



PROFESSIONAL STANDARD

SUPPLY CHAIN MANAGER Level 7

Professional standard is a document which describes professional activities and provides competency requirements, i.e. a set of skills, knowledge and attitudes required for successful work.

Area of application of professional standard

- 1) Preparation of study programmes and training programmes complying with the demands of the labour market
- 2) Assessment of the competence of individuals, including self-assessment and conformity assessment upon awarding profession
- 3) Description and introduction of occupations
- 4) Career planning and forming a basis for life-long learning
- 5) Establishing training needs and planning training
- 6) Preparation of job descriptions and recruiting employees
- 7) Comparing professions and qualifications

Professional title	Estonian qualification framework (EQF) level
Supply chain manager	7

Part A

DESCRIPTION OF PROFESSION

A.1 Description of work

The supply chain manager is a strategic level manager working in the production and trading companies, taking responsibility for the business activities targeted at the satisfaction of customer demand. The supply chain manager is responsible for synchronizing supply and demand and the optimum level of inventories within the whole extent of the supply chain.

Co-operation with clients and suppliers, planning, communication, cost reduction and process improvement, and supervising teamwork comprise an extremely important part of the work of the supply chain manager.

A.2 Work units
A.2.1 Preparation and implementation of the supply chain strategy; A.2.2 Design and development of the supply chain network; A.2.3 Management and integration of internal processes; A.2.4 Co-operation with external partners and process integration; A.2.5 Financial management of supply chain; A.2.6 Risk management of supply chain; A.2.7 Sustainable and environment-conscious management of supply chain; A.2.8 Demand forecasts; A.2.9 Purchasing management; A.2.10 Production management; A.2.11 Organisation of transport; A.2.12 Inventory management A.2.13 Warehouse management A.2.14 Performing orders and customer service
A.3 Work environment and peculiarities
Work may be extremely intense at times. The allocation of workload may be uneven. Frequent and long-term business trips are possible.
A.4 Tools
The supply chain manager uses common office tools, various means of communication, office- and area-specific software
A.5 Personal attributes required for work: skills and character traits
The following character traits are relevant in the work of the supply chain manager: Perseverance, communication skills, responsibility and self-assertion skills, decisiveness, leadership skills, empathy, initiative skills, analytical reasoning, result- and quality orientedness, stress tolerance and entrepreneurship.
A.6 Documents required for work in the profession
None
A.7 Potential official titles
Supply chain manager
A.8 Vocational training
Working as a supply chain manager requires higher education equal to Master's level (in the areas of economics, logistics, engineering, production, and business management).

Part B

COMPETENCY REQUIREMENTS

B.1. Competencies required for applying for the vocation

B.2 Competencies

A.2.1 Preparation and implementation of supply chain strategy;	EQF Level 7
<u>Performance indicators:</u> 1) knows methods for development of business strategy and is able to define sub-strategies for baseline planning analysis, solution of tasks with limited volume provided by an architect, taking into account long-term trends and needs of spatial, economic, social, natural, historical, cultural and other environments 2) establishes goals for supply chain performance based on business strategy. Establishes performance indicators for the financial outlook, parties, and processes of the supply chain and also the development activities of the supply chain team. Explains goals, performance indicators and quality requirements to the parties in an understandable and comprehensive manner. 3) maps the requirements of the customer and defines respective goals, indicators and process requirements of the supply chain 4) conducts comparative studies, fixes initial tasks for the study based on the business strategy, supply chain strategy or the needs of client-specific supply chain 5) plans the supply chain resources based on the implementation of the strategy (capital, means of production, labour)	
B.2.2 Design and development of the supply chain	EQF Level 7
<u>Performance indicators:</u> 1. maps the existing supply chain ("As Is") and defines processes within the whole extent of the supply chain, applying suitable approaches. Applies common performance indicators for assessing the performance of the supply chain processes (security of provision, Order Fulfilment Cycle Time, flexibility, supply chain costs and return on assets) and identifying bottlenecks. Prepares various spatial visions and draft plans of a building or part of building on the basis of the initial task and under the supervision of the leading architect, identifying a sustainable solution that is functional, constructive, technically sound, aesthetically and economically balanced. 2. Specifies factors and restrictions influencing the specific supply chain network and establishes their impact (including quantitative) on the supply chain strategy (e.g. incurred costs, tax load, quota restrictions, impact of Trade Union activities, customer protection, and environmental impacts). 3. Models comprehensive supply chains, applying linear programming and commonly used approaches. 4. Designs the supply chain network based on business strategy, client needs and model results. 5. Identifies the best network structure by comparative methods. Justifies the advantages of the latter in a clear and understandable manner.	
B.2.3 Management and integration of internal processes	EQF Level 7
<u>Performance indicators:</u> 1) generates tasks based on supply chain processes and defines the roles of the organisation for the performance thereof with profiles to which the role performers are expected to comply with. Participates in decision -making for team staffing 2) develops the core process of the supply chain, taking into account the reciprocal relations between sales management, production, marketing and sales and logistics 3) forms and supervises inter-company project-oriented cross-cutting teams in the manner most feasible for the company	
B.2.4 Co-operation with external partners and process integration	EQF Level 7
<u>Performance indicators:</u>	

- 1) understands the relevance of co-operation between the links of the supply chain and communicates its advantages to the management in an understandable manner. Communicates efficiently with co-operation partners. Understands the internal logic of various co-operation strategies (ECR, CFPR, VMI, etc.) and selects the most suitable from them;
- 2) ensures an optimum level of inventories across the supply chain, in co-operation with other parties, based on the agreed level of customer service and principles of cost-effectiveness. Proceeds from the bases for management of client and supplier relations, holds effective negotiations, uses CRM and SRM software when necessary
- 3) analyses the functioning of the supply chain as a whole, is able to promptly identify the bottlenecks between different links of the supply chain, identifies the core reasons and offers solutions that benefit the company the most.
- 4) understands the role of information flows in the functioning of the supply chain and the relevance of transparency. Ensures prompt availability of information to the cooperation partners. Introduces electronic documents in the communication between the parties of the supply chain and within the company (e-orders, e-delivery notes, e-reception confirmations, e-invoices, etc.).

B.2.5 Financial management of supply chain	EQF Level 7
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- Performance indicators:
- 1) understands the logic behind the development of the company's value (costs and revenue, financing or cost of capital and return on net assets). Reads and understands the balance sheet and income statement, uses financial analysis tools. Understands the options for checking the supply chain costs, managing supply chain cycle duration and demand planning. Understands the link between entries of the income statement and balance sheet and logistical aspects (e.g. the cost of sold goods is related to the procurement strategy and planning of production volume, interest cost is linked to inventory management, etc.). Understands the relationship of individuals with the environment under construction and the relationship of the environment under construction with the existing environment, considering that buildings and the space between the buildings must meet the needs of individuals and be in compliance with nature
 - 2) analyses supply chain costs and cost drivers. Participates in the development of the activity-based costing model, if necessary. Determines the cost of customer service of the supply chain. Applies the Total Cost of Ownership (TCO) concept to decision-making
 - 3) applies investment analysis or capital budgeting if necessary and risk analysis tools (sensitivity analysis, scenario analysis, etc.). Is able to justify the need for supply chain investments based on well-known methods (NPV, IRR, pay-back period, pay-back threshold, etc.). Is aware of various sources for capital raising (loan, shareholders' equity, funds, mezzanine, etc.), understands the concept of capital cost and understands the options and impacts of shaping the composition of capital
 - 4) understands the importance of working capital management and is able to communicate it to the management. Optimizes the components of the cash cycle: period of customer receivables, period of payment to suppliers and inventory period. Understands the total costs related to inventories and their subtypes: warehouse costs, financial costs and risk-related costs, and optimises costs related to the inventories

B.2.6 Risk management of supply chain	EQF Level 7
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Performance indicators:

<ol style="list-style-type: none"> 1) specifies risks having an impact on the supply chain, estimates their probability and the amount of the impact of these risks, applying the generally accepted risk management methods 2) classifies risks based on their relevance, specifies an appropriate hedging strategy for each risk category in cooperation with the supply chain partners based on the interests of the comprehensive supply chain 3) prepares a crisis management plan for the supply chain, taking into consideration the principles of crisis communication 	
B.2.7 Sustainable and environment-conscious management of supply chain	EQF Level 6
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) considers the negative externalities resulting from the operation of the supply chain and is able to identify optimum solutions to reduce the impact thereof 2) Computes the amount/cost of the negative impacts resulting from the supply chain operation (Carbon Footprint, etc.) and finds opportunities for the reduction thereof 	
B.2.8 Demand forecasts	EQF Level 7
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) applies mathematical, brainstorming and combined forecasting methods, suitable software solutions (e.g. MS Excel Solver) and core functions used for demand forecasting (e.g. Analysis Toolpack), if necessary 2) analyses the connections between forecast and real outcomes, draws conclusions and makes required decisions, and introduces corrections into the forecasts of future periods. 	
B.2.9 Sales management	EQF Level 6
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) understands the needs arising from the supply chain strategy and requirements for the purchasing activities. Prepares a purchase strategy based on the supply chain strategy, if necessary 2) prepares activity plans, based on the purchasing strategy, for purchases of strategic and tactical levels, specifies relevant performance indicators, observes and measures the performance of purchase activities and introduces improvements, if necessary 3) knows the bases of supplier relation management, is able to hold effective negotiations with the suppliers, is in command of methods of supplier auditing and evaluation and is able to use SRM software for supplier management 	
B.2.10 Production management	EQF Level 6
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) specifies production needs based on the company's business and supply chain strategies 2) performs the Make or Buy analysis and based thereon takes optimum decisions for production organisation. Ensures information regarding subcontracting options and selects subcontractors applying the methods for supplier selection. 3) analyses production processes, determines bottlenecks and problems, analyses the core reasons of problems and develops solutions based on the modern principles of production management (Lean, Six Sigma, etc.) 	
<u>Knowledge:</u>	
Applies modern principles of production management (Lean, Six Sigma, etc.)	
B.2.11 Organisation of transport	EQF Level 6
<u>Performance indicators:</u>	
<ol style="list-style-type: none"> 1) specifies transport needs considering point of departure and destination, volumes of goods, transport frequencies, peculiarities of goods and time factor 	

<ol style="list-style-type: none"> 2) compares various transport options, considering the peculiarities of various modes of transport and their adjustability to the transport needs; economic and geographic conditions in the area; cost and time factors. Based on this, selects the optimum variant and makes plans for the transport system 3) determines the reasons for problems, applying the methods for establishing causes and effects ("fishbones", 5 WHY's, etc.) and develops a most suitable solution using decision-making techniques (e.g. cost and benefit analysis, Pareto analysis (80-20), grid analysis, the method of six thinking hats, etc.) considering limited resources and supply chain strategy 	
B.2.12 Inventory management	EQF Level 7
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) understands the role and importance of inventories in the supply chain. Applies generally acknowledged inventory management models (e.g. SCOR) for planning, measuring, analysing and rearranging processes of inventory management 2) applies key indicators of inventory management (e.g. ITO, DOS) for goal-setting and measuring process performance and optimises inventories 3) distinguishes between inactive and active inventory, analyses the causes for inactiveness, performs ABC and XYZ analyses and interprets results of analyses. 4) understands periodic and continuous ordering systems, determines the amount of buffer stock required if necessary, optimum ordering volumes and re-ordering point 5) understands the advances of EDI (Electronic Data Interchange) solutions and understands its value to the supply chain. Keeps up-to date on the solutions of various providers of EDI services and acquires the best service for his company. Explains to the management in an understandable and comprehensive manner the role of EDI in optimising the supply chain. Is aware of the attributes of the 2- and 4-document delivery process. Understands strategies that are based on on-going co-operation (e.g. VMI, CPFR) and understands the need for automation of information flows for implementation of these strategies. Prepares a plan for engaging business partners required for application of EDI. Knows the success factors of the introduction project of e-invoices and takes them into consideration 	
B.2.13 Warehouse management	EQF Level 6
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) determines storage needs and makes plans for warehousing based on the inventory management strategy, parameters of material flows, warehouse processes, economic geography and resources 2) compares various warehouse systems, taking into consideration the parameters of material flows, warehouse processes, resources and key indicators of customer services, and selects the most optimal option 3) analyses warehouse processes, determines bottlenecks and problems, analyses the core causes of problems and develops solutions based on the best practices and principles of cost-efficiency 	
B.2.14 Performing orders and customer service	EQF Level 7
<p><u>Performance indicators:</u></p> <ol style="list-style-type: none"> 1) analyses sales and marketing information, applying mathematical, evaluative and combined methods. Plans, organises, and develops the customer service processes of the company based on the agreed level of customer services and principles of cost-effectiveness 2) develops the system of the part of client agreements related to the supply chain, provides input to the client agreements and organises secured performance of contractual obligations based on the internal procedure of the organisation, client specifics and the legislation governing the specific area 3) determines differences between the service levels offered by the company and customer expectations. Analyses relations between service costs and service level and applies measures in order to bring them into compliance. Develops and implements a suitable quality measurement 	

system for customer service. Prepares quality reports on a regular basis and based thereon introduces improvements. Manages continuous client communication.

Part C GENERAL INFORMATION AND ANNEXES

C.1 Information regarding preparation, approval of professional standard and the awarder of profession and a reference to the location of professional standard	
1. Professional standard number in the register of professions	
2. Profession and vocations of the profession	Profession: Supply Chain Management Vocation: supply chain manager
3. Similar professions and vocations	Logistics, business manager, sales manager, production manager
4. Authors of the professional standard: names of persons and organisations	Ain Tulvi, <i>PROLOG, PAC Training OÜ</i> Gristel Tali, <i>PROLOG, BCS Itera AS</i> Hele Hammer, <i>Telema AS, EBS</i> Illimar Paul, <i>PROLOG, Sensei OÜ</i> Jekaterina Ossipova, <i>Tallinn College of Engineering, Tallinn University of Technology</i>
5. Professional standard approved by (name of the professional council)	Transport and Logistics Professional Council
6. Number of the decision of the professional council	
7. Date of the decision of the professional council	
8. Period of validity of the professional standard (date)	
9. Version of the professional standard	
10. Reference to Classification of Occupations (ISCO 08) (<i>min 2, max 4 digits</i>)	1324
11. Reference to the European Qualifications Framework (EQF)	7
C.2 Professional title in foreign languages	
In English: Supply Chain Manager	
In Finnish: Toimitus-tilausketjun johtaja	
In Russian: Менеджер цепи поставок/Управляющий цепями поставок	
C.3 Annexes	
Annex 1 Work units and tasks (Chart 3)	

Work units and tasks

1. Preparation and implementation of supply chain strategy
1.1. Adapting the supply chain strategy to the company's business strategy (including product development and marketing strategies)
1.2. Setting and communication of the goals, performance indicators and quality requirements of the supply chain
1.3 Determining requirements established for the supply chain by the clients
1.4 Application of the comparative study of the supply chain
1.5 Planning for the supply chain resources
2. Design and development of the supply chain network
2.1. Mapping and analysing the existing supply chain
2.2. Defining relevant factors having an impact on the supply chain network (infrastructure, political, macroeconomic, etc.)
2.3. Development and application of optimisation models for decision-making relating to location of buildings and allocation of resources
2.4 Designing of a desired supply chain
2.5 Justification of the impact of the supply chain network on the efficiency of the supply chain
3. Management and integration of internal processes
3.1. Staffing of the supply chain team
3.2. Considering reciprocal relations of the internal processes while developing the core process of the supply chain
3.3. Engaging various departments for satisfaction of customer demand in the manner that is most beneficial for the company
4. Co-operation with external partners and process integration
4.1 Developing co-operation and trust between the parties of the supply chain
4.2 Co-operating with other parties of the supply chain for ensuring an optimum level of inventories over the supply chain
4.3 Establishing circumstances blocking the seamless co-operation between the parties of the supply chain
4.4 Understanding the role of information and application thereof for achieving efficient co-operation in the supply chain
5. Financial management of supply chain
5.1 Defining the impact of the supply chain on the value of the company
5.2 Supply chain cost management
5.3 Investment analysis and financing decisions
5.4 Working capital management in the supply chain
6. Supply chain risk management
6.1 Establishing, monitoring and assessment of supply chain risks
6.2 Development of risk hedging strategies and approval with the supply chain partners
6.3 Planning supply chain crisis communication
7. Sustainable and environment-conscious management of supply chain

7.1. Considering limitations resulting from environmental sustainability influencing the supply chain and proceeding from these limitations in daily activities
7.2. Computation of the cost of sustainable and environmentally conscious management of the supply chain
8. Demand forecasts
8.1 Preparing demand forecasts by interpolation and extrapolation of time series, applying regression equations and/or brainstorming (e.g. Delphi and World Cafe)
8.2 Comparing forecasts with actual results, result analysis, drawing conclusions and introducing changes for improving the accuracy of the forecast
9. Sales management
9.1 Adjusting purchases strategy with the supply chain strategy
9.2. Planning monitoring and measuring of purchases processes
9.3. Management of suppliers
10. Production management
10.1 Identification of production needs
10.2 Comparing various production options and selection of optimum variant (Make or Buy)
10.3 Identification of the causes of production-related problems, problem solving
11. Organisation of transport
11.1 Identification of transport needs
11.2 Comparing various transport options and selection of the optimum variant, planning of transport system
11.3 Identification of the causes of transport-related problems, problem solving
12. Inventory management
12.1 Consideration of the relations between supply security, speed and flexibility of the supply chain and inventory management; relying on these factors for development of inventory management strategy
12.2 Application of key indicators of inventory management
12.3 Analysis of inventory structure in order to identify inactive inventory and conducting ABC/XYZ analyses
12.4 Application of inventory management techniques
12.5 Applying electronic means of data exchange for inventory management for internal uses and also within the whole supply chain in co-operation with suppliers and clients
13. Warehouse management
13.1 Establishing storing needs and planning of warehousing
13.2 Comparing various warehouse systems and selecting the optimum variant
13.3 Identification of the causes of problems related to warehousing, problem solving
14. Performing orders and customer service
14.1 Analysis of sales and marketing information and satisfaction of the business needs of existing and future clients
14.2 Developing the system of the part of client agreements related to the supply chain, providing input to the client agreements and organising secured performance of contractual obligations
14.3 Measuring client satisfaction with the supply chain performance, analysis of results and

introduction of improvements (key indicators: timely supply, quality, number of complaints, delays)