The SOLOS Model

Competence profiles and competence requirements in logistics – Brochure 3

Contents

Introduction

When attempting to realise qualification programmes that focus on concrete fields of action in logistics, it is of importance to orientate towards real roles and job profiles that exist in logistical processes. This applies particularly to in-company qualifications that are understood and organised as **learning within the working process**.

The fact that the majority of qualification programmes focus on the development of competencies is the result of a broad debate about qualification requirements that has taken place in educational institutions, in enterprises and academic circles. Learning competence (meaning learning to be competent) is a challenge which must be accepted by educational institutions as well as enterprises. This challenge touches upon the very self-conception and effectiveness of all actors involved in qualification. Being competent and exhibiting this is a question that is tangent to one's own personality. Considerations regarding the necessity of such new learning models have been elaborated upon in the previous PROLOG brochures 1 (PROLOG results) and 2 (Learning causes and learning guidance in the SOLOS model).

The competence approach is the foundation of the competence profiles for specialists and middle management in logistics. The SOLOS model (see PROLOG brochure 1) is based on this description as it orientates towards logisti-cal processes within enterprises and the according competence requirements. One of the responses at the European level is the European Qualification Framework (EQF)[1] which was passed in the European Parliament and the Council of Ministers in April 2008. The EQF serves as a reference tool for the development of national qualification frameworks in the member states.

Results of competence research, classified amongst others in the form of competence classes, are an important approach to the understanding and meaning of competence in organisational routines and hence to competence learning in the form of in-company qualification measures.[2]

The question of what competencies are required in logistical work was also posed in a perennial study undertaken by the German Federal Institute for Vocational Education and Training. This study was conducted in and in collaboration with enterprises which dealt in logistical fields of action. The results of this study[3] were also used in order to delineate the requirements for the competence profiles.

Finally, the fields of activity of logistical work[4] were integrated into the description standard as the level on which the competence profiles manifest themselves.
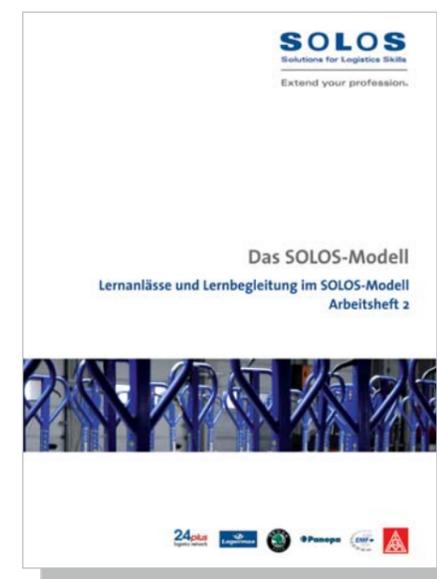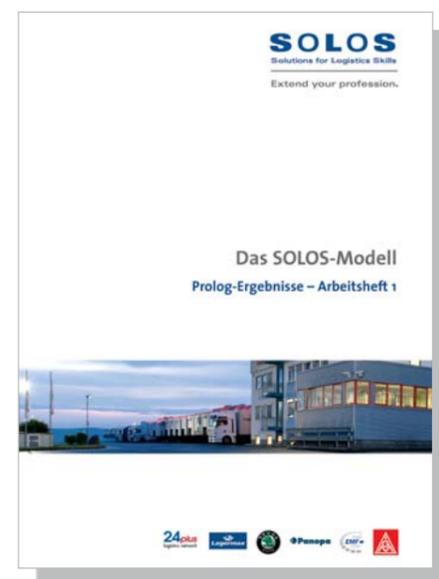
[1] See http://ec.europa.eu/education/policies/educ/edf/eqf/eqfo8_de.pdf
[2] John Erpenbeck, Handbuch Kompetenzmessung (Manual for Measuring Competencies), Stuttgart 2003

[3] Vgl. http://www.bibb.de/de/wlk8081.htm
[4] s. Arbeitsheft 1 Das SOLOS-Modell, S. 7

A) Standards of description for competence profiles in logistics

The following section aims at depicting the process towards the development of a description standard that is capable of concretely highlighting which competence characteristics are to be connected in order to build a given competence profile. The frame of reference always remains that of logistical work.

Subsequently, three exemplary competence profiles will be described: dispatcher, warehouse supervisor and foreman / woman. These competence profiles were chosen based on the notion broadly shared in many enterprises that it is particularly the functions of specialists and middle management that play a decisive role as the actors who implement strategical considerations in the daily work whilst ensuring immanent service as well as a high degree of flexibility and quality. The description of competence profiles is structured in a way that allows the application to other job profiles in logistics.

During the analysis and implementation of the results, we acted on the assumption that specialist knowledge and the according job-specific skills can and have to correspond closely with a competence-oriented qualification. We view competence learning as learning in the working process; in this case, the often reported eye-opener that occurs in this form of learning is mostly caused through a new understanding of working processes and their conditions.

In the description of requirements, we oriented towards the reference tools described in the introduction:

- the European Qualification Framework (EQF);
- working results regarding the design of qualification for logistical work;
- the description of competence classes; and
- the four dimensions of the fields of activity in logistical work.

1. European Qualification Framework (EQF)

The EQF distinguishes three descriptors; these are knowledge (theoretic and factual knowledge), skills (cognitive skills = application of logical, intuitive and creative thinking and practical skills = dexterity and application of methods, material, tools and instruments) and competence (in the sense of taking on responsibility and independence). Knowledge and skills are the precondition for the development of competence. Contrary to prior conviction, the focus is placed on the result of the qualification, the co-called learning outcome. This mean that it is not primarily the formal education / qualification programmes undertaken which are of importance but what qualifications an individual actually possesses. Competence as such is understood as a combination of qualifications.

"A European Qualification Framework that classifies learning outcomes as competences aims at enabling the typification of levels of occupations requirements and competence profiles independent of education / qualification certificates. Employer and employee can transparently describe and depict skills sought after or available – more precisely than possible through mere formal certificates and periods of practical experience. A competence-oriented frame of reference should enable a Europe-wide depiction and interrelation of qualification programmes and offers independent of certificates. Learning outcomes (including those acquired informally) should be accountable across qualifications and education areas, learning processes can be organised independent of places of learning and across borders.

Such a framework is of specific interest to those employees who aim at advancing, furthering or repositioning their career domestically and EU-wide. The EQF also offers the possibility to appropriately consider and acknowledge existing competencies that go beyond the formally certified ones, e.g. in the case of vocationally qualified individuals with complex professional experience. The EQF could lead to a re-assessment /acknowledgment of experience particularly of formally un- and semi-skilled workers." [5]

[5] Fachlicher Prüfbericht zu den Grundbegriffen und Deskriptoren des Entwurfs für einen Europäischen Qualifikationsrahmen, (Specialist audit report regarding the basic concepts and descriptors of the draft for a European Qualification Framework), German Federal Institute for Vocational Education and Training, December 2005
http://www.bibb.de/de/25717.htm#jump2

Relating the competence profiles to the competence levels of the EQF can be an initial approach; the EQF represents an instrument on the European level which enables the inclusion of the actual qualifications of actors, not only the formal certificates (which are difficult to compare at a European level anyway). In the context of the European debate surrounding the issue of qualification, this is of major importance.

The EQF uses the following definitions:

"Learning outcomes" –
information regarding what a learner knows, understands and is able to do after concluding a learning process. These are defined as knowledge, skills and competencies;

"Knowledge" –
the outcome of processing information through learning. Knowledge refers to the entirety of facts, principles, theories and practice in a working or learning area. The EQF describes knowledge as theoretic or factual knowledge;

"Skills" –
the ability to apply knowledge and know-how in order to carry out tasks and solve problems. This includes cognitive skills (logical, intuitive and creative thinking) and practical skills (dexterity and the use of methods, material, tools and instruments); and

"Competence" –
the evident ability to utilise knowledge and skills as well as personal, social and methodological abilities in working and learning situations and for the professional and / or personal development. The EQF defines competence in the sense of accepting responsibility and independence.

The EQF classification as described above is one of the approaches to the individual competence profiles and the issue of competence and the connected requirements.

2. Logistical Framework of Action

The reference to the Logistical Framework of Action for the individual competence profiles is established with the aid of the results of the previously-mentioned BIBB survey. The following areas of logistics are in the focus:

- Logistics strategy including consulting
- Logistics management
- Logistics controlling
- Logistical technology including ICT
- Operative logistics

These focus points have been related to the competence fields of
- I "Active system understanding";
- II "Specialist functions in logistics"; and
- III "Specialist and executive functions".

We refer to the concept of logistics system competence[6] which means:

- **Understanding logistics as a system**
  Actors are aware of the principles of logistics[7]
- **Understanding logistical systems**
  Actors understand individual logistical system
- **Acting competently in logistics systems**
  Actors should recognise the connections of individual systems as a whole.

This translates into the assumption that: In order to be successful, logistical work requires the understanding of the logistical system it is based upon. Expressed in a different way: An actor within a logistical system who does not understand why he does something the way he is supposed to will ultimately commit grave mistakes and not be able to make the contribution that is expected of him with regard to his responsibilities. This finding will unlikely surprise experts, however, for the debate regarding further training and qualification, it requires to be stressed repeatedly.

Naturally the extent of system understanding varies according to the breadth of tasks and responsibilities as well as the hierarchical position of an actor within the system, the depth of the understanding varies accordingly. However, in light of the required flexibility and variability of conforming with tasks in the area of logistics as a service it is of central importance that such a system understanding is developed and promoted in a sustainable manner – this has again been demonstrated by the interviews with managers of the enterprises involved.

The table relating to the "Logistical Framework of Action" in chapter B must hence be read accordingly: The foreman / woman of a well-managed enterprise will contribute by bringing in his / her factual knowledge and experience during processes of change, just as the other two described functions will. The differences result from the different areas for respectively in which the contribution is made – provided that those areas can be distinguished.

[6] Brochure 1 – The SOLOS Model and Brochure 2 – Learning causes and learning guidance in the SOLOS model

[7] See "Landesschulrat für Steiermark, Schulversuchsplan für Berufsschulen im Amtsbereich des Landesschulrates für Steiermark für den Lehrberuf Speditionslogistiker nach abgeschlossener Lehre als Speditionskaufmann", the text in italic is quoted from this paper.

3. Competence classes

The German Federal Institute for Vocational Education and Training (BIBB) suggests the use of the definition of competence by the OECD: *"A competence is defined as the ability to successfully meet complex demands in a particular context. Competent performance or effective action implies the mobilization of knowledge, cognitive and practical skills, as well as social and behaviour components such as attitudes, emotions, and values and motivations."* [8]

The aim of acquiring and applying competences is to act in a self-organised and reflected manner.[9] This is essential particularly for actors within logistics with its strong systems ties and high degree of interconnectedness.

The following competence classes (KODE competence grid) are named:

P Personal competencies
Disposition of a person to act reflexive and self-organised.[10]
The self-directed acting: this includes the competences needed in order to act reflective and self-directed such as self-assessment, the development of attitudes, motivation and personal development.

A Activity-oriented competencies
Disposition of a person to act actively and holistically in a self-organised manner.
The principles of action: These competencies are the basis for the integration of other competencies and the personal impetus of will and span the starting and sustainable implementation of actions.

M Methodical competencies
Disposition of a person to act mentally and physically independent in the solution of problems.
Actions in the physical environment: This includes all competencies used in the solution of factual and physical problems, spanning knowledge, methods and the furtherance thereof.

S Social-communicative competencies
Disposition of a person to act in a communicative, cooperative and self-organised manner.
Actions on the social environment: This spans all competencies used for communicative and cooperative acting, for dealing with groups and individuals and to act in a relationship-oriented manner.

4. Fields of action of logistical work

The inclusion of the fields of activity of logistical work in the description standard for the competence profile means the inclusion of real work and service provision in the description of competencies. This means that the approach becomes tangible in direct relation to the enterprise-specific working activities whilst at the same time allowing for the necessary bridge to the learning in the process of logistical work.
This enables locating and developing competencies in the design and carrying-out of working processes. The following fields of action can be found in individual sub-processes of logistics as well as in the entirety of service perception in logistics.

The four fields of action of logistical work
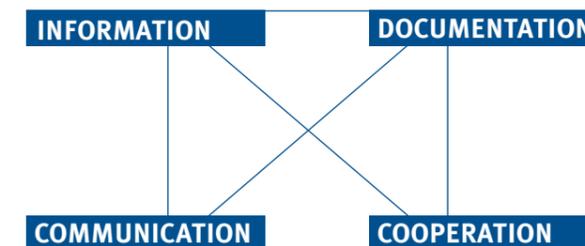
Actors can describe and reflect **what** they do and **how** they do it on the level of these four fields of action or working fields.

The fact that logistics always takes the shape of a system affects the design and implementation of logistical work. The structuring of logistical work into four fields of action helps making the actors aware of concrete tasks and their meaning in the entire process of the accomplishment of tasks.

5. Overarching profile of "logistical work"

Two groups of characteristics are therefore incorporated into the competence profiles for logistical work:

• general qualificational characteristics from the **European Qualification Framework** and the **grid of competence classes**

• characteristics directly related to logistics from the **Logistical Framework of Action and the fields of action of logistical work**.

This depiction forms an initial level of abstraction that offers an overview of the capacity of the individual characteristics and their relationship to one another.

Description standard for competence profiles for logistical work
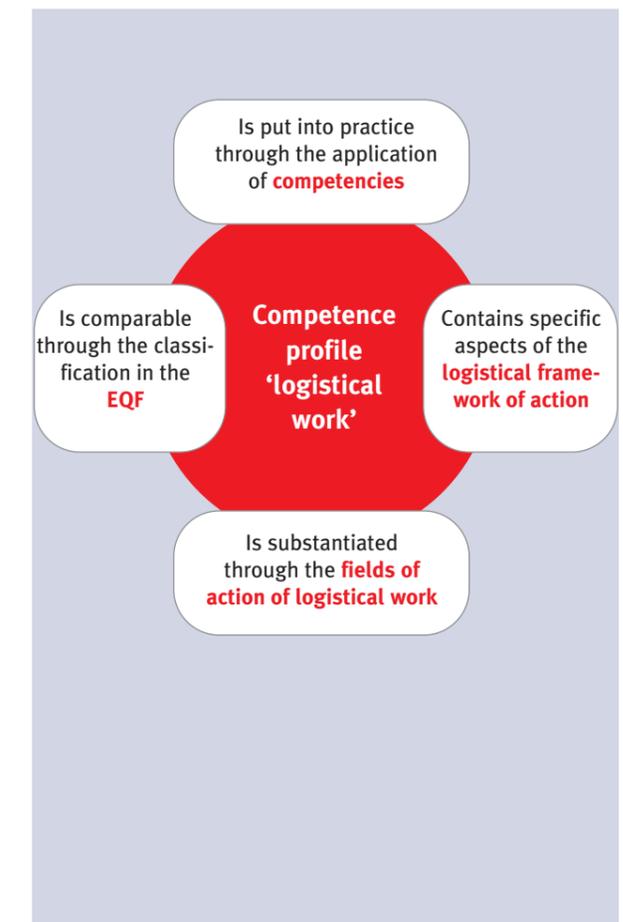
[8] Further it states: "A competence – a holistic notion – is therefore not reducible to its cognitive dimension, and thus the terms competence and skill are not synonymous." (D. S. Rychen/L. H. Salganik: A holistic model of competence (p. 41-62), in: Ibid, Key Competencies for a Successful Life and a Well-Functioning Society. Göttingen 2003, p. 43).

[9] Erpenbeck, J./ Sauer, J. (2000): Das Forschungs- und Entwicklungsprogramm „Lernkultur Kompetenzentwicklung", in: Arbeitsgemeinschaft Qualifikations-Entwicklungs-Management (Publisher): Kompetenzentwicklung 2000. Lernen im Wandel – Wandel durch Lernen. Münster, New York, 289-337.

[10] The elaborations of the competence classes are quoted from: Wiest, Bernd, Mit gezieltem Kompetenzmanagement zu mehr Servicequalität, Manuskript September 2007

Summary:
Standards of description for competence profiles in logistical work

The development of a description standard is the result of a shift from classical accumulation of knowledge towards the deepening of competencies.

This shift necessitates the question of an adaptation of content focus for the requirements that exist in relevant job and competence profiles in logistics.

According to the breadth of the qualification debate in enterprises, organisations and the scientific community, there is need for generic qualificational characteristics as well as logistic-specific ones for such a catalogue of requirements.

In our competence profiles, the generic characteristics are being represented by the competence levels of the EQF and the competence classes from the scientific field.

The logistics-specific characteristics are being represented through the Logistical Framework of Action of the BIBB as well as by the fields of action of logistical work which are information, documentation, communication and cooperation.

The link between the so-called groups of characteristics enables a description standard for competence profiles in logistics.

B) Requirements on competence characteristics, including exemplary depiction for three competence profiles

This chapter contains a detailed description of the individual competence profiles, namely those of foreman / woman, warehouse supervisor and dispatcher.

1. Foreman / woman

Competence requirements relating to the competence levels of the EQF

- Accepting responsibility for the fulfilment of working and learning tasks

- Adapting personal attitudes to varying conditions when solving problems

- Acting independently and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is to be accepted for the working and learning activities of others

Competence requirements from the Logistical Framework of Action

Requirements relating to logistics management
Competence field I – *Active system understanding*

- Abilities pertaining to the application of factual knowledge and experience to logistical processes of change
- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise colleagues about their tasks

Competence field III – *Specialist and executive functions*

- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Requirements relating to logistics technology including IT
Competence field I – *Active system understanding*

- Abilities pertaining to the appropriate handling of logistical technologies and technical logistics

Requirements relating to operative logistics
Competence field II – *Specialist functions in logistics*

- Proficiency in operative logistics, understanding of permanent inter-company material flows

Requirements relating to competence classes
On the level of competence classes, there is no differentiation between the three competence profiles which is why the four classes are only mentioned shortly here after being described in detail in chapter A3.

P	Personal competencies
A	Activity-oriented competencies
M	Methodical competencies
S	Social-communicative competencies

Requirements relating to the fields of action of logistical work
The same applies to requirements relating to the fields of action of logistical work, they apply to all three competence profiles.

The shape of the competence profile of 'foreman / woman' through logistical and qualificational aspects

Competence classes
P, A, S, F

Classification in the EQF according to competencies

Competence profile 'Foreman / woman'

Logistics management and logistics technology including IT

Fields of action of logistical work: information, documentation, communication, cooperation

2. Warehouse supervisor

Competence requirements relating to the competence levels of the EQF

- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is accepted for the assessment and improvement of the working and learning activities of others

- Leading and supervising in working and learning contexts in which unforeseeable changes can occur

- Verification and development of one's own performance and the performance of others

Competence requirements from the Logistical Framework of Action

Requirements relating to logistics management
Competence field I – *Active system understanding*

- Abilities pertaining to subject-oriented communication with internal and external customers in order to work on interface barriers
- Abilities pertaining to solving social conflicts at customer interfaces which represent barriers appropriate to function
- Abilities pertaining to the application of one's subject knowledge and experience to logistical processes of change
- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise and qualify colleagues about / in their tasks

Competence field III – *Specialist and executive functions*

- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Requirements relating to logistics controlling
Competence field III – *Specialist and executive functions*

- Proficiency in functions of business processes of logistical service providers (project management, controlling, operative logistics)

Requirements relating to logistics technology including IT
Competence field I – *Active system understanding*

- Abilities pertaining to the appropriate handling of logistical technologies and technical logistics

Requirements relating to operative logistics
Competence field II – *Specialist functions in logistics*

- Proficiency in operative logistics, understanding of permanent inter-company material flows
- Accepting responsibility for the fulfilment of working and learning tasks
- Adapting personal attitudes to varying conditions when solving problems
- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is to be accepted for the working and learning activities of others

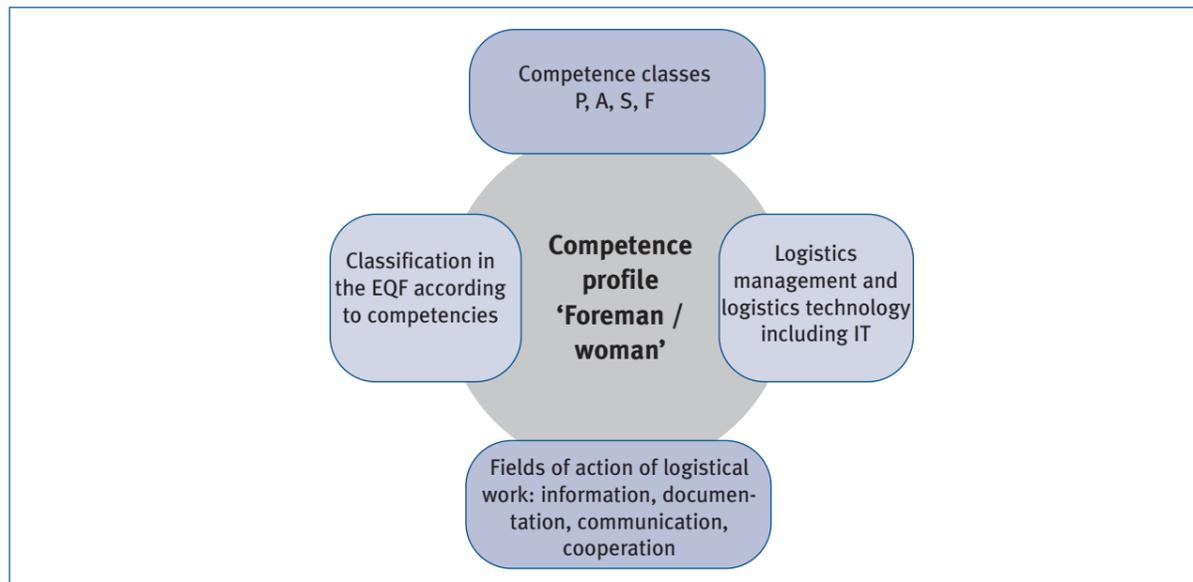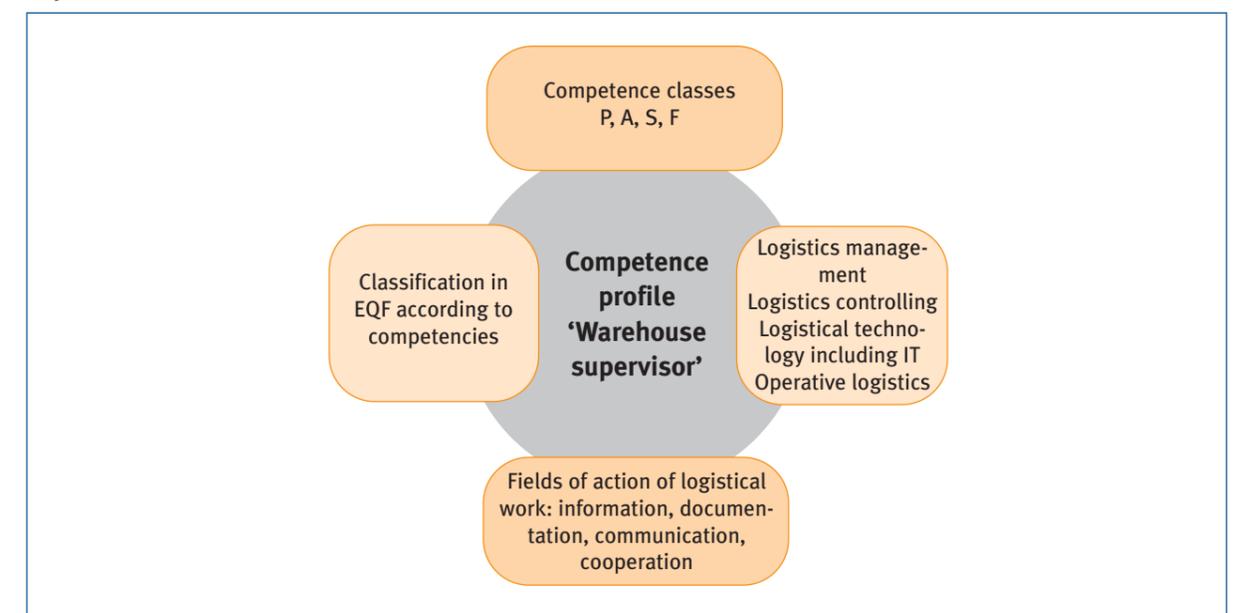*Requirements relating to competence classes*
On the level of competence classes, there is no differentiation between the three competence profiles which is why the four classes are only mentioned shortly here after being described in detail in chapter A3.

P	Personal competencies
A	Activity-oriented competencies
M	Methodical competencies
S	Social-communicative competencies

Requirements relating to the fields of action of logistical work
The same applies to requirements relating to the fields of action of logistical work, they apply to all three competence profiles.

The shape of the competence profile of 'warehouse supervisor' through logistical and qualificational aspects

Competence classes
P, A, S, F

Classification in EQF according to competencies

Competence profile 'Warehouse supervisor'

Logistics management
Logistics controlling
Logistical technology including IT
Operative logistics

Fields of action of logistical work: information, documentation, communication, cooperation

3. Dispatcher

Competence requirements relating to the competence levels of the EQF

- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is accepted for the assessment and improvement of the working and learning activities of others

- Leading and supervising in working and learning contexts in which unforeseeable changes can occur

- Verification and development of one's own performance and the performance of others

Competence requirements from the Logistical Framework of Action

Requirements relating to logistics management
Competence field I – *Active system understanding*

- Abilities pertaining to subject-oriented communication with internal and external customers in order to work on interface barriers
- Abilities pertaining to solving social conflicts at customer interfaces which represent barriers appropriate to function
- Abilities pertaining to the application of ones subject knowledge and experience to logistical processes of change

- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise and qualify colleagues about / in their tasks

Competence field III – *Specialist and executive functions*

- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Requirements relating to logistics controlling
Competence field III – *Specialist and executive functions*

- Proficiency in functions of business processes of logistical service providers (project management, controlling, operative logistics)

Requirements relating to logistics technology including IT
Competence field I – *Active system understanding*

- Abilities pertaining to the appropriate handling of logistical technologies and technical logistics

Requirements relating to operative logistics
Competence field II – *Specialist functions in logistics*

- Proficiency in operative logistics, understanding of permanent inter-company material flows

The shape of the competence profile of 'dispatcher' through logistical and qualificational aspects
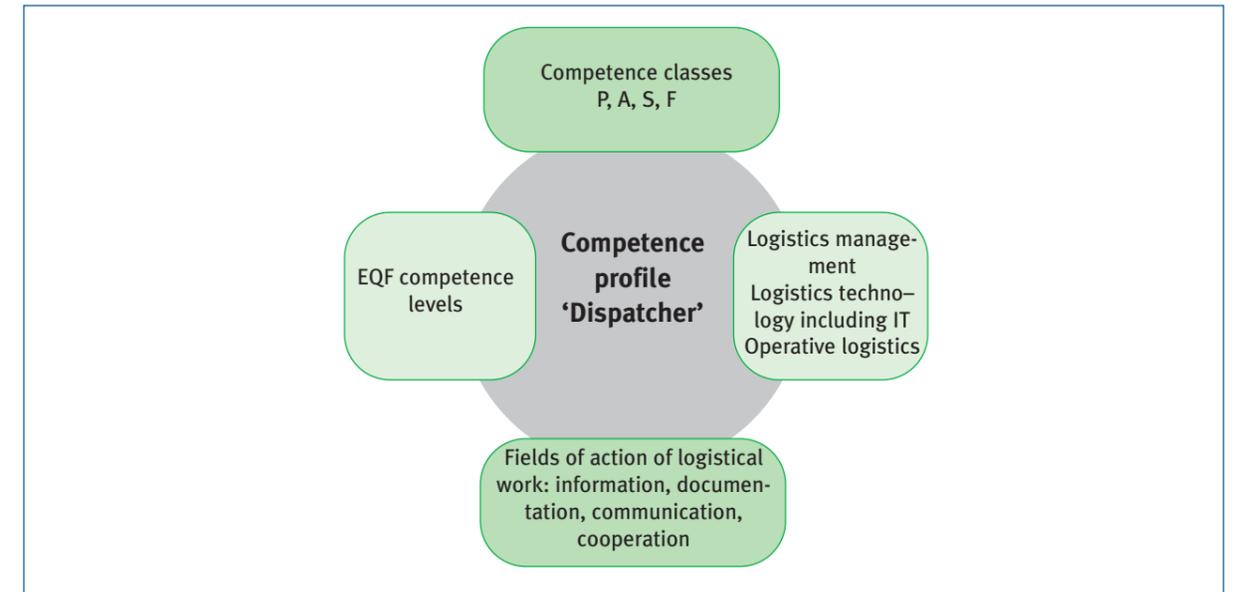
Summary:
Requirements to the competence characteristics, depiction for three exemplary competence profiles

The three selected competence profiles are found in the fields of middle management and specialist logistics functions.

The three competence profile descriptions adhere to the standard that was developed for the overarching profile of "logistical work" (chapter A).

The reason for the relative similarity between the three competence profiles can be found in the common content basis of the three functions in question.

Despite the proximity in content, differences are perceivable which root in the different content orientation of the functions as well as in the difference in reach of the different actors.

C) Description of three competence profiles at in-company level

A number of pertinent enterprises were examined by means of semi-standardised interviews in order to establish what shape the selected competence profiles take on in-company level. The interviews were held with relevant workers and their managers. Another aim of the interviews was to establish the structure and organisation of the enterprise and its strategical orientation and goal.
A viewing was also conducted. The aim of this series of interviews was to establish which competencies were considered relevant for each job profile in the context of everyday work and especially what shape these competencies take concretely.

The following trends were extracted from the evaluation of the extensive interviews. This form of interpretation and depiction enables an overview of all interview results from a "bird's eye perspective". A form of "competence topography" has been developed for the selected competence profiles. This can be related to the general description standard which was developed in chapter A and B.

The competence profile-specific trends are structured into four competence classes which have already been previously depicted. Groups of competencies can be identified because the results of the interviews suggest that the four competence classes stand in close relation to one another, however, emphases become apparent.

1. Overarching Trends

- It became apparent that, according to logistical actors as well as their managers, the competence level defined by the EQF must be reached by all actors in the respective functions, an accumulation of knowledge and skills is not sufficient. Competence requirements are therefore not tied to specific levels of hierarchy, however, competence characteristics as regards content are tied to levels of hierarchy.

- The competence characteristic has a strategical dimension in all functions that were examined; the collaboration of different characteristics can lead to the organisation of logistical work as a group effort which is consistent with the ideas of the interviewees, both at the operative as well as the executive level.

- Groupings of competencies are the same for all three competence profiles, i.e. in all profiles the four competence classes are recognisable and relevant.

- Characteristics of competencies as regards content can be distinguished clearly for all profiles, i.e. different foci are emphasised within the four groups of competencies for all three profiles.

- The characteristics of competencies within the competence profile does not differ strongly between different enterprises in the European countries that were examined. National differences could not be ascertained.

2. Trends of the competence profile of "foreman / woman"

- Competence group focussing on *personal competencies*

The person contributes to the organisational culture through substance.
The foreman / woman leads their team mainly based on his personal preconditions which gives them the authority to assert themselves and ensure work is carried out successfully and company concerns are met through their management style.

- Competence group focussing on *activity-oriented competencies*

Securing efficiency in the division
The foreman / woman concentrates on his team and ensures that tasks can be implemented and procedures can be adapted flexibly where necessary. He also ensures that the conditions for completing tasks are given. Employee satisfaction is part of this.

- Competence group focussing on *methodical competencies*

Being in the loop, applying knowledge
The foreman / woman knows the characteristics and procedures within logistical processes and can apply available technical and organisational means in order to meet targets, he / she can also implement quality standards and contribute to continuous improvement within his / her division.

- Competence group focussing on *social-communicative competencies*

Recognising and utilising the importance of personal address, building and maintaining relationships, also on a personal level
The foreman / woman talks to their team, listens and takes care of "their" people, they intervene in internal conflicts and ensures the necessary justice within the team. This also applies to salary and potential bonuses.

The foreman / woman regard themselves primarily as the person supporting the team efficiently in their working process – they are the supporting person.

3. Trends of the competence profile of "warehouse supervisor"

- Competence group focussing on *personal competencies*

The person is offering security.
The warehouse supervisor is characterised by the sound integration of their executive function into his specialist responsibilities. They can translate company needs and requirements as well as changes thereto for their employees in a way that makes them feel safe in fulfilling these requirements. They take on responsibility through delegating and signalling trust into their employees.

- Competence group focussing on *activity-oriented competencies*

Spanning and structuring the framework of action in the division
The warehouse supervisor is responsible for the organisation of work in a way that allows for the economically successful completion by employees. They take care of organisational conditions, e.g. bonus systems or the keeping of working time accounts. They involve employees in the working process, enabling them to understand what they do and to show initiative.

- Competence group focussing on *methodical competencies*

Being in charge of the process
The warehouse supervisor knows the overall occurrences and its interfaces in the division as well as company needs. They act as a link between the administrative and the operative level. They keeps and overview and know what happens and how it happens in the overarching process.

- Competence group focussing on *social-communicative competencies*

Building and being in charge of communication appropriate to role and responsibilities, ability to depict structures of overall processes
The warehouse supervisor obtains necessary information with regard to company needs and can pass them on in a rightful manner to their employees. This applies also to larger contexts. They work on mistakes and their causes in an appropriate manner by the means of employee talks. Their communication always aims at promoting motivation.

The warehouse supervisor regards himself or herself as the person who structures processes and keeps an overview, giving cues like a conductor. The definition of bandleader emphasises this role.

4. Trends of the competence profile of "dispatcher"

- Competence group focussing on *personal competencies*

The person does not hide behind the task.
The dispatcher has a distinct sense for the logic of completing tasks and is available for colleagues who implement those tasks. They are also available for customers and represents the order towards the enterprise. They are always "on the go" in the enterprise, has to look beyond the own desk on a continuous basis.

- Competence group focussing on *activity-oriented competencies*

Creating and maintaining overview and order in the division and beyond
The dispatcher avoids disorderliness and hectic pace in their own work and ensures this also applies to divisions who receive their orders. They stick to the schedule to a degree where others can profit from their work. They are reliable in their work and motivate others to be so through expectation. They take on responsibility for his customer (group) but also know the customers of their colleagues so that they can take on tasks competently and flexibly where necessary.

- Competence group focussing on *methodical competencies*

Dispatcher as an entrepreneur, recognising and taking on his responsibilities
The dispatcher is courageous and has a natural feel for performance. They keep an overview of the entire spectre of work and do not fall into a routine. They utilise their relatively high degree of autonomy for the independent organisation of their work and their team face-to-face with other divisions and with regard to customer relations.

- Competence group focussing on *social-communicative competencies*

Generating the task of service provision through communication within the enterprise
The dispatcher ensures the qualitative completion of service provision through adequate forms of communication towards the customer but particularly towards colleagues within the enterprise. They collaborate with every member of the team and on the operative level towards ensuring the principle of give and take. They ensure that everybody feels sufficiently informed and hereby integrated. They know that informal networks are the key to stability and success within the enterprise.

The dispatcher regards himself or herself as the mediator between the interests of the customer and company-internal interests and ensures both are well-balanced.

5. Assessment by the executive level: Relevance of the competence groups

- Competence group focussing on *personal competencies*

The customer should know that they are dealing with real people, not an anonymous organisation.

The workers convey to the customer that they can always contact them and they respond to the problem. Employees can also perform correctly under pressure, i.e. also when things do not go according to plan. They know how important it is that everybody in the team can work on the process.

- Competence group focussing on *activity-oriented competencies*

Independence, personal responsibility, sensitivity for tasks and customers
All workers should be able to work independently within their area of responsibility. They should continue to think beyond the borders of their own division. It is important that workers are able to develop co-operational competence. They can apply this competence, in order to realise appropriate solutions for each customer profile.

- Competence group focussing on *methodical competencies*

Developing logistical services in the interest of the customer.
The workers know that service provision is undergoing continuous change and work with the attitude that there must be a solution for any customer problem – which can best be found through communicating. Workers understand and accept that it is about offering "something special" to each customer.

- Competence group focussing on *social-communicative competencies*

Communication has to be followed by co-operation, there is a direct line between both logistical fields of action

The workers know about each other that everybody can keep up with developments and that changes are perceived as a challenge. Their cooperation among each other is understood as an expression of reciprocity. They have gut feeling and "heart feeling" can apply it appropriately. They know that each division plays a part in the completion of an order and that all divisions depend on one another.

6. Detailed results for the three exemplary competence profiles

In the next step the statements from the interviews are depicted in connection with the requirements taken from the EQF and the Logistical Framework of Action. This means using the description standards in the form of the four fields representing the profiles and filling them with statements and quotes from the interviews. The images that result from this adaptation mirror the facets of the competence profiles and stimulate a debate about whether the actors should play the role ideally depicted in the profile or what emphasis should be placed on particular aspects of the profiles. Through such a debate, the discrepancy between the actual and target situation in terms of current qualifications can be established specific to person / situation.

The aim was not to reproduce the statements of each interviewee but to summarise succinct statements in order to visualise the typical and significant aspects of the roles of **foreman / woman, warehouse supervisor and dispatcher.**

Foreman / woman

Interview results competencies

- Competence group focussing on **personal competencies**
  Can locate their own tasks and their quality in the logistical chain

  ---> *Is perceptive, contemplative towards improvements*
  ---> *Is anxious to find a solution to every problem*

- Competence group focussing on **activity-oriented competencies**
  Can contribute subject knowledge into processes of change

  ---> *Talks to executives about how to improve things*
  ---> *Uses basic knowledge in order to learn and act creatively within the process, also wants this for his colleagues*
  ---> *Leads through demonstration*

- Competence group focussing on **methodical competencies**
  Is proficient in operative logistics, knows the material flow, can handle logistics' technology

  ---> *Can think broadly*

- Competence group focussing on **social-communicative competencies**
  Can advise co-workers

  ---> *Ensures that the structure of the team is sound, that each member of the group does what's right, can delegate*
 ---> *Is proficient in methods of conflict resolution*
  ---> *Can deal with co-workers, knows how they per form, reciprocal trust is important*
  ---> *Enables informal contact since this is what ensures quality*

Requirements EQF

- Accepting responsibility for the fulfilment of working and learning tasks

- Adapting personal attitudes to varying conditions when solving problems

- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of co-workers in which a certain amount of responsibility is to be accepted for the working and learning activities of others
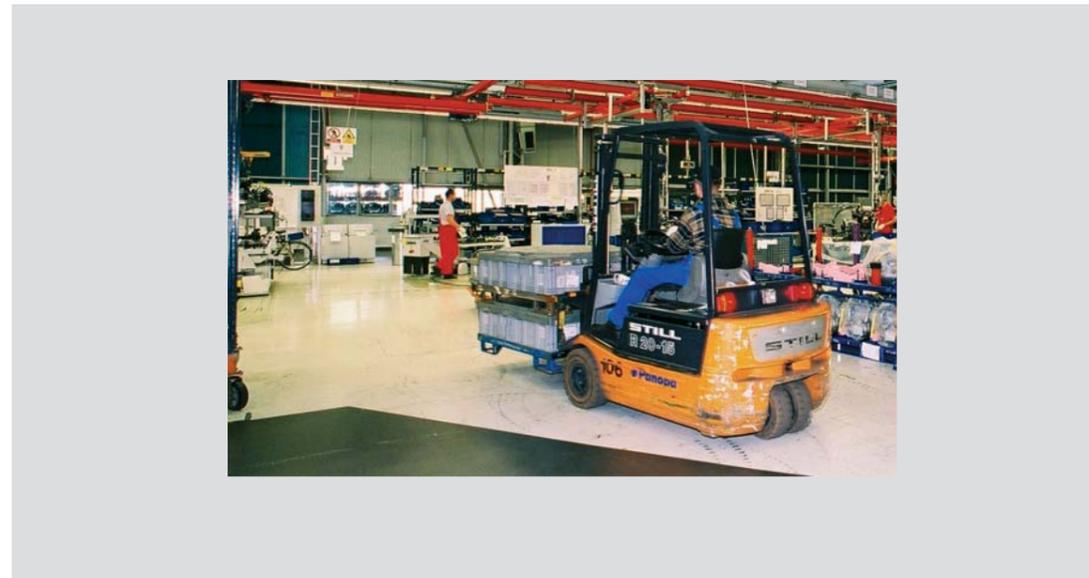
Requirements from the Logistical Framework of Action

Logistics management
- Abilities pertaining to the application of subject knowledge and experience to logistical processes of change
- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise co-workers about their tasks
- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Logistics technology including
- appropriate handling of logistical technologies and technical logistics

Operative logistics
- Proficiency in operative logistics, understanding of permanent inter-company material flows

Interview results relating to acting within the logistical fields of action

- **Information**
  ---> *Utilises the PC for information retrieval from the system*
  ---> *Maintains good contacts with administrative staff*
  ---> *Co-workers as "information agents" – they know who is in need of help and who should talk to whom*

- **Documentation**
  ---> *Utilises relevant data of co-workers for regulation purposes*

- **Communication**
  ---> *Communicates with customers regarding orders*
  ---> *Communicates with a large network of co-workers and customers*

- **Co-operation**
  ---> *Co-operation also implies accepting the strengths and weaknesses of co-workers. For example, disturbances arise when top performers are absent.*

Warehouse supervisor

Interview results competencies

- Competence group focussing on **personal competencies**
  Has the ability of resolving conflicts and leading, advising and qualifying co-workers
  - ----> *Works like a conductor, i.e. keeping an overview*
  - ----> *Their task is to ensure co-workers are satisfied, including motivation and support, filtering out external pressures*
  - ----> *Has authority, accepts authority*

- Competence group focussing on **activity-oriented competencies**
  Has the ability to apply subject knowledge and experience to processes of change; is proficient in operative logistics and logistics technology
  - ----> *Assessing procedures, organising, anticipating and planning*
  - ----> *Co-workers should understand what they do, think ahead, this way they do a better job and believe in what they do*
  - ----> *Main tasks: continuous monitoring of processes, planning and supervising staff assignments, i.e. HR and controlling*

- Competence group focussing on **methodical competencies**
  Is proficient in methods of the business process of logistical service providers (project management, controlling, operative logistics)
  - ----> *Reaching customers through quality and flexibility*
  - ----> *Informal contacts to the customer determine the degree of quality. Dealings with the customer are important.*
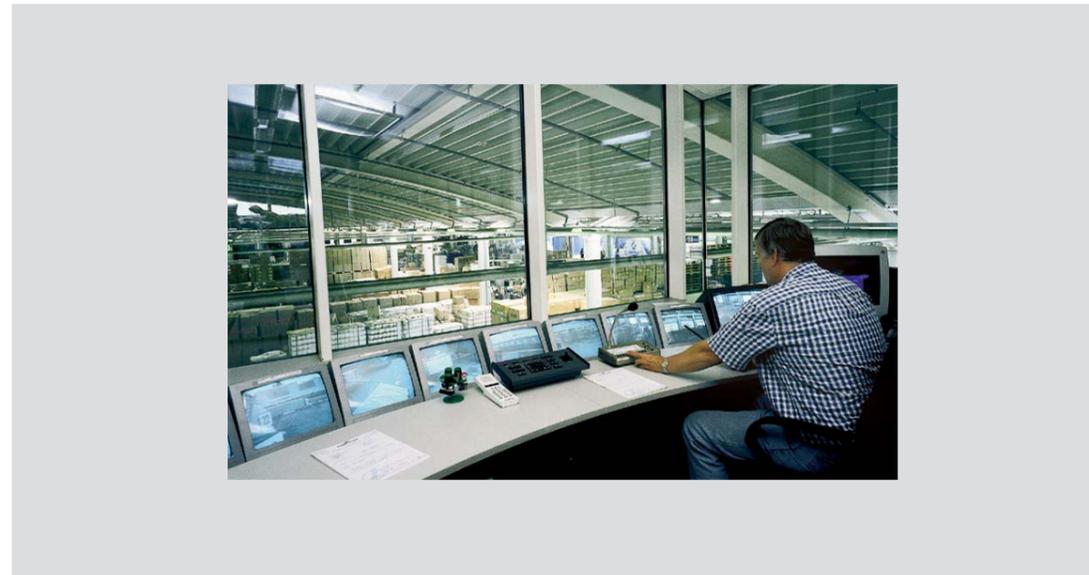 - ----> *Background knowledge and expertise are important for controlling*

- Competence group focussing on **social-communicative competencies:**
  Has the ability to apply subject-oriented communication in order to work on interface barriers and deal appropriately with social conflicts
  - ----> *Advisory conversation with the group as a reaction to mistakes, praise as a reaction to swift work*
  - ----> *In stressful situations: calming down the situation rather than "turning up the heat"*
  - ----> *Always appease co-workers before talking about conflicts*

Requirements EQR

- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is accepted for the assessment and improvement of the working and learning activities of others

- Leading and supervising in working and learning contexts in which unforeseeable changes can occur

- Verification and development of the own performance and the performance of others

Requirements Logistical Framework of Action

Logistics management
- Abilities pertaining to subject-oriented communication with internal and external customers in order to work on interface barriers
- Abilities pertaining to solving social conflicts at customer interfaces which represent barriers appropriate to function
- Abilities pertaining to the application of ones subject knowledge and experience to logistical processes of change
- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise and qualify colleagues about / in their tasks
- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Logistics controlling
- Proficiency in functions of business processes of logistical service providers (project management, controlling, operative logistics)

Logistics technology including IT
- Abilities pertaining to the appropriate handling of logistical technologies and technical logistics

Operative Logistics
- Proficiency in operative logistics, understanding of permanent inter-company material flows

Interview results relating to acting within the logistical fields of action

- **Information**
  - ----> *Shift leaders are to be integrated into information flows regarding operation and character of goods*
  - ----> *Information focus: quality and mistakes in the shift*
  - ----> *Has to process information and hence control it*
  - ----> *Dispatching is the central source of information which has to be processed flexibly by warehouse supervision*

- **Documentation**
  - ----> *Documentation supplies identification codes to warehouse supervision; this enables addressing workers directly in order to support quality management*
  - ----> *Documentation is used for error diagnostics*

- **Communikation**
  - ----> *Regard themselves as hub of communication*
  - ----> *Issues necessitating communication should be dealt with on the same day*

- **Co-operation**
  - ----> *Co-operates intensively with shift leaders in order to keep each others updated*
  - ----> *Co-operation works only when the members of the team can depend on each other*
  - ----> *Co-operation should be desired and "done"*

Dispatcher

Interview results competencies

- Competence group focussing on **personal competencies**
Complex understanding of customer-oriented service provision
Dealings with customers aim at positive effects on business
  ---> *Needs to be courageous*
  ---> *Important towards customers and co-workers: creating contentment*
  ---> *Intensive maintenance of customer contacts, including personal commitment*
  ---> *A service is being sold, this is about personal commitment*

- Competence group focussing on **activity-oriented competencies**
Applying experience and expertise to logistical processes of change
  ---> *Dispatching is characterised, on the one hand, by a high degree of uncertainty and pressure and, on the other hand, by the positive aspect of flexibility and room for creativity*
  ---> *Has the liberty to adapt orders processing the needs of the customer*
  ---> *Aspect of learning by doing is important, when encountering new situations*
  ---> *Each dispatcher has their customers, each dispatcher can process everything*

- Competence group focussing on **methodical competencies**
Proficiency in business processes of operative logistics
  ---> *Importance of thinking and acting in complex ways*
  ---> *The dispatcher must see everything, the entire spectre of work. If work is done as if on a con veyor belt, there is danger of losing customers*
  ---> *Product knowledge is important when dealing with large-scale customers*

- Competence group focussing on **social-communicative competencies**
Resolving conflicts along logistical interfaces
  ---> *Actual dispatching has a lot to do with dealing with the unforeseen*
  ---> *Assertiveness is of importance*

Requirements EQF

- Independent acting and showing initiative within the parameters of action of working and learning contexts – which are generally known but can vary

- Supervision of routine work of other persons in which a certain amount of responsibility is accepted for the assessment and improvement of the working and learning activities of others

- Leading and supervising in working and learning contexts in which unforeseeable changes can occur

- Verification and development of the own performance and the performance of others

Requirements Logistical Framework of Action

Logistics management
- Abilities pertaining to subject-oriented communication with internal and external customers in order to work on interface barriers
- Abilities pertaining to solving social conflicts at customer interfaces which represent barriers appropriate to function
- Abilities pertaining to the application of ones subject knowledge and experience to logistical processes of change
- Knowledge pertaining to the location and the quality of one's own logistical responsibility in the supply chain
- Ability to advise and qualify colleagues about / in their tasks
- Complex understanding for customer-oriented logistics services
- Ability to solve conflicts at logistical interfaces and to lead individual and groups working in logistics

Logistics controlling
- Proficiency in functions of business processes of logistical service providers (project management, controlling, operative logistics)

Logistics technology including IT
- Abilities pertaining to the appropriate handling of logistical technologies and technical logistics

Operative logistics
- Proficiency in operative logistics, understanding of permanent inter-company material flows

Interview results relating to acting within the logistical fields of action

- **Information**
  ---> *Must be able to demonstrate issues clearly, everybody should be able to understand the information*

- **Documentation**
  ---> *It should be the rule that order information is only passed on in written form*
  ---> *The entire work relating to an order must be traceable. The documentation must be based on true facts*
  ---> *Documentation, as far as possible, should be open to all parties concerned*

  ---> *Dispatcher must be orderly as a basis for keeping an overview*

- **Communication**
  ---> *The customer needs a contact person*
  ---> *The dispatcher compensates for discrepancies between customer requirements and procedures in warehousing through communication*

- **Co-operation**
  ---> *Acts as the interface between customer and warehouse*
  ---> *Is mobile within the enterprise*
  ---> *Co-operating with co-workers that do not look beyond their own desk is viewed critically*

  ---> *An individual and stable network most effectively enables service which is provided as a collective*
  ---> *Co-operation implies that each worker in a given division can take over work of his co-workers. Every member of the group is responsible for reporting bottlenecks*
  ---> *Competitive thinking must not evolve*
  ---> *Critique must be allowed for and accepted*
  ---> *Dispatching can take on tasks of warehousing, e.g. covering for the warehouse supervisor*

Summary:
**Characteristics of exemplary competence profiles in logistics enterprises**

The images of the three exemplary competence profiles are intended as a basis for debate for in-company qualification and personnel development.

The images give an overview of what dimensions the qualification framework takes and how aims for competence learning can be derived.

The relationship between parts which are indicated as requirements and those which mainly reproduce interview statements demonstrates how the description standard of the competence profiles mirrors day-to-day reality within the enterprise.

There is necessarily a certain degree of friction between the four areas of description of the competence profile. Learning in the working process offers opportunities to productively utilise these frictions because the relation to company-specific learning causes demands an according dimension of methods and aims.

The overall description standard also enables the development of a yardstick that can support company-internal and external comparability of requirements and results of competence learning.
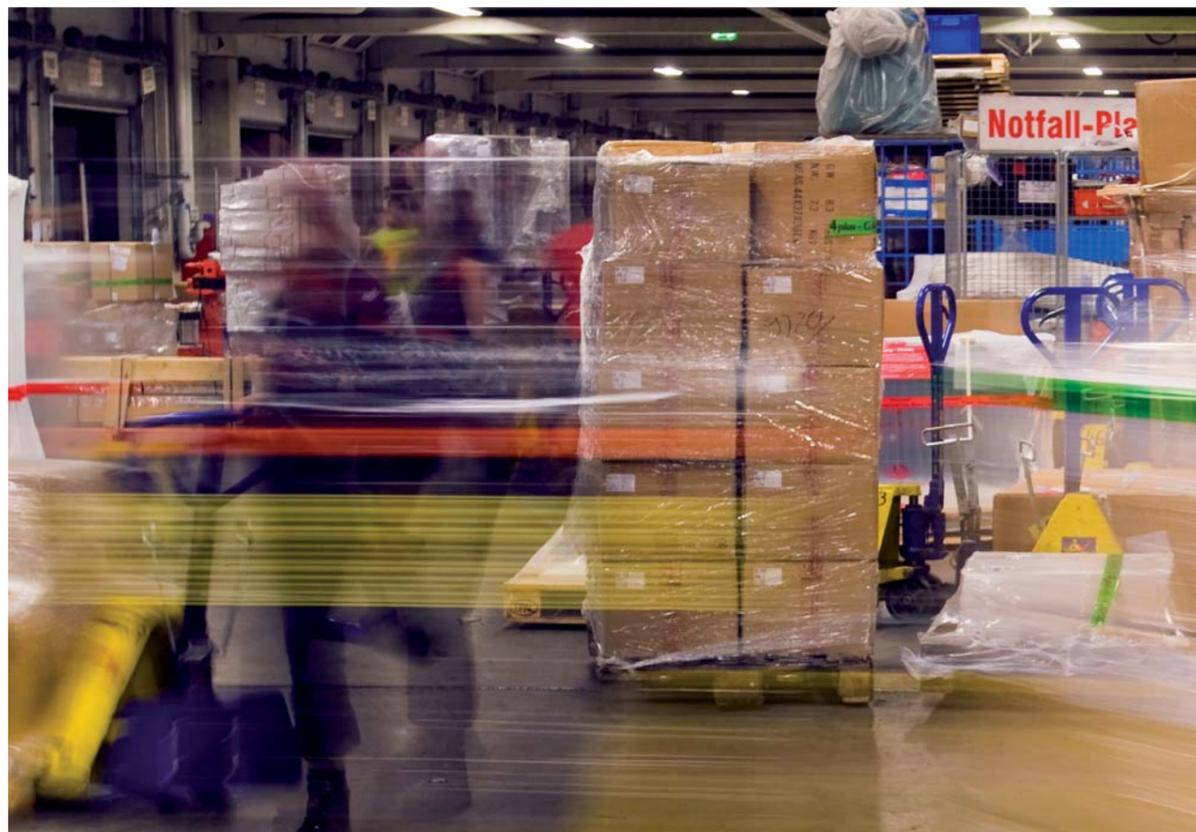
The PROLOG project – SOLOS experiences

"European Training Profiles in Logistics – PROLOG" was a project supported by the Leonardo da Vinci programme of the European Commission.

The results of the PROLOG project want contribute to the professionalisation of logistical work. The learning model SOLOS – **So**lutions for **Lo**gistics **S**kills – was developed and tested within the project. Exemplary competence requirements for three prototypical logistical job profiles were described according to the EQF: foreman, warehouse supervisor and dispatcher. The SOLOS model enables workers in those occupations (but also other workers in the sector) to further develop their logistics systems competence. The learning process takes place in real working contexts. In this process, learning guidance is viewed as part of the management culture.

The PROLOG project with its **So**lutions for **Lo**gistics **S**kills also makes a contribution to the European skills initiative. A European dialogue offers a forum for exchange of experiences and results from other logistics projects in order to develop a European qualification standard for logistics.

The products

Brochure 1: „**So**lutions for **Lo**gistics **S**kills –
Extend your profession. The SOLOS learning model
Language: DE/EN/PL/CZ

What is logistics systems competence and how can it be achieved? This is what the first brochure about the SOLOS learning model addresses. The process of competence development in the framework of logistical work is explained.

Brochure 2: „**So**lutions for **Lo**gistics **S**kills –
Extend your profession. Learning causes and learning guidance
Language: DE/EN/PL/CZ

This brochure highlights how and by the means of which causes learning in the context of logistical work takes place. Exemplary learning causes are presented. The role of learning guidance and methods for the creation of learning processes are explained.

Brochure 3: „**So**lutions for **Lo**gistics **S**kills –
Extend your profession. Competence profiles and competence requirements in logistics
Language: DE/EN/PL/CZ

The competence requirements for the three competence profiles are described: foreman, warehouse supervisor and dispatcher. They serve as prototypes that can be applied to other job profiles.

Contact:
IG Metall Headquarters,
Department for Education and Qualification Policy
Wilhelm-Leuschner Str.79
60329 Frankfurt am Main
Tanja Eick
Tel. ++49 69 6693 2571
tanja.eick@igmetall.de

www.solos-model.eu

PROLOG project: www.prolog-project.eu

The PROLOG project partners:

INDUSTRIEGEWERKSCHAFT METALL VORSTAND (DE)
(Project coordinator)
www.igmetall.de
www.igmetall-wap.de

Lagermax Lagerhaus und Speditions AG (AT)
Salzburg
www.lagermax.com

European Metalworkers Federation (EMF) (BE)
Brüssel
www.emf-fem.org

Škoda Auto (CZ)
Mlada Boleslav
www.skoda-auto.com

24plus Systemverkehre GmbH & Co KG (DE)
Hauneck
www.24plus.de

Panopa Logistik Polska Sp. z o.o. (PL)
Poznan
www.panopa.com.pl
www.panopa.de