



Bundesministerium
für Bildung
und Forschung

New Challenges for European Research and the Need for Strategic Response

New World – New Solutions, July 7-8, 2009,
Lund/Sweden

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The Federal Ministry of Education and Research (BMBF)

Ideen zünden!



The Challenge

- The current financial and economic turmoils lead to an upgrading of education, research and innovation policies in many countries (e.g. US, Japan, China, France, Germany, etc.)
- Innovation and Research policy need a holistic approach, a comprehensive framework and strategic governance involving regions, state governments and supranational organizations



Two Proposals

- 1. European Innovation Strategy**
 - 2. European Champions League for Research Fields**
- Key Elements for a holistic approach of R&I Measures with a view to the 8th Framework Programme



National efforts in the field of innovation policies

- **Finland:** Education and Research '03-'08 Development Plan – develops the education and research system with a view to a balance and interaction between its different sectors
- **Spain:** Spanish National R&D&I Plan '08-'11 – contributing to a greater and more harmonious development of the Science-Technology-Enterprise (S-T-E) System
- **Ireland:** Strategy for Science, Technology and Innovation '06-'13 – whole-of-government strategy for science, technology and innovation
- **Denmark:** A Strategy for Denmark in the Global Economy - Progress, Innovation and Cohesion, developing Denmark as a leading knowledge society
- **United Kingdom:** Innovation Nation '08 – strategy of the Department for Innovation, Universities & Skills
- And other countries such as **Czech Republic, Greece, Lithuania, Estonia...**



National efforts in the field of innovation policies

Bridging the innovation gap – key factors of national policies

- Clustering Academia and Industry in the knowledge triangle through efficient use of results
- Development of Lead Markets
- Holistic Approach of innovation policies and involvement of different Ministries



Aims of the German High-Tech Strategy

“Ideas are more rapidly translated into products“

Lead markets

- New priorities.
- Strategic partnerships mobilize industrial research.
- All preconditions for successful innovations are taken into account.



Industry / Science

- Outstanding clusters in research and innovation are growing.
- Innovation support is expanded and made more efficient.
- “Exchange processes” competition is signal for new forms of cooperation.
- Growth cores in the new *Länder* are strengthened.

Framework conditions

- Innovation funding is becoming more attractive.
- Private capital for research and development is mobilized.
- Protection of intellectual property makes R&D investment more profitable.



- Public procurement becomes more innovative.



Main Ingredients – a proposal

- New Governance Structure
- Innovation and society problems solutions (grand challenges)
- Interplay of National and European efforts and instruments
- Innovation friendly framework conditions



National efforts in the field of world class research

- **Austria:** COMET '06 – competence centres for excellent technologies
- **Denmark:** Centres of Excellence 1993-today – Strengthen Danish research base through long-time support of high-performance research groups
- **Finland:** Centres of Excellence (CoE) '08-'13 – Investing in research Teams that target at international cutting edge of particular research fields
- **Netherlands:** Higher Education and research plan HOOP 2004 – developing the HE system in the light of the knowledge-based economy, internationalisation, societal complexity
- **France:** Law on University reform '07 – targeting at excellence, relevance and management of research in Universities
- And other countries such as **Greece, Romania, Estonia...**



National efforts in the field of world class research

Unleashing research excellence – similarities of national policies

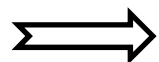
- **Integration** of regional and sectoral strengths and excellence in research and higher education
- **Development** of sectoral and regional clusters linking research institutions and industry
- **Accentuation of Peaks** of excellence by strengthening autonomy, competition and international attractiveness
- **Combining** universities and public research institutions



European Champions League of Research Fields

Challenge:

- Global distribution of world class research: increasingly a multacentral landscape
- US-science system remains the key driver



The European answer:
European Champions League of Research
Fields

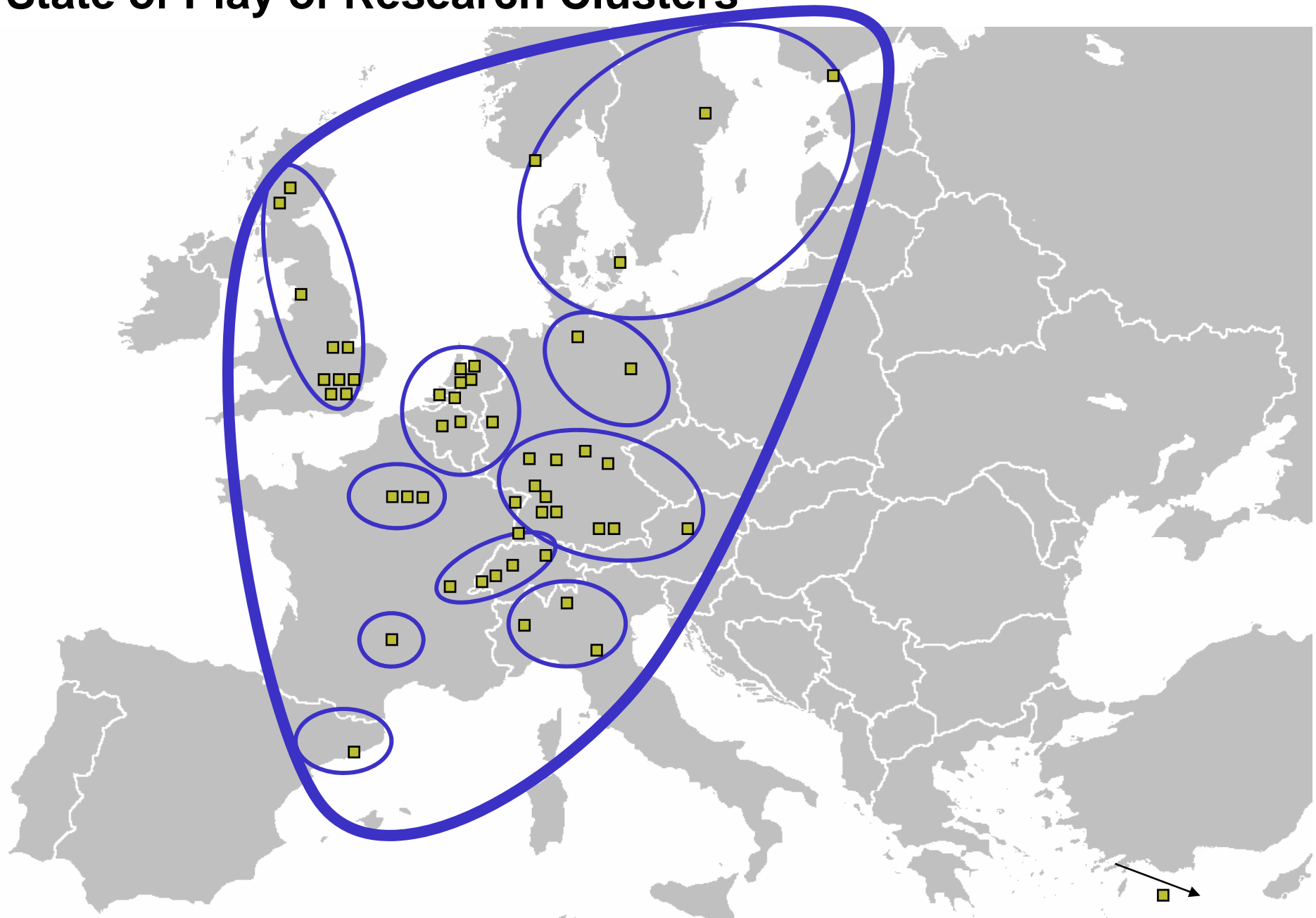


Top Ranking European Centres in Immunology (Bibliometric Data according to van Raan)

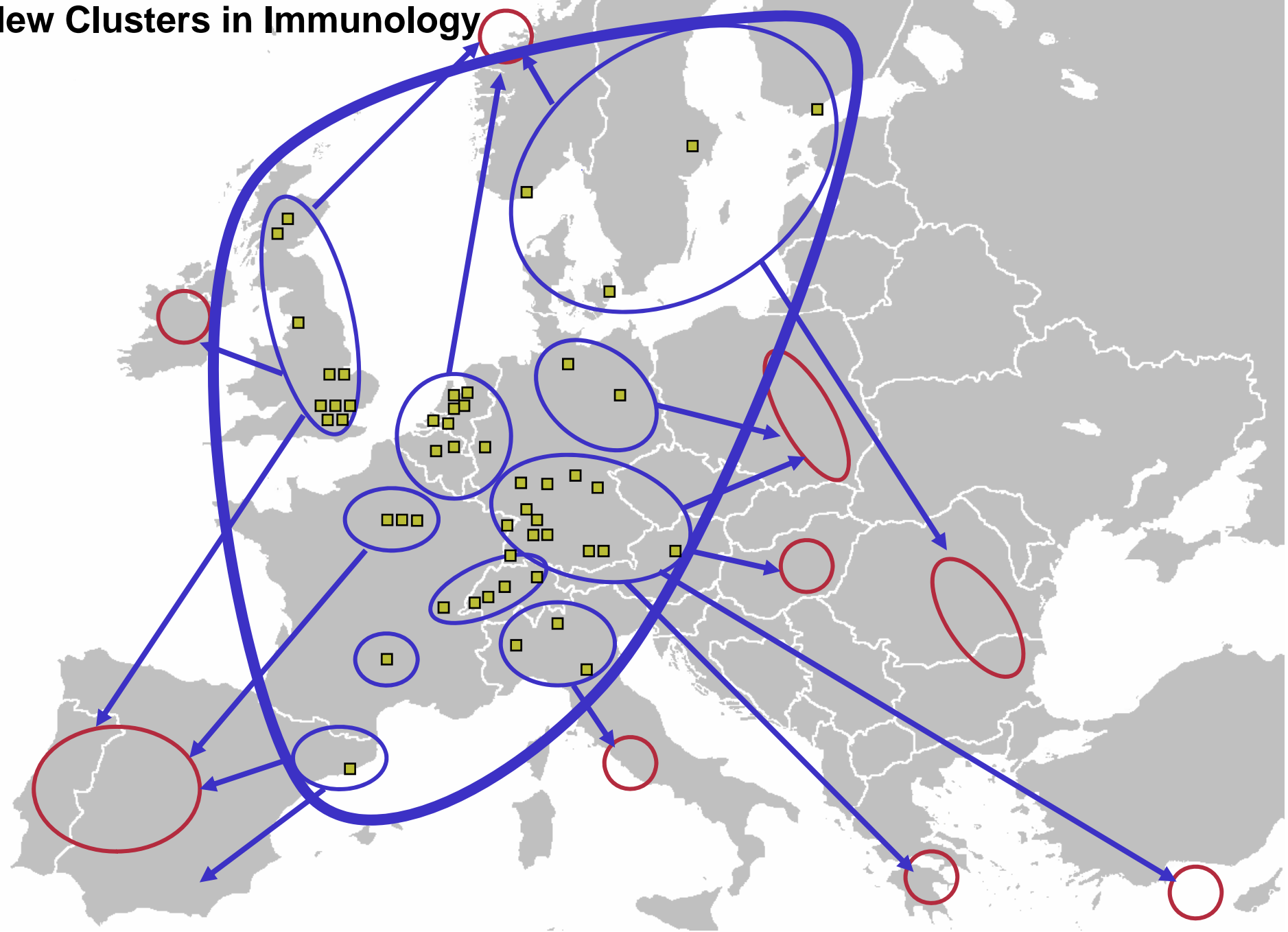
Legende

-
- | | | | |
|----|--------------------------------------|----|-------------------------------------|
| 1 | Universität London | 21 | Europ. Molec. Biol. Lab. Heidelberg |
| 2 | Universität Oxford | 22 | Universität Freiburg |
| 3 | Universität Hamburg | 23 | Inst. for Immunology Basel |
| 4 | Karolinska Inst. Stockholm | 24 | Universität Edinburgh |
| 5 | Universität Paris | 25 | Universität Lausanne |
| 6 | Humboldt u. Freie Universität Berlin | 26 | Universität Helsinki |
| 7 | Universität Cambridge | 27 | Universität Copenhagen |
| 8 | Inst. Pasteur Paris | 28 | Universität Tübingen |
| 9 | Universität Mailand | 29 | Weizmann Institut SCI Rehovot |
| 10 | Universität Paris | 30 | Universität Manchester |
| 11 | Universität Zürich | 31 | Universität Erlangen/Nürnberg |
| 12 | Universität Genf | 32 | Erasmus Universität Rotterdam |
| 13 | Universität Leiden | 33 | Universität Mainz |
| 14 | Imperial Canc. Res. Fund. London | 34 | Universität Amsterdam |
| 15 | Universität Utrecht | 35 | Universität Bern |
| 16 | Universität Amsterdam | 36 | Universität Glasgow |
| 17 | Universität Wien | 37 | Universität Würzburg |
| 18 | German Cancer Res. CTR Heidelberg | 38 | Netherlands Canc. Inst. Amsterdam |
| 19 | Universität Paris | 39 | Universität Brüssel |
| 20 | LM Universität München | 40 | Universität Basel |

Champions League of European Research Fields – State of Play of Research Clusters

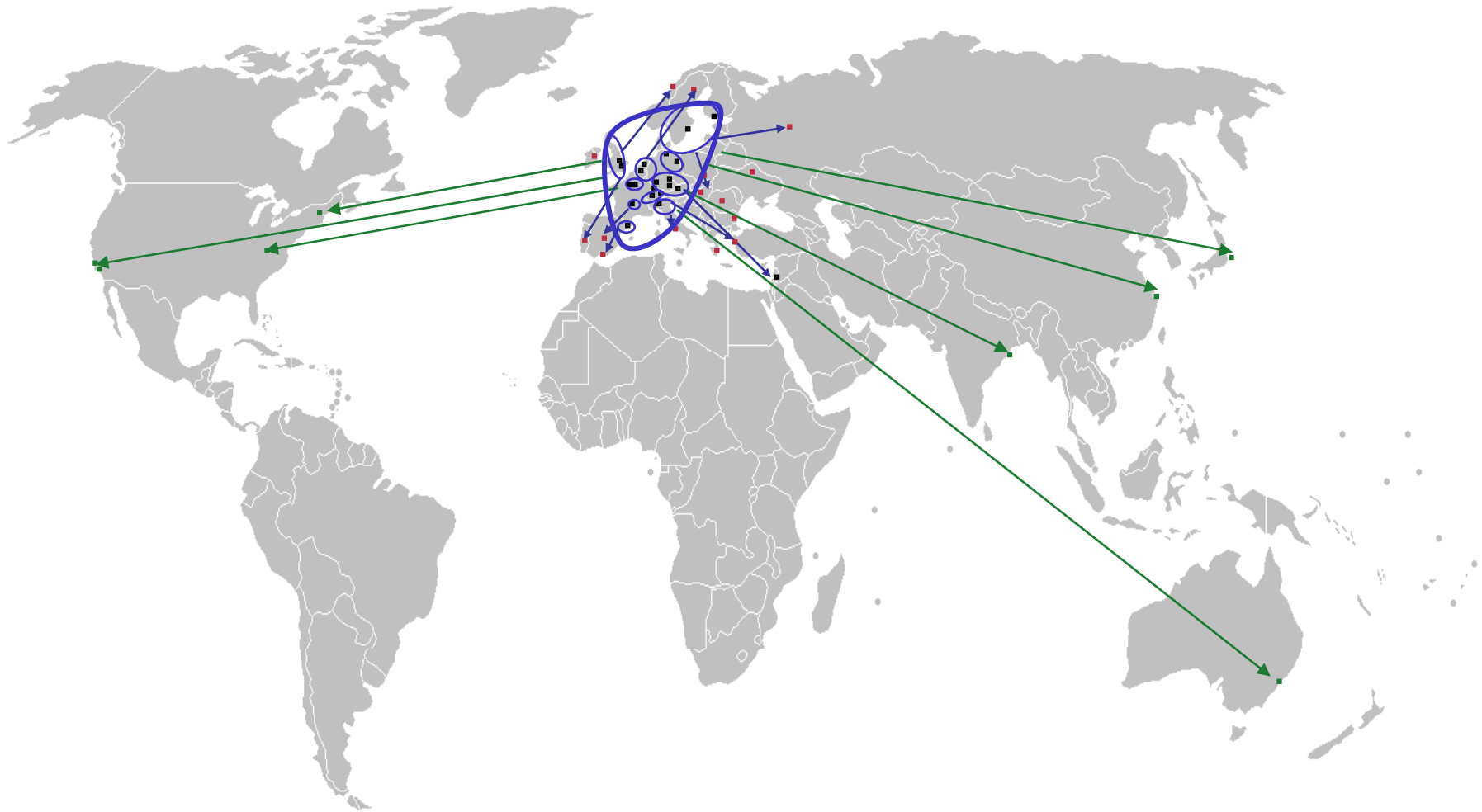


Perspective: European Champions League of Research Fields - New Clusters in Immunology





International Cooperation as a prerequisite for top research





Expected Questions for a future ERA - Debate

1 European Innovation Strategy

- How can we use national experiences to find European answers?
- What could be the main characteristics of an adequate governance for a European Innovation Strategy?

2 European Champions League for Research Fields

- How can we achieve the most dynamic development in the interplay between national, meso- and European levels of research?
- How can we avoid an EU of two speeds without destroying the European Champions League approach?



Thank you for your attention

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