Presenting the Leading Edge Cluster Future

2015
Network World-Wide Logistics

2010
Efficiency

7 Key Issues
- Adaptable Logistics Systems
- Maximizing Cluster Potential
- Together
- Logistics Design Competence
- Transportation

130 Partners
- 100 Innovations
- Logistics-as-a-Service
- Cloud Computing
- Navigation Research
- Technology
- Individuality
- Cooperation

30 Joint Projects
- Freight Management International
- Mobility
- Market Potential of 2 Billion
Germany is the world champion in logistics, generating a turnover of over 200 billion euros per year and employing 2.7 million people. Some of the world's greatest logistics companies are from Germany.

The logistics sector is the third largest industrial sector in Germany and many other sectors benefit from its value creation. In 2010, EffizienzCluster LogistikRuhr prevailed over numerous applicants from all scientific fields to be recognized by the Federal Ministry of Education and Research as one of the top 10 Leading-Edge Clusters in Germany. Thus, logistics was not only acknowledged as a sector in and of itself, but also recognized as one of the most important scientific disciplines with regard to future research.

Logistics is the driving force behind many things. The world revolves around logistics. The challenges are becoming increasingly diverse and complex: climate change and efficient management of resources, individualization of consumption and demographic development, globalization and online trading are just some of the essential challenges. The EffizienzCluster links logistics not only to economic issues, but, for the first time, also to current ecological and societal issues.

The key players are tackling related logistics management responsibilities head-on – with a clear strategy and a commitment to generating innovations that benefit competition and growth.
A Question of Logistics  // Our Mission

The organization and viability of societies are specific topics of interest for logistics. The mission and aim of EffizienzCluster LogistikRuhr is to facilitate tomorrow’s individuality – in the sense of individual goods supply, mobility, and production – using 75 percent of today’s resources in both the ecological and the economic sense. Tomorrow’s logistics will be expected to save the environment as much as to secure supply. The main focus is on the efficiency of processes and products.

Protecting the Environment and Resources.
Limited resources and vulnerable ecosystems have led to a change of mindset in business and society. The EffizienzCluster recognizes that conserving resources means driving innovation forward – achieving greater growth and competitiveness.

Maintaining the Individuality of Society.
Diversified human behavior patterns in terms of consumption and leisure, taken together with globalization characterized by borderless goods transportation, result in increasingly complex value networks. The EffizienzCluster supports companies in the development of concepts, solutions, and products that address consumers’ demands for goods and, accordingly, the demands of tomorrow’s logistics.

Securing Supply within Urban Systems.
The trend toward urbanization is increasing, due part to demographic changes. More and more goods must make their way to their destinations using an infrastructure that is already constrained within urban areas and inner cities. The EffizienzCluster is developing solutions to enable flexible, cooperative, and resource-efficient supply to people and companies in urban systems.
Scientific and business communities are working on an array of logistics-related topics of the future, within seven key areas. These key issues provide the framework for all projects and proposals that support the aims of the EffizienzCluster.

**Adaptable Logistics Systems.** In terms of flexibility and dynamics, the logistics systems of tomorrow need to exceed the current level of flexibility. Autonomous technologies are the future: goods will automatically get themselves to their destinations. To achieve this, integrated concepts and intelligent products are being developed.

**Transportation Management.** Overloaded transportation infrastructure has led to a decline in the reliability of transportation networks. Tailor-made software systems and service-oriented tools will provide solutions for the development of innovative transportation concepts and for the optimization of transportation management.

**Logistics-as-a-Service.** Flexible and individualized logistics processes require innovative, tailor-made IT support – high-capacity, low-cost and low-effort. This area is developed alongside adaptable logistics systems.

**The Environment in Focus.** Logistics generate 14 percent of CO2 emissions worldwide. Better organization and technical innovations can help reduce emissions. The projects relating to this key issue are focused on the “green revolution” in logistics.

**Urban Supply.** By 2030, 78 percent of Europe’s population will be living in urban areas. At the same time, traffic in the inner cities will be increasingly restricted. This key issue requires research into solutions for completely new products and services in the field of intelligent supply.

**Logistics Design Competency.** Within specific research projects, the EffizienzCluster is working to achieve greater competence and higher qualification levels in logistics – fostering capabilities for innovation within companies.

**Activating Cluster Potential.** Knowledge is the foundation the future is built on: innovative and technology-driven knowledge as well as tool that facilitate efficient and sustainable control of clusters are expected to advance the competitiveness of the sector.
Facts and Figures // Summary

EffizienzCluster LogistikRuhr is the largest logistics research and development cluster within the logistics branch. It was established by the Fraunhofer-Institute for Material Flow and Logistics IML and is unique in its size, economic power and scientific capabilities.

// Over 120 companies – major corporations as well as small and medium-sized companies – in addition to 11 research and training facilities are directly involved in the cluster’s projects.

// 30 projects and 3 associated projects are being conducted in seven technical and socio-technical key issue areas.

// The cluster’s projects have a total volume of 80 million euros, with the companies involved participating with a share of approximately 40 million euros. The funding volume of associated projects totals an additional 20 million euros.

// The EffizienzCluster was a winner in the Leading-Edge Cluster competition run by the Federal Ministry of Education and Research. The projects chosen through the competition have been awarded funding for up to five years, from 2010 to 2015.

// EffizienzCluster Management GmbH acts as the cluster’s neutral coordination hub. Management of the cluster is the responsibility of the Initiativkreis Ruhr, the Fraunhofer Society, and agiplan GmbH. Additionally, the Dortmund Economic Development Agency, last mile logistics network, and EffizienzCluster Logistik e.V. support the cluster management, which also receives funding from the Federal State of North-Rhine Westphalia.

// It is envisaged that during the course of the projects, 100 products and patents will be developed with a potential market value of over 2 billion euros and, at the same time, over 4,000 professional positions will be created.