

ScanBalt Competence Region: Creating Value between Biotech Clusters

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ScanBalt Competence Region: Creating Value between Biotech Clusters

- Do clusters still **matter** in a globalizing economy and research community?
- What is the **role** for cooperation across life sciences clusters in a cross-national region?
- A look ahead: **Issues on the horizon** for cluster-development efforts in the life sciences

Globalization and Regional Clusters

The context for competition between locations is changing

- More locations meet the minimum conditions to become **potential sites** for economic activity
- More locations reach a high level of growth, making them attractive **markets** to serve



...and thus the relationship between locations

- More **competiton**
- More **specialization** and regional **concentration**
- More **linkages**

Clusters are an **increasingly important** feature of the global economy

The Economic Geography of Life Sciences

Drivers of Change

- There is an increasing **number of locations** vying for life science activities, often with significant government involvement
- Factors related to **geographic proximity**, e.g. knowledge spillovers and access to a shared skill pool, are critical in the life sciences
- Industry consolidation and the use of acquisitions to add innovative capacity increase **international linkages**



- Location is becoming **increasingly important** for life science companies and research institutions
- Locational patterns in the industry are in flux with the number of significant future life science hubs **far smaller** than the number of locations currently competing

New Model of Innovation

Old “silo”-model

- Sequential process



- *Basic research* conducted in universities
- *Knowledge transfer* through licensing
- *Product development* in big Pharma
- *Product launch* and marketing by big Pharma companies

New “open”-model

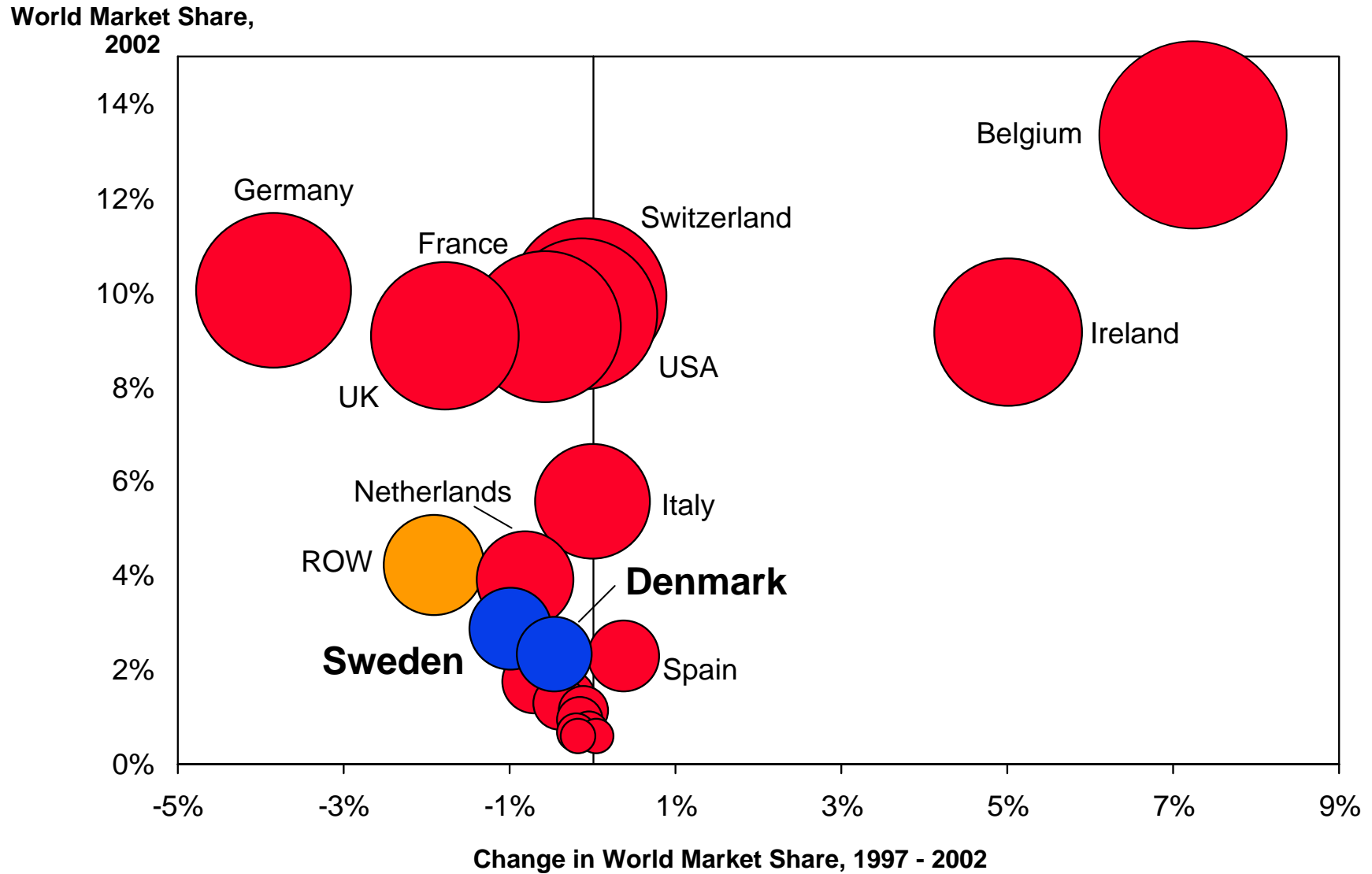
- Parallel process



- *Basic research* conducted in universities and biotech companies
- *Knowledge transfer* through licensing and acquisition
- *Product development* in big Pharma and specialist biotech companies
- *Product launch* and marketing by big Pharma companies

A Crowded Field

World Export Market Shares in Biopharmaceuticals



Source: International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School

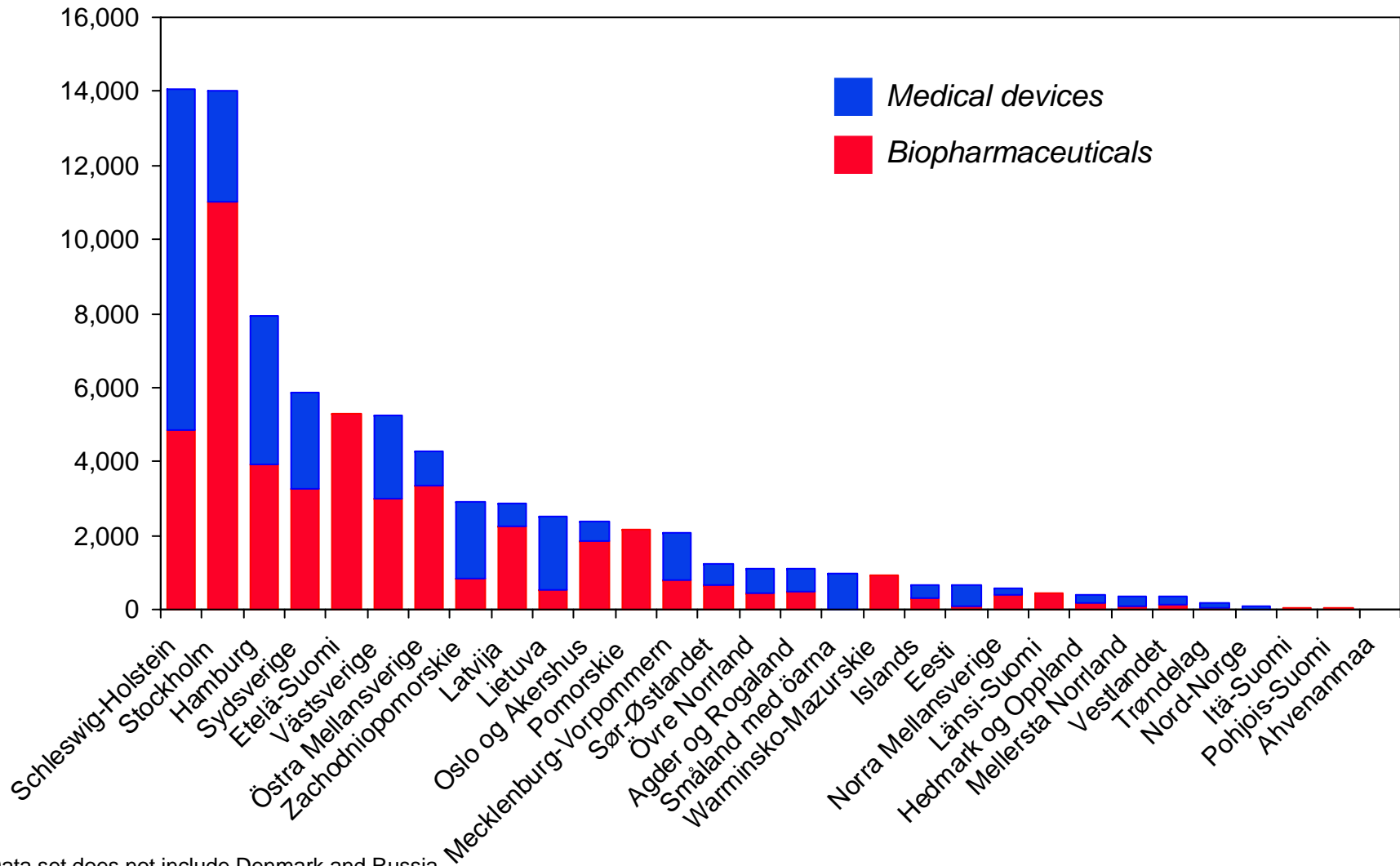
Co-operation Across Cluster Initiatives

- **Activities with substantial **economies of scale****
 - Marketing the region, including FDI attraction
 - Lobbying politicians and public sector officials
 - Financing large research facilities
 - Creating specialized markets for IP and equity
- Activities to leverage similarities across cluster
- Activities to leverage differences across clusters

Generation of Solid Data on Clusters

Biopharmaceuticals and Medical Devices Employment

Employment, 2002



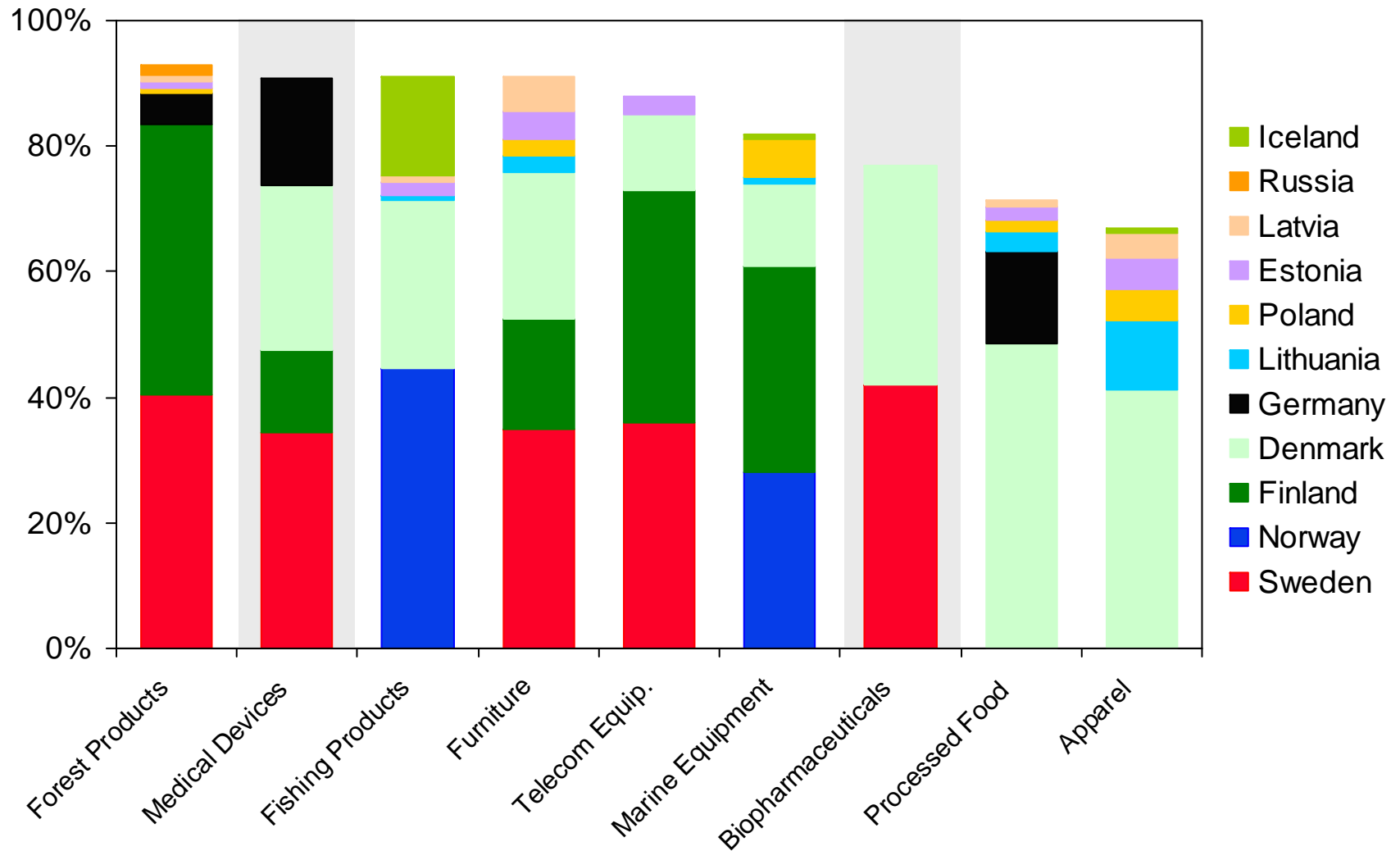
Note: Data set does not include Denmark and Russia

Source: Institute for Strategy and Competitiveness, author's analysis.

Generation of Solid Data on Clusters

Export Specialization Patterns

Share of BSR exports,
2002



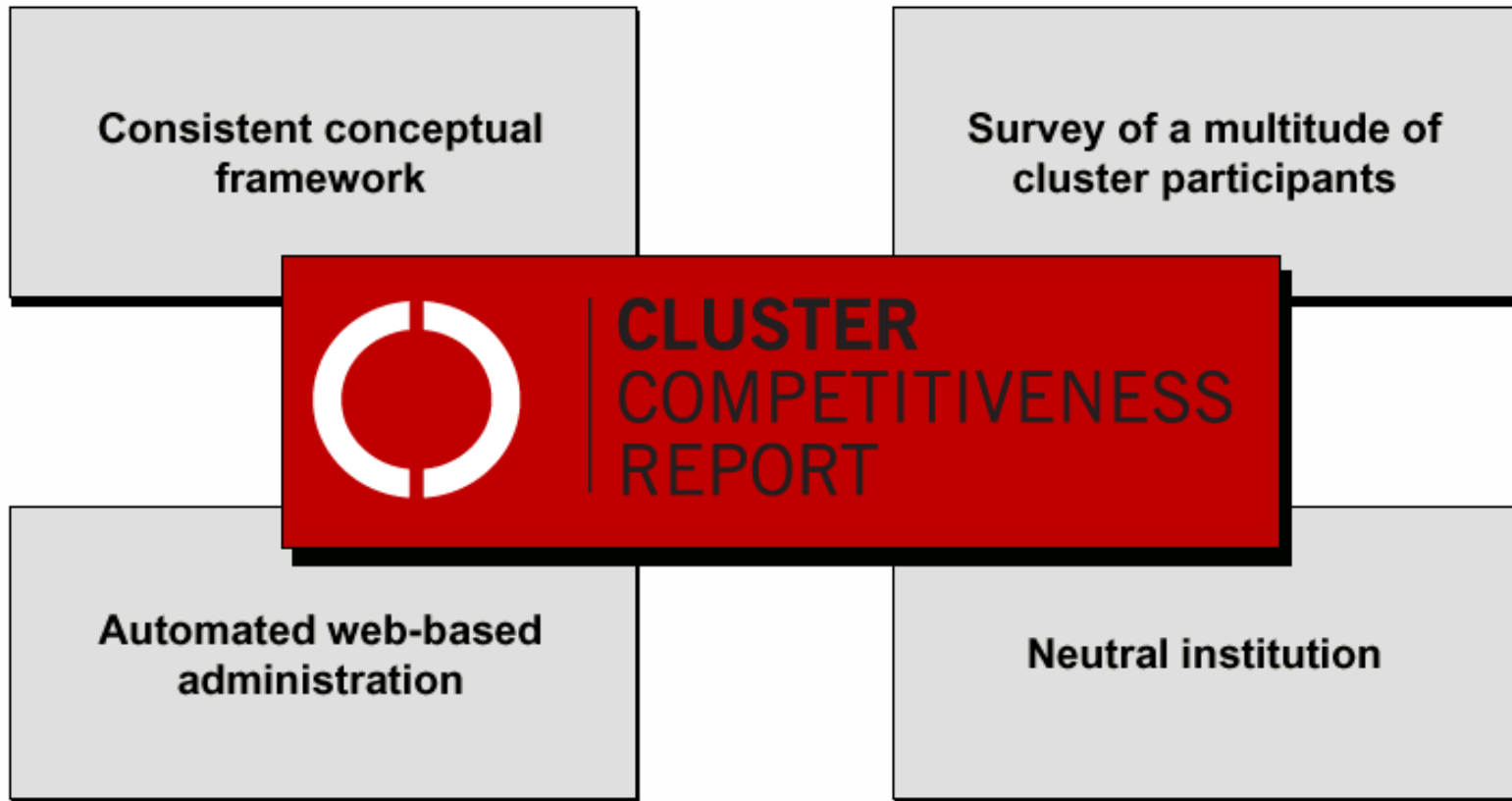
Source: WTO (2005), Institute for Strategy and Competitiveness, author's analysis.

Co-operation Across Cluster Initiatives

- Activities with substantial economies of scale
- **Activities to leverage similarities across cluster**
 - Learning from each other about cluster development activities
 - Providing a neutral assessment of clusters and cluster policies
- Activities to leverage differences across clusters

Tracking the Impact of Cluster Policies

The Cluster Competitiveness Report



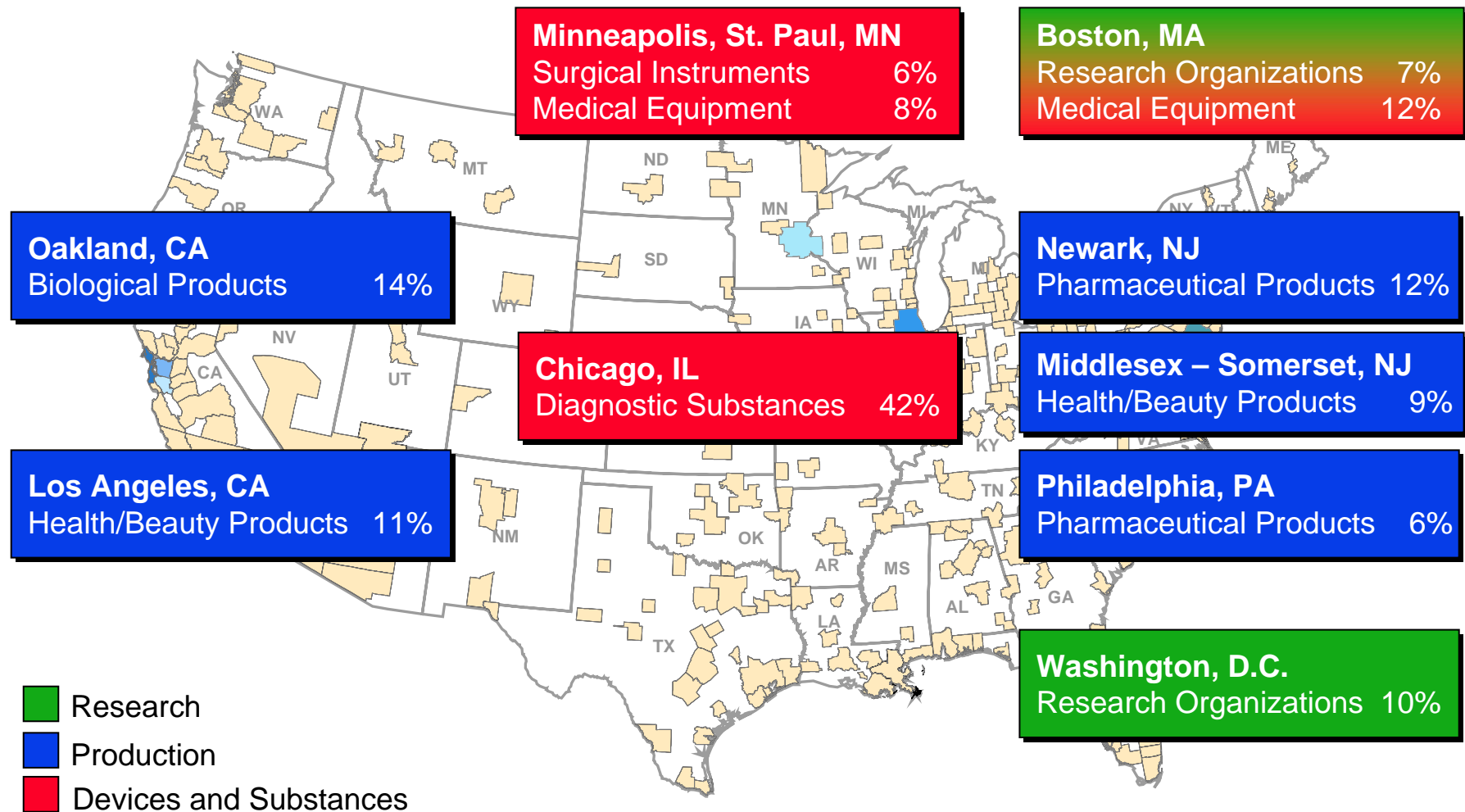
More information at www.clustercompetitiveness.org

Co-operation Across Cluster Initiatives

- Activities with substantial economies of scale
- Activities to leverage similarities across cluster
- **Activities to leverage differences across clusters**
 - Increase the bandwidth of value provided in the region by linking the specific skills of heterogeneous regional clusters
 - Create a bridge to strong but isolated research capabilities

Strategic Positioning of Life Science Clusters

United States



Note: All 318 Metropolitan Areas are shown as shaded; includes subclusters in which the MA has employment rank 1 or 2 nationally, 1999 data
 Source: Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Co-operation Across Cluster Initiatives

- Activities with substantial economies of scale
- Activities to leverage similarities across cluster
- Activities to leverage differences across clusters



- **The impact of cross-cluster cooperation crucially depends on the strength of the individual cluster efforts**
 - Cooperation across the region is no substitute for lacking activities on the cluster level

Issues on the Horizon

- Economic policy for the **new innovation model** – taking entrepreneurship seriously
- **Balance** of basic and applied research in publicly-funded institutions
- Management of **conflicts of interest** among companies, individual researchers, and publicly-funded institutions
- **Health care policy** as the key driver of volume and quality of demand for life sciences products



- ScanBalt is well placed to be the **central venue** for discussing and addressing these type of issues

Further Information

- Institute for Strategy and Competitiveness (www.isc.hbs.edu)
 - Extensive material and presentations on competitiveness and clusters
 - Data on US clusters, including biopharmaceuticals and medical devices
 - Data on global export patterns by cluster (to be launched)
- Center for Strategy and Competitiveness, SSE (www.sse.edu/csc)
 - Research on Nordic clusters and cluster policy
- Ivory Tower/Cluster Research (www.cluster-research.org)
 - Data on Swedish clusters , including biopharmaceuticals and medical devices
 - Data on cluster initiatives worldwide
- The Competitiveness Institute (www.competitiveness.org)
 - Global network of cluster practitioners