

Business field-specific qualification
for the Second-Hand sector
"Specialist for used electrical appliance"



European qualification concept
„Specialist for used electrical appliance“

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Project coordination

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Content

1. Foreword	4
2. General remarks to the EU-qualification concept	5
2.1 Background of the qualification.....	5
2.2 Type and benefit of the qualification	5
2.3 Objective of the qualification	6
2.4 Target groups and beneficiaries of the qualification.....	7
2.5 Notes on the supplementary quality standards.....	7
2.6 Used teaching methods	8
3. Core work processes of the qualification	9
3.1 Overview core work processes in the business field „WEEE“	10
3.2 Presentation of the core work processes in the business field „WEEE“	11
3.3 Overview of the core work tasks and necessary requirements.....	17
4. Structure and content of the qualification concept	28
4.1 The qualification modules and their temporal scope.....	29
4.2 Teaching/learning objectives and content of the qualification modules.....	30
4.3 For teaching competencies and skills.....	41
4.4 Implementation of the qualification modules	52
Bibliography and references	53

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The basis of the qualification concept are the results that are set under the national research and analysis of the Leonardo da Vinci project "QualiProSecondHand" (2007-2009) and the educational products that are developed in the Leonardo da Vinci project "QualiProSH II" (2009-2011) under the leadership of the Institute technology and Education (IT + B) of the University of Bremen - project management: Heike Arold. The developed qualification concept results from the previous projects and is a further development of the undertaken work.

As partner of the Erasmus+-project Business field-specific qualification for the second hand sector "Specialist for used electrical appliance" are mentioned:

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1. Foreword

The subsequent European qualification concept is the result of two successive Leonardo da Vinci Projects "QualiProSecondHand" (2006 -2008) and "QualiProSH II" (2009 - 2011). In the context of these projects has been developed basing on an extensive sector analysis, case studies and expert interviews in the European Second-Hand sector (including Germany, Belgium, UK, Slovenia, Finland and Bulgaria) an across all business fields qualification profile, quality standards for a qualification concept and across all business fields qualification modules and other supplementary educational products such as a quality control instrument. The results are partly a component respectively basis for the business field specific EU-qualification concept "specialist for used electrical appliance" that was developed in the Erasmus + -Project "QualiProSH Electro" (2014-2016).

The business field „used electrical appliance“ that belongs to the Second-Hand sector offers for the employees Europe-wide no uniform qualification or training measures that are specifically consider the requirements of the employees and the needs of the companies. There exist only selectively and demand-driven internal company qualifications to perform individual tasks. Because of that is not given a complete qualification of the employees, a cross-border comparability of the acquired skills and finally a professionalization of the business field.

The subsequent European qualification concept "specialist for used electrical appliance" essentially based on the identified core work processes, the necessary skills to exercise the core work processes and the requirements of the people who work in the business field. By focusing on the core work processes and the necessary core competencies the qualification concept can easily be adapted to different European VET systems and integrated without minimizing the comparability or the quality of the qualification.

The qualification concept is not only created practicable and understandable. It offers due to the modular structure on the one hand the opportunity to be implemented holistically as a whole qualification and on the other hand it can be implemented partial, that is individual modules can be trained separately and in isolation from the overall qualification. Thus, the greatest possible degree of flexibility should be reached for the beneficiaries.

At this point, all those who were involved in the underlying investigations of the Leonardo da Vinci previous project "QualiProSecondHand" is to be thanked. Here are to name Prof. Dr. Lars Windelband of the University of Education Schwäbisch Gmünd and Claudia Koring from Institute Technology and Education of the University of Bremen. Furthermore, thanks to the project partners of the second Leonardo da Vinci previous project "QualiProSH II" who were involved in the development of products which, inter alia are part of the concept such as quality standards, across all business fields modules and an instrument for quality check of the qualification.

2. General remarks to the EU-qualification concept

2.1 Background of the qualification

In the last 30 years, since the introduction of the EU Waste Directive 1975 (implementation into national legislation by December 2012), the Second-Hand sector and the recycling industry have on the one hand against the background of an expected shortage of resources and an increasing environmental awareness of consumers and on the other hand also because of economic considerations, developed into an independent sector. The EU countries are on one hand requested to implement waste prevention measures and on the other hand to promote the recycling and reuse.

In addition to a variety of different used goods the used electrical and electronic appliances in the EU are the largest proportion of waste. In addition to the pure recycling of such appliances (the recycling and reuse of individual components or materials in order to recover valuable raw materials) the trading accordingly to used and remanufactured appliances steadily increase. To promote the reuse of electrical and electronic appliances, inter alia the WEEE directive was adopted by the EU in 2003. According to this, the EU countries are encouraged to collect corresponding appliances among consumers, to reduce their share of household waste, to collect materials from the appliances and to bring them into the reuse cycle.

Against this background, according to a comprehensive and EU-wide sector analysis (which was carried out under the Leonardo da Vinci project "QualiProSecondHand") the trading with electrical and electronic appliances developed to an own business field in the Second-Hand sector in which on one hand profit companies and on the other hand especially non-for-profit companies are operating. In addition to the trade with used large household appliances (such as washing machines, refrigerators, dishwashers) and the trade with computer hardware, mobile phones and hi-fi equipment, the trade with small devices is increasing more and more. Accordingly, more and more people find employment in this field. Above all, we have to mention the group of people who are labor market disadvantaged. Because particular companies, which carry out measures for labor market integration use the business field to make their participants fit for the first job market.

The analysis has shown in detail that the work processes (from the collection through the reprocessing to the sale) exist EU-wide in companies, who are operating in the business field WEEE. But they are neither uniformly structured, nor they are professionalized. To promote the professionalization, a unified, specialized and working process-oriented qualification of the employees of the business field is necessary. For this to the European qualification concept "specialist for used electrical appliance" make a significant contribution (see. Arold, Windelband 2010).

2.2 Type and benefit of the qualification

The qualification concept that in total cover 11 qualification modules consider the core professional profile of the employees of the Second-Hand business field "used electrical appliance" (WEEE) and which inter alia was identified by a work process analysis under the Leonardo da Vinci project "QualiProSecondHand". This means that all the identified core work processes and the relevant core competencies to carry out them as well as the requirements for the employees are considered. The orientation to the work processes ensures the practical relevance and creates the possibility of implementation in different European VET systems. Since the core work processes that are the basis for the qualification concept, could be identified in all countries with only minor differences, the qualification concept can easily be adapted to country-specific conditions, without losing its comparability or quality.

In the qualification concept is a further education qualification, which gives employees of the business field "WEEE" the possibility to qualify themselves in all identified work processes and to acquire the necessary know-how and the skills that they need in the business field to be able to work professionally. Essentially the qualification covers across all business field work processes, which, inter alia, have also a relevance in other Second-Hand business fields as well as business field-specific work processes and the necessary personal and employee and customer related skills.

The qualification concept was deliberately designed modular in order to give the opportunity to be able to carry it out selectively and demand-oriented to specific work processes. The focus of the individual qualification modules are always the products "WEEE" and the specifics how to deal with this. Furthermore, it should be noted that the qualification concept not include a professional (additional) qualification such as Electrician, which is needed in whole Europe to do certain professional activities on electrical equipment/appliances. The qualification concept covers all work processes and competencies that may be implemented without statutory provisions or regulations in the business field, such as purely commercial content to craft activities. Furthermore, for the beneficiary a comprehensible and workable structure was chosen. Thus the adaptation of the qualification concept to the respective national conditions as well as the direct implementation is easier.

The main benefit of the qualification concept is the professionalization of the employees and a good-quality, comparable qualification of them. Besides the possibility of transnational comparability of the acquired qualification a qualified employment opportunity, especially for already in the business field workers as well as labor market disadvantaged people who use the business field to re-enter the labor market, was created. Based on the core contents of the qualification concept and the related quality standards also the cross-border labor market mobility will be encouraged and the business field itself will be professionalized. This sustainably contributes to the fact that the business field "WEEE" gets a better image among the consumers.

2.3 Objective of the qualification

The overall objective of the qualification "specialist for used electrical appliance" is to qualify the employees in the business field technical, business field specific and work process-oriented. They should get and learn all necessary competencies and skills that they need to work in a company that collects used electrical appliances or buys, the products recycle or preprocess and sale that they are reused. The imparted competencies and skills as well as the specific content are based closely to the real work processes and requirements to reach the highest possible practical relevance.

A further objective is to impart also the relationship between the different work processes, the needed competencies and the specific know-how. By that it should be ensured that suitably qualified employees are comprehensively qualified. They should be able to work, both in individual work areas such as purchase, repair or sale as well as in all work areas in total (e.g. to set up their own private company in the business field "WEEE").

The qualification concept as such is the basis for national adaptations and aims at the comparability of the acquired competencies and skills. It may be used forward-looking as a basis for the development of an excepted apprenticeship.

2.4 Target groups and beneficiaries of the qualification

The general beneficiaries of the European qualification concept is the Second-Hand sector and especially here the companies and employees who are active in the business field "WEEE".

The qualification addresses to different target groups which have to be qualified. However, always and exclusively it focused the business field "WEEE" with its specific products and includes both the private sector, as well as the socio-economic employment field, because the business field is located in both fields. The qualification is suitable for

- Employees in the Second-Hand sector, who wish to specialize professionally in one business field
- Already in the business field "WEEE" working employees
- People, who see in the business field „WEEE“ a new job opportunity
- People, who want to set up an own company in the business Field „WEEE“
- In the labor market disadvantaged who use the business field "WEEE" to increase their chances of labor market integration
- Disadvantaged young people without job prospects and with training barriers (e.g. to use the qualification as a springboard to an apprenticeship – as a kind of pre-qualification)

The implementation of the qualification addresses to different institutions that are operating in the field of education, further training and vocational training and/or use the business field for labor market integration of disadvantaged people. Here are i.a. named

- Qualifying institutions in the field education and further training and vocational training
- Employment companies
- Social companies that use the business field „WEEE“ as a framework for job creation measures for labor market disadvantaged people
- Private companies that want to qualify their employees professionally in order to improve the quality of their company

2.5 Notes on the supplementary quality standards

In addition to the identified work processes, required competencies and skills and the requirements on the employees the quality standards that were developed in the Leonardo da Vinci project "QualiProSH II" are the basis for the EU-wide uniform qualification concept. They have to be considered in a concept adaptation to different national frameworks of individual EU member states and should be observed. The quality standards are criteria that have to be valid independent of a region. Thus it can be ensured that the qualification in addition to the core teaching contents, which are also an integral part of the qualification, is comparable across countries.

The underlying quality standards describe on one hand the framework of the qualification and on the other hand, they reflect the requirements for the qualification in general. On them can i.a. be measured if the requirements are met and if specific objectives and features could be achieved in the course of implementing the qualification. Thus, they also contribute to the comparability of trained competences and skills that are acquired by the qualification.

To clarify the relevance of the different quality standards, these have been clustered and assigned to specific categories such as input, process and output quality standards. The category "input" covers all quality standards that represent the framework (conditions) of the qualification. The category "process" covers industry-specific and content-related criteria and the category "output" refers to the results that are achieved by the qualification (cf.. Arold, Windelband 2011).

The individual underlying quality standards and their assigned objectives and the recommended tools for implementing the quality standards are presented in the document "quality standards for a sector-specific qualification concept in the European Second-Hand sector". The corresponding document is available for download at the project website www.qualiprosh.eu (<http://www.qualiprosh.eu/downloads.html#2.4>) or can be requested via the above mentioned contact data of Heike Arold.

2.6 Used teaching methods

The teaching and learning methods that are applied for the qualification concept were against the background of the strong practical relevance of the teaching content and the consideration of the core work processes and tasks, deliberately not limited to only one or two teaching methods. The placement of expert knowledge as well as practical skills and competencies consists of a combination of theory and practice in all qualification modules.

The placement of the specific basic knowledge in the individual qualification modules is initially takes place by theoretical teaching methods. Thus the learners should first get an overview of the teaching content of the different qualification modules as well as the necessary and specific background knowledge and the context knowledge. This includes mainly basics to work items, tasks and processes as well as to the necessary connections between these against the background of the different priorities of the various qualification modules. The eventual choice of theoretical teaching methods that are used, it is up to the qualifier. With the objective to make the knowledge motivating, it is recommended not to convey the theory exclusively in the form of pure ex-cathedra teaching. It should be used different methods, such as active learning, cooperative learning (such as partner and group work) and self-directed learning. Besides pure lectures by the trainer or teacher, all teaching/learning techniques such as discussions, role playing, pin board moderation, teamwork, mind map, task processing, presentations can be used. As teaching media can also come to use various media such as boards, flipchart, video and audio media, PCs, etc. as well as different materials (presentations, literature, handouts, work items, etc.).

Besides the placement of the theoretical basics the qualification concept includes the teaching of practical skills to enable the learners to use their theoretical knowledge practically in the work process and to do the various work tasks in a technically correct way and according to the job requirements. It is recommended in this regard classical teaching methods like training on-job, learning-by-doing and coaching in the work process. The learners should be introduced individually or in a group under professional guidance in the work process (e.g. by practical tasks and exercises) and directly in the workplace (e.g. workshops, warehouses, office) and deepen this. Responsible for the eventual choice of teaching method that is used for the training of the practical skills is also the qualifier.

Furthermore, it should be noted that in all the qualification modules performance testing is provided. This is used on one hand for controlling and on other hand to identify existing deficits in the learning process. The performance testing on one hand is used for controlling and on the other hand to identify existing deficits. Furthermore the performance testing belongs to the set quality standards and thus they are an integral part of the qualification. The choice of method of performance testing is not specified in detail, so that the qualifier can decide it himself which method he select.

To meet the demand of education and training experts for the use of new teaching methods the teaching methods are not be limited to traditional teaching methods. So can be used limited with regard to the implementation of the individual qualification modules the digital knowledge transfer via webinars, which are carried out via the internet. Because the content and time scope of webinars is limited, they cover only selected core content and an introduction to the subject of the individual modules. The use of webinars as part of the qualification concept is no mandatory teaching method, but merely another recommended teaching method that the above mentioned classical teaching methods supplements.

3. Core work processes of the qualification

To assign the individual teaching and learning content and the competencies and skills better to the different qualification modules and to understand the relationship between them they have been clustered corresponding to the identified work processes and tasks. For a general overview they are shown below schematically in chapter 3.1. The following graphic provides information on the nine core work processes / tasks that occur in a company for "WEEE" as well as their schedule and interaction within the overall work processes.

Furthermore, the individual work processes and tasks that have been identified by an EU-wide work process analysis and which are relevant across countries will be described in chapter 3.2. These and the competencies which are relevant to carry out them and the necessary requirements describe the qualification profile of a "specialist for used electrical appliance". And they are the basis for the EU qualification concept.

Note: Because the qualification concept is an EU-wide uniform concept that acts as a basis for implementing national qualification concepts in the context of the respective specifics of the individual EU countries, was given up a description of the country-specific specials regarding the work processes and tasks (in chapter 3.2).

3.1 Overview core work processes in the business field „WEEE“

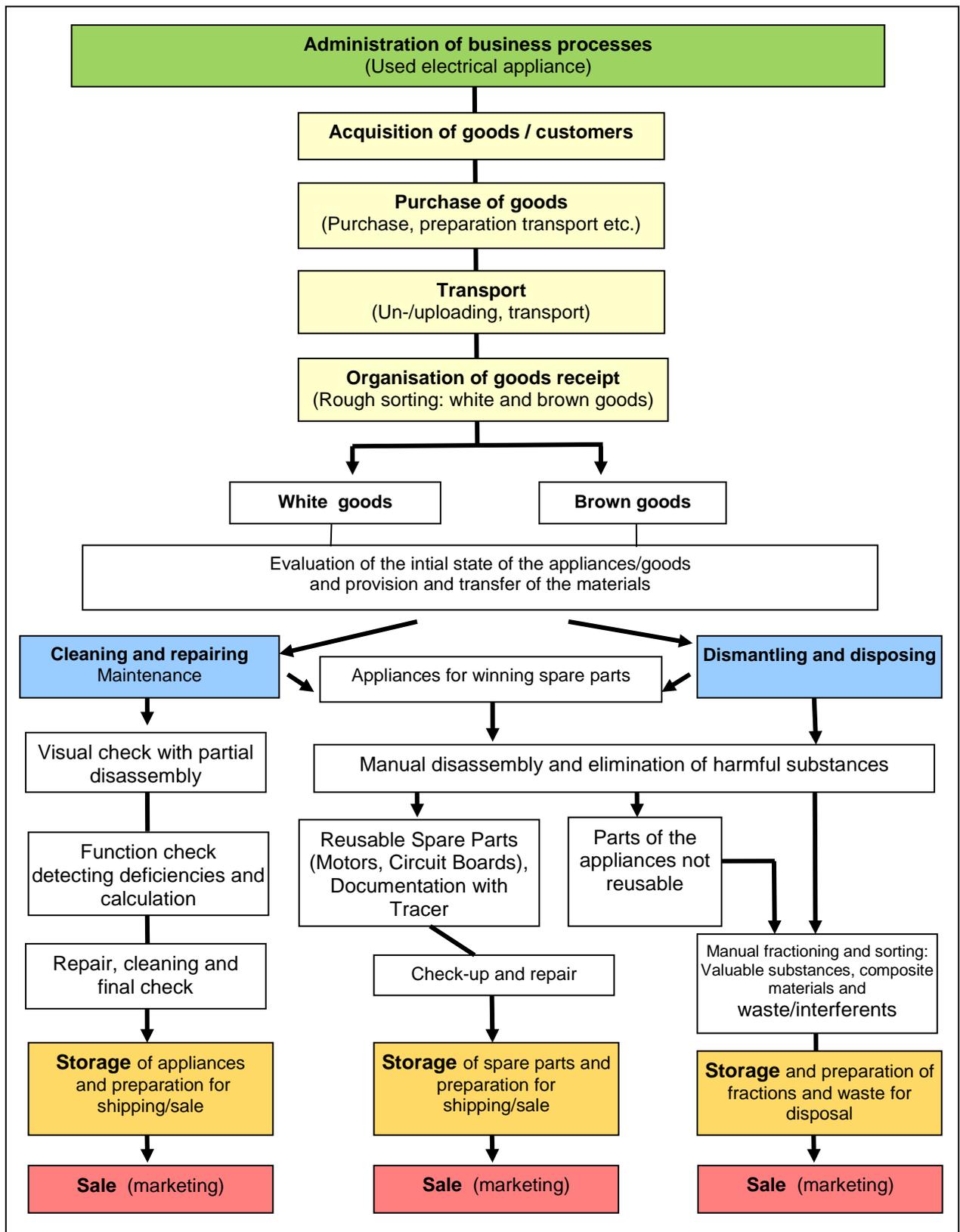


Fig 1: Overview of the work processes / tasks in the business field "WEEE" (see. Arnold, Koring, Windelband 2008)

3.2 Presentation of the core work processes in the business field „WEEE“

In the Second-hand business field "WEEE" are used electrical and electronic small and large appliances (e.g. white goods such as kitchen utensils), consumer electronics (e.g. brown goods such as TV, hi-fi systems), computers and computer accessories, office equipment purchased, received, transported, collected, stored, disassembled, repaired and resold.

Overall, the business field is characterized by a variety of technical tasks that are closely related to the handling with "used electrical appliances". Over all identifies core work processes and tasks in the business field "WEEE" is the workarea "administration of business processes" with core work tasks such as personnel management, accounting, finance, education. This area, all other areas of work and the respective required work tasks are subordinated:

At the beginning of the entire work process is the acquisition of used electrical appliances and customers. Here were on one hand searched for goods and on the other hand customers acquired, who offering goods or want to buy used goods. The acquisition happens before the purchase of goods and tangent i.a. the area of the transport of goods and in particular the preparation and planning the transport that must be taken into account in the acquisition. After the area purchase of goods and a possible transport follows the organization of the goods receipt. In the companies the goods depending on their type (e.g. by distinguishing white or brown goods) are pre-sorted and at the same time the initial condition of the goods is evaluated to determine the subsequent processing. Depending on the condition and the quality of the electrical appliances is decided whether the appliance is refurbished by repairing and/or cleaning or delivered to the area "dismantling and disposing of used electrical appliance". During the maintenance defects are eliminated and spare parts replaced, in order to bring the appliance into an intact and salable condition. If a maintenance is excluded the appliances, depending on the market situation, are dismantled in single parts which then resold as spare parts. This will also be checked, repaired and stored. Is it not worth not to repair the appliance or to remove spare parts, the appliance is separated into its individual fractions and recycled and disposed against the background of the current environmental regulations. The recovered fractions for recycling are sold depending on the market price. At the end of the business field, the repaired appliances and spare parts are stored and transferred to the sale. The sale takes place depending on the kind of company in a shop / department store or on the Internet.

The identified work processes can be divided into nine work areas with respective core work tasks:

1. **The core work task "Administration of business processes"** stands over the whole work processes and tasks in the business field "WEEE". To ensure the individual operations and the technical quality of the company, an appropriately organized management is indispensable. In addition to the personnel planning, operational processes have to be coordinated and commercial tasks have to be managed. The personnel planning includes on the one hand the activities of recruitment, personnel classification and training and on the other hand it ensures a smooth workflow within the company between the different areas of work such as purchase of goods, transport, organization of goods receipt, storage and sales. In detail work plans, work tasks and working hours of employees are coordinated with the employees in the context of the overall business processes and arranged. In addition, new employees are selected and learning procedure is organized and taken over by experienced staff. Furthermore the "administration of business processes" includes the implementation of optimization and adaptation and change processes in the company to remain competitive in the business field. Also belong to the work task the processing of commercial administration tasks such as financial management, documentation, communication. The aim is a rapid and correct processing of e.g. z. B. incoming

payment and cash disbursement as well as personnel accounting. For the preparation of all commercial documents current PC systems for accounting, tax returns, etc. are used.

Work areas:

- Personnel planning
- Organization of the instruction of employees
- Processing of the commercial administration work

Performers: The task is mainly settled by the level of requirements of the management.

- 2. The core work task “Acquisition of goods/customers”** includes the acquisition of contracts for WEEE collection or for delivering electrical appliances from collections or local collection points. By using various media, such as flyers, brochures, newspapers, Internet and also by advertising on radio and personal contacts or through special networks new suppliers for delivery of electrical appliances and thus goods are to be found. A second, connected thereto, but secondary objective is to gain new customers, a.) who want to give / sell the goods or b.) who are potential buyer of used electrical appliances. For this purpose, inter alia, intensive public relations work is necessary. The acquisition of goods and customers ensures on one hand the sale of goods and on the other hand it ensures a large and diverse product offer. In detail, the work task includes the organization and design of newspaper and Internet advertising, billboard advertising and partly radio or cinema advertising. In addition, general marketing tasks, research work and market observations belong to the detailed tasks.

Work areas:

- Organization and creation of advertising campaigns for buying / selling: selection of target groups, destinations and content of the advertising campaigns
- Constant observation of the market
- Research for sales offers in different media (liquidations, remainders) and alignment with the business needs
- Maintaining networks and contact
- Assisting in the design of advertising campaigns (cultural events, open day)

Performers: The responsibility for the marketing activities is with the lead the management level, and also partly the staff level. General staff members take over subtasks and do legwork. Subtasks are e.g. the creative co-development and collection of ideas for the kind, content and design of promotional activities, helping to organize and carry out operational events in the company as well as networking e.g. to maintain the personal contacts with suppliers during they deliver goods.

- 3. The core work task "Purchase of goods"** includes firstly the acceptance of supplier requests for collection of goods and, second, the inspection of the goods (partly direct at the suppliers) as well as the preparation and organization of the transport of the appliances. Beside the assessment of the condition and the quality of the goods in the context of fixed and company-specific standards another task is the observation and analysis of developments in the Second-Hand market. And the actual cash value, the buying and selling value as well as possible repair costs have to be estimated and calculated. Furthermore the registration of the transport (pick up of the goods) is organized by special order documents and transport documents (if existing) as well as the receipt of the used electrical appliances (when the appliances are accepted. For that the customer data with the destination and the amount of material and the type appliance must be registered in the papers/documents. For an optimal planning and

implementation of the transport, the employees must coordinate themselves with the colleagues of the work area "transport".

Work areas:

- Quality check and assessment of the functioning of the goods
- Review of the goods regarding the resale value and repair costs
- Calculation of the price for purchase
- Sorting by internal standards
- Documentation by inventory management system, dockets etc.
- Passing on the goods to following work processes / areas

Performers: The work task is carried out by employees of the management level or taken over by employees of operational staff level, which carry out single detail tasks on the basis of instructions

4. **The core work task "Organisation of goods receipt"** is immediately followed by the purchase of goods and includes a rough sorting and the verification of the state the goods and as well as preparing the devices for the working steps to follow. If new used electrical appliances coming in, they will be identified by a visual inspection (brown or white appliances), labeled and transported to further processing or provided for the intermediate storage. In some company resources are available such as special order documents, internal waybills or a computerized order processing. In some cases, a first function check is already done because primarily functioning electrical appliances are adopted to resell them profitably. The sorting of incoming goods takes generally place in consideration of the efficiency, the resale value and repair costs of the appliances. Depending on the result, the appliances are assigned to further processing steps (repair and cleaning = maintenance, spare parts production or dismantling). Partial an interim storage in pallet cages, containers or shelves in consideration of the safety regulations is necessary.

After this follows a supply of the assorted appliances for further processing in different work areas by different transport vehicles and containers. Therefore the appliances must be labeled specifically. Indispensable is a close coordination with the following work areas. Furthermore, the work task includes the documentation of the goods at the goods receipt, the handling of incoming goods and sometimes the communication with potential suppliers who partly directly deliver the goods in the companies.

Work areas:

- Acceptance of supplier offers
- Quality check and rough sorting
- Coordination with transport, storage and other following areas (e.g. workshops)
- Planning and organizing the collection of goods
- Route planning
- Passing on contracts by order form

Performers: The work task requires a higher level of requirements because specialized knowledge is necessary (e.g. in the review of the initial state, the functional test) and is therefore implemented by the foreman or skilled worker level. Operational staff (e.g. semi-skilled and unskilled workers) implements the sorting and quality check criteria and they are involved in tasks such as intermediate storage and transport.

5. The core work task „Transport of used electrical appliance“ involves all executive work directly related to transport. Therefore, included are the loading of the goods on board, the transport itself (abiding by the regulations of loading and transport) and the unloading process at destination. After having planned these steps, the ones responsible drive to the supplier and put the appliances on board the vehicle of transport to make sure they are transported safely to the destination/business. Transport and loading regulations have to be followed and used transport and loading devices (forklift truck, lifting truck and strap equipment) have to be handled reliably. In parts, certain boxes or devices for storage (wire metal boxes or skids) have to be provided for the transport. The appliances have to be loaded and transported in a very careful, space-saving manner.

After loading, the appliances are transported with a suitable vehicle (truck, transporters etc.). The legal requirements of the respective country regarding road safety and transport/safety regulations have to be followed. The vehicle used has to be roadworthy and registered. The aim is to ensure transporting the goods carefully abiding by the regulations of transport. At the destination the appliances are unloaded taking into account the in-house processes of the organisation. To some extent, the appliances are stored temporarily. The unloading should be happen in a material gentle way. Tools that are provided for this are amongst other things forklift truck and hand forklift truck. Order documents have to be filled in after unloading and passed on when completed.

Work areas:

- Safe and reliable driving of the transport vehicle
- Secure and material gentle loading and unloading of the goods maybe dismantling)
- Approximate visual check when picking up the goods (no need of extensive product-specific knowledge)
- Proper processing of order papers
- Coordination with work areas before and after the transport
- Possible route planning (if not done by the planning board)

Performers: The task is implemented by the operational staff (e.g. semi-skilled and unskilled workers). The authorization (driving license) for the transport vehicle is an essential precondition.

6. The core work task „Cleaning and repairing of used electrical appliance“ (= maintenance) is a very challenging one with regard to the technical skills the ones responsible have to have and also requires a lot of experience in the field in order to be able to repair and maintain the wide variety of different types of appliances in the most efficient way possible. The function check starts by finding out if it is the case that the product is broken, leaking or cabled the wrong way. If there are only pure stains follows a professional cleaning of the appliances. For the direct function check the appliances has to be partly disassembled. After that, a quick and reliable function check by means of checking and diagnostic devices is carried out. The ones responsible fall back on the producer's documents available (e.g. operating manuals). Different testing concepts are being implemented (amongst other things VDE (German Association for Electrical, Electronic and Information Technologies) and voltage test) and defined measurements depending on the type of device (e.g. motor power for white goods) are carried out. The deficiencies are registered and necessary repair is done. If a appliance has to be repaired the expense for repair has to be calculated beforehand to make sure it is worth it depending on the possible price it could be sold at. If it is repaired the worn or broken parts are exchanged and other ones (new if needed) are installed. For that purpose standard tools, service and repair documents, technical information, work sheets if available, the internet and special tools are used.

The purchase of new spare parts has to be weighed up against the possible resale price. The aim is to re-establish the functioning of the product in consideration of the economic framework conditions. Due to the fact that in the context of commercial sales of used electronic appliances it is required by law to give one year of warranty, a product is only repaired if it is actually possible to give a warranty. Therefore devices have to meet a minimum standard. In the end, its functioning is tested and it is finally checked as a whole.

Work areas:

- Estimation of the state, the quality and functionality of the used electrical appliance
- Cleaning of the appliances
- Presorting according to internal categories
- Use of tools (diagnostic and test tools, simple hand tools)
- Estimation of repair costs
- Implementation of simple repairs

Performers: The ones responsible for this task are individuals at the lead worker/trainer level, because it is quite challenging and very profound technical knowledge (regarding the repairing and maintaining processes as well as determining the resale value) is absolutely necessary. General staff members (e.g. semi-skilled and unskilled workers) work in this field when they are being asked to do so, they assist and support and do routine work in the cleaning and repairing so far no proof of special electrical knowledge is necessary.

7. The core work task „Dismantling and disposing of used electrical appliance“ comes into play when the used electrical appliances are not suitable for repair or recycling of spare parts. These are then disassembled in the most companies. The appliances are disassembled taking into account safety and environmental regulations, contaminated parts are removed and the grouping of the different parts of material are recycled (quality of valuable substance) and secondary raw materials and waste dismantled. The parts have to be told apart, the material has to be sorted correctly and the legal requirements for pollutant extraction have to be met. For the disassembly are provided workbench, conveyor belt, air torque screwdriver, wire metal boxes/containers, boxes for contaminated parts and also common tools (hammer, screw driver, pliers). Besides using the tools in a reliable way it is important to remove the contaminated parts carefully without damaging them. The level to which a certain appliance is taken apart is determined in consideration of economic aspects: the parts that are reusable are withdrawn (reusable parts are e.g. motors, circuit boards). The information about where the part came from and part number are documented or written on docketts. The overall target of this task is the efficient and unmixed materials recovery.

Work areas:

- Removal of usable spare parts
- Manual dismantling and separating of recyclable materials in accordance with legal and internal requirements for removal of hazardous substances in the field used electrical appliance
- Following the safety regulations
- Nondestructive removal of noxious components
- Consideration of economic aspects with regard to the optimal depth of disassembling
- Documentation by docketts

Performers: The work task is completed by general staff (e.g. semi-skilled and unskilled workers).

8. The core work task „Storage of used electrical appliance“ (and might spare parts) involves that repaired appliances and the functioning or repaired spare parts being stored in a space-saving manner according to a storage plan, using forklift trucks, wire metal boxes, skids, containers and shelves. The inventory is documented regularly – in parts by means of an EDP system. The storage and supply of the sorted parts and waste parts, until they are recycled and disposed, is related to the working task. If old appliances or spare parts are called up (e.g. when being sold on the internet) they have to be prepared for shipping (if the respective business is offering the service) or for being sold directly (shop or store). Methods of transport have to be handled reliably while storing or removing the devices. It is possible to identify and call up the repaired devices quickly if the stock is administered well.

Work areas:

- Handling of transport vehicles (e.g. forklift)
- Storage according to the warehouse plan
- Conscientious and complete documentation of the warehouse
- Supply of goods
- Preparation of goods for sale or shipment

Performers: The task does not require much technical knowledge and is thus completed by general staff members (e.g. semi-skilled and unskilled individuals)..

9. The core work task „Sale“ presents the last step of the area of business. It aims at selling the repaired devices and spare parts and at recycling the usable parts. The used spare parts offered for sale (e.g. motors), the electronic devices (e.g. white or brown goods) or valuable substances (e.g. metal, copper and plastics) are registered in an inventory control system, if available and maybe present in a salesroom. Prices have to be fixed following the market price and in consideration of the costs for repair. When offering the products on the internet pictures have to be uploaded and the device has to be described on the relevant site. Different media like digital cameras or computers have to be operated in this context. If an order is received via the internet (telephone/PC), the one responsible in the storehouse has to be told, because shipping is organised via that place. The repaired appliances are sometimes delivered and installed at the customer's. In order to increase sales ads are taken out in the newspapers or on the internet and flyers or emails are distributed. Besides, networks are being established for strengthening relations with customers or for winning new ones.

Work areas:

- Calculation of the price (internal standards, personal archives, internet, demand situation)
- Labeling and sorting in the range of goods
- Decoration
- Sale
- Handling cash desk systems
- Offer creation on the internet (photographs, description)
- Sales conversation and counseling
- Handling with inventory management system

Performers: Responsibility for the sales activities is with the lead the skilled worker/trainer level, and also partly with the management. General staff members (e.g. semi-skilled and unskilled individuals) are asked to complete subtasks in this context

The nine shown core work processes and the corresponding core work tasks are used in almost all companies in the business field "WEEE". Some of the work processes can be found not only in the business field "WEEE", but also in other Second-Hand business fields. These across all business field work processes / tasks are

- Administration of business processes
- Acquisition of goods and customers
- Purchase of goods
- Organization of goods receipt
- Sales

The requirements on the employees as well as the competencies and skills which are necessary to carry out the work tasks do not differ significant in the different Second-Hand business fields. The only distinction is in the type of goods with which it have the employees do. In addition to the across all business field core work processes / tasks could also business field-specific core processes / tasks are identified. These are

- Transport of used electrical appliances
- Storage of used electrical appliances
- Cleaning and repairing of used electrical appliances
- Dismantling and disposing of used electrical appliances

The requirements on the employees concerning the implementation of this core work processes / tasks are aligned on the goods "WEEE" and the specific conditions that the handling of these requires. (see Arold, Koring, Windelband 2008)

3.3 Overview of the core work tasks and necessary requirements

In addition to the described work processes and tasks that are considered as part of the qualification "specialist for used electrical appliance" the demands on employees are the essential basis of the qualification concept. The employees must have a variety of job-related skills to carry out the required tasks correctly and to provide a high-quality work. The respective requirements for the employees and the necessary resulting competencies are reflected in the identified contents of work and learning in the various core work processes / tasks. They result on one hand from the operation-related objects such as different materials, transport vehicles, storage containers, presentation shelves, etc., as well as the tools used in handling the goods in cleaning, repairing and dismantling and on the other hand from the company work organization and the specific detailed tasks. Furthermore the requirements are also influenced by different legal and internal regulations such as safety regulations and by the expectations of the customers and suppliers. (see Arold, Windelband 2010).

The basis of the description of the core work tasks are three dimensions of the "working and learning" (see Spöttl 2000) that are partly interrelated and always have a close connection to the real work processes. As dimensions are mentioned:

1. The **object** of the skilled work, which can consist of technology, functions, phenomena or customers.
2. The **tools, methods and organization** of skilled work.
3. The **requirements** for skilled work and technology by laws, companies, customers and society.

The following tables (see Arold, Windelband 2010) give an overview of the core work tasks which are the basis of the qualification concept with detailed listing of the current work object, the to-use tools, methods and work organizations and the respective requirements. They form the basis for the eventual definition of teaching and learning materials in the different qualification modules.

Core work task: Administration of business processes		
Contents of work and learning		
Object of work	Tools, methods and organization of work	Requirements for work and technology
Carry through personnel planning, planning work schedules, tasks, times	<u>Tools</u> <ul style="list-style-type: none"> Personnel plans <u>Methods</u> <ul style="list-style-type: none"> Setting-up of work plans Determination of work tasks Determination of working times Analysis of qualification needs <u>Organization</u> <ul style="list-style-type: none"> Select employees Conversations with employees for working time planning Clarification of work tasks 	<u>For work</u> <ul style="list-style-type: none"> Flawless work processes between the different work fields goods receiving and sales Flawless work processes between purchasing, stock keeping and sales
Handling of general management tasks	<u>Tools</u> <ul style="list-style-type: none"> Current PC systems for accounting, tax return declaration etc. <u>Methods</u> <ul style="list-style-type: none"> Setting up of all commercial documents <u>Organization</u> <ul style="list-style-type: none"> Registration of cash receipt and cash disbursement Handling of payroll accounting, payment of salaries Creating work reports 	<u>For work</u> <ul style="list-style-type: none"> Swift and correct handling of all commercial administration tasks Need for business and organisational skills and good communicational and customer service skills
Presentation of the company to the outside	<u>Tools</u> <ul style="list-style-type: none"> Advertisement in various media (newspaper, flyer, newsletter) <u>Methods</u> <ul style="list-style-type: none"> Dissemination of the company's thoughts (image) through various media <u>Organization</u> <ul style="list-style-type: none"> Building a company image and spread it out 	<u>For work</u> <ul style="list-style-type: none"> New customer winning and dissemination of the company image

Core work task: Acquisition of goods and customers		
Contents of work and learning		
Object of work	Tools, methods and organization of work	Requirements for work and technology
Marketing measures for the sale of new goods or the acquisition of new customers	<u>Tools</u> <ul style="list-style-type: none"> • Advertisements (internet, newspaper) • Radio and cinema spots <u>Methods</u> <ul style="list-style-type: none"> • Advertising in order to gain goods with the aid of different media • Advertising in order to win new customers <u>Organization</u> <ul style="list-style-type: none"> • Select media (internet, newspaper, cinema etc.) • Design advertisements 	<u>For work</u> <ul style="list-style-type: none"> • Winning of new suppliers and private persons who deliver the business with goods • Winning of new customers • Marketing should be developed with modern methods like internet, advertisement in magazines and newspapers, flyers
Acquisition of goods (new contracts)	<u>Tools</u> <ul style="list-style-type: none"> • Specialist journals and local newspapers • Advertisements • Internet <u>Methods</u> <ul style="list-style-type: none"> • Check of different media according to the offers for the sales of goods (prices) • Observation of the market (market analysis) • Comparison of offers with the existing range of goods in order to determine an additional need for the goods • Setting up and maintaining customer contacts <u>Organization</u> <ul style="list-style-type: none"> • Identification of offers in specialist media • Contact suppliers 	<u>For work</u> <ul style="list-style-type: none"> • Safeguarding of a general range of offered goods • Safeguarding of a market and need-oriented offer of goods • Winning of new suppliers
Acquisition of donations and network maintenance (suppliers and customers)	<u>Tools</u> <ul style="list-style-type: none"> • Cultural offers and events • Flyer, brochures, advertisements • Internet • Assignment of design awards <u>Methods</u> <ul style="list-style-type: none"> • Different media or measures • Promotion activities (open days) • Public relation <u>Organization</u> <ul style="list-style-type: none"> • Selection of destinations, target groups and measures and implementation of the activities • Dissemination of advertising material (föyer, poster, advertisements) 	<u>For work</u> <ul style="list-style-type: none"> • Winning of donations to secure the range of goods • Winning of new customers to secure the sale • Maintenance of existing networks • Image care

Core work task: Purchase of goods (Part I)

Contents of work and learning

Object of work	Tools, methods and organization of work	Requirements for work and technology
<p>Quality check: Checking the goods (current conditions, functionality, possible repair costs)</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • In-house waybills <p><u>Methods</u></p> <ul style="list-style-type: none"> • Visual and function test • Completeness check • Inspection of the goods ownership <p><u>Organization</u></p> <ul style="list-style-type: none"> • The goods are seen, tested and evaluated at the place of the supplier • The goods are seen, tested and evaluated directly in the company. 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Identification of incomplete goods (knowledge of goods) • Identification of faulty and/or repairable goods • Identification of not saleable goods
<p>Price calculation for purchasing</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Merchandise management system (MMS) • Internet <p><u>Methods</u></p> <ul style="list-style-type: none"> • Prices already determined in the past can be taken from the MMS • Price comparisons with offers from the Internet (market knowledge) • Determination of the purchasing prices at discretion/ experience with a focus on the goods quality <p><u>Organization</u></p> <ul style="list-style-type: none"> • Price comparison in the internet • Coordination with colleagues • Submitting offers to suppliers/ offerers of goods 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Identification of the value of the goods • Identification of the profit rate • Knowledge of the Second-Hand trade in the business field "WEEE"

Core work task: Purchase of goods (Part II)

Contents of work and learning

Object of work	Tools, methods and organization of work	Requirements for work and technology
<p>Checking and sorting of goods regarding the initial conditions</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Merchandise management system (MMS) • Pallet cages • Container • Order form • Operating Manual <p><u>Methods</u></p> <ul style="list-style-type: none"> • Estimation of the initial state of the goods (visual check) • Identifizierung von Lücken im Ladensortiment • Identification of gaps in the shop's range of goods • Identification of goods which has to be processed or repaired (calculating the repair costs) • Classification according to internal standards (product groups) <p><u>Organization</u></p> <ul style="list-style-type: none"> • Coordination with colleagues in sales department • Coordination with goods reception and with the purchaser responsible for the warehouse • Coordination of the purchaser with the shops • Assignment of goods to different reuse options (e.g. repair, spare part production, dismantling) 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Knowledge about the sorting of the range of goods and internal standards • Checking the initial conditions regarding their functionality, resale value and repair expense • Recognition of the intrinsic value • Knowledge of stock range
<p>Making goods available for other work areas and allocate them to other work areas</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Pallet cages • Container • Means of transport <p><u>Methods</u></p> <ul style="list-style-type: none"> • Logistic concept for allocation and interim storage <p><u>Organization</u></p> <ul style="list-style-type: none"> • Knowledge and consideration of the storage plan and capacity • Coordination with other work areas 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Ensure the correct allocation of goods • Correct choice of means of transport • Safe handling of transport tools • Comply with storage regulations • Correct choice of containers and labeling

Core work task: Organization of goods receipt		
Contents of work and learning		
Object of work	Tools, methods and organization of work	Requirements for work and technology
<p>Accepting suppliers' offers, registration of supplier data</p> <p>Visits to suppliers, order processing</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Current PC-programmes or manual handling • Car <p><u>Methods</u></p> <ul style="list-style-type: none"> • Comparison of the offer with existing range of products • Setting price according book value • Order processing • Determination of appointments <p><u>Organization</u></p> <ul style="list-style-type: none"> • Check of offer via phone or email • Planning of supplier visits • Visual check of the goods • Order processing 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Safeguarding that the supplier has the goods ready for purchasing • Safeguarding that the offered good fits into the existing range of products • Organisation of saleable goods
<p>Acceptance of donation requests and coordination with other work areas (transport, workshops etc.)</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Predominantly telecommunication • Order form <p><u>Methods</u></p> <ul style="list-style-type: none"> • Coordination with resources of other work areas • Allocation of donation requests, request to the transport sector • Handling with order forms <p><u>Organization</u></p> <ul style="list-style-type: none"> • Identification of the destination and quantity of goods 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Classification and allocation of orders • Coordination of resources
<p>Planning and identification of the goods at the customers /suppliers</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Order papers • Transport documents <p><u>Methods</u></p> <ul style="list-style-type: none"> • Organization of the transport • Visual check • Possibly defining necessary steps locally (e.g. dismantling) • Communication with following work areas <p><u>Organization</u></p> <ul style="list-style-type: none"> • Identification of the destination and quantity of goods • Coordination with organization of the transport and transfer of the order to the transport area, processing area etc.) • Route planning 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Assessment of the goods conditions at the customer • Proper processing of order papers

Core work task: Transport of used electrical appliances

Contents of work and learning

Object of work	Tools, methods and organization of work	Requirements for work and technology
<p>Pick-up service (Apartment liquidation / clearing out), if necessary dismantling, transport to storage, loading of the goods</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Trucks / transport Vehicle • Navigation System • Order papers • Harness • Transport and loading rules • Fork lift and elevating truck • Transport documents <p><u>Methods</u></p> <ul style="list-style-type: none"> • Planning of the transport management • Visual check • If necessary, dismantling • Loading of the goods and securing of the transport (load securing) • Communication with the following work areas <p><u>Organization</u></p> <ul style="list-style-type: none"> • Identification of the destination and quantity of goods • Coordination with the transport planning management • Route planning 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Driving a licensed and roadworthy vehicle • Safe handling of transport and loading tools • Adherence to transport stipulations or environmental legislation (transport of dangerous goods) • Material saving, space-saving loading • Material saving transport • Proper processing of order papers
<p>Unloading of the merchandise by adhering to internal corporate organisation and passing the order by order forms</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Fork lift and elevating truck • Harness • Order papers <p><u>Methods</u></p> <ul style="list-style-type: none"> • Communication with the following work areas • Unloading <p><u>Organization</u></p> <ul style="list-style-type: none"> • Organization of interim storage 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Proper processing of order papers • Safe handling of loading and transport tools • Material saving unloading • Unloading at the correct interim storage site
<p>Delivery of sold goods to the customer</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Trucks / transport Vehicle • Navigation System • Order papers • Harness • Transport and loading rules • Fork lift and elevating truck <p><u>Methods</u></p> <ul style="list-style-type: none"> • Loading and unloading of goods and securing of the transport • Coordination with the transport planning management <p><u>Organization</u></p> <ul style="list-style-type: none"> • Coordination with the transport planning management • Transport preparation • Route planning 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Driving a licensed and roadworthy vehicle under compliance with internal rules • Safe handling of loading and transport tools • Compliance with regulations • Material saving, space-saving loading • Material saving transport and unloading • Proper processing of order papers

Core work task: Cleaning and repairing of used electrical appliances

Contents of work and learning

Object of work	Tools, methods and organization of work	Requirements for work and technology
Visual check of the appliance with partial disassembly	<u>Tools</u> <ul style="list-style-type: none"> • Standard tools <u>Methods</u> <ul style="list-style-type: none"> • Visual check <u>Organization</u> <ul style="list-style-type: none"> • Concept for optical checks 	<u>For work</u> <ul style="list-style-type: none"> • Check of the housing in terms of ruptures, water or incorrect wiring
Function check (e.g. engines)	<u>Tools</u> <ul style="list-style-type: none"> • Test devices and diagnostic devices • Documents of the manufacturer (e.g. operating manual) <u>Methods</u> <ul style="list-style-type: none"> • Special test concepts (among others voltage check, VDE check) and measurements (e.g. engine performance). • Registration of deficiencies • Carrying out maintenance work • Calculation of the repair expenditure (repair costs) <u>Organization</u> <ul style="list-style-type: none"> • Shaping and equipment of workplace • Concept for function check 	<u>For work</u> <ul style="list-style-type: none"> • Swift and target-oriented checks • Correct assessments of the measuring results • Qualitative and economic valorisation of the parts and spare parts parts (expenditure of a repair and possible profit after sales) • Knowledge about and use of information systems at the workplace <u>From society</u> <ul style="list-style-type: none"> • Use of reliable test methods • Creation of realistic prices
Repair and cleaning	<u>Tools</u> <ul style="list-style-type: none"> • Standard tools • Service documents • Repair documents • Technical information • Special tools • Internet • Spare data base <u>Methods</u> <ul style="list-style-type: none"> • Repair concept for appliances and parts • Exchange of wear parts (e.g. exchange of bearings) • Partially new acquisition of parts (purchase of spare parts) • Safeguarding functioning and final control <u>Organization</u> <ul style="list-style-type: none"> • Shaping and equipment of workplace • Coordination and exchange between the employees • Use of work sheets 	<u>For work</u> <ul style="list-style-type: none"> • Operability shall be re-established under economic conditions (weighting of the grade of repair and the purchase of spare parts) • Knowledge of the market for procurment of spare parts <u>From society</u> <ul style="list-style-type: none"> • Successfully working company to ensure the quality of used appliances

Core work task: Dismantling and disposing of used electrical appliances

Contents of work and learning

Object of work	Tools, methods and organization of work	Requirements for work and technology
<p>Disassembly of goods and removal of elements containing hazardous materials</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Work table, conveyor belt • Pneumatic screw driver, standard tools (hammer, screwdriver, pliers) • Container for elements containing hazardous material • Pallet cages/ containers <p><u>Methods</u></p> <ul style="list-style-type: none"> • Visual check • De-freighting of hazardous materials • Documentation /route card <p><u>Organization</u></p> <ul style="list-style-type: none"> • Access to spare parts (re-usable parts e.g. engines, mother boards) • Use and creation of optimized disassembly concepts 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Correct disassembly of goods • Non-destructive removal of elements containing hazardous material • Knowledge about legal stipulations • Determination of the economic depth of disassembly • Removal of re-usable parts • Safe use of tools in terms of accident prevention
<p>Sorting of dismantled components and fractioning into materials for further use (rich/poor in valuable materials), separating of secondary raw materials</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Work table, conveyor belt • Pneumatic screw driver, standard tools (hammer, screwdriver, pliers) • Pallet cages/ containers <p><u>Methods</u></p> <ul style="list-style-type: none"> • Visual check • Documentation /route card <p><u>Organization</u></p> <ul style="list-style-type: none"> • Coordination with colleagues • Clearly arranged work place • Safeguard continuous material flow 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Identification of the different fractions • Documentation of origin data • Assessment of fractions • Differentiation of materials and residual material <p><u>From society</u></p> <ul style="list-style-type: none"> • High, authentic reflux of material • No health hazards during coping with tasks
<p>Disposal of not reusable waste</p>	<p><u>Tools</u></p> <ul style="list-style-type: none"> • Pneumatic screw driver, standard tools (hammer, screwdriver, pliers) • Pallet cages/ containers <p><u>Methods</u></p> <ul style="list-style-type: none"> • Disassembly and sorting by material conditions in compliance with the disposal regulations • Documentation /route card <p><u>Organization</u></p> <ul style="list-style-type: none"> • Easy disassembly and disposal • Use of operating manuals 	<p><u>For work</u></p> <ul style="list-style-type: none"> • Disassembling of goods • Legal regulations and requirements • Safe use of tools (preventing accidents) • Recognize different material <p><u>From society</u></p> <ul style="list-style-type: none"> • High, authentic reflux of material • No health hazards during coping with tasks

Core work task: Storage of used electrical appliances		
Contents of work and learning		
Object of work	Tools, methods and organization of work	Requirements for work and technology
Sorting of goods based on the storage system	<u>Tools</u> <ul style="list-style-type: none"> Shelves, pallets, pallet boxes, baskets, boxes <u>Methods</u> <ul style="list-style-type: none"> Recording of the stock in the merchandise management system (MMS) Logistics concept for supply and storage Storage of goods by categories such as seasons or supply with a focus on the following steps <u>Organization</u> <ul style="list-style-type: none"> Creation of a warehouse plan Creation of a work plan 	<u>For work</u> <ul style="list-style-type: none"> Fast supply of goods Space-sving storage Consideration of the material properties Documentation of the stock
Transport of goods in the warehouse	<u>Tools</u> <ul style="list-style-type: none"> Fork and hand lift Storage container (Shelves, pallets, pallet boxes, baskets, boxes) Order papers <u>Methods</u> <ul style="list-style-type: none"> Communication with following work areas Selection of means of transport on the type of storage container and further processing steps <u>Organization</u> <ul style="list-style-type: none"> Organization of the interim storage 	<u>For work</u> <ul style="list-style-type: none"> Correct handling with order papers Safe handling of means of loading and transport and transport tools
Storage of the spare parts / appliances and provision (Dismantling, processing, repair, dispatch)	<u>Tools</u> <ul style="list-style-type: none"> Shelves, fork lift, boxes, pallets, container <u>Methods</u> <ul style="list-style-type: none"> Logistics concept for supply, storage and dispatch <u>Organization</u> <ul style="list-style-type: none"> Creation and consideration of a warehouse plan Creation and consideration of a work plan 	<u>For work</u> <ul style="list-style-type: none"> Safe handling of transport tools Space-saving storage Ensure the accessibility of goods Documentation of the stock

Core work task: Sales		
Contents of work and learning		
Object of work	Tools, methods and organization of work	Requirements for work and technology
Pricing and labeling of goods	<u>Tools</u> <ul style="list-style-type: none"> • Computer/day lists • Merchandise management system (MMS) • Stickers/ price labels <u>Methods</u> <ul style="list-style-type: none"> • Labeling and capture in the merchandise management system (MMS) • Pricing or arrangement in goods system (e.g. internal points system) <u>Organization</u> <ul style="list-style-type: none"> • Implementation of a concept for the identification of the goods and the customer 	<u>For work</u> <ul style="list-style-type: none"> • Customer orientation • Realistic pricing (according to quality and demand) • Market and product knowledge <u>From society</u> <ul style="list-style-type: none"> • Reliable supply of goods
Sorting by category and decoration of goods	<u>Tools</u> <ul style="list-style-type: none"> • Merchandise management system (MMS) • Decoration materials • Salesrooms <u>Methods</u> <ul style="list-style-type: none"> • Sorting of goods in product mix • Decorate the shop <u>Organization</u> <ul style="list-style-type: none"> ○ Implementation of sales and decoration concept ○ Implementatioofmarketing concept 	<u>For work</u> <ul style="list-style-type: none"> • Decoration of second hand goods as new goods • Design skills • Knowledge of the classification of goods in the assortment
Sales and customer service	<u>Tools</u> <ul style="list-style-type: none"> • POS systems <u>Methods</u> <ul style="list-style-type: none"> ○ Sales ptich ○ Customer consultation (Knowledge about guarantees, products) ○ Use of POS systems <u>Organization</u> <ul style="list-style-type: none"> ○ Implementation of different sales strategies (offers, promotion, decoration) 	<u>For work</u> <ul style="list-style-type: none"> • Commercial act towards selling • Use of sales strategies • Conflict management with difficult customers • Use of POS systems <u>From society</u> <ul style="list-style-type: none"> • Favorable purchase of used goods with high quality
Creating offers on the internet	<u>Tools</u> <ul style="list-style-type: none"> ○ Computer und Kamera ○ Electronic means of communication (internet, phone) <u>Methods</u> <ul style="list-style-type: none"> ○ Offer creation on the internet (phot and description) ○ Market analysis for calulation ○ Customer service <u>Organization</u> <ul style="list-style-type: none"> ○ Optimale organization for the reapid dissemination of infos 	<u>For work</u> <ul style="list-style-type: none"> • Knowledge and use of the internal and external network for preparation of offers

Tab 1: Overview of the assignment of the work object, tool, method and organization as well as the respective requirements for each core work process / task

4. Structure and content of the qualification concept

The EU-wide uniform qualification concept is modular and consists in total nine qualification modules that relate to the identified core work processes / tasks as well as two training modules for teaching relevant social skills, be mentioned:

1. Administration of business processes
2. Acquisition of goods and customers
3. Purchase of goods
4. Organization of goods receipt
5. Transport of used electrical appliances
6. Cleaning and repairing of used electrical appliances
7. Dismantling and disposing of used electrical appliances
8. Storage of used electrical appliances
9. Sales
10. Social skills I (personnel competencies)
11. Social skills II (employee and customer related skills)

The structuring of the core work tasks is based on a logical development of the competence development. The approach of Dreyfus and Dreyfus (1986) forms the frame for this. In this approach for competence development takes place a development from a beginner to an expert on five stages: newcomer, advanced beginner, competent actor, professional and expert. Based on Dreyfus und Dreyfus in the European qualification concept "specialist for used electrical appliance" is made a three-step gradation on the difficulty of the tasks and that from beginner to advanced learner to expert. Furthermore two supplementary qualification modules on relevant social skills were also assigned to this classification. (see Arold, Windelband 2010)

Learning area	Skills development phase	Vocational (ocucupational) tasks
1	Beginner	1. Transport of used electrical appliances 2. Storage of used electrical appliances 3. Dismantling and disposing of used electrical appliances 4. Social skills I (personnel competencies) 5. Social skills II (employee and customer related skills)
2	Advanced learner	6. Organization of goods receipt 7. Administration of business processes 8. Sales 9. Acquisition of goods and customers
3	Expert	10. Purchase of goods 11. Cleaning and repairing of used electrical appliances

Tab. 2: Development logical structuring of the qualification concept

The modular structure of the qualification concept is based on the background of the above mentioned and identified core work processes / tasks and their clustering and also with the aim to teach the individual modules of the qualification concept separately when there is a necessity and appropriate deficits. Furthermore each qualifying institution is responsible for the order of implementation of the qualification modules and is able to determine the framework variable. However, the individual qualification modules should be trained fully so that the relationship between the teaching/learning content and the respective core work process is given.

4.1 The qualification modules and their temporal scope

The temporal scope for teaching/training the necessary knowledge and the necessary skills to the respective work processes / tasks professionally can vary in the 11 qualification modules because of the different levels of teaching content.

For the teaching/training of the Learning content of all qualification modules, a time totaling **79 days (approximately 452 hours)** is scheduled. **Note: The time for the individual modules scope is limited to the theoretical teaching of the teaching content.**

The expended temporal scope for **practical exercises and a deepening of the acquired knowledge and the needed skills at the work place** (training-on-the-job, coaching) can be set free of the qualifying institution, depending on their conditions, and the requirement of the learners. **Recommendation:** The temporal scope of the total qualification should not exceed **13 months**. For each qualification module should be planned a period of **max. 2 to 6 weeks** for practical deepening of teaching content. The duration can vary accordingly depending on the scope of the teaching content. The practical teaching of the social skills should be done parallel in the context of the practical consolidate of the acquired knowledge and skills.

The following table shows the scheduled time to teach the theoretical teaching content of each qualification module.

Wqualification module	Duration in days	Duration in hours
Administration of business processes	6	30
Acquisition of goods and customers	7	42
Purchase of goods	7	32
Organization of goods receipt	10	44
Transport of used electrical appliances	3	15
Cleaning and repairing of used electrical appliances	12	96
Dismantling and disposing of used electrical appliances	8	42
Storage of used electrical appliances	6	30
Sales	8	51
Social skills I (personnel competencies)	6	30
Social skills II (employee and customer related skills)	6	40
Total	79	452

Tab. 3: Overview of the temporal scope of the theoretical teaching of the content of each module

Note: A possible timing for the implementation of the qualification modules in detail can be taken from the corresponding didactic tables (see Appendix "Summary of didactic tables of 11 modules as a working basis"). **Attention:** The content of the modules 1 to 4 relate partly also to other business fields in the second hand sector. They are at the core, however, transferable, except a few details relating to other products than electrical appliances (e.g. material knowledge)

4.2 Teaching/learning objectives and content of the qualification modules

The teaching/learning objectives of each qualification module aimed at the requirements for the implementation of the various work processes/tasks (see Chapter 3). In general, the employees should be enabled to carry out all work tasks professional, competent and independent, which are processed at a second hand company that act in the business field "WEEE" (e.g. purchase, prepare like cleaning, repairing, dismantling and recycling and sale of goods) or, in a company that is exclusively active in the business field "WEEE". The qualification concept is created in a way that the learners one hand get an overview knowledge across all work areas and the other hand, the needed expert knowledge to deal with the individual tasks as well as the necessary skills and competencies.

According to the teaching/learning objectives of the individual modules and against the background of the requirements and necessary competencies and skills to the employees the respective teaching/learning content were determined. Beside across business field teaching/learning contents the qualification concept includes business field specific contents. Partly some of the teaching/learning contents of the individual qualification modules overlap and build on each other.

The below listed teaching/learning objectives and content are the objectives and content that must be considered after the adaption of the qualification concept to national conditions or operating conditions in order to ensure a transnational comparability of the qualification. While the objective must be transnational consistently, it can be happen that teaching/learning contents have to be adapted. However, this adaptation may have no significant impact on the overall objective and the detailed objectives of each module.

Module „Administration of business processes“
Teaching/learning objectives: <i>The learners should be enabled, to carry out all general tasks concerning the management of the resulting business processes in Second-Hand companies, that affect the business field "WEEE" or Second-Hand companies that are only active in the business field. Beside the teaching of expert knowledge to commercial administration tasks, and human resources and training planning mainly organizational, communication and coordination skills should be promoted.</i> <i>Moreover, the learners should be enabled to establish an appropriate company or to lead a company.</i>
Teaching contents: a) (Mini-) companies and their need and relevant business processes <ul style="list-style-type: none">○ Training and certification in (mini-) companies (advantages and disadvantages, identification of the need of qualification within the company)○ Assessment process in assessment centers b) Personal development planning <ul style="list-style-type: none">○ Personal development planning, self assessment○ Portfolio (working steps on portfolio and on designing personal) c) Training of social skills <ul style="list-style-type: none">○ Types of communication, coaching conversations, types of characters d) Entrepreneurial training and entrepreneurship <ul style="list-style-type: none">○ determining products and services, preparation of business plans○ Business-Kommunikation○ Leadership (management) and their tasks e) Finance <ul style="list-style-type: none">○ Fundamental terms, calculation, cash flow○ Book keeping, budgeting, monitoring, testing, inspection, analysis and financial documentation

Module „Acquisition of goods and customers“**Teaching/learning objectives :**

The learners should be enabled by means of different methods, tools and media on one hand to find goods for the purchase and on the other hand to win customers, of which goods can be purchased or who buy goods. The learners should be enabled in addition to the acquisition of basic knowledge on marketing, market research and SWOT analyzes and their practical implementation to carry out professional correct advertising strategies and measures.

Furthermore aspects such as teamwork, motivation, coordination and organization, which play an essential role in the acquisition should be taught to enable the learners to develop and carry out their own acquisition strategies and to coordinate the necessary tasks.

Teaching contents:

- a) Basic knowledge of marketing and its implementation
 - Market / marketing definition, marketing mix and its elements, creating marketing plans
 - Market research (preparation and implementation), primary and secondary market research, information sources use, collecting information
 - SWOT-analysis (meaning and usage)
- b) Basic knowledge of advertising
 - Advertising and promotional activities (planning, design and implementation)
 - Use of different advertising media
- c) Communication in the acquisition
 - Influence factors
 - Fast response
 - Building a successful communication
- d) Organization, coordination and motivation in the acquisition
 - Importance of organization and coordination
 - Definition of motivation, reasons for motivation, motivational techniques
 - Motivation factors

Module „Purchase of goods “

Teaching/learning objectives :

The learners will be taught the necessary expert knowledge and skills for the purchase of goods in relation to the goods assessment (quality assessment) and the assessment of the product value during the purchase as well as the subsequent sale. They should assess the products which are offered by consumers for the purchase by using different quality criteria and be enabled to make an assignment on the condition to other work areas (e.g. storage, repair, dismantling, sales).

The learners should be enabled, taking into account the goods state, the market value of the goods and possible repair work such as cleaning, repairing to make the goods providers an adequate price offer. They should learn in this regard aspects of economy and realisation of profit. Furthermore, they should acquire knowledge about the following work areas, to which they assign the goods after the purchase. They should learn all relevant technical, logistical and administrative tasks which are necessary for the purchase of goods.

Teaching contents:

- a) Product knowledge
 - Produktarten, -gruppen, -familien
 - Distinguishing criteria and categories (e.g., manufacturer, models, type, age) and assignment of certain goods
 - Material knowledge
 - Knowledge of the use of general components or electronic components as well as other dangerous or harmful components
- b) Quality assessment and assurance
 - Quality systems and their benefit
 - Company internal quality standards
 - Realization of quality checks (visual check), use of check lists
 - Realization of functional checks (marking of goods, assignment to other working areas, decision-making processes)
 - Knowledge of operational procedures
- c) Cost calculation and evaluation of repair costs
 - Enlargement or refreshment of simple mathematical knowledge
 - Identification of purchase price, maintenance/repair costs, spare parts costs, costs for material (e.g. screws, glue), return on sale
 - Knowledge about personnel costs, effort of work in repair and purchase of spare parts
- d) Market and price knowledge
 - Realization of market analysis and research for the identification of sellers, buyers, new prices, resale prices
 - Information sources on prices
 - Knowledge of procurement channels (partly legally basics)
 - Basic knowledge of pricing / costing and marketing in general
- e) Basics of logistics and warehousing
 - Logistical skills such as organization and assignment of goods to other work areas
 - Knowledge about other (following) work areas, what is done in this work areas?
 - Classification of the goods in the storage, creating logistical plans
- f) Use of administrative tools
 - Securing the flow of information through documentation
 - Documentation of the receipt of goods
 - Knowledge of inventory systems (e.g. computer-aided) and basic IT-knowledge
 - Goods labeling, tracking of goods (know where and when the goods are in

storage)

Module „Organization of goods receipt“

Teaching/learning objectives :

The learners should acquire expert knowledge concerning the organization and distribution of the purchased or accepted goods within the operational structures. They are taught the necessary knowledge and skills that are relevant for a quality check in the context of a rough sorting and final allocation to other work areas (e.g. repair, dismantling, sales) and for further processing within the company. In this regard, they acquire knowledge about different forms of (interim) storage, safety regulations and transport vehicles that will be used in the company. They should be enabled to register correctly the roughly sorted goods and, if necessary, to label them.

Furthermore, they should be enabled to communicate technically correct with potential suppliers and to manage supplier deals. They learn to plan and organize the goods collection (carry out route planning and, if necessary, to plan the transport logistics), prepare and finalize contracts, create invoices and make payments agreements. Also they should be able to handle correctly order documents such as order forms and computerized registration systems and to make a correctly booking at the goods receipt, so that the goods are documented and can be found in the warehouse.

Teaching contents:

- a) Basic knowledge of the range of goods
 - Overview of the business field and market trends
 - Basic knowledge about recycling
 - Goods knowledge (materials, use, expectancy, etc.)
- b) Corresponding with suppliers
 - Search of information on the internet
 - Business communication (Kinds, principles, formulations of problems and questions)
 - Communication at a foreign level
 - Handling with and creation of offers (content, different kind of offers etc.)
 - Usage of applied software for the organization of the goods receipt (especially tables, creation of graphics)
- c) Ordering goods
 - Contract preparation and conclusion of contract
 - Create and complete invoices for suppliers
- d) Logistical knowledge of the transportation
 - Means and kind of transport
 - Preparation of transport documents
 - Route planning
- e) Organization of goods receipt
 - Organization steps in the company
 - Quality check (goods inspection)
 - Rough sorting by criteria
 - Goods booking and processing (e.g. weighing, recording, determining the kind of storage)

Module „Transport of used electrical appliance“

Teaching/learning objectives :

The learners should be enabled to transport used electrical appliances on the basis of a route plan and by means of a suitable transport vehicle (e.g. trucks, vans) as well as taking into account the legal requirements for road safety and transport and safety regulations from the supplier/customer to the company and vice versa. They should be able to read and execute route plans as well as if possible to carry out independently a route planning.

Besides learning technical knowledge to relevant regulations, they should acquire the necessary skills for safe loading and unloading of goods and for visual quality assessment of goods. Beside the use of different expedients for loading (e.g. straps, mesh boxes) they should also gain knowledge about different tools for loading (e.g. lift trucks). Furthermore they should also learn how to work with order papers and the correct transfer of goods, as well as the basics for packaging and storage of goods.

Teaching contents:

a) Dealing with customers

- Correct handling with customers on the phone
- Correct behavior at the customer site

b) Goods pick-up

- Planning of vehicle size, number of persons, tools for loading, tools to secure goods
- Implementation of route planning

a) Loading and unloading of goods

- Visual check of goods
- Secure goods
- Disadvantage of a bad loading
- Handling with and use of order papers
- Transfer of goods within the company or at the customers

b) Cargo security

- Practical basics of cargo security
- Legal regulations for securing the cargo

Module „Cleaning and repairing of used electrical appliance“

Teaching/learning objectives :

The learners should get an overview of the work tasks that are required to prepare used electrical appliances for reuse. They should be enabled to check the used electrical appliances that have to be reprocessed as well as to clean them professionally or to identify needed repairs autonomously (Note: Skills for the implementation of concrete repair work are not taught because real electrical work tasks can be legally done only by professionals of the electrical sector like e.g. electricians). Beside the necessary theoretical knowledge necessary for that purpose they should acquire the necessary practical skills. They should get to know concrete knowledge about the way how to treat used electrical appliances and analytical methods for assessing the electrical appliances and possible defects (taking into account economic considerations). Furthermore they learn to assess defective electrical appliances concerning their defect and to assign them to the appropriate specialists (engineers) in the case of complicated repairs. They should get knowledge and skills to different test methods such as visual check and functional check as well as their documentation and be enabled to prepare the used electrical appliances for reuse and to define possible prices for the sale.

Teaching contents:

- a) Testing of used electrical appliances
 - Legal framework and market conditions
 - Selection criteria
 - Documentation of the testing
 - Protection of workers and customers (personal protective equipment on first inspection, warranty and product liability)
 - Use of test devices for safety testing
 - Safety testing on devices with the testing device GT Lite/Pro
 - Functionality of electrical appliances using selected examples
- b) Economic considerations of repairing
 - Market overview of new appliances, used electrical appliances and spare part suppliers
 - knowledge of the internal cost structure (like e.g. working hours/productivity of workers, rent, energy)
- c) Cleaning of used electrical appliances
 - Cleaning of used electrical appliances in the course of the testing
 - Cleaning of used electrical appliances for preparation for sale
- d) Communication processes
 - Communication with the deliverer (stock)
 - Communication with repair technician
 - Communication with seller

Module „Dismantling and disposing of used electrical appliance“

Teaching/learning objectives :

The learners should get an overview of the WEEE market structures in terms of recycling of used electrical appliances, be enabled to presort the purchased used electrical appliances regarding the dismantling and taking into account legal and environmental regulations, and to dismantle them professional in different fractions and and to disposal them. The learners should get to know all the relevant knowledge of the market structure and on the legal and environmental regulations. They should be enabled to do all relevant work tasks to prepare the dismantling and disposal tasks such as proper labeling, keeping lists, checking the functionality and to carry out a correctly separation and sorting.

Furthermore, they acquire all necessary knowledge and skills to the cutting process to dismantle used electrical appliances correctly and to dispose of the removed parts. Also they acquire expert knowledge to work tasks, which follow the dismantling process like to restore, the sale and the transport of the dismantled fractions or recovered materials within the company. They should acquire knowledge about safety, energy savings, volumes and the optimization of the recycling and the sale of the dismantled groups/fractions and to produce less waste in order to improve their work processes sustainably.

Teaching contents:

- a) Informational overview of the WEEE-market structures
 - Market description and position
 - Market players
 - Legal framework
- b) Product flow in the company
 - *product listing*
 - product flow at wholesale and business
 - Responsibilities
 - Products under law and ISO14001 standards
- c) Preparation of dismantling and disposing
 - Handling incoming goods
 - Marking and listing of incoming goods
 - Separating and sorting of different used electrical appliances
 - Testing of reusable goods in general
- d) Test for reuse
 - Whole process of dismantling
 - Separation/sorting of spare parts
 - Process of sorting
- e) Following work tasks
 - Resoring process
 - Law at the transporting
 - Guarantee and law at sale of reuse goods
 - Price forming for material sale, negotiation strategies
- f) Supplementary basics I
 - Identification of new business fields
 - Assessment of the results (methods/techniques for detecting, indicators, documentation)
 - Environmental aspects versus efficiency
 - Economical transportation and enhanced safety
- g) Supplementary basics II
 - Business plan
 - Network sales and repair
 - Cooperation with other actors (e.g. vocational schools)

Module „Storage of used electrical appliance“

Teaching/learning objectives :

The learners should acquire all basic skills and the necessary special skills that are needed to do the work tasks in the warehouse. Beside the basic knowledge of warehouse logistics and an overview of used electrical appliances they should learn the correct handling with incoming goods. They should be enabled to check the used electrical appliances and to assess them qualitatively. Furthermore, they should acquire the necessary knowledge and skills regarding to the supply of the third market with used electrical appliances, which have to be cleaned and how to pack and to store used electrical appliances. Also they should acquire knowledge for location fixation inside the warehouse and to inventory and warehouse management. Additionally the learners learn to communicate correctly with customers and the staff of sale, which is immediately following the work area “storage” to make sure that the processes in the warehouse are done correctly.

Teaching contents:

- a) Basics of storage
 - Principles of warehousing
 - Receipt of used electrical appliances in the warehouse and rough sorting
 - Visual check and assessment of the quality
 - Testing of the stored electrical appliances and assessment
- b) Allocation of the used electrical appliances to third markets
 - Sorting by fixed criteria
- c) Cleaning of the electrical appliances in the storage
 - Overview of cleaning functions (when have the appliances to be cleaned)
 - Cleaning regulations and requirements
 - Setting of required repairs
 - Setting of cleanings and repairs to maintain the saleability of used electrical appliances
- d) Packaging of used electrical appliances
 - Benefit and purpose of packaging
 - Kinds of packaging
- e) Location fixing in the storage
 - Storage locations
 - Labeling
- f) Basics of inventory
 - Recording of inventory
 - Maintenance of the inventory
- g) Communication in the storage
 - Communication processes with customers
 - Communication processes with the sellers

Module „Sales“

Teaching/learning objectives :

The learners should be enabled to carry out all the work tasks of the sale in a technically correct way. They should also acquire additional knowledge to marketing and logistics, because these affect the sales activities. The learners should acquire on one hand basic knowledge about the products and, on the other hand, the basics of the sales process and the necessary skills to sell goods. Beside the basic knowledge about the Second-Hand markets, they should get an overview of the importance and implementation of marketing (in particular of key concepts, distribution relationships, models and implementation) and in terms of logistics in sales (in particular the relationship between logistics and communications, logistics models and their implementation).

Furthermore, they should acquire beside expert knowledge to marketing and distribution of products skills that are needed to develop and implement corresponding strategies. Also they should be enabled in the context of multicultural customers to communicate correctly and to deal with conflicts, to carry out a good sales consulting can and to acquire the necessary sales skills. In terms of pure sales activities, they should acquire the basic knowledge and skills in order to handle the sale properly. They learn to use POS systems, the importance of information on receipts, dealing and problems with money cards and to present/to describe the offer of goods offers and to create sales contracts and to close a deal.

Teaching contents:

- a) Basics of Second-Hand markets and marketing
 - Factors influencing the marketing environment (external and internal)
 - Key concepts
 - Marketing and sales relationships
 - Marketing models and implementation
 - Creating of frameworks for marketing / sales practices
- b) Basics of tangtia logistics
 - Logistic questions
 - Relationship between logistics and marketing / sales practices
 - Logistics models and implementation
- c) Communication in the context with logistics
 - Impact of communication on the sale profit
 - Impact of communication on the work environment and the work culture
 - Impact of communication on the sale and marketing practices
 - Key concepts
- d) Product knowledge
 - Product types and materials, nature of the product
 - Pricing
 - Presentation of goods in a shop
- e) Communicative selling skills
 - Multicultural communication
 - Conflict resolution and prevention
- f) Sales process
 - Cash systems, components and use
 - Reading and understanding of receipts
 - Use of cash cards and possible problems
- g) Product presentation and contract management
 - Creating short product descriptions and offers
 - Basics of sale contracts for used goods (content)

Module „Social skills I – Personal competencies“

Teaching/learning objectives :

The learners should acquire the basic knowledge of six necessary social skills, particularly personal skills and the one who are highly relevant by the implementation of the core work processes/tasks. This involves essentially the improvement of competencies that the learners personally bring along. They should firstly understand the importance of communication skills, ability to resolve conflicts, ability to accept criticisms, ability to teamwork, assertiveness and ability to negotiations and secondly optimize and expand these. They should be enabled to use appropriate personal social skills selectively to carry out a professional implementation of the individual work tasks safely and to improve the quality of work.

Teaching contents:

- a) Communication skills
 - Basics of communication
 - Methods of communication
 - External appearance „dress code“
 - Improving communication by understanding your communication style and communication style of others
- b) Conflict management
 - Development of Konflikts
 - Dealing with conflicts
- c) Ability to accept criticism
 - Acceptance of criticism
 - Types of criticism inability
- d) Ability to teamwork
 - Advantages of teamwork
 - Individual and team development
 - Types of teamwork
- e) Assertiveness
 - Use of assertiveness
 - Assertiveness techniques
 - Characteristic of assertive behaviour (differences, passive and aggressive behaviour)
- f) Negotiation skills
 - Basic concepts of negotiation
 - Negotiation styles
 - Preparation for negotiation
 - The selection of negotiation strategy
 - Influence on negotiations
 - Closing of the negotiations

Module „Social skills II – Employee and customer related skills“**Teaching/learning objectives:**

The learners should acquire the basic knowledge of six necessary skills that they need especially in dealing with customers and employees. They should learn the importance and necessity of organizational skills, the ability to take responsibility, the problem-solving ability, contact readiness, commercial skills and customer orientation and how to use them specifically in dealing with customers and employees. They should acquire the ability to treat customers and employees in a correctly and professional manner, so that the impression arises to the outside, that the company is professional. The acquired or improved competencies should have a positive effect on the handling with customers in order to hold them long-term in the customer base and to the staff to create a positive working atmosphere.

Teaching contents:

- a) Ability to organize
 - Organisational skills at the workplace and workflow organisation
 - Prioritising of work tasks (identification of important tasks, arrange tasks in a logical order, monitor and eliminate tasks)
 - Creating to-do-lists
 - Importance of plans and planning and time management
 - Coordination of the tasks and responsibilities in the workflow
- b) Ability to take responsibility
 - Responsibility in the workplace
 - Principles of responsibility in the daily work
 - Ability to take responsibility for others and honesty
 - Avoiding unnecessary risks
 - Personal responsibility as a precondition for work responsibility
 - Maintaining relationship with other colleagues
- c) Problem-solving ability
 - Identification of problems and techniques for problem analysis
 - Obstacles to solving the problem
 - Problem solving and problem-solving ideas
 - Traditional and innovative ways of solving problems
 - Problem solving methods and ideas (5-way-method, Pareto method, method Ishikawa diagram, SKAMPER method)
 - Individual Problem Solving versus group problem solving
- b) Contact readiness
 - Customers' behaviors
 - Communication causes, function and barriers
 - Good and bad listening
 - Non-verbal and verbal communication
 - Assertiveness
 - Personality Types
- d) Commercial skills
 - Store layout and product display
 - Mandatory requirements to the salesperson
 - 7 stages of the sale process (identification of customer desires, presentation of goods, objection, negotiation, closing the sale, follow-up)
- e) Customer orientation
 - Identification of customer's needs
 - Building a relationship of trust with customers
 - Communication with customers

Tab. 4: Overview of the teaching/learning objectives and the teaching contents

4.3 For teaching competencies and skills

In addition to the individual work processes and tasks the required and acquired skills and competencies are another basis for the teaching / learning objectives and content of the European qualification concept. So it is important to teach/train this, to ensure that the qualified people after qualification be able to do the necessary working processes and tasks professionally and can fulfill the requirements. To differentiate the terms "competence" and "skills and abilities" better, this will be explained in more detail below.

Meaning of the term “competence”

The competence item in education goes back to Klafki's competency model of critical-constructive didactics. This means the ability and skill in those areas to solve problems and the willingness to do this. In the educational term of competence are substantive-categorical elements, methodical elements and volitional elements linked, including their transfer to different objects. There is an ambiguity of the term competence. Depending on the position, there exist different definitions what from competencies are put together. .

In the vocational education (in the vocational studies and economic education) competencies are defined as a part of "self-organisation dispositions". A person who has sufficient competence to do certain things properly in this respect is competent. Competence can be acquired inter alia through education, training, experience, self-reflection and informal learning or self-education. Since the 1990s in the practice of vocational education four core competencies are established, from which all other skills can be deduced: social skills, professional skills, methods skills and personal skills. Partially information literacy is taken as a combination of technical and methodological expertise. However, this classification is understood in the scientific discussion again and again as problematic. It is difficult to separate the content of technical and methodological competencies. It has become apparent that there exist very little Competencies to solve problems that can be transferred to any specialized content. In the educational science, the model (e.g. from Dieter Euler) preferred a matrix in which on one axis the content areas of professional competence, social competence and self-competence are and on the other axis: Knowledge, skills and attitudes.¹ All areas of competence together are the basis for competence to act. All in all the term “competence” can be account as a kind of generic term that covers different skills and capabilities.

The Council of Europe called competence as a proven ability, knowledge, skills and personal, social and methodological ability which is used in working and learning situations and for the professional and personal development. In connection with the European Qualification Framework, competence is described in term of the takeover of responsibility and autonomy. (Council of Europe, 2007) (see Arold 2009).

Meaning of the terms “abilities and respectively skills”

Abilities are in general all things that a person is able to do. To be able to do something (the ability) is a part of the knowledge and means the practical skills and therefore it stands in contrast to the theoretical knowledge. It is also called the practice that a person has: e.g. professional practice or professional experience, language practice and the driving experience, etc. "Can" is therefore also characterised as the sum of all experiences. The ability to manage something very easy is characterised as a skill. It means the potential or accomplishment to characterise the ability to perform activities.²

¹ Source: http://de.wikipedia.org/wiki/Kompetenz_%28P%C3%A4dagogik%29 (access on 23.06.2008)

² Source: <http://de.wikipedia.org/wiki/F%C3%A4higkeiten> (access on 23.06.2008)

Skills are in contrast to abilities innate or defined by external circumstances and must therefore not be acquired. Abilities are the physical and mental prerequisites for the performance of certain work tasks. According to the individual job these are among others: physical ability and dexterity, reasoning power, power of concentration, articulateness, imagination, power of observation etc. But some abilities can be improved by training. On the other hand generally skills describe a learned and acquired part of the behaviour. Skills differ from abilities in the way that they can be learned only if a person has special abilities to realise the skills. Skills are, for example, reading, speaking, repairing etc.³ (vgl. Arold 2009).

The following tables give a detailed overview of the skills to be acquired based on the different core work processes and tasks:

³ Source: <http://de.wikipedia.org/wiki/Fertigkeit> (access on 23.06.2008)

Core work process	Sub-working tasks	Competencies/skills
Administration of all business processes	Personnel planning	<ul style="list-style-type: none"> • ability to communicate (verbal and nonverbal) • ability to organise • knowledge of personnel structures and personnel resources development planning
	Carrying out general administrative tasks	<ul style="list-style-type: none"> • able to do the bookkeeping • able to do the salary administration and the preparation • IT-skill • ability to organise the office • able to document the work (to write work reports) • knowledge of methods of data recording
	Planning of work schedules, working tasks, working time	<ul style="list-style-type: none"> • ability to organise • ability to structure • ability to optimize effectiveness • administration and logistic knowledge/skills • IT-skills • ability to understand the employees needs • flexibility in planning • ability to check the working equipment • knowledge of the workshop and the requirements of the field of work • able to prepare instructions • able to insure conditions for safety work
	Organisation of job training	<ul style="list-style-type: none"> • ability to organise • administration knowledge/skills • IT-skills • ability to train • ability to identify the training need • able to match the capacity of trainers with the need of trainees/organisation
	Job controlling	<ul style="list-style-type: none"> • ability to organise • ability to communicate • administration knowledge/skills • IT-skills • realization of employees problems • ability to secure the quality
	Presentation of the company outwards	<ul style="list-style-type: none"> • ability to communicate • IT-skills • negotiating skills • able to act appropriate according to different target groups • ability to handle with public relations • ability to present the enterprise principles • marketing knowledge • knowledge of the market • be able to design an image

Core work process	Sub-working tasks	Competencies/skills
Acquisition of goods / customers	Organisation and creation of advertising tactics	<ul style="list-style-type: none"> • marketing knowledge • IT-skills • creativity • be able to organise different advertising measures • be able to implement them • ability to formulate • knowledge of the local market and media • customer-orientated
	Observation of the market	<ul style="list-style-type: none"> • experiences in market analysis/research • ability to communicate • market knowledge (inc. competitors, trends) • able to identify target groups and their needs
	Search for sales offers in different media and comparison with the need of the company	<ul style="list-style-type: none"> • experiences in market analysis/research • ability to communicate • knowledge of the sector • IT-skills • knowledge of different media • knowledge of goods that should be sold • knowledge of general market prices • product knowledge • able to identify sales offers
	Maintenance of networks and contacts	<ul style="list-style-type: none"> • knowledge of the sector • ability to communicate and make contacts • ability to organise • motivation and engagement
	Participation in sales campaigns (e.g. open day)	<ul style="list-style-type: none"> • marketing knowledge • ability to communicate • ability to organise • knowledge in creating advertisement measures • creativity • ability to organise seasonal events
	Public relation tasks	<ul style="list-style-type: none"> • marketing knowledge • ability to communicate • ability to supply suppliers and customers with information • be able to work with local stakeholders
	Development of advertising resources (e.g. flyer, poster, advertisements)	<ul style="list-style-type: none"> • marketing knowledge • ability to communicate • creativity (esp. design techniques) • IT-skills • ability to formulate • knowledge about advertising methods and organisation

Core work process	Sub-working tasks	Competencies/skills
Purchase of goods	Quality check (e.g. actual state, functionality)	<ul style="list-style-type: none"> • be able to do a quality check • administration knowledge/skills • knowledge of function, technology and materials of goods • knowledge of quality assurance systems • able to operate with quality assurance protocols
	Assessment of the resale value and the repair costs	<ul style="list-style-type: none"> • knowledge about prices • calculation knowledge • material knowledge • be able to evaluate the repair costs • knowledge about the goods value • ability to estimate repairing time need • market knowledge
	Pricing (calculation) for purchase	<ul style="list-style-type: none"> • pricing/calculation knowledge • knowledge of market analysis and research • market knowledge • ability to assess the goods quality • ability to estimate costs of work • product knowledge
	Sorting by internal standards	<ul style="list-style-type: none"> • product knowledge • knowledge about internal standards • able to distinguish different goods • logistic skills
	Documentation of the purchased goods (e.g. by inventory control system)	<ul style="list-style-type: none"> • administration knowledge/skills • knowledge in purchasing • IT-skills • able to distinguish different goods • ability to work scrupulous • knowledge of documentation needed
	Transfer of the goods to other work areas	<ul style="list-style-type: none"> - logistics skills - material knowledge (in order to choose the means of transportation) • knowledge about other work area

Core work process	Sub-working tasks	Competencies/skills
Organization of goods receipt	Adoption of suppliers/goods offers	<ul style="list-style-type: none"> • administration knowledge/skills • ability to communicate • knowledge of range • logistics skills • be able to purchase goods • be able to assess goods • knowledge about market needs
	Coordination with other work areas like the transport, goods receipt and workshops (if existing)	<ul style="list-style-type: none"> • administration knowledge/skills • IT-skills • logistics skills • knowledge about storage capacity • ability to organise • ability to communicate • be able to coordinate work processes
	Planning and organisation of goods pick-up	<ul style="list-style-type: none"> • administration knowledge/skills • knowledge about purchasing goods • IT-skills • logistics skills • ability to communicate • ability to organise
	Route planning	<ul style="list-style-type: none"> • logistics skills • ability to organise (distribution) • local knowledge • ability to use digital route planners
	Transfer of the order by order papers	<ul style="list-style-type: none"> • Knowledge of business administration • IT-skills • Be able to understand instructions • ability to manage documentation
	Identification of the kind of donations or good offers (e.g. kind of goods, the actual state of the goods, the amount of goods etc.)	<ul style="list-style-type: none"> • sector knowledge • be able to create a price • accounting knowledge • product knowledge • ability to organize • be able to assess goods (to recognise defects) • knowledge about market needs

Core work process	Sub-working tasks	Competencies/skills
Transport of used electrical appliances	Driving a transport vehicle	<ul style="list-style-type: none"> • driving licence • knowledge about health & safety • local knowledge • reliability
	Loading and unloading goods	<ul style="list-style-type: none"> • knowledge about health & safety and cargo security • knowledge about the handling of the goods • physical strength • maybe a fork-lift licence • be able to load/unload goods carefully
	Controlling of the loading goods	<ul style="list-style-type: none"> • knowledge about health & safety and cargo security • knowledge about the handling of the goods • ability to identify special criteria concerning loading (e.g. hazardous items) • ability to assess the transportability of the goods • ability to manage documentations
	Organisation of the route	<ul style="list-style-type: none"> • logistics skills • local knowledge • ability to organise (activities, time schedule) • ability to think economically and environmentally
	Handling with order papers	<ul style="list-style-type: none"> • administration knowledge/skills • able to handle the shop papers correctly • IT-skills • ability to operate with inventory control systems
	Dismantling of goods by the “supplier” or customers	<ul style="list-style-type: none"> • knowledge about health & safety • knowledge about legislation • be able to work accurately • be able to use tools • knowledge about dismantling processes • manual abilities • knowledge of electrical factors

Core work process	Sub-working tasks	Competencies/skills
Ceaning and repairing of used electrical appliances	Quality check (e.g. functionality, optically)	<ul style="list-style-type: none"> • be able to do a quality check • knowledge of the function of goods • ability to assess the condition of the goods • ability to assess the resale value • ability to decide if the goods can be repaired
	Maintenance, repair and cleaning of the appliances	<ul style="list-style-type: none"> • product knowledge • cleaning skills (about cleaning material and methods) • manual skills (use of tools) • knowledge of the function of goods • ability to operate with technical instructions
	Calculation of the repair costs	<ul style="list-style-type: none"> • product knowledge • marketing knowledge • ability to calculate • IT-skills • able to pre-estimate prices of share-parts and time need for repair
	Exchange of wear parts	<ul style="list-style-type: none"> • manual skills (use of tools) • knowledge of the function of goods and wear parts • knowledge about the inventory
	Purchase of spare parts	<ul style="list-style-type: none"> • market knowledge • ability to organise • IT-skills • ability to calculate • knowledge about spare parts and their original use • knowledge of prices of spare parts
	Final controlling	<ul style="list-style-type: none"> • be able to do a quality check • knowledge of the function of goods • knowledge of quality assurance system • ability to operate with quality assurance protocols • knowledge of standards and regulations

Core work process	Sub-working tasks	Competencies/skills
Dismantling and disposing of used electrical appliances	Notice product streams	<ul style="list-style-type: none"> • ability to make and maintain product lists • knowledge about product streams in trade and in the company • ability to accept responsibilities • knowledge of legislation
	Preparation of dismantling/disposing	<ul style="list-style-type: none"> • be able to mark products • be able to make lists • ability to sort and to separate goods • be able to assess the quality of goods
	Manually deconstruction of the goods	<ul style="list-style-type: none"> • be able to use tools • be able to recognise the value of materials • be able to dismantle spare parts that they are still in good conditions
	Non-destructive removing of contaminated materials	<ul style="list-style-type: none"> • be able to use tools • ability to identify components and material • knowledge of contaminated materials • knowledge about health & safety
	Sorting of deconstructed (single) components	<ul style="list-style-type: none"> • experiences in market analysis and research • ability to identify different components and their value • ability to assign components to categories • ability to work accuracy • ability to check single components
	Documentation of the deconstruction	<ul style="list-style-type: none"> • be able to fill out forms • IT-skills • knowledge of different categories of goods • knowledge of schedules by the dismantling of goods
	Assessment of the component or material value	<ul style="list-style-type: none"> • ability to assess the value of components • material knowledge • knowledge of weights • knowledge of recyclable fractions and their commercialization
	Assignment of component to other work areas (e.g. storage, sale)	<ul style="list-style-type: none"> • knowledge about recovery processes • knowledge of the transport regulations/law • be able to make a price for components and to negotiate

Core work process	Sub-working tasks	Competencies/skills
Storage of used electrical appliances	Sorting of goods depending on a storage system	<ul style="list-style-type: none"> • be able to control the stock • knowledge about storage systems and conditions • knowledge about internal categories of goods • material knowledge • be able not to damage goods when sorting
	Transport of goods in the storage	<ul style="list-style-type: none"> • logistics skills • material knowledge • physical strength • (maybe) fork-lift driving licence • be able to to adjust things • able not to damage goods during the transport • ability to work careful and have patient • ability to organise • knowledge of different kind of transports
	Placing goods in storage	<ul style="list-style-type: none"> • stock knowledge • season knoelwde • be able not to damage Goods during placing them
	Placing goods at the disposal	<ul style="list-style-type: none"> • sector knowledge • communication skills and ability to maintain contacts • ability to organize • motivation and commitment • ability to work more than necessary
	Preparation of goods for dispatch	<ul style="list-style-type: none"> • stock knowledge • knowledge about packaging and dispatch conditions • ability to handle the goods carefully • ability to organise

Core work process	Sub-working tasks	Competencies/skills
Sales	Pricing (calculation) for sale	<ul style="list-style-type: none"> • pricing and calculation knowledge • accounting knowledge • market and goods knowledge • able to estimate the value of used goods
	Labelling goods	<ul style="list-style-type: none"> • sales knowledge • able to fulfil simple instructions • ability to work patiently and carefully
	Sorting of goods by category	<ul style="list-style-type: none"> • product knowledge • knowledge about internal categories of goods • ability to distinguish goods • ability to recognise space for placing goods in the shop
	Decoration of the goods in the shop	<ul style="list-style-type: none"> • creativity • design skills • knowledge in arranging goods
	Sale	<ul style="list-style-type: none"> • sales knowledge /experience • ability to communicate • product knowledge • customer orientated • honesty • ability to give the customers support
	Use of a cash desk and a inventory control system (ics)	<ul style="list-style-type: none"> • administration knowledge/skills • stock knowledge • IT-skills • ability to handle with money • economy knowledge to calculate capacities quickly • able to operate with cash desks and inventory control systems
	Creating offers on the internet	<ul style="list-style-type: none"> • marketing knowledge • IT-skills (e.g. design technology) • ability in internet wording • market oriented • knowledge of market analysis
	Customer service	<ul style="list-style-type: none"> • customer orientated • ability to communicate • product knowledge • ability in complaint management • knowledge of guarantee • ability to advice customers
	Dealing with difficult customers	<ul style="list-style-type: none"> • ability to communicate • ability to handle conflicts

Tab. 5: Overview of required competencies and skills based on individual tasks

4.4 Implementation of the qualification modules

The implementation of the 11 qualification modules in detail is only be limited by the quality standards (see section 2.5) and the teaching / learning objectives and content and the trained competencies/skills. This must be considered in the qualification concept to ensure a cross-border comparability of the qualification "specialist for used electrical appliances" and to achieve a high equivalent qualification.

The extent to which the qualifying institutions change the order of placement of the teaching content in the individual modules is their own decision. They can be adapted to their national conditions and in particular the specific conditions of the qualifier and the requirements of the trainees. Nevertheless, the time framework for the implementation of the qualification should not be substantially changed in order to ensure that the qualification can be acquired in a specific and defined time frame (see section 4.1).

To facilitate the implementation of the qualification for the institutions that carry out the qualification, the qualification concept covers for each qualification module, a didactic preparation. It includes

- a) comprehensible tables of teaching / learning content and usable teaching / learning materials and their allocation to learning units
- b) a tabularly rough concept for the direct implementation of the different teaching / learning units per qualification module and teaching / learning day (including a breakdown of the temporal scope, the respective teaching / learning objectives and content, the used teaching / learning methods and the duration of the units as well as recommended teaching / learning materials and the infrastructure of the learning environment) and
- c) detailed schedules for the sequence of the individual teaching / learning days that are listed in the rough concept. These include a specific day schedule, the duration of the placement of the different teaching / learning topics, the corresponding content title of the content as well as a content description and the material to be used and a notice indication about the used teaching / learning method.

The didactic preparation of the qualification modules can, but need not be taken in the implementation of the qualification concept. However, it is recommended to orientate by these in order to cover all content, to comply with the time frame and to meet the requirements.

The individual didactic preparations can be taken (downloaded) from the "summary of the didactic tables of the 11 modules as a working basis". This is, inter alia, available on the website www.qualiprosh.eu unter <http://www.qualiprosh.eu/downloads.html#3> in chapter 4.

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