

# SOLOS

Solutions for Logistics Skills

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Extend your profession.

## The SOLOS Model Prolog Results – Brochure 1



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Editors: Dr. Karin Bockelmann, Thomas Ressel  
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# Logistical work requires competence!

The continued transnational logistical integration of enterprises – reinforced through the globalisation of economic relations – effects and demands permanent competence development of the actors involved. This accounts especially to the integration of competencies of immediate actors. The importance of qualified logistical work is growing!

Rendering logistical services means merging physical services with consultation. Not every customer and situation requires the same services; hence, finding the right balance between standardisation and flexibility is vital. Understanding and mastering this is the every-day-life of logistical work. And it is in this every-day-life of logistical work that logistical competencies can be acquired best, according to practitioners. The professionalisation of logistical work must be promoted in a structured way.

The PROLOG project has developed and tested the learning model **SOLOS** – **S**olutions for **L**ogistics **S**kills as a response to these needs, hereby contributing to a form of qualification that is geared towards the job profiles and the corresponding competencies. The learning process takes place in real work situations with the support of a learning guide.

In this context, learning in the working process means: **Developing employees' competencies whilst optimising work processes.**

Competence is understood as a holistic concept describing the ability of an individual to utilise and apply his / her knowledge, skills and attitudes in a self-determined and targeted fashion.

Competencies can be developed through acting not through theoretical understanding. Competencies that relate to acting in the working context therefore require forms of learning that utilise a situation originating in the working context as a starting point and aim for the learning process, sourcing the learning cause from this situation. In this process, competencies that are relevant for the respective situation and work processes can be developed step-by-step. Utilising situations out of the working context as learning causes leads to the development of competencies of actors which can positively influence not only the individual's but also the organisational development.



# What does logistics systems competence refer to?

The SOLOS model perceives logistical work as follows:

- The core of logistical services is the organisation of logistics processes.
- Actors therefore require understanding of the processes, *logistics systems competence* in order to fulfil their work.
- Logistics systems competence means:
  1. Understanding logistics as a system
  2. Understanding logistics systems
  3. Acting competently in logistical systems

1. „*Understanding logistics as a system*“, refers to the basic understanding of what constitutes a system: A logistics system is developed with the aim of bridging space (through transport) and time (through storage). The system, however, only works as such through the correct interaction of its parts. Most important for understanding the system is therefore the understanding of the interaction and interrelation of its parts. It is characteristic for the system that its parts can be located in different places: The manufacturer is situated in Asia, the logistics service provider operates in Asia as well as in Europe, the customer in Hamburg must also serve the distribution chain of his own customers. In order to do so, he also hires logistics service providers. The complexity of supply chain management, the logistical chain, continues to grow and

the statement “A logistical system can only be as good as its individual parts and their interrelations” holds true more than ever.

2. Such a logistics system understanding contributes to the success of the next step: „*Understanding logistics systems*“. This refers to one’s own logistics system in which one fulfils a function as an actor. For example: the dispatcher should not only know the warehouse in their own system but also the processes at the customer for which the parts to be delivered are needed. The head of logistics knows what happens in the system before and after orders are placed. Understanding one’s own logistics system can also help to understand other logistics systems, for example those of cooperation partners. This is what SOLOS is geared towards: The better my understanding of my own system, the more I am able to cooperate with others in my own system and beyond.

3. „*Acting competently in logistics systems*“, refers to the daily tasks in the various functions in logistics systems. It is about the way of rendering services in demanding logistical work processes. Major challenges in this process are the flexibility and quality of the service; this counts for the operative as well as the management level. It is up to the actors involved to meet the challenges, the individuals with their competencies as service providers are at the centre of interest.

**The CEO of a logistics group:**

*Top performers have to recognise the entirety of processes.*

**The head of logistics of a medium-sized logistics enterprise:**

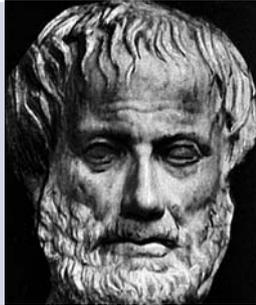
*The pre-condition for logistical work is a comprehensive systems competence.*

**The head of production of a transport company:**

*People should understand what they are doing, think proactively, then they do a better job and believe in what they do.*



*What we have  
to learn to do,  
We learn by doing.*

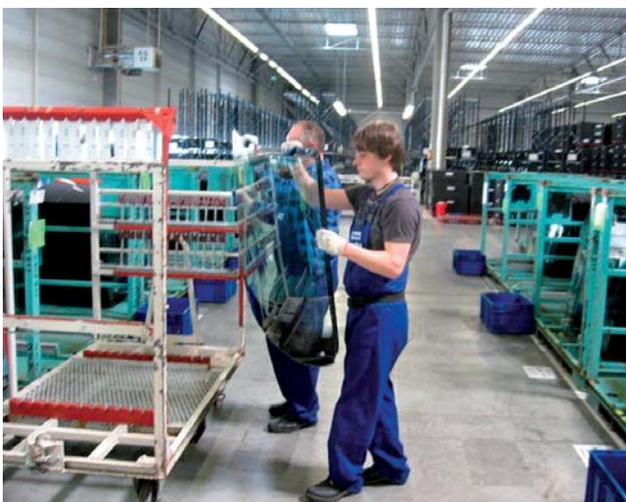


**The SOLOS model embraces this quote of the Greek philosopher Aristotle because it states exactly what applies to the modern understanding of organisational learning today.**

Logistics systems competence as described above does not only develop from subject-related knowledge but mainly from experiences that originate from acting within the system. It is the quintessence of various competencies that are required in logistics processes. The focus towards competencies constitutes the “roof” of the SOLOS model.

It has been proven that 70 – 90 % of the competencies one needs for work are acquired directly within the context of work. *Learning for work* is actually mostly *learning within work*. Professional competence is to a large part promoted through well-organised experiential learning. This insight is being increasingly utilised in organisational training and personnel development.

- The SOLOS model accepts that in logistical work, development processes of individual actors are promoted best in groups.
- Logistics systems competence also involved „doing the correct things“ (strategic dimension) and „doing the things correctly“ (operative dimension).



**The foreman of a logistics service provider:**

*Understanding work: Understanding what the customer wants, working in a team-oriented fashion, also recognising what others need. Thinking proactively: customer- and process-oriented work.*

**The CEO of a logistics group:**

*We want high quality competence and high IT competence for our network.*

# The SOLOS model

The aim of the SOLOS model is to promote the development and enhancement of logistics systems competencies in all areas and actors in logistics systems. This can be achieved through a form of learning that relates to the actual tasks of a workplace. Forms of learning are required that place an actual situation (as the starting point and aim of a learning process) at the centre of a learning activity and utilise it to source learning input.

The structure is provided through the **four fields of activity of logistical work**. These are: Information, documentation, communication and cooperation. These are found in all logistical processes; logistical work can be reproduced utilising the fields of activity.

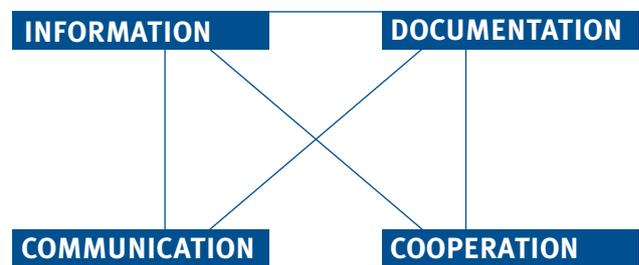
The quality of logistical work is defined to a major degree by the quality of relations between these fields of activity.

An everyday-life example: In order to handle a stock removal order of a customer, an employee in the warehouse requires the information of an administrative employee who received the order as input. The employee in the warehouse carries out the stock removal and documents this for further processing of the order. This is the precondition for control to correctly notify the delivery to the customer. Communication with the colleague from the shipping department is important because in this case some issues are to be considered when the order is forwarded. The cooperation between administrative and operative employee and the shipping department all the way to the transport company that

picks up the order is the indispensable precondition for customer satisfaction. If things only run smoothly in one or two fields of activity and other fields are weaker, quality problems will arise.

If used as orientation, the fields of activity can help to perceive processes of logistical work in a detailed way and be utilised for organisational learning processes.

## The four fields of activity of logistical work



In numerous conversations with executives and employees of logistical service and manufacturing enterprises, it has been proven that the fields of activity offer the opportunity of reproducing and reflecting one's own work within logistical systems in a very concrete yet comprehensive way.



**The head of logistics:**  
*The competence of service providers is exhibited in the four fields of activity of logistical work.*



**The head of storage of a logistics service provider:**  
*Previously, the master craftsman would instruct, today the storage management steers the employees who can carry out all tasks. The spectre of our task flexibility must be mirrored by the employee.*

This also provides the approach of intensifying organisational learning, because qualification requirements become comparable with regard to function and tasks if derived from the four fields of activity. This comparison can take place internally or beyond the own company so that job profiles can be described for particular functions. Another brochure of the PROLOG project describes in detail three exemplary job profiles according to this approach.

The SOLOS model offers employees the opportunity to develop and extend their logistics systems competence in learning groups at the example of concrete tasks or problems from and within the work process. In this process, they are supported by a company-internal learning guide who knows the processes well.

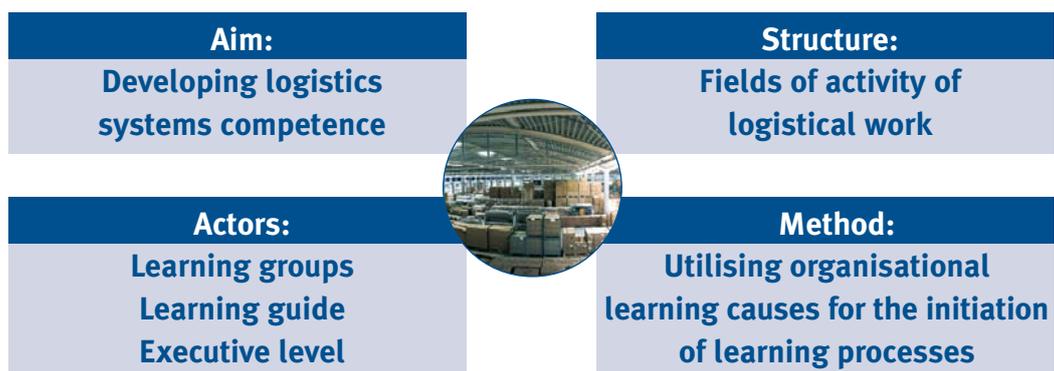
They also receive indirect support from the executive level who secure and maintain the framework conditions required by learning in the work process.



**A team leader in the warehouse:**  
*To know the processes, to be perceptive and think proactively what can be improved. Attempt optimisation!*

The central methodological thought is to gain learning causes from the organisational processes. These learning causes relate to current problems or to upcoming events.

### The four aspects of the SOLOS model



In order to ensure the success of the SOLOS model, the interaction and cooperation of various actors within the enterprise is vital.

- The initial impulse for this form of learning – this is what experience has taught during the implementation of the SOLOS model – should come from the executive level as the necessary resources have to be made available for the organisational training. The support of the executive level is also vital for the practical implementation of the results of the learning process. Management should regard it as their task to accompany the competence development of their employees.
- The concrete organisational learning process requires internal support, the *learning guides*, the coaches, who initiate and moderate the process. These learning guides should know the structures and processes of the enterprise well and should be situated at middle management level but not be direct superiors of the learners.
- The learning groups with which the SOLOS model was tested mainly consisted of employees from operative and controlling functions, among those: warehouse supervisors, foreman and dispatchers. They knew everyday processes and the set targets that should be implemented. The SOLOS model can also be applied to the planning and managing dimension of logistics. For example, a problem analysis with regard to deficits in planning can be conducted with the help of SOLOS.
- The methods with which the learning groups and guides work in the SOLOS model are targeted at the application in enterprises. They are supported through the instrument of visualisation. The learning guide, together with the executive in charge, chooses a learning cause and prepares the learning session. The duration and frequency depends mostly on the learning cause.



**A learning guide:**

*The fish bone diagram is perfect for the detection of concrete causes of problems!*



**A head of storage:**

*A central ability of the employees: People talk to each other! Their competence also lies in the ability to find a solution!*



**The head of logistics of a medium-sized logistics enterprise:**

*The learning guide is perceived as the key figure!*

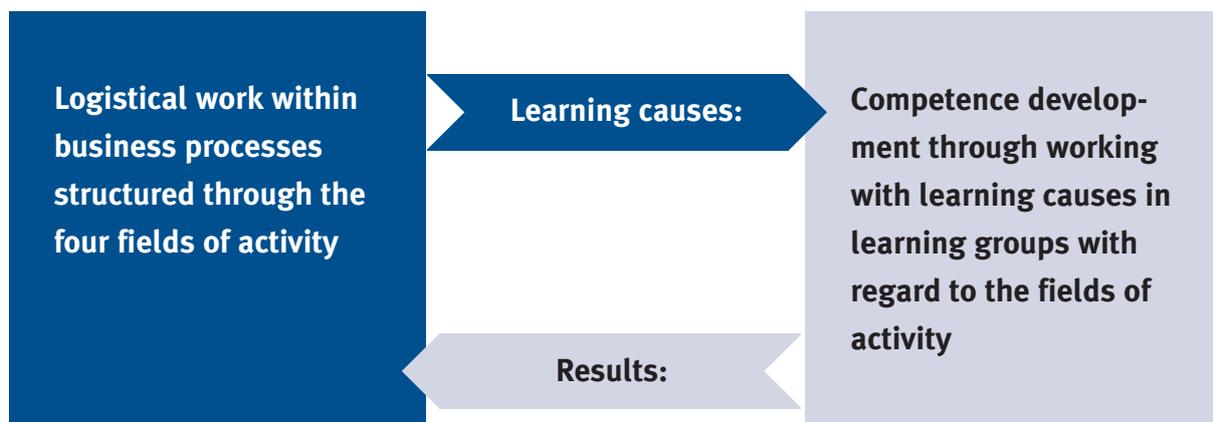
- The *learning cause* is derived from the real work process in logistics. Through this, learning is directly linked to actual tasks and aims at differentiated development of competencies of the members of the learning group. Learning causes can be derived from everyday business as well as from planned changes.
- Examples for learning causes:
  - Shaping sensitive commissioning processes for the automotive area safely
  - Integrating operative workers into the conversion and extension of a cargo handling facility
  - Shaping the cooperation between dispatchers and transport service provider according to requirements
  - Improve coordination of commissioning processes between different areas
- The methods of the SOLOS model support the learning groups in the process of creating leaning fields from their everyday work and hence using work as a trigger for developing competencies. If the results of the learning group are directly implemented, the added value of such learning processes becomes clear. The following interrelation is being created:



**A foreman:**  
*Don't only do the work, also talk about what you do and how you do it.*



**The head of logistics:**  
*As a learning cause, we have chosen the optimisation of work processes of logistics and freight handling. The learning group consisted of persons in charge from the operative level of both areas. Together with the learning guide, they managed to develop feasible solutions in two sessions.*



# Which framework conditions are necessary for the implementation of the SOLOS model?

- Logistical work and the learning processes relating hereto are not perceived by actors as two isolated worlds but as two aspects of one: competence development and optimisation of processes.
- The structure of logistical work by means of the four fields of activity information, documentation, communication and cooperation, are perceived and exercised as the main concept of competence learning.
- The work with learning causes is carried out continuously. The instrument of learning causes is integrated into everyday procedures in a way that makes it accessible to employees, learning guides and executives.
- Executives use their management style to show appreciation of employees and their performance.
- An open learning culture is exercised in the enterprise and the learning groups so that actors do not perceive competence learning as a threat but as an opportunity.
- The work with the SOLOS model is perceived as a contribution to promote logistics systems competence and organisational and personnel development in an integrated way.

The framework conditions for a successful work with the SOLOS model are ambitious: There are challenges for all actors, the learning groups as well as the learning guides and the executive level. The management style and learning culture within the enterprise can be strengthened through the application of the model if there is continuity and the necessary perseverance in working with it. A successful implementation requires the exchange between learning guide and executives regarding how to support the unison between work, personnel and organisational development.

## **A head of logistics:**

*We want to involve the warehouse employees in processes. We take them along to customer conversations so they know what the customer wants.*



## **A warehouse employee:**

*My expectation of executives: Appreciation, but also criticising constructively.*



## **A foreman:**

*To trust the employees, delegate tasks and work with the team.*



## **A warehouse supervisor:**

*The team is well-balanced. We regard this as part of the organisational culture.*



# The PROLOG project – SOLOS experiences

The project „European Training Profiles in Logistics – PROLOG“ was funded by the European Commission (Leonardo da Vinci Programme).

The results of the PROLOG project can contribute to the professionalisation of logistical work. The learning model **SOLOS – Solutions for Logistics Skills** – was developed and tested within the framework of PROLOG. The competence requirements for three prototypical job profiles were described in relation to the European Qualification Framework (EQF): Foreman, warehouse supervisor and dispatcher. The SOLOS model enables employees of these functions – but also from other ones – to develop their logistics systems competence. The learning process is supported by the learning guide and is carried out in real work contexts. In this, the learning guidance is regarded as part of the organisational culture and management style.

The PROLOG project and its SOLOS model make a contribution to the European skills initiative. Experiences and results from this and other logistics projects can be developed towards a European qualification standard.

## The products

**PROLOG brochure 1:** “Solutions for Logistics Skills – Extend your profession. The SOLOS learning model“  
Language: DE/EN/PL/CZ

The brochure defines logistical competence and how can it be achieved. The process of competence development in the framework of logistical work is described.

**PROLOG brochure 2:** “Solutions for Logistics Skills – Extend your profession. Learning causes and learning guidance“  
Language: DE/EN/PL/CZ

This brochure explains how learning takes place in logistics and how learning causes can lead to learning processes. Prototypical learning causes are presented. The role and methods of learning guidance are described.

**PROLOG brochure 3:** “Solutions for Logistics Skills – Extend your profession. Job profiles and competence requirements in logistics“  
Language: DE/EN/PL/CZ

Description of competence requirements for three job profiles in logistics: Foreman, warehouse manager, dispatcher. They serve as prototypes, the method can be applied to further job roles.

### 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](http://www.solos-model.eu)

**PROLOG project:** [www.prolog-project.eu](http://www.prolog-project.eu)



## The PROLOG project partners:

**Industriegewerkschaft Metall Vorstand (DE)**  
**Frankfurt am Main**  
**(Project coordinator)**  
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