

Regional Development:

Qualification measure as an instrument of regional development - focussing the logistics field in the Metropolitan Region of Hamburg

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Abstract:

As the EU expands, the Baltic Sea Region (BSR) becomes more important for Germany's economy. An increasing number of logistics companies are establishing new economic relations with Baltic countries. This development is accompanied with new challenges and organizational changes. Many logistics companies have to implement organizational changes. Therefore the requirements for specialists and executives in the logistics field are both rising and changing. For the accomplishment of the new tasks, qualifications are often demanded from employees who often exceed their individual knowledge and experiences. The increasing need for qualified personnel in logistics can only be covered by suitable qualification measures. Therefore, enterprises must identify their qualification needs as early as possible and reinforce their educational measures. But major results show that in general, although logistics companies have realized the changes in field of activities and responsibilities as well as in demand on further education, they still do not take them into account in their personnel planning. That's why Hamburg's regional development agencies have started regional development projects to support Hamburg's logistics companies in covering their need for qualified employees. The purpose of this paper is to demonstrate the future development and need for qualification measures in the field of logistics. It is also described and analysed specific regional projects that promote qualification and employment in the field of logistics in the Metropolitan Region of Hamburg: The educational project "Logistics 50+", awarded by the German Federal Ministry of Labour and Social Affairs, aims to reintegrate unemployed people (blue- and white-collar workers, elder than 50 years) into the working life of the logistics field. Another example for successful regional development is the development of a modular concept of Hamburg's centre of further education, called "Fortbildungszentrum Hafen Hamburg e.V.". Together with political and research institutions a modular training conception was created as an answer to the ongoing qualification need of co-workers.

Keywords:

Logistics, Regional Economics, Regional Development, Education, Project logistics 50+, Fortbildungszentrum Hafen Hamburg (FZH), Metropolitan Region of Hamburg, Qualification, Need for Specialists and Managers, Wachstumsinitiative Süderelbe, Logistics Initiative Hamburg

1 Introduction

Since the expansion of the EU in 2004 the Baltic Sea Region (BSR) has become one of the most dynamic regions in the European Union (EU). While the Baltic Sea has been situated at the border of Europe for a long time, it has only recently been identified as a sea route connecting the markets of Scandinavia and Middle- and Eastern Europe. The Baltic countries Latvia, Lithuania and Estonia which have GDP growth rates of more than 10% are of special interest to German logistics companies in term of the building-up of new economic relations.

Economic recovery is offering new business opportunities for logistics service providers as well as for manufacturing and trading companies. Due to the increasing complexity of processes most logistics companies have to align with others in supply chains for the flow of goods and commodities. Not only optimization of several functional areas, but the consideration of the whole logistics chain becomes important. This offers new opportunities to logistics companies but it is also connected with new challenges. Many logistics companies now have to implement organizational changes.

The requirements for specialists and executives in the logistics field are both changing and rising. The consequences are increased job specialisation and division of work, which is causing changes in job profiles. For the accomplishment of these new tasks, qualifications are demanded from employees that often exceed their individual knowledge and experiences. If companies want to stay competitive in the medium to long run they have to eliminate and prevent existing deficits in qualification with the help of qualification measures.

The purpose of this paper is to show the future development and need of qualification measures in the field of logistics and to describe and to analyse specific regional projects that promote employment in the field of logistics in the Metropolitan Region of Hamburg. In addition, the factors influencing the development of employment and the reasons for changes in job profiles will be compiled. The consequences for requirements of qualifications for specialists and executive employees in the logistics field will be demonstrated. In order to achieve the goal, some empirical findings of the HSL study are first presented. Regional educational projects that underline the presented empirical results will be described. Finally, general recommendations will be given for qualification measures as an instrument for regional development in the logistics sector. Regarding the experiences in Germany, the presented results provide a basis for the logistics market in Estonia to focus on further education and educational projects, as an integral part of regional development activities.

2 Influencing factors for logistics and the role of the employee

The German logistics sector is at present embossed by strong dynamics. It also shows a high potential for growth. By turnover, logistics, with a current market volume of 170 billion Euros, is the second largest industrial branch after the automobile industry. With about 2.48 million employees it belongs to the biggest industrial employers and plays a major employment role (Klaus, Kille 2006).

The following figure (Fig. 1) summarizes the current situation of employment in the German logistics market.

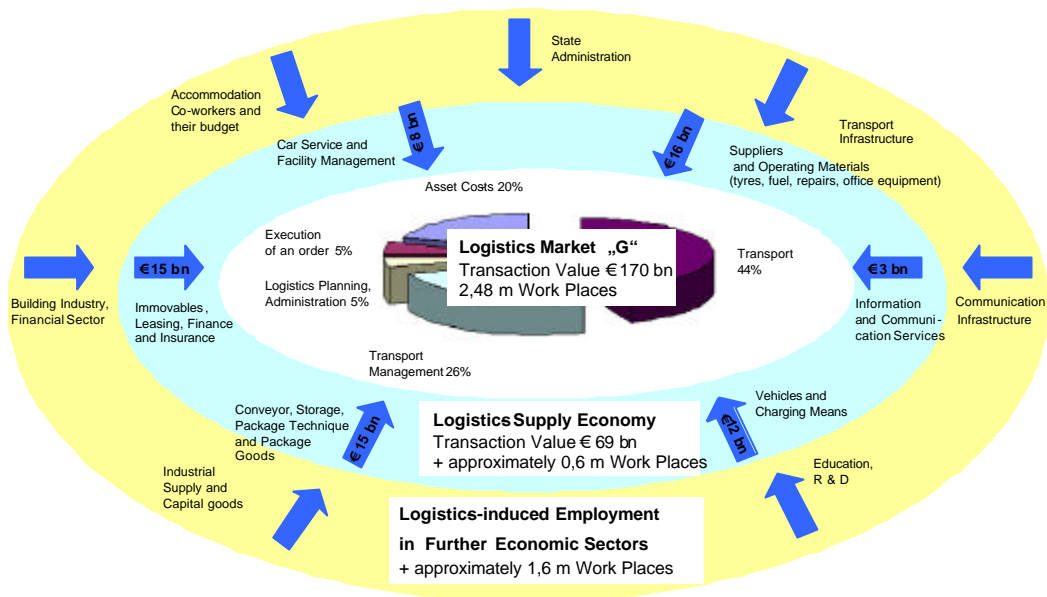


Fig. 1: The German Logistics Sector
Source: Klaus, Kille (2006)

The logistics field is influenced by ongoing trends like individual and heterogeneous customer demands, technological innovations and strong competitions. Besides increasing globalisation, rising complexity is another important influencing factor (Bowersox, Closs, Cooper 2002). It is related to the numerous, the variety of business processes in the supply chain, as well as to the number of interacting partners.

The Supply Chain is driven by internal and external drivers. The internal drivers are mainly the managerial decisions and the tendency of organisational systems to create intricacy. The external drivers are several factors, including uncertain individual and heterogeneous customer demands, global procurement and distribution, technological innovations and high dynamics in today's logistics market (Wilding, 1998). They directly lead to a great number of different customer orders in terms of quality, quantity, variety and time. Very often, it is difficult for supply chains partners to fulfil such a broad range of different requirements, because they cannot resort back to infinite competencies and capabilities. To cope with this problem they tend to extend their supply chain and to integrate additional actors (Adam, Johannville 1998; Dooley, Ven 1999).

As a consequence, the number of managed business relations and business processes increases, as well as the number of management interfaces and systems. This leads to a high degree of complexity for all the involved partners (Vachon, Klassen 2005). Aside from increasing complexity in structures and processes of manufacturers, the rest of supply chain is also affected. Because of the direct link between the efficiency and the complexity of a supply chain, complexity management has become one of the major challenges of sustainable business management (cp. Fig. 2).

In addition, market conditions have changed. Competition among enterprises has evolved to become competition among supply chains. The efficiency of a single

supply chain or a whole supply network is becoming more relevant for success within this environment. Companies have to work more closely with others in the supply chain.

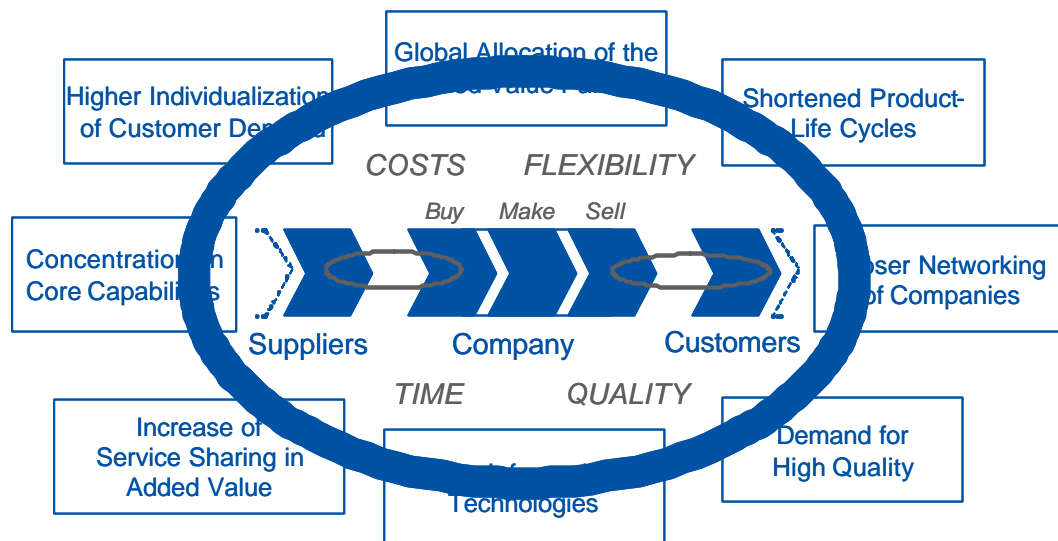


Fig. 2: Market and environment influence the logistics sector
Source: Own illustration

Companies, who have always developed, produced and distributed products independently, suddenly become part of globally distributed supply chains. Because of the focus on core competencies, human resource management has gained in importance. Depending on the company and the specialization of his scope of duties, the human resources employee takes on a determining key role. He/she exerts a major influence on the company's competitiveness with his/her knowledge (Heizer, Render 2004).

Many logistics companies have had to make organizational changes during the last years, in order to make the grade of the new global requirements in the job market. As a consequence, the requirements for specialists and executives in the logistics field are changing and rising (Bieber 2004).

3 Development in the Metropolitan Region of Hamburg

3.1 Development of economy

In the following paragraphs the development of economy and employment in the field of logistics will be described through an example of the Metropolitan Region of Hamburg, one of the most dynamic regions in Germany (SCI 2003).

The Metropolitan Region of Hamburg comprises the city of Hamburg, eight administrative districts of the adjacent state of Lower Saxony to the south as well as six administrative districts of Schleswig-Holstein to the north. The Southern Metropolitan Region of Hamburg covers a surface of about 4,588 km² and has a population of 2,357,370 (in 2005) inhabitants with a density of 514 inhabitants/km² (in 2005). (<http://www.metropolregion.hamburg.de>).

The Metropolitan Region of Hamburg plays a very significant role in the German economy regarding the service sector, manufacturing and industry as well as education. With a GDP of 79.96 billion the region's contribution to the German GDP is over 50% higher than the average. Around 100,000 companies and businessmen are currently registered with the Hamburg Chamber of Commerce. Despite the dominance of services, Hamburg is still a leading industrial location. More than 10,000 Hamburg firms from trade and industry, transport, banking, insurance and other services have direct business relationships with businesses abroad.

The Baltic Sea Region is of special interest regarding business relations for companies of the Metropolitan Region of Hamburg. There are several reasons for this:

- the geographical position
- the economic dynamics of the Baltic States
- the additional impulse caused by the expansion of the EU
- the cost-effective transport facilities crossing the Baltic Sea

Due to the fact that Northern Europe - especially the Baltic Sea Region - is one of Europe's most dynamic economic regions, this attractive market with huge purchasing power is very important for the Metropolitan Region. Whether national or continental, on the ocean or on roads, through the air or over waters – all kinds of logistics connections can be found there. Hamburg is also a hub for long-distance transport to the Eastern part of the Baltic Sea Region, including Estonia, Lithuania and Poland.

3.2 Development of employment

In a study ordered by the Hamburg Port Authority it is shown that the number of jobs which directly depend on the Port of Hamburg has increased between 2004 and 2005. According to the study, the Metropolitan Region of Hamburg was the location for more than 156,000 jobs in the Port in 2005, which corresponds to 12.7% of all jobs in Hamburg (Planco 2006). This dynamic is set to continue in the following years.

First approaches pointing out job creating effects of regional development measures have shown that with the help of regional development projects, up to 14,150 new jobs may be added within the logistics sector of the Metropolitan Region of Hamburg (Kersten, Böger, Schröder 2007). This can only be realized with the help and support of regional development activities and logistics-related projects. These projects will cover for example, settlement of logistics companies, a targeted promotion of logistics technologies and innovations as well as intensified qualification measures and education. The number of potential new jobs underlines the importance of educational measures as an instrument of regional development.

According to estimations the nation wide need for junior staff in the field of operational logistics will amount to 100,000, middle management up to 10,000 and upper management up to 1,000 executives (Regionomica 2005).

This trend is confirmed by first empirical findings of a study, which has been conducted by the HSL Hamburg School of Logistics in co-operation with a Human-Resources Consultancy in Logistics. The survey contains questions about the development of requirements of qualifications and the need of specialists and executive employees in the logistics sector. Producing companies as well as logistics service providers in the Metropolitan Region of Hamburg have been contacted. The goal is to track the past and future development of the need for specialist and executive employees in logistics (Kersten, Schröder 2007).

Figure 3 shows, that the need for qualified specialists and executive employees in logistics is much bigger than the need for industrial workers and general executive employees.

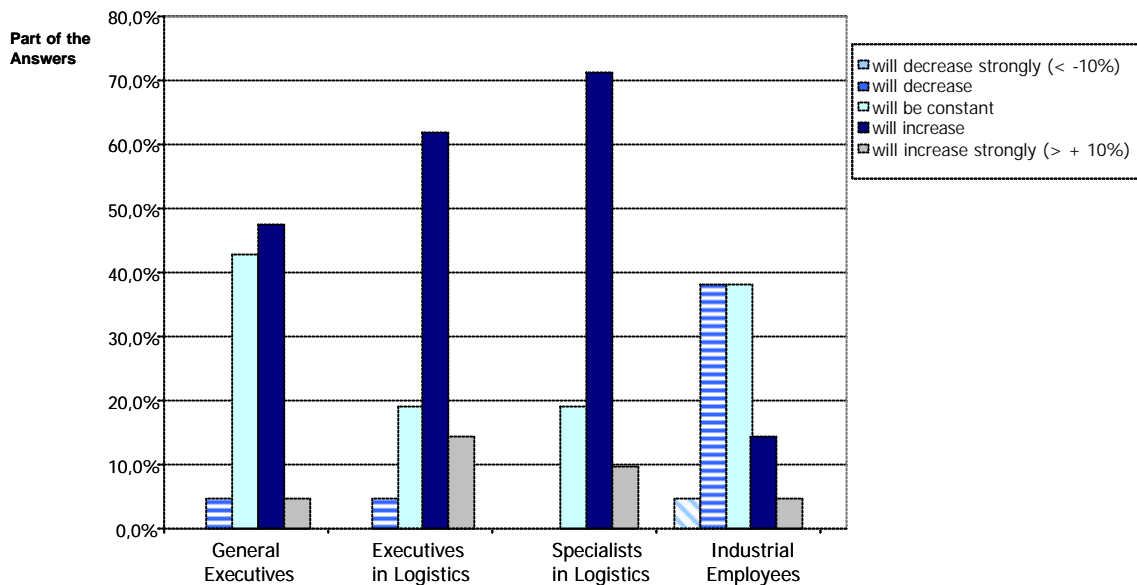


Fig. 3: The development in needs for senior management and other workers in the Metropolitan Region of Hamburg

Source: Kersten, Schröder (2007)

The intensified internationalization as well as growth of turnover and the establishment of new business fields is mentioned by the producing companies and logistics service providers as reasons for the development of needs. The age-related retirement of specialists and executives is rarely recognized as background for the development (Kersten, Schröder 2007). Despite the newest population forecast, provided by the Federal Statistical Office, stating that half of the German's population will be older than 48 in 2050. This represents significant rise in the average age of employees, which is only rarely taken into account by the further education measures of production and service enterprise (Koper 2006).

4 Changes in qualification and requirements

The afore-mentioned changes in market and competition change the industry and the tasks of co-workers. As a result, some qualification requirements developed more than others in the last three years.

Time-critical procedures, additional computing, as well as new and flexible working time models increase the complexity for all employees involved. The number and weight of decisions made during day-to-day business is increasing and requiring the employee to work more and to accept larger time flexibility (Kuwon 2002). The consequences are job specialisation and division of work. These cause changes in job profiles. Executive employees in upper management have to transfer more decision authority to employees on-site and executive employees in middle and upper management have to increasingly decide with their own responsibility. For the accomplishment of these new tasks, qualifications are demanded from employees who often exceed their individual knowledge and experiences.

Among the most important requirements for specials and executives in logistics there is, for example, beside the practical experiences and the understanding of processes mainly the soft skills. Logistics Companies in Hamburg mentioned that having social competence is one of the most important requirements for employees in the logistics field. In the context of cross-sectional tasks and work on the project, frequently changing temporary teams will be created consisting of co-workers. Solution must be compiled together and communication skills are tested.

Also, the leadership ability as well as the ability to communicate with business partners and customers became very important. However, theoretical logistics knowledge and knowledge of management theories are still important but less than soft skills.

Co-operation by enterprises in international Supply chains presupposes the control of internet technologies. Business data are exchanged over internet, intranet and extranet with cost and time saving. If further information is needed, the co-worker must be able to obtain information form the internet and manage the data efficiently.

Figure 4 shows the current requirements for specials and executives in the logistics field in Hamburg (Kersten, Schröder 2007).

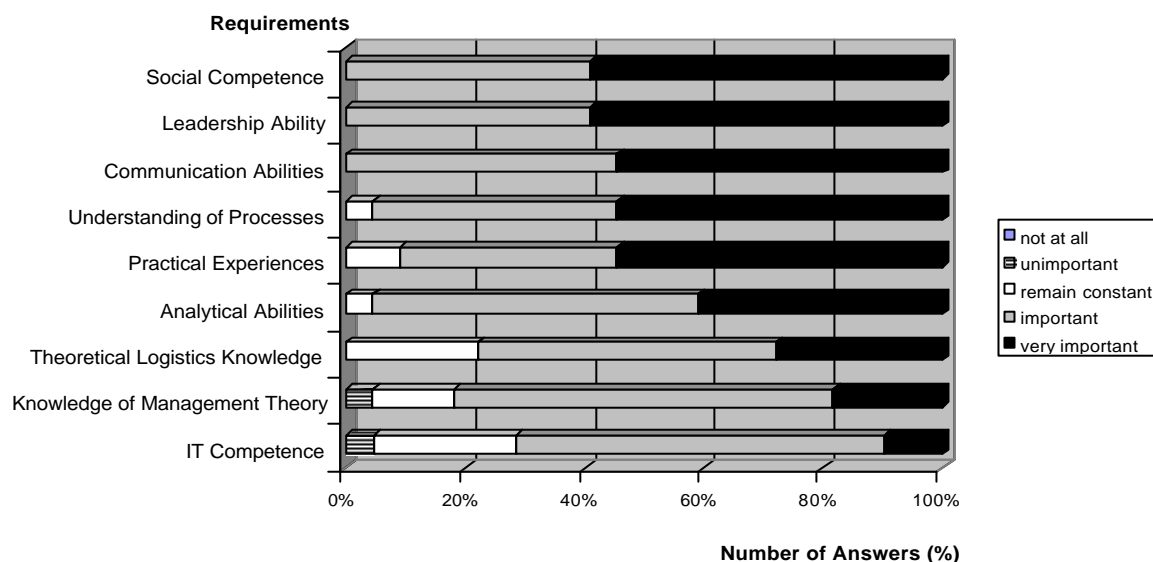


Fig. 4: Current requirements for specials and executives
Source: Kersten, Schröder (2007)

The future requirements of the knowledge of a logistics senior manager do not remain unaffected by the changed basic conditions. It is important to note that the relevance of specialized knowledge changes over time.

Although further education in the logistics industry clearly presents important possibility of working against qualification deficits and on a long-term basis can cover the need of employees, enterprises many times are slowly to develop further education strategies slowly. Less than half of the asked enterprises supplemented their further education budget in the years 2000-2005 (Kersten, Schröder 2007).

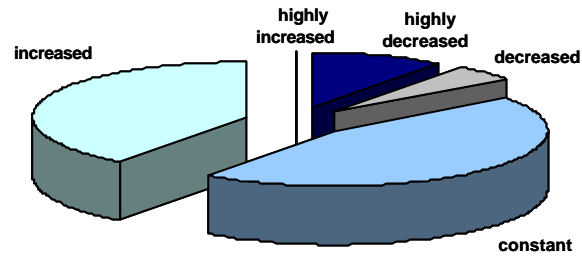


Fig. 5: Development of the Expenditures for Further Education
Source: Kersten, Schröder (2007)

Figure 5 shows that the development of the education budget is still in conflict with the actual identified demand for further education!

If companies want to stay competitive for a longer period they have to eliminate and prevent existing deficits in qualification with the help of qualification measures. Already today a lack of qualified and well trained employees is in 80 % of the cases the reason for the bottleneck in the German trade and service industries. This deficit evolves into an incremental brake, which can only be released through targeted education and training.

5 Regional Educational Development in the Field of Logistics

5.1 Hamburg's Regional Development Agencies

There are several different kinds of regional development organisations in Hamburg. The following paragraph will describe two of them. These two are promoting the regional development of the Metropolitan Region of Hamburg. They act in the fields of spatial planning, logistics and ICT for the benefit of the regional business sector.

5.1.1 The Wachstumsinitiative Süderelbe AG

The Wachstumsinitiative Süderelbe AG (abbrev. SAG) was founded in December 2004 to fill an increased need for regional cooperation between Hamburg and its surrounding region, especially with regard to the growing competition among metropolises worldwide. The SAG cooperates with its partners in the form of a "Public-Private Partnership" (PPP) in which the participation of the business sector is of foremost importance. It represents a new type of regional development agency.

With its cluster-oriented strategy the SAG aims to achieve sustainable economic growth in the Southern Metropolitan Region of Hamburg. It plans to form networks and accomplish project-oriented cooperation between regional companies, service providers, scientific institutions and authorities, thereby crossing traditional borderlines of municipalities, districts and federal states. The SAG was recently awarded the national "kommKoop Award" by the Federal Ministry of Transport, Building and Urban Development in 2006, for this innovative approach.

With just two years of experience, the SAG has already 80 of its shareholders predominantly form private businesses in the region. Other shareholders are banks, savings banks and regional authorities. This structure ensures that regional interests

are incorporated. At the same time it represents a particular form of public-private partnership which emphasises involvement of the cooperation with the private business sector.

The SAG is committed to bringing about economic growth, added value and employment for the good of a sustainable regional development and an improved competitiveness for the Metropolitan Region of Hamburg.

Figure 6 shows the cluster management of the SAG.

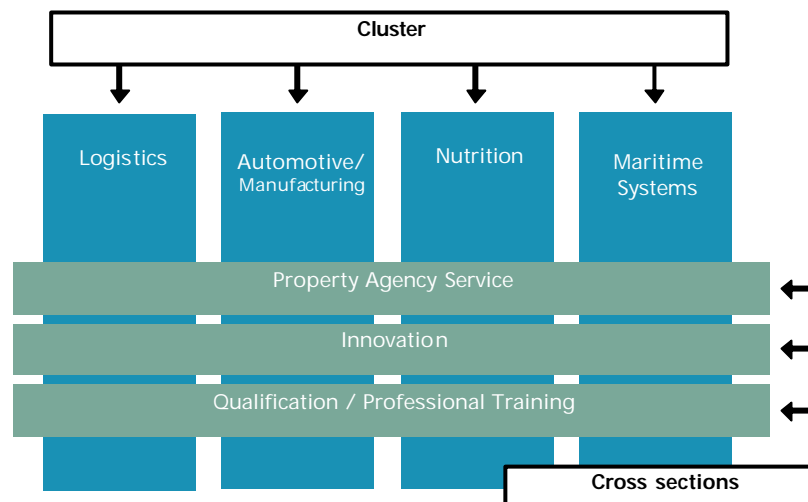


Fig. 6: The cluster management of the SAG
Source: Wachstumsinitiative Süderelbe AG (2007)

The 15 employees of the SAG work in different regional development projects, like the EU project, called LogOn Baltic – Developing Regions through Spatial Planning and Logistics & ICT competence. Or they try to promote projects for the development of logistics parks or a centre of competence in logistics. Another important project of the SAG is called “Logistics 50+, which is described in chapter 5.2.1.

5.1.2 The Logistics Initiative Hamburg

To further expand Hamburg’s role as a leading hub of logistics in Northern Europe, the Hamburg State Ministry for Economic and Labour Affairs and the Hamburg Economy have started the Logistics Initiative in 2006.

The Initiative’s aim is to form a network within the business, academic and political communities ranging from the exchange of information to long term cooperation. They promote general recognition of the Metropolitan Region of Hamburg as a prime location of logistics.

By organizing workshops, research groups and events on current issues in the logistics field they build a network of logistics companies in the Metropolitan Region of Hamburg. The organisation acts as a channel for companies' ideas, demands and interests. They also offer a comprehensive consulting service and communicate with authorities and institutions. Through their work, location conditions for logistics activities and regional development projects in the Metropolitan Region of Hamburg are being further developed.

Like the SAG the Logistics Initiative is organised around a central Cluster Management body (cp. Fig. 7).

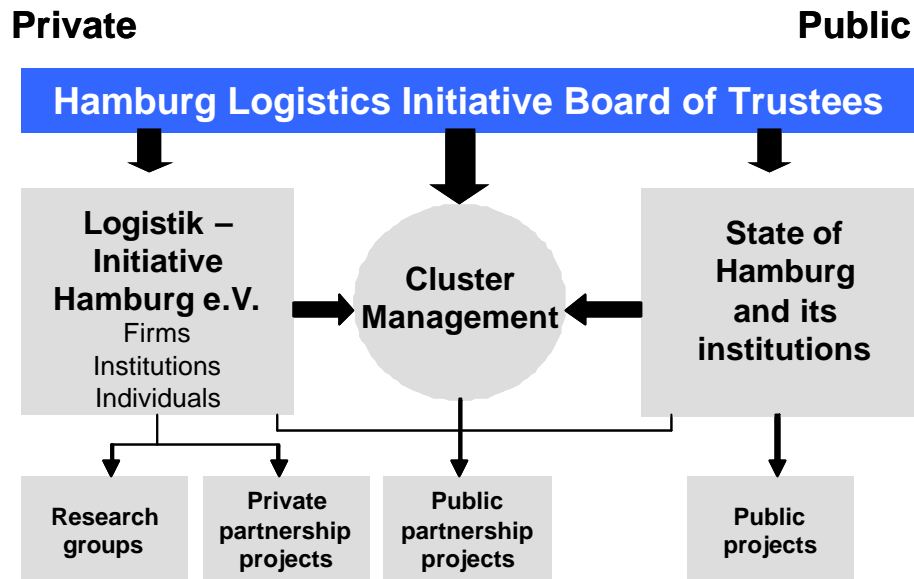


Fig. 7: The cluster management of the Logistics Initiative Hamburg
Source: Logistics Initiative Hamburg (2007)

Projects, offered by the Logistics Initiative are e.g. Learning Logistics, Logistics 50+ or Logistics: Challenges. The result of these projects is more incentives for more growth and more employment.

5.2 Regional Development Measures

In the first chapters, the mentioned need for qualified employees which is reinforced by the demographical change has promoted Hamburg's regional development agencies to start regional projects which are used for regional development of educational measures in the Metropolitan Region of Hamburg. One example is a project called "Logistics 50+ - Performance of the Elderly". Together with 5 other partners the Wachstumsinitiative Süderelbe AG promotes employment in the field of logistics, especially for people above 50 years of age.

Another example for successful and innovative regional development measures is the modular concept of further education developed by the "Fortbildungszentrum Hafen Hamburg e.V. (FZH) in cooperation with Hamburg's political and research institutions.

5.2.1 Logistics 50+

One example of "best practices" is the educational project called "Logistics 50+ - performance of the Elderly". The successful project has started in 2005 and is awarded by the German Federal Ministry of Labour and Social Affairs. The aim of the project is to reintegrate unemployed people (blue and white -collar workers, older than 50 years) into the working life of the logistics field in the Metropolitan Region of Hamburg through different approaches. At the same time, the project supports logistics companies actively in searching for qualified employees. Another aim is to sensitise logistics companies to demographical changes in the job market and to spark interest in older employees among companies (<http://www.50plus-logistik.info>).

The project team consists of six partners from educational institutions and regional development agencies. They organize events, presentations and workshops about different topics, e.g. about the demographical development, about the employability till 67 or about legal conditions for employees over 50. The strengths and advantages of older blue- and white-collar workers in the logistics branch are analyzed and explained. Competences, experiences and qualifications of people over 50 are promoted. Together with logistics experts these topics are discussed and presented. In their work the project team is supported by different associations, logistics companies and societies.

To achieve the re-integration of unemployed persons over 50, the qualifications of these people are first tested with the help of a selection procedure. After this, the members of the project teams decide if the participant can be placed directly in a company or if he needs educational measures. Participating companies have the possibility to describe and to decide their individual need for employees in advance. After the qualification process, the companies assure themselves of the favoured candidates during a four-week work experience. If they decide to employ the candidate in a regular employment relationship, they are financially supported by the employment centre of Hamburg-Harburg, the “Arbeitsgemeinschaft Arbeit und Grundsicherung (ARGE)” (Glaser, Schröder 2006).

With the help of these activities, however, the awareness of logistics companies is broadened. They must consequently see that the need for employees have to also be covered by reintegrating people over 50. Currently, more than 640 people have been tested by the selection procedures and about 40 unemployed persons have been placed in a new job.

5.2.2 Hamburg’s Regional Centre of Further Education (FZH)

Hamburg’s centre of further education, called “Fortbildungszentrum Hafen Hamburg e.V.” (FZH) aims to educate employees in a targeted and precise way with the help of a modular concept. Therefore, they offer a wide assortment of logistics training courses, which constantly orient themselves to changing market requirements. The modular system was developed by the “Koordinationsstelle Weiterbildung und Beschäftigung e.V. (KWB), the Hamburg University of Technology (TUHH) and the FZH. In co-operation with Hamburg’s logistics companies, they have developed a system for qualifying employees in commercial and technical jobs. The project is supported by the European Social Fund (<http://www.fzh.de>).

The concept of the FZH follows this operating process: receipt of goods, in-house transport, storage, order-picking and dispatch. Accordingly, they illustrate the basic modules of the education system. In addition, some further modules, like dangerous cargo and customs are offered. Altogether, they build a self-contained working area. (cp. Fig. 8)

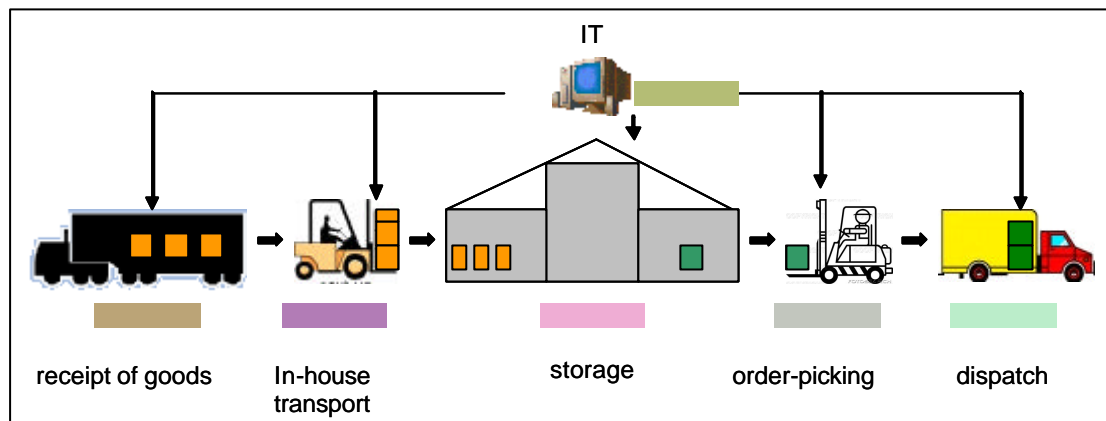


Fig. 8: Development of the Expenditures for Further Education
Source: Scharringhausen, H., Giese, J. (2006), p.17.

The modular concept offers possibilities of adaptations to industry-specific, operational and personal interests and guarantees custom-made further training. Co-operation with enterprises, authorities and professional associations guarantees that innovations and practical expertise are constantly integrated into the content of seminar. Co-workers also profit. The sum of different modules makes it possible to join in different examinations of the Chamber of Commerce like: Specialist for Stock Management, Warehouseman, Specialist in Warehouse Logistics or those that lead to the certificate of the ELA European Logistics Association: Supervisory/Operational-Level (EJLog)

The effectiveness of advanced training for the participant and the enterprise is essential. Due to temporal flexibility, the modular education concept can be integrated optimally into the capacity planning of enterprises. It therefore also forms a basis for the quality management system DIN/CISO 9000 FF of an enterprise.

With the modular training concept, the FZH provides an answer to the ongoing qualification need of co-workers in the logistics field. Further training ensures the responsibility-readiness of co-workers as well as medium-term advantages over competitors. The concept allows them to develop the existing offer in a better way and create conditions for flexible adjustment to individual needs.

6 Recommendations for Further Education and Regional Development

The need for qualified personnel in the field of logistics, through the example of the Metropolitan Region of Hamburg proves that further education and qualification measures have become very important for logistics companies.

Due to the fact that in most cases, current in-house personnel resources fulfil the increasing demand for high qualified employees only partially, logistics companies must identify their qualification needs as early as possible.

Companies have to reinforce their educational measures to avoid bottlenecks in day-to-day business caused by a lack of qualified and well-trained executives.

Universities and academies have reacted and now offer appropriate logistics measures in further education for middle and upper management. Apart from comprehensive knowledge in logistics and economics, management skills are also being emphasized.

Besides contents of general logistics management, management skills should also be included in order to develop the integrated management competence of the participants.

Hamburg has responded to this challenge with the HSL Hamburg School of Logistics, a Public-Private Partnership with an appropriate conception of a MBA and Professional Program in co-operation with executive committees and managing directors of numerous enterprises (Hamburg School of Logistics 2007). Certain success factors are decisive for an efficient and successful further education in logistics (cp. Figure 9)

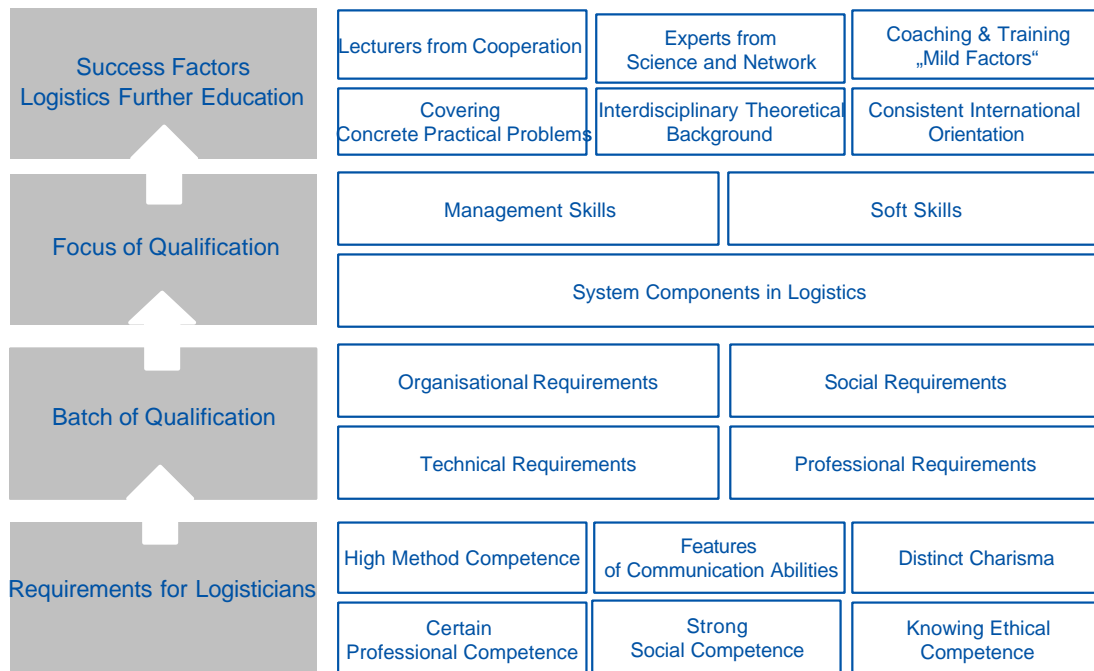


Fig. 9: Requirement for Logistics Education
Source: Own illustration

For this, among other things, the integration of experts from science is integral in the further education program. Practice-oriented training in the form of group work and case studies allow co-workers to apply their acquired specialized knowledge to a real situation.

Logistics companies, however, should not take only universities and academies into account, when offering further education to their employees. They should also take part in the regional educational projects offered by development agencies.

7 SUMMARY

Modern logistics is characterized by rapid and very significant changes. These changes lead to the increasing importance of human resources. Globalisation, shorter product life cycles and mass customization are only some keywords which describe the logistics field. These lead to a change general conditions in the industry and force companies to become part of globally distributed supply chains. Many logistics companies are now implementing organizational changes.

As a consequence, the requirements for specialists and executives in the logistics field are changing and rising. Fields of activities and responsibilities are changing, because time-critical procedures as well as new and flexible working time models increase the complexity for all employees involved. New requirements in qualification can be derived from changing competence profiles. Employees often don't have the required knowledge and experiences.

The increasing need for qualified personnel can only be covered by suitable qualification measures. As a survey by the Hamburg School of Logistics (HSL) shows, the need for qualified specialists and executive employees in the Metropolitan Region of Hamburg is much direr than the need for industrial workers and general executive employees. Therefore, enterprises must identify their qualification needs as early as possible and then reinforce their educational measures.

Major results show that, although logistics companies have realized the changes in fields of activity, responsibilities, and the subsequent new demands on further education, they still do not take them into account when doing their personnel planning. With the help of regional development measures, however, especially in terms of educational projects, the awareness of logistics companies is broadening. They must constantly see the need to include qualification measures in their strategic planning if they aim to stay competitive.

This is the reason why Hamburg's regional development agencies have started projects which are used for regional development of educational measures in the Metropolitan Region of Hamburg. The project "Logistics 50+" and the modular concept of the FZH are only two successful examples of how regional development entities can help to fill the need for qualified employees. Numerous examples of successful enterprises show that investments in qualifications ultimately pay for themselves.

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