Der ‚best-practice' orientierte Cluster-Ansatz lässt viele Fragen offen
  - Effizienz-Frage
  - Skalen-Frage
  - Sektoren-Frage
  - Reichweiten-Frage

Erst zu bejahen, wenn diese Fragen beantwortet sind!