Work Package 4

Guidelines for Development of Apprenticeship in the VET system of Lithuania

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WORK PACKAGE 4

GUIDELINES FOR DEVELOPMENT OF APPRENTICESHIP IN THE VET SYSTEM OF LITHUANIA with Respect to the Experiences in Germany, France, the Netherlands and The UK

REPORT

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1 INTRODUCTION

This document presents the main result of the Leonardo da Vinci project "Development of Apprenticeship in Lithuania referring to experience from Germany, France, the United Kingdom and the Netherlands" DEVAPPRENT No. DE/10/LLP-LdV0TOI0147320. The preparation of guidelines is based on the outcomes of the research stages of the project:

1. Research into the preconditions for the development of the apprenticeship in the VET system of Lithuania.
2. Comparative analysis of the development of apprenticeship in Germany, France, the Netherlands and the UK, seeking to define the transferable elements of effective practices and experiences and their appropriateness for the development of apprenticeship in Lithuania.

These guidelines are based on two main methodological approaches – policy learning and process approach.

Referring to policy learning, by apparent good practices of apprenticeship in the context of this project we mean the examples of various policies, measures, instruments and approaches for the development of apprenticeship that can serve as objects for policy learning and be used for the development of original solutions for developing apprenticeship in Lithuania. It means that these practices can include not only positive examples of effective practices, but also the 'lessons' from the failures and mistakes in the field of apprenticeship.

The scope for learning from apparent good practice concerning apprenticeship can be defined and delimited by two main factors:

1. Comparability of the context of practices of apprenticeship in the country of its origin to the corresponding context and conditions in Lithuania. Here it is necessary to estimate the extent to which the success or failure of concrete practices of apprenticeship depends upon the different conditions and features of local contexts. In so doing, it is possible to outline/estimate potential changes of context that could be favourable for the development of apprenticeship in Lithuania and to define how the know-how from the analysed measures can be effectively applied in the existing context.
   We propose to consider the following main factors of these contexts:
   - existing socioeconomic conditions of the country (structure of economy in terms of size of enterprises, level of industrialization, skills distribution amongst the workforce, etc.),
   - specific features of existing institutional models of VET and skills development (political economical orientation of VET and skills development, access regimes),
   - patterns of cooperation and interactivity between stakeholders of VET (government, employers, trade unions, training providers),
   - national policies and strategies of VET development (implementation of NQFs, introduction of outcome-based standards, modularization of VET).

2. Potential of the measures to provide know-how and ideas on how to facilitate effective implementation and development of apprenticeship in the VET system of Lithuania. This relates directly to the contents of measures, their goals, objectives and effectiveness in solving different problems of organization, provision, funding of apprenticeship training, its quality assurance, co-operation between stakeholders and other issues. In these guidelines we will focus on the following issues for such policy learning:
   - How to strengthen the capacity of enterprises (especially SMEs) to take more responsibility for the organization and funding of apprenticeship?
   - How to motivate and support enterprises (especially SMEs) in the organization and funding of apprenticeship? How to make apprenticeship more attractive to employers? What legal, fiscal concessions or exemptions can help support motivation of employers and trade unions to participate in the provision of apprenticeship?
   - What are the possible ways and patterns of effective distribution and allocation of funding of apprenticeship that enable maximal output from modest volumes of funding?
   - How to integrate effectively apprenticeship with the work processes in the enterprises, especially considering practices of outsourcing and subcontracting?
   - How to enable, develop and sustain effective cooperation and interactivity between the stakeholders involved in apprenticeship?
   - How to provide the supply of qualified tutors and trainers of apprenticeship in the enterprises?
   - How to exploit existing infrastructure of initial and continuing VET for the development of apprenticeship (sectoral training centres, private providers of training, former employment training centres)?

Process approach requires designing the recommendations of guidelines referring to the requirements of the different stages of apprenticeship process from the marketing of apprenticeship and enrolment of apprentices to the assessment of competences and awarding of qualifications of apprentices. It also requires relating the recommendations to the different needs of stakeholders and participants involved in this process.

These guidelines are designed for all stakeholders and interests groups which are or will be involved in the implementation and development of apprenticeship in the VET system of Lithuania:

1. Policy makers responsible for the policy and regulation of VET (including issues of apprenticeship):
   Ministry of Education and Science of the Republic of Lithuania, Centre for Development of Qualifications and VET. These stakeholders need the information and know-how on the apprenticeship funding policy or model, institutional structure of apprenticeship (rights, responsibilities of institutions, interactions between institutions), recommendations on updating and adapting legal regulations, as well as recommendations on compatibility of the currently developed VET policy instruments, (sectoral occupational standards, VET standards and national curricula of modular training) with the development of apprenticeship training.
2. VET providers:
   Initial VET schools, regional VET centres, sectoral practical training centres, private providers of training, higher vocational education colleges. These stakeholders need know-how and recommendations about the organization of theoretical and practical training in apprenticeships (time, place), management of human resources in training institutions (teachers and trainers involved in apprenticeship activities), contracting with apprentices and enterprises, curriculum design, application of training methods.
3. Enterprises and employers associations:
   Enterprises that provide training, sectoral associations of enterprises. These stakeholders need know-how and recommendations about cost-effective management and organization of apprenticeship in the context of human resources management and development activities of enterprise, know-how of the effective integration of apprenticeship training in the production process, methods for on-the- job training and quality assurance of training, recruitment and selection of apprenticeship supervisors and their qualifications, ideas about the coordination of apprenticeship training amongst the enterprises in the sectors/ branches.
4. Stakeholders involved in the assessment of competences of VET graduates:
   Chambers of Commerce, Industry and Crafts. These stakeholders need know-how and recommendations concerning organization and provision of competence assessment of apprenticeship.
5. Trade unions and professional organizations:
   These stakeholders need the guidelines for monitoring and protecting the rights of apprentices, recommendations on the provision of support and guidance to apprentices in their workplaces, know-how concerning external quality assessment of apprenticeship.

The guidelines consist of the following parts:

1. Discussion of the comparability of the context and processes of apprenticeship development in Lithuania, Germany, France, Netherlands and the UK and its implications for policy learning.
2. Recommendations for the national policy of apprenticeship development related to the different external (general) processes – involvement and roles of stakeholders, quality control, funding and legal regulation.
3. Recommendations for the development of the different apprenticeship processes in the enterprises and training centres – curriculum design, promotion of apprenticeship and enrolment of apprentices, organization of training, assessment of learning outcomes. Proposals concerning the measures of dissemination of short-term implementation of developed recommendations.
4. Overview of the possible long-term scenarios of the apprenticeship development in Lithuania.

2 EXECUTIVE SUMMARY

This document presents the main result of the Leonardo da Vinci project "Development of Apprenticeship in Lithuania referring to experience from Germany, France, England and the Netherlands" DEVAPPRENT No. DE/10/LLP-LdV0TOI0147320.

These guidelines are based on a policy learning and process approach. The scope for learning from apparent good practice of apprenticeship in Germany, France, England and the Netherlands is defined and delimited by comparability of the context of practices of apprenticeship in the country of origin with the corresponding context and conditions in Lithuania, as well as in relation to the potential of measures from other countries to provide know-how and ideas on how to facilitate the effective implementation and development of apprenticeship in the VET system of Lithuania.

A process approach requires that the design of recommendations of guidelines refers to the requirements of the different stages of the apprenticeship process from the marketing of apprenticeship and enrolment of apprentices to the assessment of competences and awarding of qualifications of apprentices. It also requires relating the recommendations to the different needs of stakeholders and participants involved in this process.

These guidelines are designed for all stakeholders and interest groups that are or will be involved in the implementation and development of apprenticeship in the VET system of Lithuania: policy makers responsible for the policy and regulation of VET (including the issues of apprenticeship); VET providers, enterprises and employers associations; stakeholders involved in the assessment of competences of VET graduates; and trade unions and professional organizations.

2.1 Comparison of the context and processes of apprenticeship development and implications for policy learning

Policy learning between countries should involve deep consideration of the context of policy measures and instruments. This also applies for the case of policy learning in the implementation and development of apprenticeship in the IVET system of Lithuania. Therefore the first chapter provides a short comparative overview of the main contextual issues of apprenticeship development in the project partner countries, outlining their potential implications for policy learning.

Apprenticeship training is organically embedded in the systems of education, economy and social cohesion of these countries, together with corresponding institutional, legal and cooperation frameworks. These circumstances practically exclude the possibility of 'mechanical' policy borrowing and transfer of different measures and instruments of apprenticeship from these countries to Lithuania. Regarding policy learning, the choice of the objects of learning for designing and developing original instruments and measures of apprenticeship depends on the choice of the politico-socio-economic model of apprenticeship.

Significant differences in the structure of economies (notably the size distribution of enterprises), levels of industrialisation, differences in politico-economic orientation of VET requires the exercise of prudence in learning from **national policy** measures and instruments of apprenticeship. At the same time, the partner countries offer opportunities for learning from very different experiences, approaches and instruments of apprenticeship, which are applied **locally** at the level of enterprises and sectors.

2.2 External context challenges and factors in the introduction and development of apprenticeship in Lithuania

This chapter provides an overview and discussion of the main external challenges and issues faced in the introduction and development of apprenticeship in the VET system of Lithuania, which are related to the different socio-economic and institutional processes that directly influence the introduction and development of apprenticeship. Referring to the analysis of the development of apprenticeship in Lithuania, Germany, France, England and the Netherlands, stakeholder and social partner roles, quality control in apprenticeship training, as well as funding and development of legal regulation are all analysed.

2.2.1 Stakeholder and social partner roles

Apparent good practice from the benchmark countries demonstrates the potential for the social partners to establish networks and structures of cooperation and partnership that cover very wide fields of apprenticeship training, from the development of vocational profiles and curricula to questions of funding and quality assurance. There is substantial diversity in these arrangements as a consequence of historical differences between the countries in terms of labour market and training regimes as well as specificities of social partner organisation.

For the development of an apprenticeship system, it is clear that a workplace focus is important, and this is of itself, conducive to social partner involvement. However, it is essential that labour market stakeholders have real representative power and clearly expressed interests in the field of apprenticeship. The context of Lithuania in this respect presents a problem since stakeholders often lack representative power and resources, and their interests in the field of apprenticeship are not so evident. Indeed, the weakness of the trade unions and the underdeveloped nature of social dialogue, especially at the level of enterprises and workplaces, represent major challenges for the development of apprenticeship in Lithuania.

What is crucial, however, is that (a) the social partner organisations (trade unions and employers' associations) develop the necessary internal capacity to play a full role in developing the apprenticeship system; (b) that this role is supported and legitimized by the state, most likely through laws that embed social dialogue in the apprenticeship system; and (c) that the apprenticeship system and the wider VET regime is sufficiently grounded in the workplace to provide both the opportunity and necessity for extensive social partner involvement.

Clearly there is intimate articulation between these conditions, with the concomitant risk that conditions (b) and (c) will not be met until there is evidence of (a) but that progress on (a) will

not be made until there is movement on (c) and probably also (b). To break this vicious cycle a number of measures could be proposed on a practical level. Capacity development need not and should not await state decisions on the legal and structural aspects of the apprenticeship system. The social partner organisations in Lithuania are affiliated to the European social partner organisations and can draw on a network of trade unions and employers' representative organisations around Europe to acquire the necessary expertise and draw on experience of apparent good practice.

The following proposals are made for the development of social dialogue in the field of apprenticeship:

a) Measures to develop the internal capacity of social partner organisations (trade unions and employers' associations) to play a full role in developing the apprenticeship system:
   - direct and active involvement of trade unions and employers associations in the currently implemented projects of VET development related to apprenticeship and practical training, by proposing that they undertake concrete obligations and responsibilities,
   - initiation of projects of training of selected members of trade unions and employers' associations to provide them with necessary know-how and expertise to enable them to take an active part in activities related to the development of apprenticeship,
   - Building a positive image and raising the prestige of apprenticeship and supervision of apprenticeship among employers, employees and trade union representatives.

b) State support and legitimization of the activities of social partner organisations in embedding social dialogue in the apprenticeship system:
   - introducting legal regulations and awarding legal statuses necessary for active participation of trade unions and employers' organisations in the apprenticeship system.
   - state assistance in coordinating and intermediating agreements of social partner organisations in the system of apprenticeship.
   - financial and fiscal measures of support to the activities of social partner organisations in embedding social dialogue in the apprenticeship system.

c) Grounding of the introduced apprenticeship system and the wider VET regime in the workplace in order to provide both the opportunity and the necessity for extensive social partner involvement:
   - enhancing support to enterprises to create special apprenticeship workplaces (through subsidies, tax reductions and exemptions).
   - in the production sector - exploitation of possibilities provided by internal subcontracting activities (for example, between big enterprises and SMEs).

2.2.2 Quality control in apprenticeship training

Quality management in apprenticeship training in Lithuania is one of the most important components in the entire apprenticeship process. Management excellence means learning to manage time and costs, scope, risks and other traditional practices. However, to achieve excellence and success some recommendations should be taken into consideration as a strategic tool. The purpose of recommendation is to assist in developing a quality control system to be used in practice.

The quality of apprenticeship training could best be judged by the following criteria:

- Flexibility, facilitating change and adaptation of the contents and forms of training provision according to the changing conditions and needs of the economy, enterprises and learners.
- Individuality, or the extent to which the contents and organisational forms of apprenticeship training respond to the needs and intentions of each apprentice.
- Practicality, or the orientation of training provision to work process practices in the organisation.
- Educational success of apprenticeship or the capacity of training to provide the knowledge, skills and competences to ensure successful integration of apprentices in job positions and subsequent career, as well as providing the capacity for autonomous personal and professional development.

From the point of view of quality management in apprenticeship training in Lithuania, it is essential that the strategy is used and that it is prepared in a way that is both economic and suited to purpose. The strategy of quality management should encompass the vision, mission, values and principles, and the purpose and goals involved.

With respect to quality management of apprenticeship organisers of apprenticeship training should:

- clearly define who is responsible for the management of apprenticeship training;
- ensure that there are necessary resources for achieving specified goals;
- foresee ways and measures to achieve common understanding of the values, goals and objectives of apprenticeship amongst all involved stakeholders, as well as ways for the distribution and share of benefits of apprenticeship for apprentices, enterprises and other stakeholders.
- foresee systemic measures for accumulation and development of expertise and know-how in the field of apprenticeship amongst all involved stakeholders - enterprises, VET providers, trade unions, professional organisations etc.

There are also other components related to the assessment of apprenticeship training. It is essential that the apprenticeship training process is steered and controlled based on reliable facts. Consequently, the organiser of training should:

- develop and maintain a data system and methods that are necessary for this data strategy taking into consideration the special characteristics of apprenticeship training.
- define the parameters necessary for monitoring and regularly evaluating the attainment of goals;
- adopt methods that facilitate the retrieval and acquisition of comparative data.

Nevertheless, it is important to note that imposing highly demanding and overly bureaucratised systems and frameworks of quality management of apprenticeship as obligations on enterprises can have very detrimental effects to the introduction and development of apprenticeship. For these reasons quality assurance of apprenticeship should be limited to procedures that directly influence the improvement of training process and its responsiveness to the needs of stakeholders. Another important issue here is the effective division of responsibilities for quality assurance measures amongst all stakeholders involved in apprenticeship.

2.2.3 Funding of apprenticeship

This chapter outlines the possibilities of policy learning in the funding of apprenticeship referring to the practices and instruments of funding used in Germany, France, England and the Netherlands.

The following recommendations are proposed for the introduction and development of funding/co-funding instruments of apprenticeship in Lithuania:

- Avoiding complete transposition of transferable apprenticeship funding/co-funding instruments identified in the benchmark partners countries to the Lithuanian context.
- Proceeding on the basis of step by step piloting/testing stages for the adaptation, introduction and development of funding/co-funding instruments taken/tested individually. In certain cases, it might be necessary to construct more adapted packages based on inter-complementary instruments. Referring to some of the identified cases of effective practices, this process suggests going for the following exemplary package options:

  Given the weakness and limited experience of funding/co-funding capacities of potentially involved stakeholders (especially social partners), it might be necessary to rely initially on a package of state contribution to funding of apprenticeship in both off-the-job and on-the-job parts. In a second stage an adapted piloting version of the tripartite apprenticeship pact (experience from Germany) could be introduced within more developed and active sectors to deal with issues of skills shortages and skills mismatchesin the labour force. This can be undertaken through state encouragement by granting social security contributions/tax exemptions to employers effectively recruiting apprentices as is the case in France. In later stages a funding package made-up of levying an adapted apprenticeship tax (as a percentage of each company's overall wage bill)

on all registered enterprises (with the exception of free-lance individuals) can be tested as is the case in France. This instrument is more compatible with the exiting institutional setting in Lithuania of more or less centralised state governance of public finances and IVET funding/co-funding.

2.2.4 Development of the legal basis of apprenticeship

Looking to the possibilities of policy learning from the experiences of Germany, France, England and the Netherlands the following **recommendations can be proposed**:

Experience in the development of apprenticeship in Germany, France and the Netherlands shows that strong and long-term development of apprenticeship is better ensured by comprehensive models of contractual and regulatory arrangements based on wide collective agreements and negotiations of interested social stakeholders.

Standardization of the contents of apprenticeship contracts and their linkage to vocational profiles can be useful for assuring smooth management and quality of apprenticeships. In fixing the duration of apprenticeship in laws, it is important to anticipate the possibility of reducing the duration of training depending on the progress of apprentices.

Provision of special apprenticeship programmes and contracts for handicapped persons and other specific groups can be helpful for using apprenticeship as a tool of social reintegration of disadvantaged individuals.

Enhancing the variety of types of apprenticeship contracts depending on their goals and target groups can be useful and important considering the variety of potential target groups of apprenticeship in Lithuania.

The legal measures for reduction of taxes to SMEs and enterprises in the rural areas and small cities that are involved in apprenticeship training can be a very helpful measure for assuring coherent regional development of apprenticeship in Lithuania.

2.3 Specific VET system related challenges and factors in the introduction and development of apprenticeship in Lithuania

This chapter provides an overview and discussion of the main specific VET system related challenges and issues in the introduction and development of apprenticeship in the VET system of Lithuania: curriculum design of apprenticeship training; promotion of apprenticeship and enrolment of apprentices; organisation of training and assessment of learning outcomes.

2.3.1 Curriculum design of apprenticeship training

One of the main **challenges** of introducing and developing apprenticeship related to the issues of curriculum design is the compatibility of apprenticeship with plans to introduce national modular curricula (national system of modular training) in VET. The crucial question here is how modules are understood and treated – only as measures to structure and organize curriculum, or as instruments to structure qualifications and learning outcomes?

The introduction of a system of modular training and national modular curricula in IVET can support and foster the development of apprenticeship, provided the introduced national curricula of modular training consider the following requirements of the apprenticeship training process:

- the units of learning (modules) have to be based on the internal logics and order of work processes;
- modules shall lead to the acquisition of competences enabling the execution of sufficiently complex and important work processes and objectives (key work tasks), which are sufficiently challenging to motivate apprentices for independent learning and for intensive cooperation with masters or foremen;
- didactic principles of acquisition of new knowledge and skills must be considered, especially the principle of learning from simple to complex, or steps of competence development.

The possibility of compatibility of modularization of VET curricula with apprenticeship training depends on goals of the modularization of VET curricula and objects of modules.

One of possible learning sources here could be the competence matrix developed by the VQTS project. (http://www.vocationalqualification.net).

Amongst potential challenges and difficulties of applying the competence matrix and competence development steps in the modularisation of VET curricula is that such an approach in curriculum design requires closer integration of different training curricula and programmes within the areas of activities that today lead to the acquisition of narrow, specialised qualifications. From a long-term perspective this is very positive and promising requirement. However, seeking such close integration involves challenges caused by the specificities of training curricula, intensive competition of training providers, etc. Nevertheless, the competence matrix should be discussed as one highly promising approach for the design of national curricula of modular training.

2.3.2 Promotion of apprenticeship and enrolment of apprentices

Raising awareness of the apprenticeship programme needs to be coordinated with clear, concise messages that are aimed at potential stakeholders including also young people – potential apprentices.

After initiating a programme to develop and promote apprenticeships, a crucial lesson from the experiences of countries where VET and academic programs do not enjoy parity of esteem is that the VET apprenticeship route can also provide entry to HE.

The apprenticeship route can be built on existing VET qualifications and adapted to the needs of the economy and the workplace. Developing an entirely new apprenticeship framework would be costly both in terms of finance and time. Moreover, new apprenticeship programmes need to fit within existing education programmes otherwise there will be a lack of understanding between all parties participating and problems with permeability to HE.

Promoting apprenticeships and their value to learners, particularly ensuring that the value of the apprenticeship is highlighted from the beginning. Promotion should focus on such advantages as an equivalent value to similar academic qualification and high values amongst employers, as well as the possibility to 'earn whilst you learn' giving an additional benefit to those who seek this particular pathway to have economic independence from parents/guardian/state. Promoting apprenticeships and their value to employers in the public and private sectors should focus on the benefits of developing the skills of apprentices to fit sector needs and organisational gaps, as well as on the possibility of developing other skills and traits amongst young workers to ensure a fully rounded employee in tune with the needs of the organisation, working with the apprentice to continue to develop new skills and career advancement to fully pay back the organisation's investment. Promotion of the VET route with parents or guardians is very challenging especially when this is the less proven route to HE, for example, even though this is an understood and now standardised route. Although not impossible, it is difficult to recruit apprentices without parental support and guidance for the young person to undertake this route. VET providers need to develop promotional campaigns to ensure a clear understanding of the apprenticeship pathway, ensuring that they give a clear message about the support and level of tuition available.

2.3.3 Organisation of training

Independently of the type of VET system there are three (possible) learning places: a classroom, a workshop (sectoral practical training centres - either in a plant, a school or separately), and workplaces. Whereas in all systems a vocational teacher is responsible for lectures, the person in charge of the workshop is, depending on the work share (and the place where the workshop is located), either a teacher or a trainer. The 3rd place is the crucial one for apprenticeship: usually the person responsible for accompanying the apprentice has no specific pedagogic skills (and is not paid for teaching); it is a skilled worker who is guiding and instructing the learner. The main issues for success are:

- the interest/motivation of this skilled worker;
- a fair balance of the time needed for instruction and the work tasks performed by the apprentice (e.g. preparatory works) and;
- a good preparation of the apprentice and the skilled worker, and competent supervision of the apprenticeship-period by the teacher/trainer who runs the course.

With respect to Lithuanian preconditions it is unrealistic to establish an elaborated system of training and motivating skilled workers as supervisors or a stable cooperation between small and big enterprises. On the other hand a top-down approach of appointing workers is misleading; this usually leads to unmotivated supervisors and, as a consequence, apprentices. But when advertising for apprenticeship in a transparent and face-to-face manner, taking the vocational teacher, the candidates for supervising, the managers/employers and the potential apprentice on board, volunteers will be found.

The three factors for success mentioned above lead to the following recommendations for implementing or improving apprenticeship:

1. Accurately choose and recruit the skilled workers taking part in the apprenticeship programme
2. State clearly that an apprentice is not only a burden but a support too.
3. Train the vocational teachers/trainers for a different role. Their job during apprenticeship-periods is neither the teaching of knowledge nor skills – but the supervision of the process.
4. Finally, do not mix up apprenticeship with training on the job. Every apprenticeship period is part of an IVET programme of 2-3 years, not the training for a certain workplace. This must be clear for all involved and especially respected by the responsible teacher/trainer.

2.3.4 Assessment of learning outcomes

As Lithuania decided to organise its vocational profiles in units, one central issue related to assessment must be clarified at the beginning: Are the units meant as structuring ones with an interim and a final assessment or as qualification units assessed separately?

We strongly recommend the first alternative for a variety of reasons:

- Finances and manpower:
  As a qualification consists of 10-20 units, the time and money needed for a corresponding number of assessments is enormous – regarding the lack of skilled assessors in Lithuania and the very limited funding both (money and time) can be better spent.
- Bureaucracy:
  As UK experience in particular shows, the additional paperwork can be exhausting, and additional authorities are needed to supervise all the tests.
- Holistic:
  VET does not consist of a couple of (more or less) separate subjects (like in general schools) – its units are usually closely related and often learners really understand an issue of unit 1 whilst working on unit 10.
- Pedagogy:
  Learning is development and not executing. Especially in IVET learners develop knowledge, skills and competences; identification, motivation and self-confidence over the whole three years, with individual speed and different emphasis in different phases on the single elements.

Another central issue is a fair balance between standardisation and individualisation of assessment. Certainly some basic standards must be fulfilled; an employer should trust that each holder of a qualification has a certain level of knowledge, skills and competences. On the other hand, from a pedagogic point of view, an individualised assessment is much better: an expert of the profession, just observing the work of a candidate and interviewing him mean-

while, can better predict the candidate's success on the labour market than any standard test. Additionally due to the specialisation of small medium enterprises the learning outcomes of apprenticeship can differ: when learning in one company there might be a larger impact on a given unit than in the other company.

Respecting these introductory considerations, we recommend an assessment style oriented at (not copying) the current two-step assessment in Germany for the long-term development (scenario). The first part of assessment takes place after 18 months of training, the second at the end of the qualification period, in the Lithuania case after 36 months. To find the balance between standardisation and individualisation the work tasks in both parts should be in general identical for all apprentices (e.g. "produce a device" or "repair a system") but the system they are repairing or the device they are producing should be company specific – this reduces the money needed (materials, tools etc. are there and the product can be sold afterwards). The apprentice might even work for some days in a department as a skilled worker to prepare the product – during assessment they have to explain what they are doing, why they are acting this way and how they are producing the work piece.

The examination board, considering the lack of skilled assessors should have at least two members: an independent expert for the qualification (as there are no trainers in Lithuania, perhaps a teacher chosen by the Chamber) and the skilled worker (mentor).

2.4 Apprenticeship development scenarios

Considering existing preconditions for the introduction and development of apprenticeship, as well as the experiences of other countries in this field (Germany, France, England, and Netherlands) possible scenarios for the development of apprenticeship in Lithuania are proposed based on the modes of institutional change discerned by Streeck and Thelen: displacement, layering, drift, conversion and exhaustion.

Referring to the possible pathways of the development of VET system the following scenarios of introduction and development of apprenticeship in Lithuania may be distinguished:

1. Development of apprenticeship as a separate track or sector of the IVET system provided exclusively by enterprises on a contractual basis.
2. Development of a dual approach of apprenticeship with active involvement of the IVET schools as providers of theoretical knowledge.

In the first scenario, the differentiation of apprenticeship from the school-based provision of VET can be expressed by the different locus of provision, different modes of management and regulation of training, different models and ways of funding and co-funding. Such a market- driven apprenticeship pathway could emerge and develop as a competitor to school-based IVET provision. It may also lead to an unequal speed and extent of apprenticeship development in different sectors - such apprenticeship training may concentrate only in those sectors where enterprises have higher financial potential for funding and face a shortage of skilled workers, because school-based IVET does not prepare such specialists or because there are

gaps between their provided skills and the needs of enterprises. This pathway of development of apprenticeship would enrich the provision of vocational qualifications and expand the supply of training services in the market by introducing qualifications based on knowledge and skills provided through apprenticeship in enterprises. At the same time it would create the need to find ways to integrate these new qualifications provided by enterprises in the existing national system of qualifications, creating mechanisms of permeability and comparison between apprenticeship and school-based qualifications. It could also open new possibilities for enterprises to satisfy their needs of skilled workforce, potentially leading to an incremental increase in the interest and motivation of enterprises to use apprenticeship as one instrument of HRD. In order to ensure this scenario, a liberal legal basis for contracting of apprenticeship is needed, foreseeing wide rights of enterprises and apprentices to define and settle their obligations in the organisation and provision of training. It also requires actions to strengthen and develop the capacities and competences of sectoral enterprise associations, trade unions and professional organizations in the field of training and HRD through providing know-how of organization of training, methods and forms of training in enterprises, integration of theoretical and practical training etc. Enterprises are facing challenges to find and attract potential apprentices considering the rather poor image of vocational training and the strong orientation of youth to seek careers through HE studies. It can require significant efforts of enterprises and employers' organizations in promoting the apprenticeship pathway of training amongst youth and their families.

The second scenario presupposes that enterprises become responsible providers of apprenticeship training and conclude contracts with VET schools regarding provision of theoretical training in the schools. In this case the funding of apprenticeship would be shared by the state and enterprises: the state would fund provision of theoretical training in the schools, enterprises would fund provision of practical training in the workplaces. If implemented successfully and this becomes the main pathway of VET provision in the country, this scenario could significantly increase the quality of vocational training and fit of provided knowledge, skills and compentences to the needs of enterprises, thus facilitating employability of graduates and improvement of the image of vocational training in society. It could also significantly contribute to increasing attractiveness of the Lithuanian economy and its human resources to foreign investors and attract new workplaces demanding skilled workers. The implementation of this pathway of apprenticeship requires a transparent legal basis for contracting of apprenticeship, with clear regulations of rights and responsibilities of enterprises and public VET providers in the organisation and provision of training, based on the negotiations of the stakeholders. Different fiscal exemptions and concessions to enterprises providing apprenticeship training should also enhance the interest of employers to take responsibility for apprenticeship.

3 COMPARISON OF THE CONTEXT AND PROCESSES OF APPRENTICESHIP DEVELOPMENT AND ITS IMPLICATIONS FOR POLICY LEARNING

Policy learning between countries should involve deep consideration of the context of policy measures and instruments. This also applies for the case of policy learning in the implementation and development of apprenticeship in the initial VET system of Lithuania. Therefore this chapter will provide a short comparative overview of the main contextual issues of apprenticeship development in the project partner countries by outlining potential implications of these issues for policy learning.

Historical evolution of apprenticeship: preconditions for pathway development

LITHUANIA

The predominantly agrarian character of economy until the middle of XXth century and late industrialization under the regime of centrally planned economy could not create any firm traditions of apprenticeship training, nor facilitate the establishment and development of systematic understanding, values and know-how of this training pathway. Therefore the process of implementation and development of apprenticeship is largely 'ad hoc' and begins from the establishment of basic and fundamental issues.

GERMANY

Firm traditions and values of apprenticeship were developed more or less in a consecutive and 'organic' way throughout the different historical periods: institutional and economic pattern of apprenticeship in the system of medieval crafts guilds was followed and transformed according to the needs and requirements of human resources of the emerging industrial economy, by establishing the institutional frameworks of cooperation, instruments of funding, organization of training etc. Apprenticeship served as one of the cornerstones in the development of the dual VET model.

FRANCE

As in the other Western European countries apprenticeship traditions were founded in the medieval crafts and continued throughout later periods of industrial development. One of the distinctive features of the pathway of apprenticeship development in France is the strong regulative power of the state. State interventions to apprenticeship regulation were marked by such legal acts as the suppression of guilds in 1791, the Act of 22nd February 1851 which

regulated contracts binding apprentices to their masters, the Astier Act of 25th July 1919 giving local authorities responsibility for organising compulsory vocational training courses for youngsters from 14 to17 years old employed in industrial companies. Consequently, apprenticeship became as one of the important instruments of national economic and social policies.

ENGLAND

One of the distinctive features of the apprenticeship development pathway in England is a degree of division of the aims and goals of apprenticeship seen by the different stakeholders: from the regulation of provision of skills by craft guilds, to the free provision of skills according to the needs of entrepreneurs in the early years of the industrial revolution. Unlike the development of apprenticeship in France, the role of state regulation is much weaker and the autonomy of employers, trade unions and training providers much higher. A very important role is played in the development and organisation of apprenticeship by different intermediating institutions representing employers, professionals or employees, such as UK Industry Training Boards (ITBs), Sector Skills councils etc.

NETHERLANDS

Apprenticeship development in the Netherlands was influenced by the early industrialization. For example, in XVIth-XVIIth century Amsterdam, certain crafts set more stringent and comprehensive requirements to training and evaluation of acquired knowledge and skills, than others. For example, the guilds of bakers, carpenters, masons, basket makers, tailors, weavers, shoe-makers, forgers, book printers, painters established an obligatory three years training and an examination. Other crafts, related to the trade and transport or services in the most cases lacked clearly defined training requirements and paid more attention to practical experience of candidates (Geschiedenis van Amsterdam Centrum van de Wereld 1578-1650, 2004). Early industrialization and mercantilism facilitated development of different entrepreneurial approaches to workforce training and exploitation of skills For example, the superiority of the Dutch navy in XVIIth century world trade amongst was largely determined by the application of modern technologies of shipbuilding of that period and the availability of expert workers and supervisors in shipbuilding. Another important advantage was the organization of the work of marines by setting in detail their positions and responsibilities in the ship, which made it possible to recruit and train even inexperienced marines (Braudel, 1986). As in Germany, apprenticeship became one of the cornerstones of the modern system of VET.

Implications (things to consider) for policy learning in developing apprenticeship

The measures and instruments of apprenticeship applied in Germany, France, England and the Netherlands are designed and developed in the context of continuous historical pathways of the development of apprenticeship. Their effectiveness is supported by the established traditions, values and cultural approaches towards apprenticeship. Therefore apprenticeship training is organically embedded in the systems of education, economy and social cohesion of these countries, together with corresponding institutional, legal and cooperation frameworks. These circumstances practically exclude the possibility of 'mechanical' policy borrowing and transfer of different measures and instruments of apprenticeship from these countries to Lithuania. Regarding policy learning, the choice of objects of learning for designing and development of original instruments and measures of apprenticeship depends on the choice of political-socio-economic model of apprenticeship. For example, the choice of a liberal pathway with decreased state regulation, delegation of wide rights and responsibilities in the field of apprenticeship to enterprises and negotiations between enterprises and apprentices can make the experience of England more attractive and pertinent. By contrast in the case of seeking to integrate apprenticeship training with the school based initial VET by actively involving sectoral stakeholders and governmental institutions, the experience of Germany and France can provide more ideas for learning.

Existing socioeconomic conditions:
structure of economy in terms of size of enterprises

LITHUANIA

The very strong domination of SMEs in the economy and labour market of Lithuania must be mentioned. The majority of workplaces belong to enterprises with 250 or fewer employees.

In 2003, SMEs accounted for 99.4% of the total number of enterprises in Lithuania and employed 69.7% of the total working population.

Beginning 2012

Total number of employed population		806359	
Total number of enterprises		62889	
Enterprises by size (number of employees)			Percentage
1–4 employees	Number of employees	79479	9,86%
	Number of enterprises	35145	55,88%
5–9 employees	Number of employees	90008	11,16%
	Number of enterprises	13772	21,90%
10–19 employees	Number of employees	94193	11,68%
	Number of enterprises	7041	11,20%
20–49 employees	Number of employees	130354	16,17%
	Number of enterprises	4358	6,93%
Σ 1-49 employees	Number of employees	394034	48,87%
	Number of enterprises	60316	95,91%
50–99 employees	Number of employees	105547	13,09%
	Number of enterprises	1523	2,42%
100–149 employees	Number of employees	57176	7,09%
	Number of enterprises	473	0,75%
150–249 employees	Number of employees	51475	6,38%
	Number of enterprises	274	0,44%
Σ 50-249 employees	Number of employees	214198	26,56%
	Number of enterprises	2270	3,61%
250–499 employees	Number of employees	72453	8,99%
	Number of enterprises	205	0,33%
500–999 employees	Number of employees	43403	5,38%
	Number of enterprises	66	0,10%
1 000 and more employees	Number of employees	82271	10,20%
	Number of enterprises	32	0,05%
Σ 250-1000 and more	Number of employees	198127	24,57%
	Number of enterprises	303	0,48%

Table No. 1: Structure of economy according to the size of enterprises in Lithuania. (Source: Statistics Lithuania)

At the beginning of 2012 micro enterprises (up to 50 employees) represented 96 % of the total number of enterprises and employed 49 % of the total working population. Some 26% of the working population were employed in SMEs having from 50 to 249 employees.

GERMANY

The share of big enterprises in the structure of economy and labour market in Germany is above the EU average, despite the fact that there are about 3.6 million small and medium-sized enterprises representing 99.7 percent of all companies. Around 70-80 percent of the total employed population work in SMEs.

> "Germany's industrial sector consists to a large extent of small and medium-size firms, the so-called Mittelstand. As Siebert explains, the important companies in this group are built around a technological idea and are technological specialists in their fields (…). Private ownership by the entrepreneur typically plays an important role in these firms, and thus the "owner-entrepreneur is the driving force of the enterprise." (Müller, 2007: 9)

FRANCE

Currently the economy of France is dominated by SMEs, which employ 63% of the total employed workforce. In recent years, SMEs increased employment opportunities by 35 %. The concentration of SMEs in the economy of France ref; lects the EU average, while the concentration of big enterprises is slightly above the EU average. (Institut Sage, 2011) Very small enterprises (TPE) make up 97 % of all enterprises in France and employ 37% of the total working population (producing 28% of added value); SMEs (20 - 249 employees) make up 3% of companies and employ 27% of the working population (producing 25% of added value); whilst big enterprises (more than 250 employees) represent only 0.2% of enterprises but employ 36% of the total working population (producing 47% of added value).

ENGLAND

The UK is a big firm economy by European standards, using the commonly used definition of 250 employees or more in a large firm. A recent review of available data shows that in 2003 the UK had the biggest share of employment in large firms (250 employees) of any of the EU States, with 41 percent employed in large firms compared with an EU average of just over 31 percent (Brinkley, 2008).

NETHERLANDS

Some 99.6% out of a total of 864,000 Dutch companies in 2010 were SMEs, according to the EU definition. In the non-financial business economy 537,000 SMEs accounted for 67.2% of total employment (in 2008). This indicates that there are relatively more large scale enterprises (LSE) and that they account for a larger share in total employment in the Netherlands compared to the EU-27.

A look at the distribution of SMEs and LSEs across sectors reveals that most of the non-financial SMEs are active in the wholesale and retail trade sectors (32% of SMEs) and the business activities sector (about 31%). By contrast, LSEs are relatively active in the manufacturing sector (around 31% of LSEs). In the case of SMEs the distribution of enterprises across sectors is similar for the Netherlands, Germany and the EU in total. In Germany and the EU more LSEs are active in the manufacturing sector (in both cases nearly 50%) than in the Netherlands (Roth, 2011).

Implications (things to consider) for policy learning in developing apprenticeship

This comparison shows that although small enterprises and SMEs make the biggest share of enterprises in all the economies considered, large enterprises employ a much bigger share of working population in Germany, France, England and Netherlands than in Lithuania. It raises the question of applicability of know-how of **national policy** measures and instruments of apprenticeship oriented to the capacities and needs of big enterprises in the contexts of small and medium enterprises. From the other side the project partners countries can propose for learning many different experiences, approaches and instruments of apprenticeship, which are applied **locally** in the SMEs or on the level of SME dominated sectors (e.g. hospitality), or specific national policy measures and instruments aimed at developing apprenticeship in SMEs.

Existing socioeconomic conditions:
Level and features of industrialization

LITHUANIA

Lithuania can be characterized as a country of late industrialization (second half of XXth century). The restructuring of the economy after 1990 also involved a collapse or restructuring of the big industrial enterprises established in the Soviet period. The newly established industrial enterprises are more concentrated in the sectors of high technologies. Currently industrial enterprises employ only about 15% of the total employed workforce (data of 2nd quarter 2011, Statistics Lithuania). Industry is concentrated in the sectors of food and beverage, woodworking, textile, chemical industry, production of machinery and equipment. A rather important feature and a factor of industrial development in certain sectors (like metalworking, machinery production) is the extent of subcontract work undertaken for Western European enterprises. However, due to increasing labour costs, the extent of outsourcing to Lithuanian industry is declining and the involvement of outsourced/subcontracted workplaces is shifting to more complex and higher value added orders.

GERMANY

Germany is an economy with a strong industrial base. Germany's technology-based industry provides almost 90 percent of the country's exports, of which a large part is investment goods: 59 percent of exports stem from four industrial sectors: machine building, automobiles, chemicals, and electro-technical products; only 10 percent of exports are services. Its industrial base traditionally depended on engineering know-how and innovative performance, on entrepreneurial spirit, on the organizational capabilities of its people, and on the skills and the effort of its workers.

> "There was relative decline of industry or manufacturing (verarbeitendes Gewerbe) from 38.1 percent of employment in 1970 to 22.4 percent in 2002. The wider delineation of the producing sector or the production industries (produzierendes Gewerbe), also including mining, energy supply and construction, fell from 47.9 percent of employment or 12.5 million in 1960 to 27.8 or 10.8 million in 2002, whereas the employment in the service sector increased from 38.4 to 69.7 percent (figure 1.3). There has been a continuous shift away from the industrial economy, first to a service economy and lately to the information (IT) or knowledge-based economy (Siebert, 2005).

In a political sense the consequences of industrialisation enforced the question of education of the (poor) workers: the authorities were afraid of the revolutionary impact of the existence of industrial workers and the trade unions were interested in *"Bildung"* because this was expected to offer more social equality. In an economic sense the career of the dual system in Germany is simply based on the fact that to have a kind of education (*Bildung*) for young proletarians, a copy of the tradition of handcraft apprenticeship to industry was strongly needed.

By legal initiative the industrial enterprises had to copy the apprenticeship of trade and crafts (or the so called *famulatur* of the academic professions) to establish a basis of qualification.

FRANCE

The decline in industrial employment towards the end of the XXth century in France was associated with an important growth of productivity in this sector and with processes of outsourcing. This restructuring involved important redistributions of the workforce according to skills levels with an increased employment of high skilled workers and a reduction of low-skilled and unskilled jobs:

> The massive reduction in jobs (-30% between 1978 and 2002 i.e. – 1.6 million jobs) is the logical consequence of increasing productivity gains in industry. However, another crucial phenomenon complicates the analysis and makes it difficult to thoroughly assess the real weight of industry in employment: the widespread and increased use of outsourcing in the 1990s. The result of this development is a transfer of a share of the added value and jobs from industry to the service sector. The significant decrease in industrial jobs due to increased productivity must also be qualified by a more qualitative assessment of the distribution of industrial jobs. This is evidenced by two phenomena directly related to increased productivity: the relocation of occupational specialities and the general raising of the level of skills. An analysis of the ten professional families (a nomenclature of jobs that combines Insee's code of professions and socio-professional categories and ANPE3's directory of jobs) between 1982 and 2002 highlights the increased level of skill in industry: it can be observed that for qualified workers in the semi-processed goods industries (the pivot of the French industrial system which was restructured during 1990s), there has been an increase of more than 30% in the workforce comprising supervisory staff, technical experts and engineers. By contrast, unskilled workers in all industrial branches and skilled workers in the most labour-intensive sectors (mechanics, textiles, wood) are amongst those families that have lost the greatest number of jobs over the period (Le Blanc, 2005).

ENGLAND

Industrial decline from the 1980s changed the structure and profile of industry. By 2007 the contribution of manufacturing to total GDP had declined to 12.4 per cent. Manufacturing employs only 2.6 million people, compared with nearly seven million at the end of the 1970s.

> "Labour politicians have argued that Lady Thatcher's willingness to see the closure of large industrial installations such as steelworks left Britain with an imbalanced economy." (Fleming, 2009)

The broader services sector now comprises 75 per cent of economic activity. The decline of industry involved an important increase in productivity and a shift to the higher added value products.

> "The UK is still one of world's biggest manufacturers and a leading exporter of high-tech goods." (Fleming, 2009)

NETHERLANDS

Industrial decline in the Netherlands is also related to technological development and to increased productivity. These changes influenced the restructuring of the industrial workforce with the reduction of unskilled and low-skilled jobs:

> While production levels have risen in recent decades, industrial employment has been steadily declining. Extensive automation, digitisation and robotisation means that more and more work can be performed by fewer people. In 2009 and 2010 the decline in the number of industrial jobs has been reinforced by the continued overcapacity. Although specialist staffs are still very scarce in some branches of industry, the fall-off in demand is forcing companies to make cutbacks. Companies already started trimming the flexible component of their workforce at the end of 2007. Up to September 2009, the number of hours worked by temporary employees in industry has on average been more than a quarter lower than a year ago. (Dantuma, 2010)

Dutch industry was seriously affected by the recent world economic recession:

> The deepest recession since the Second World War had a global impact, with all of the ensuing consequences for Dutch industry. With transport and logistics leading the way, industry headed the list of worst affected business sectors in 2009. It is not surprising that these two cyclical and highly internationally oriented sectors sustained the heaviest blows from the economic storm. Industry suffered the largest increase in the number of bankruptcies of any business sector. A record number of companies failed in the first half of 2009. Publishers and printing companies, metal companies and machine builders were the hardest hit. (Dantuma, 2010)

Implications (things to consider) for policy learning in developing apprenticeship:

The level of industrialization and features of manufacturing are important factors for the development of apprenticeship. The manufacturing sector has traditionally been the most important practitioner of apprenticeship and 'employer' of apprentices in many countries. However the project partners' countries offer evidence that the future of apprenticeship development will largely depend on the service sector. Apprenticeship in the industrial sector must reorient to the needs of high-skilled workplaces. These commonalities create possibilities for learning in relation to the organization of apprenticeship and its adaptation to the changing technological and organizational requirements of industry and service sectors.

Existing socioeconomic conditions:
Skills distribution amongst the workforce

LITHUANIA

According to recent statistical data (2nd quarter 2011) some 493,900 employees belong to the highly skilled category (35.8%), 776,600 are medium skilled employees (56.3%) and 108,000 are considered unskilled (7.9%) (Statistics Lithuania, 2011). In general the number of unskilled and low skilled workers is decreasing (from 160,600 in 2006 to 112,100 in 2010 and 108,000 in 2011). Increasing proportions of the workforce with higher education cause problems of over-qualification. The skills distribution is also influenced by intensive workforce migration.

GERMANY

Statistical data provide evidence that the largest group of the employed population in *Germany can be considered skilled employees (54.2%).*

The group-specific unemployment rate of the unskilled in Germany is higher than in other major countries – and the German employment rate of the lowest qualification group accordingly turns out to be below-average. (Hagemann, Rukwid, 2007).

FRANCE

Statistical data offer evidence that the skills distribution of workforce in France is dominated by medium skilled workers: in 2009 unskilled workers constituted 6.1%, medium skilled employees 76.5% and highly skilled workers 16.6% (INSEE, 2010)

ENGLAND

The UK's skills base has improved significantly over recent years as reforms have begun to succeed in driving improvements. The proportion of people with a Level 4 and above qualification has risen from 21 per cent in 1994 to 29 per cent in 2005. The proportion of people with no qualifications has fallen from 22 per cent in 1994 to 13 per cent in 2005. The number of Apprentices in England has grown from 76,000 in 1997 to 256,000 in 2005. Today around 42 per cent of young people aged 18-30 participate in higher education, more than ever before.

In OECD comparisons of 30 countries, the UK lies 17th on low skills, 20th on intermediate and 11th on high skills. 7 million adults lack functional numeracy and 5 million lack functional literacy. Some 17 million adults lack Level 1 numeracy – equivalent to a low level GCSE. The proportion of people with low or no qualifications is more than double that in Sweden, Japan and Canada. (Leitch Review of Skills, 2005).

NETHERLANDS

Recently the number of employees with lower and extended lower education has diminished, whereas the share of employees with intermediate and higher education has increased strongly. The conclusion is that, like other populations of the advanced industrial societies the Dutch workforce has achieved very high levels of formal credentials (INSEE, 2010). The intermediate--'technician' and 'craft'—levels workforce makes important part in the structure of workforce. The larger category of middle-level qualifications in Netherlands can perhaps be regarded as part of a long-standing characteristic of Dutch society, much emphasised by social historians, namely, the breadth of its 'middle classes' (middenstand) which resulted from its geographical position and made it a prime trading nation. (Batenburg, de Witte, 1999).

Implications (things to consider) for policy learning in developing apprenticeship

Statistical data on the distribution of workforce according to skills levels is quite similar in all partner countries, perhaps with the exception of the UK, which exhibits a higher share of low-skilled and unskilled in the workforce. On the one hand, this creates favourable context preconditions for policy learning in the field of apprenticeship development, because the measures of apprenticeship proposed by the reference countries can be treated as one of the essential factors influencing the development of the skilled (medium skilled) workforce and these measures have been designed and implemented considering the situation of the workforce skills distribution in these countries. On the other hand, it is necessary to consider specific factors which distinguish the development of workforce skills distribution in Lithuania from the reference countries, such as workforce emigration and over-qualification issues, as well as a comparatively high mismatch between the supply of workforce (in terms of skills profiles) and labour market needs. Therefore specific attention should be paid to those measures and instruments of apprenticeship, which can tackle these factors.

Specific features of existing institutional models of VET and skills development: ***political-economical orientation of VET and skills development***

LITHUANIA

There is something of a dual politico-economic orientation of VET and skills development policies:

- Seeking to increase flexibility and economic effectiveness of VET provision and higher responsiveness to the needs of employers.
  Introduction of apprenticeship, together with the implementation of competence-based occupational standards and modularization of VET are regarded as instruments to achieve this goal.
- Sustaining and expanding access to VET as a measure against unemployment and social polarization.
  The main measures are optimisation of the institutional network of VET provision, state funding of VET and quality improvement of VET provision.

GERMANY

VET and skills development is strongly related to the needs of economy and strong involvement of social partners. GVET legal regulation is executed in a decentralised way and is under the jurisdiction of federal authorities. The constitution states that the school system in total is subject to federal state regulation.

VET, including apprenticeship, is based upon the principle of enhancing individual capacity or potential within a broadly defined occupational field. Qualifications, developed by the social partners (employers and trade unions), are awarded on completion of a regulated and recognised programme, comprising occupational knowledge and competences as well as general and civic education, thus providing for the development of the person within the occupation and as a citizen in the wider society. (Brockman et al, 2010).

FRANCE

The politico-economic orientation of VET and skills development in France can be characterized by the following features:

- Strong coordinating role of state.
- Strong involvement of stakeholders and social partners, especially in the fields of VET legislation setting, funding, setting of standards.

The integration of the twin approaches of social cohesion and market economy development is ensured by a big variety of forms and measures of training provision that seek to satisfy the

needs of economic development, fostering employability of youth and vulnerable groups and improving the quality and stability of employment.

ENGLAND

One of the key features of the politico-economic orientation of VET and skills development in the UK is the voluntarist approach of British governments towards VET. This voluntarism results in liberal and patchy legal regulation of VET, contributing to its low status (including apprenticeship):

The lack of a legislative framework which sets out minimum standards for an apprenticeship, since the demise of most of the earlier statutory Industrial Training Boards (ITBs) in the 1970s, together with lack of employer commitment, accounts for the current low status and standards of apprenticeship and the lack of available training places. (Brockman et al, 2010).

Decreasing stability of employment relationships, labour market deregulation and limited co-ordination of social dialogue at sectoral and national levels create serious obstacles for the development of apprenticeship:

The increasing use of agencies, temporary workers and the self-employed has meant that employee status is no longer necessarily identifiable with the individual permanent contract of employment and that it is more and more difficult to integrate apprentices and trainees into the workforce and to provide the necessary mentorship (Clarke, Cremers, and Janssen 2007).

NETHERLANDS

Two major movements in the development of Dutch VET since 1969 are apparent: a search for efficiency and a fight for accessibility of lower educated youth. There is a strong sectoral approach in the development of VET:

The sectoral policy is based on the implementation of sectoral qualification structures, in which the labour-markets demands are translated into educational trajectories. (Nieuwenhuis, Shapiro, 2004).

As in other partner countries, VET policy is oriented both to social and economic demands:

The main issue is preparing and supporting youngsters and adults for lifelong learning, according to the needs of a rapidly changing economy. Social demands are fulfilled by a general target for basic qualifications (qualified to participate in the economy) (Nieuwenhuis, Shapiro, 2004).

State regulation of VET is combined with the autonomy of VET providers:

The power of traditional institutions is still quite strong in the Dutch case, connecting school to work in an industrial paradigm through forecasting and prescriptions. However, the Minister for Education in the Netherlands seems to have relaxed the position with (VET) colleges in the last policy document allowing educational content to be chosen by school boards with

only a small core curriculum decided upon politically by the government. (Nieuwenhuis, Shapiro, 2004).

Implications (things to consider) for policy learning in developing apprenticeship

Looking from the perspective of comparability of the politico-economic orientation of VET, France could present interesting and relevant cases for policy learning in the development of apprenticeship of Lithuania because of apparent similarities of state policy approaches in VET and the strong influence of a coordinating role of the state in VET. From the point of view of current liberal (or neo-liberal) educational policy orientation in Lithuania, examples and practices of the United Kingdom and to some extent of the Netherlands could also be of interest. The VET policy of Germany is quite different from the Lithuanian situation due to the federal governance approach and well established and developed structures of social partnership in the sectors and regions.

4 EXTERNAL CONTEXT CHALLENGES AND FACTORS IN THE INTRODUCTION AND DEVELOPMENT OF APPRENTICESHIP IN LITHUANIA

This chapter provides an overview and discussion of the main external challenges and factors faced in the introduction and development of apprenticeship in the VET system of Lithuania, which are related to different socio-economic and institutional phenomena directly influencing the introduction and development of apprenticeship. Referring to the analysis of the development of apprenticeship in Lithuania, Germany, France, Netherlands and the UK, four such factors can be identified: stakeholder and social partner roles, quality control in apprenticeship training, funding and development of legal regulation.

4.1 Stakeholder and social partner roles

Stakeholders, and in particular the social partners, must be involved in the development of the apprenticeship system in Lithuania. Employers and trade unions are at the point of production where much of the learning will take place and employers define the labour market needs that must be addressed in designing the curriculum. The unions also have a role in defending apprentice interests to ensure they receive adequate training and are not simply used as cheap labour.

Apparent good practice from the benchmark countries demonstrates the potential for the social partners to establish networks and structures of cooperation and partnership that cover very wide fields of apprenticeship training, from the development of vocational profiles and curricula to questions of funding and quality assurance. There is substantial diversity in these arrangements as a consequence of historical differences between the countries in terms of labour market and training regimes as well as specificities of social partner organisation.

A broad distinction can be made between countries like Germany and the Netherlands where sectoral collective agreements predominate, France, where state influence over social partner involvement in apprenticeship is stronger, and the UK where there is a more liberal market approach towards social partner involvement so collective agreements and tripartite bodies are less important in apprenticeship systems.

Earlier work (Winterton, 2007) demonstrated that patterns of social dialogue over VET in general are profoundly influenced by the nature of regulation of the VET system and its dominant focus, whether school or workplace. Such contextual factors serve to promote or constrain social partner involvement. State regulated systems facilitate a clearly prescribed role for the social partners whereas market systems are associated with uneven involvement. Social dialogue in school focused VET systems is inevitably less developed than in workplace focused systems since school-led VET is divorced from the domain where the social partners have most competence. No single approach can be considered a model for social dialogue over VET, let alone a model for VET itself, since there are merits in three of the different ideal-types. The state-regulated workplace model offers solutions better adapted to labour

market needs than the state-regulated school model, while the market-led workplace model is conducive to more flexible and responsive adaptive training.

For the development of an apprenticeship system, it is clear that a workplace focus is important, and this is of itself, conducive to social partner involvement. However, it is essential that labour market stakeholders have real representative power and clearly expressed interests in the field of apprenticeship. The context of Lithuania in this respect presents a problem since stakeholders often lack representative power and resources, and their interests in the field of apprenticeship are not so evident. Indeed, the weakness of the trade unions and the underdeveloped nature of social dialogue, especially at the level of enterprises and workplaces, represent major challenges for the development of apprenticeship in Lithuania.

According to the International Labour Organisation (ILO), trade union density in Lithuania was around 10% in 2007, and while this is lower than the UK (28%), Germany (19.9%) and the Netherlands (20.5%), it is higher than the trade union density reported for France (7.9%). While the density rates for three of the benchmark countries are conducive to social partners playing a role in the apprenticeship system, clearly this is not the only factor because despite the low level of unionization in France, the social partners play an active role and are more systematically involved than is the case in the UK, with a higher rate of unionization. The coverage of collective bargaining provides a clue to the reasons for this apparent paradox. Again, according to ILO data, the highest coverage of collective bargaining agreements is in France (97.7%) followed by the Netherlands (81%, although there is some doubt over this figure). In Germany, collective agreements cover 48% of the working population, while in the UK, with a higher trade union density, coverage is 34%. The coverage of collective agreements is quite separate from trade union density and represents the application of laws of extension that bind all employers in a particular sector to agreements reached, irrespective of the extent to which their employees are unionized and the extent to which the companies participate actively in their representative associations. France is the most striking example, but the Netherlands and Germany have similar arrangements, so collective bargaining coverage is substantially higher than unionization. The UK the voluntarist system, however, permits employers to negotiate independently (or to avoid negotiation where their employees are not effectively organized) so the coverage of collective agreements is only a few percentage points ahead of trade union density. In this respect, in Lithuania collective bargaining coverage appears completely aligned with trade union density, since the ILO reports both as being 10%.

The question for these Guidelines, therefore, is the extent to which the government in Lithuania is prepared to promote collective bargaining, perhaps through adopting extension procedures, thereby legitimizing the social partners' role. Discussion has focused on the trade unions but the argument can equally be made for the employers' associations since they also lack strong foundations. Low trade union density will inevitably raise questions of representativeness, as it regularly does in France, but need not be an impediment to social partner involvement. What is crucial, however, is that (a) the social partner organisations (trade unions and employers' associations) develop the necessary internal capacity to play a full role in developing the apprenticeship system; (b) that this role is supported and legitimized by the state,

most likely through laws that embed social dialogue in the apprenticeship system; and (c) that the apprenticeship system and the wider VET regime is sufficiently grounded in the work-place to provide both the opportunity and necessity for extensive social partner involvement.

Clearly there is intimate articulation between these conditions, with the concomitant risk that conditions (b) and (c) will not be met until there is evidence of (a) but that progress on (a) will not be made until there is movement on (c) and probably also (b). To break this vicious cycle a number of measures could be proposed on a practical level. Capacity development need not and should not await state decisions on the legal and structural aspects of the apprenticeship system. The social partner organisations in Lithuania are affiliated to the European social partner organisations and can draw on a network of trade unions and employers' representative organisations around Europe to acquire the necessary expertise and draw on experience of apparent good practice.

In this respect it is clear that different aspects of social partner involvement apparent in the benchmark countries could serve as guideline principles. France offers a model of national and regional social dialogue that could be relevant for a country that also has relatively low trade union membership. Germany offers a sectoral model based on strong social partnership and a high degree of trust between all stakeholders rooted in what is still probably the best apprenticeship system in the world. The English experience demonstrates the potential of social partner involvement in the context of a highly deregulated labour market, where the trade unions have become the main advocates of learning at work and defenders of the integrity of apprenticeships.

What concrete measures can be suggested for the development of social dialogue in the VET system and, particularly, in the field of apprenticeship?

A. Measures for the development of internal capacity of the social partner organisations (trade unions and employers' associations) to play a full role in developing the apprenticeship system:

1. Direct and active involvement of trade unions and employers associations in the currently implemented projects of VET development related to apprenticeship and practical training by proposing concrete obligations and responsibilities.
   For example, employers' organisations and trade unions can be invited to become stakeholders in the currently implemented sectoral practical training centres.

2. Initiation of projects of training of selected members of trade unions and employers' associations to provide them with the necessary know-how and expertise enabling them to take an active part in activities related to development of apprenticeship, such as organisation of workplaces for apprenticeship training, integration of apprenticeship training in the organisation of production, provision of pedagogic and informational support to apprentices, application of apprenticeship training in the human resource development strategies of enterprises.
   Trade unions and employers' organisations can also delegate their candidates for potential apprenticeship tutors and these selected candidates could be provided with special training courses leading to the acquisition of necessary pedagogical competences. All these projects could be initiated under the framework of the financial support of European structural funds and national projects in the field of VET. Another option could be initiation of international mobility projects through the EU Lifelong Learning Programme with the aim of acquainting representatives of trade unions and employers' organisations with the experience of social partner organisations in apprenticeship arrangements in the other countries. These activities could include study visits or short-term internships.

3. Building a positive image and raising the prestige of apprenticeship and supervision of apprentices amongst employers, employees and trade union representatives.
   Experience of the development of apprenticeship in the project partner countries demonstrates that the positive image and prestige of apprenticeship amongst the social partners can become a strong motivator for their involvement and participation in the development of apprenticeship systems. Here participation of enterprises or employers' organisations in apprenticeship could be used for building their image as socially responsible stakeholders, attractive and prestigious employers, etc.

B. State support and legitimization of the activities of social partner organisations in embedding social dialogue in the apprenticeship system:

1. Introduction of legal regulations and awarding legal statuses necessary for the active participation of trade unions and employers' organisations in the apprenticeship system:
   The legal framework regulating apprenticeship system should enable autonomous action and decision making of social partner organisations in the apprenticeship system, avoiding bureaucracy and extensive regulation and control of their activities. In order to attract the social partner organisations to participate in apprenticeship at the initial stage it could be advantageous to foresee wide rights and liberties to enter into and withdraw from the apprenticeship system. The entrance requirements at the initial stage of apprenticeship development should focus only on the essential prerequisites to ensure minimal quality assurance of participation of social partners in the apprenticeship system. This raises the question of whether the experience of social partners in VET should be a requirement. Perhaps a more effective solution would be to treat this experience as an advantage, but not a necessary condition. The main requirements to enter the apprenticeship system could be the financial and organisational capacity to fulfil the obligations of participation, as well as the availability of the human resources required. In longer perspective, together with growing involvement and participation of social partners in the apprenticeship system, entrance requirements could become stricter.

2. State assistance in coordinating and intermediating the agreements of social partner organisations in the system of apprenticeship:
   State institutions (governmental agencies) could act as providers of information, advice and guidance; offering independent arbitration in these processes; helping to overcome different obstacles and problems related to the lack of trust and possible conflicts of social partners; assisting in finding rational solutions to disputes and disagreements on various issues related to the distribution of obligations, responsibilities and usage of benefits of participation in the apprenticeship system.

3. Financial and fiscal measures of support to the activities of social partner organisations in embedding social dialogue in the apprenticeship system:
   A set of fiscal exemptions for employers can be envisaged where organisations are involved in the system of apprenticeship, as well as measures of direct financial support to trade unions (e.g. partial subsidies of the wages of trade union members involved in the activities of apprenticeship system).

C. Grounding of the introduced apprenticeship system and the wider VET regime in the workplace in order to provide opportunity and necessity for extensive social partner involvement:

1. Enhancement and support to enterprises to create special apprenticeship workplaces (through subsidies, tax reductions and exemptions):
   It could be very helpful to raise general awareness and interest of enterprises in apprenticeship by gradually expanding the establishment of such apprenticeship workplaces. The beginning of this expansion should start with the sectors and enterprises facing most serious shortages of skilled workers, demonstrating the highest readiness to undertake and test new solutions to this problem, having most experience in provision of practical training or having active sectoral stakeholders (employers' organisations, trade unions) involved in VET and human resources development. Sectors that meet such conditions include the engineering industry, construction and the retail trades. These sectors could be most ready to accept and develop apprenticeship training and thereafter to transmit accumulated experience and know-how to other sectors. However, the enhancement and state support to enterprises to create new workplaces for apprenticeship through subsidies or tax exemptions should be regarded only as a temporary measure and applied with prudence to avoid detrimental side effects (particularly deadweight and substitution effects) to the labour market and VET system. Again, it is necessary to find ways in which such state support and enhancement could support and positively influence the cooperation and involvement of social partners' organisations in the co-funding and organisation of such apprenticeship workplaces. Here the experience of different 'cooperative' training funds from France and Germany can be very useful. Introducing multipartite funds for apprenticeship workplaces can start with higher contributions of the state and public funding with the progressive reduction of state contributions and increase of contributions of enterprises and sectoral organisations operating in parallel with growing economic returns from the apprenticeship training.
2. In the production sector - exploitation of possibilities provided by internal subcontracting activities (for example, between big enterprises and SMEs):
   It is important to develop different forms and settings of cooperation between social partner organisations in the introduction of apprenticeship. Looking from the perspective of grounding of vocational training in the workplace, cooperation between different enterprises (especially between the big enterprises and SMEs) becomes a very important and relevant factor. First of all, such cooperation between the bigger enterprises and SMEs based on long-term subcontracting relationships creates the following economic, organisational and technological possibilities for the introduction and development of apprenticeship in SMEs:
   - It provides a firm network of cooperation between the big enterprises and SMEs, where they can cooperate and share investments in human resource development (including apprenticeship training) to achieve desired results.

- Long-term subcontracting creates more or less constant sources of revenues and constant needs for a skilled workforce in the SMEs, making them more open and interested in apprenticeship training.
- In some cases (but not always) subcontracting relationships between big enterprises and SMEs imply sharing and transfer of technological know-how between these enterprises, enriching production activities with work objectives having important learning potential.

How can subcontracting relationships between enterprises be exploited for the introduction and development of apprenticeship in Lithuania? The current trend of development of subcontracting between big and small enterprises is increasing the orientation to quality and production with higher added value, which in turn increases demand for higher skills. Such subcontracting creates naturally favourable conditions for the organisation of apprenticeship, for example, in such cases the contracting enterprise can be highly interested in becoming involved in the organisation of apprenticeship in the SME (for example, by providing supervisors, training masters, etc.).

4.2 Quality control in apprenticeship training

Looking to quality issues in the introduction and development of apprenticeship in Lithuania the following main problems can be discerned:

- Absence of tested systemic mechanisms and instruments of quality control, which can be applied in the quality control of apprenticeship. Existing measures of quality control used in initial VET institutions are quite fragmentary and inconsistent. Besides these measures are more directed to school-based theoretical training.
- Weak quality development culture in initial VET institutions, when quality control is understood only as a formal satisfaction of different formal and legal requirements. The following factors and preconditions related to quality control in VET support introduction and development of apprenticeship:
  - Introduction of apprenticeship is accompanied with the expectation that it will significantly improve the quality of VET by directly involving enterprises in the training process and providing them real possibilities to control the provision and development of skills, ensuring their fit to the needs of labour market. Such expectations can enhance corresponding quality oriented attitudes of the stakeholders in apprenticeship.
  - There is certain experience and established instruments of quality control of practical training, such as registers of approved enterprises and procedures of the assessment of practical training workplaces executed by the Chambers of Commerce, Industry and Crafts. These instruments can be further developed and used in the quality assurance of apprenticeship.

The following factors and preconditions related to quality control in VET hinder introduction and development of apprenticeship:

- High risk related to the short-term profit orientation practiced by many enterprises. The predominance of such an approach leads businesses to treat apprenticeship as a source of costs to be minimized or as a source of short-term economic benefit through exploitation of apprentices or received financial support, such as tax exemptions. In both cases the contribution of enterprises to apprenticeship quality control and development is very much reduced.
- A comparatively small number of enterprises that have initiated and practice quality development cultures. For example, in 2004 the number of industrial enterprises which implemented certified quality management systems according to the standard ISO 9000 was 498 and it made only 5,7% of all enterprises (Užsakovas, 2006). Of course, it can be assumed that the proportion of enterprises with implemented quality management systems will increase due to the expanding export of products to EU countries and more intensive integration of enterprises in various international networks of cooperation.

Quality management in apprenticeship training in Lithuania is one of the most important components in the entire apprenticeship process. Management excellence means learning to manage time, costs, scope, risks and other traditional practices. However, to achieve excellence and success some recommendations should be taken into consideration as a strategic tool. The purpose of recommendation is to assist in developing a quality control system to be used also in practice.

In the context of apprenticeship training the term "quality" is used to describe characteristics of the services produced by the organizers of training and by which the services involved are capable of fulfilling the goals that have been established or meeting the needs of the clients. In this respect, the quality of apprenticeship training could be best judged by the following criteria:

- Flexibility, facilitating change and adaptation of the contents and forms of provision of training according to changing conditions and needs of the economy, enterprises and learners. The main indicators of flexibility are: a) variety of the types and forms of organisation and funding or co-funding of apprenticeship depending on the specific features and needs of enterprises and learners; b) speed and operativeness of change of contents of apprenticeship programmes, forms of organisation and funding, applied training methods, reacting to the changing skills and training needs in the enterprises; c) extent to which the available and applied measures and instruments of apprenticeship (funding regimes, curricula, forms of organisation, training methods, etc.) can substitute and/or complement each other in seeking to achieve the changing targets.
- Individuality, or the extent to which the contents and organisational forms of apprenticeship training respond to the needs and intentions of each apprentice. The main indicators of individuality are: a) satisfaction and motivation of apprentices (can be detected by interviewing or questionnaires); b) consideration and extent of involvement of ap-

prentices in the design of apprenticeship programmes; c) variety of applied training forms and methods and the possibilities of trainers to choose them; d) ratio of number of employers and masters of training.

- Practicality, or orientation to the practices of work processes in the organisation and provision of training. Here the main indicator is an extent of integration of the work-places of apprenticeship in the process of production or provision of services in enterprises (How do apprentices participate in the real process of production or provision of services?).
- Educational success of apprenticeship or the capacity of training to provide the knowledge and skills ensuring successful integration of apprentices in the job positions and subsequent career, as well as to provide the capacities for autonomous personal and professional development. The main indicators are: a) employment rates of apprentices in the job positions corresponding to the field of their training; b) rate and level of enrolment of 'post-apprenticeship' employees in the learning activities related to personal and professional development (participation in the continuing vocational training measures, learning in the workplaces).

In practice, the quality elements of apprenticeship training arise from fruitful and successful cooperation between several participants, such as the organizer of training, the employer, those in charge of theoretical instruction, the students and the interest groups.

From the point of view of quality management in apprenticeship training in Lithuania, it is essential that the strategy is used and that it is prepared in a way that is economic and suited to the purpose. The strategy of quality management should encompass the vision, mission, values and principles, and the purpose and goals involved in the task. It further should involve the recognition of the needs of the customers and the interest groups.

Values refer to the elements that are considered to be fundamental in apprenticeship training. Moreover, defined values should also form part of the work in practice. Values are considered to be tripartite and comprise the following factors:

- Customer - orientation (feedback, development proposals and complaints)
- Cooperation - orientation (reciprocal respect of participants for one another)
- Quality of operations (the key aim of the processes and of maintaining quality in apprenticeship training is that those who engage in it also finish and obtain a qualification).

Mission refers to the task of the organizer of apprenticeship training. The key task is therefore to organize vocational initial and further training, responding to the needs of adolescents, adults, and working life, whilst further promoting the development of the competence and competitiveness of students and businesses. In addition, mission describes the tasks of the organiser of apprenticeship training and the purpose of the training. The mission is implemented by means of the strategy.

Vision in apprenticeship training refers to a future image of apprenticeship training that could assist in developing and strengthening educational channels to meet the changing needs of customers and society.

It is inevitable that systematic analysis could assist the organizer of training to perceive their own strengths and weaknesses in answering the challenges of the functional environment. The analysis of the external operating environment and internal operating environment examines the inner preparedness of apprenticeship training (its strengths and weaknesses), focusing on things like effectiveness, efficiency, economic resources, and the structure, number, and competences of personnel. Moreover, systematic analysis focuses objectively on ways that the process of apprenticeship training may be improved.

Another essential component is quality policy, which implies that the key principles of high standards are transmitted to the personnel and the customers. Quality policy in the process of apprenticeship training finds its practical and measurable expression in the Quality Objectives and the plan of action. Such plan of action shows the factual steps: tasks, responsibilities, time schedule, and parameters by which the goals can be attained.

A prerequisite for the quality management of apprenticeship training is that there is a fully operational data system and that evaluation is continuous. Evaluation is focused on the implementation of the strategies for apprenticeship training and the plans of action that have been deduced from them. Quality management presupposes monitoring the development of results and comparing them with the results obtained by others.

The management of apprenticeship training defines the realistic direction of the development of training and prepares the ground for the attainment of established goals.

Quality control management should be present from the very beginning of the apprenticeship training. This goes along with quality criteria defined clearly for apprenticeship training. Therefore, the organisers of apprenticeship training should:

- clearly define who is responsible for the management of apprenticeship training;
- ensure that there are necessary resources for achieving specified goals;
- foresee ways and measures to achieve common understanding of the values, goals and objectives of apprenticeship amongst all involved stakeholders, as well as mechanisms for distributing and sharing the benefits of apprenticeship for apprentices, enterprises and other stakeholders.
- foresee the systemic measures for accumulation and development of expertise and know-how in the field of apprenticeship amongst all involved stakeholders - enterprises, VET providers, trade unions, professional organisations etc.

It is necessary to define quality criteria for personnel involved in the process of apprenticeship training. With regard to this, the organizer of the training:

- prepares the personnel strategy in which the special characteristics of apprenticeship training have been taken into consideration;

- annually prepares a personnel audit.

Then, it is necessary to clearly identify quality criteria for material recourses. With that, the organizer of training:

- prepares an investment strategy in which the special characteristics of apprenticeship training have been taken into account;
- allocates sufficient economic means to ensure the continuous development of apprenticeship training.

There are also other components related to the assessment of apprenticeship training. It is essential that the apprenticeship training process is steered and controlled based on reliable facts. Consequently, the organiser of training should:

- develop and maintain a data system and methods that are necessary for their data strategy and take into consideration the special characteristics of apprenticeship training;
- define the parameters that are necessary to monitoring and regularly evaluating the attainment of the goals;
- adopt methods that make possible the retrieval and acquisition of comparative data.

Here, however, it is important to consider the fact that imposing highly demanding and overly bureaucratised systems and frameworks of quality management of apprenticeship as obligations on enterprises can have very detrimental effects to the introduction and development of apprenticeship. First of all it reduces the attractiveness of apprenticeship for employers by making this form of training too time consuming and costly. Secondly, even if the employers accept such a 'burden' of quality control in organising and provision of apprenticeship, there is no way of avoiding real execution of these obligations by turning quality assurance procedures to the practices of ticking boxes, having no real failure prevention or improvement effects to the practices and measures of apprenticeship. For these reasons the quality assurance of apprenticeship should be limited to procedures that directly influence the improvement of training process and its responsiveness to the needs of stakeholders. Another important issue here is effective division of responsibilities for quality assurance measures amongst all stakeholders involved in apprenticeship. For example, trade unions are in a good position to execute different activities in quality assurance of apprenticeship, because this corresponds to their function of protecting labour rights of apprentices, as well as strengthening the interests of collective defence of employees' rights amongst the future workforce.

Finally, quality criteria for cooperation networks should be established.
The organizer of training:

- prepares the goals of collaboration between the organizer of training and the participants;
- makes sure that the participating parties commit themselves to preparing a plan for skills testing and to encouraging students to take skills test by examination module at the workplace;

- creates a system that encourages the participants in apprenticeship training to improve the quality of teaching at the workplace and in theoretical instruction at school.

Various graphs, matrices, and analyses are generally used as quality management and control techniques. Further various comparisons and quality audits made by an outside party are employed.

Quality evaluation in the process of apprenticeship training refers to an interpretative analysis of how well the outcomes of training correspond to pre-determined goals. The target of evaluation may be the goals set for the training process. In practice, evaluation focuses on the users of apprenticeship training outcomes, the personnel involved in the apprenticeship training process, the processes of training themselves, their achieved results – knowledge and skills and economic effectiveness of training process. This means that the organizer of the training has to create their own system of evaluation. External auditing may be used to support self - evaluation and to provide a variety of benefits to the organizer of training, including:

- Provide an accurate assessment of the organizer's capabilities to meet the requirements
- Identify areas where the organizer needs to take action to meet the requirements
- Analyze ways to improve operational effectiveness and efficiency of the process of apprenticeship training.

Therefore, it is highly recommended that the organizer of training:

- prepares an evaluation strategy or plan that takes into account the special characteristics of apprenticeship training;
- using parameters, regularly evaluates the implementation of the strategies of apprenticeship training;
- defines those targets of evaluation and parameters;
- analyses the results of apprenticeship training in relation to the goals, comparative data and best practices.

4.3 Funding of apprenticeship

This chapter will outline the possibilities of policy learning in the funding of apprenticeship referring to the practices and instruments of funding used in Germany, France, the Netherlands and England.

Comparing the identified examples of funding approaches and practices in the benchmark partner countries (DE, FR, NL and UK) the following similarities and differences can be discerned:

- In all identified approaches in the benchmark partner countries, there are two basic categories of funding arrangements:
  Funding of the job-based part of apprenticeship concerning apprentices' salaries (including in most cases state/regional authority subsidies, tax/social security contribution exemptions to actively involved employers), and funding of the school-based part of apprenticeship (training, tutoring and assessment costs).
- All funding arrangements are mainly undertaken and implemented on two basic levels: National level and regional, sectoral and company levels:

  At national level, it is common to find funding arrangements packages concerning basically the school-based part of apprenticeship with the aim of achieving two interconnected priority basic aims: (a)-promoting/enhancing accessibility to apprenticeship; (b)-securing a high quality of provided apprenticeship meeting employability requirement in the labour market. However, there are differences in the contents of these funding arrangement packages: tripartite Federal pacts in Germany, apprenticeship tax levied on enterprises in France and the Netherlands, funding off-the-job tuition fee through the Government funding agencies in the UK, contributing to training costs incurred by employers in the Netherlands, granting social contribution/ tax payments exemptions to employers effectively recruiting through apprenticeship in France.

  On a decentralised level (regional, sectoral and company levels), the funding and co-funding arrangements usually concern both on-the-job and off-the-job parts of apprenticeship. Involved stakeholders at this level include enterprises, employer organisations, sectoral funds/bodies (including Chambers) and regional/local authorities. Among the identified effective practices at this level, the common example of employers' remuneration of on-the-job apprentices (Germany, France, Netherlands and UK), the sectoral research and development funds (O+O Fund) in the Netherlands, the sectoral pact agreements of funding apprenticeship in the German chemical and machinery production industries and the French regional funds for apprenticeship and CVT financing. All these funding arrangement practices presuppose the existence of well developed and functioning networks of co-operation and partnerships between all stakeholders involved in the apprenticeship system.

It is also possible to distinguish factors that facilitate or hinder the possibilities of introducing different apprenticeship funding and co-funding measures based on experiences from the other countries.

Hindering factors include the following:

- Domination and concentration of the public (state) funding in the school-based initial VET.
- Underdeveloped active networking of potentially involved stakeholders (on national, sectoral and regional levels) with limited experience and capacities in funding/co-funding apprenticeship.
- Lack of understanding of the importance and necessity of private co-funding for the development of high quality apprenticeship amongst the employers.
- Absence of long lasting and effective mechanisms and measures of public-private co-funding of the initial VET.
- Absence (lack) of supportive legal and fiscal measures (exemptions, privileges) in the current legal basis and tax system does not encourage and motivate enterprises to take responsibility for co-funding of the initial VET.
- Economic and financial weakness of many industrial and service enterprises (especially SMEs).
- Financial weakness and lack of financial and economic autonomy of employers' organizations and business structures – in the most cases these structures have very small budgets limited only to maintaining the main functions and coordinating activities.
- Very limited financial and economic capacities of population to participate in the co-funding of apprenticeship.
- High rate of workforce emigration increases the risk that enterprises' investments in apprenticeship will not be rewarded with the sufficient and stable supply of skilled workforce.

Facilitating/supporting factors consist basically of the following:

- The priority basic aims of the introduction of apprenticeship in Lithuania are more or less compatible with those identified in the benchmark countries, namely enhancing accessibility to apprenticeship and ensuring high quality of provided apprenticeship meeting employability requirements within the labour market.
- Recently introduced legal possibility for VET schools to become public entities with the involvement of enterprises as stakeholders or co-owners. There are some examples where the establishment of such public owners with participation of companies as stakeholders leads to significant increase of co-funding and investment from the side of involved enterprises.

- Increasing flows of foreign investment and the establishment of subsidiaries of foreign enterprises in Lithuania. These foreign enterprises are usually more open to initiatives of funding and co-funding of apprenticeship.
- Changing attitudes of local enterprises concerning investment in apprenticeship, which is initially caused by factors such as intensive emigration of skilled workforce, obliging employers to search for ways to compensate these losses of human resources.
- Existence of relatively well established institutional setting based on more or less centralised state governance of public finances favourable to the development and implementation of apprentices funding instruments more adapted to this situation such as the introduction of special apprentice tax levied on all registered enterprises (in terms of a reasonable percentage of their overall wage bill) as is the case in France.

The following recommendations are proposed for the introduction and development of funding/co-funding instruments of apprenticeship in Lithuania:

- Avoiding complete transposition of transferable apprenticeship funding/co-funding instruments identified in the benchmark partners countries into the Lithuanian context. As these transferable instruments are generally rooted into the traditions of their respective original context, their feasibility for transferability must be assessed individually (case by case) in relation to compatibility with the identified receptivity (facilitating and hindering factors) within different branches of activities at national, sectoral and regional levels within the Lithuanian context.
- Proceeding on the basis of step by step piloting/testing stages for the adaptation, introduction and development of funding/co-funding instruments taken/tested individually. In certain cases, it might be necessary to construct more adapted packages based on inter-complementary instruments. Referring to some of the identified cases of effective practices, this process suggests adopting the following exemplary package options:

  Given the weakness and limited experience of funding/co-funding capacities of potentially involved stakeholders (especially social partners), it might be necessary to rely initially on a package of state contribution to the funding of apprenticeship in its off-the-job and on-the-job parts. As existing and potential state funding should be optimised at this initial stage, the UK example based on combining "payment-per-qualification" and "payment-by-results" should be considered. The distribution of state funding according to obtained qualification/results via apprenticeship is particularly interesting as it contributes to competition between stakeholders directly involved in provision. This mode of distributing state funding might constitute a driving-engine for the development of apprenticeship at the initial stages of introduction. However, concerning the crucial issue connected with the quality of provided apprenticeship through this instrument, it is necessary is to develop adapted quality assurance criteria/methods combining quantitative and qualitative quality assessment of obtained qualification/results. This is necessary to avoid downgrading the quality of provided apprenticeship as well preventing the development of a situation where apprenticeship becomes a source of making more profits at the expense of a real long-term investment in HRD. This might be dealt with through the development of referential (occupational and qualification) standards for all provided qualifications to be rigorously respected by apprenticeship providers (apprenticeship centres as well as the enterprises). Moreover, this initial stage should also concentrate on the capacity building of sectoral stakeholders for more involvement in funding apprenticeship. This can be done by launching an active dialogue within the sectors through explaining the importance and potential use of the enterprise funding of apprenticeship and state encouragement in terms of granted social security contributions/tax exemptions to employers effectively recruiting apprentices.

  In a second stage an adapted piloting version of the tripartite apprenticeship pact (experience from Germany) could be introduced within more developed and active

sectors of activity to deal with the issue of skill shortages and skills mismatching the labour force. This can be completed by state encouragement in terms of granted social security contributions/tax exemptions to employers effectively recruiting apprentices as it the case in France.

In later stages it should be possible to test a funding package comprising levy of an adapted apprenticeship tax (as a percentage of each company's overall wages bill) on all registered enterprises (with the exception of free-lance individuals) as is the case in France. This instrument is more compatible with the exiting Lithuanian institutional setting of more or less centralised state governance of public finances and IVET funding/co-funding. The only problem with such an instrument in the present Lithuanian context is the resistance of enterprises to the introduction of such a tax when faced with an increasing loss of skilled workers through emigration. For this reason, the enterprises might, in return, require the state to undertake some legal measures to limit the flow of skilled labour force emigration (even if this may be in contradiction of European initiatives to encourage labour mobility). Such legislation could be avoided by allowing enterprises effectively active in apprenticeship to introduce voluntarily and on an individual basis an "in-working pay-back clause" in the contract of the recruited apprentice to remain working for the same enterprise for certain duration after the completion of his/her apprenticeship.

Practical recommendations concerning the contributions of stakeholders involved in funding /co-funding of apprenticeship

Here we propose certain practical recommendations concerning the share of contributions of stakeholders involved in funding/co-funding apprenticeship and mechanisms of accumulating the necessary financial resources by the State for its own contribution. The suggested schemes are divided into two periods with different shares of funding responsibilities for the state and enterprises. These practical recommendations are subject to piloting and can be subsequently adjusted according to the outcomes of this piloting.

1. **Period of application of the scheme: the first 3 years after the introduction of apprenticeship.**

<table>
<tr><th rowspan="2">Fields of apprenticeship training</th><th colspan="3">Stakeholders and their responsibilities for funding</th></tr>
<tr><th>State</th><th>Employers / enterprises</th><th>Sectoral organisations</th></tr>
<tr><td>Theoretical training courses (within apprenticeship training centres/schools)</td><td>All main costs within apprenticeship training centres / VET schools are funded from the state budget: staff costs, facilities, provision of training materials, training of teachers.</td><td colspan="2">Employers and sectoral organisations may contribute by covering costs of different auxiliary measures undertaken voluntarily on their level, for example organising seminars for VET teachers, and professionals.</td></tr>
<tr><td>Practical training in workshops within apprenticeship training centres/schools)</td><td>All main costs within apprenticeship training centres are funded from the state budget: staff costs, facilities, provision of materials, training of teachers.</td><td colspan="2">Employers and sectoral organisations may contribute by:
Supporting the acquisition of materials and equipment;
Organising training courses for VET teachers and trainers.</td></tr>
<tr><td>Training at workplaces within enterprises</td><td>State funding contributions:
Granted exemption of employers' social security contributions connected with recruited apprentices.
Granted exemption of employers' social security contributions connected with the contribution of apprenticeship masters.
Exemption from withholding tax for apprentices and supervisors of apprentices.
Costs incurred by the employers are treated as production expenditures and are not subject to income taxation.</td><td>Contribution of employers within the enterprise:
Wages for apprentices.
Wages for the masters (supervisors) of apprentices.
Materials for training.
Costs of the exploitation of equipment and facilities.</td><td>Sectoral organisations may contribute by:
Covering the costs of training and skill development of apprenticeship supervisors (masters).
Organising and funding the quality assurance of apprenticeship training.</td></tr>
</table>

Table No. 2: Stakeholders and their responsibilities for funding in the first 3 years after the introduction of apprenticeship

2. **Period of application of the scheme: subsequent period after the first 3 years.**

Fields of apprenticeship training	**Responsible (involved) stakeholders and their responsibilities of funding**		
	State	**Employers / enterprises**	**Sectoral organisations**
Theoretical training courses (within apprenticeship training centres/schools)	All main costs within apprenticeship training centres / VET schools are funded through the State budget: staff costs, facilities, provision of training materials, training of teachers.	Employers and sectoral organisations may contribute by covering costs of different auxiliary measures undertaken voluntarily on their level, for example organising seminars for VET teachers, and professionals.	
Practical training in workshops within apprenticeship training centres/schools)	All main costs within apprenticeship training centres are funded by the State budget: staff costs, facilities, provision of materials, training of teachers.	Employers and sectoral organisations may contribute by: Supporting the acquisition of materials and equipment; Organising training courses for VET teachers and trainers.	
Training at workplaces within enterprises	Certain tax exemptions can be foreseen for enterprises taking more than a certain defined number of apprentices and having employed more than a certain defined number of apprenticeship supervisors.	Contribution of employers within the enterprise: Wages for apprentices including social security contributions and withholding tax. Wages for the masters (supervisors) of apprentices including social security contributions and withholding tax. Materials for training. Costs of the exploitation of equipment and facilities.	Sectoral organisations may contribute by: Covering the costs of training and skill development of apprenticeship supervisors (masters). Organising and funding of quality assurance of apprenticeship training.

Table No. 3: Stakeholders and their responsibilities for funding after the first 3 years since the introduction of apprenticeship

Recommendations for the accumulation of the required state resources for funding of apprenticeship

- An Apprenticeship Tax could be introduced as a percentage of each company's overall wages bill for all registered enterprises. This tax could be applied with diverse rates – reduced rates can be foreseen for enterprises investing in apprenticeship through the recruitment of apprentices and the appointment of apprenticeship masters/tutors. The exemptions of this tax can be foreseen for freelance individuals and for enterprises involved in the alternative schemes of funding (tripartite funds – see below).
- Tripartite apprenticeship funds can be established in sectors or regions (or both) and managed by the sectoral stakeholders under the supervision of state institutions. These tripartite funds could be based on contributions from the state budget (50%) and contributions from enterprises or sectoral employers associations (50%). This funding scheme could exist as an alternative/complementary mechanism of funding in parallel to an Apprenticeship Tax in those sectors which have specific (higher) funding needs.
- In applying the alternative/complementary mechanisms of funding or co-funding of apprenticeship it is of crucial importance to avoid overlapping funding obligations of involved stakeholders in these measures.
- After the introduction of apprenticeship, European Social Fund schemes can be used for co-funding of apprenticeship at national, regional and sectoral levels , especially in cases of special apprenticeship training schemes targeting professional inclusion of specific categories of disadvantaged young people.

4.4 Development of the legal basis of apprenticeship

As was mentioned in the analysis of the preconditions of the development of apprenticeship in Lithuania, the first legal document regulating the issues of apprenticeship is the law on the amendment of the law of initial vocational education and training issued in 2007. However, this law only introduces apprenticeship as a legally possible way of IVET without going into details of legal regulation. This law defines apprenticeship as workplace-based training, when the responsibility for the organisation training is shifted to the employer, at the same time foreseeing dual positioning of the training places: *(practical) training at the workplace in the enterprise, office, organization, farm or at the individual trainer (master); theoretical training can be executed at the institution of initial vocational training or in the other schools.*
This law does not provide more detailed prescriptions and regulations for the organisation of apprenticeship – this function is left to the supplementary legal acts. For example, it foresees that the enrolment of trainees to apprenticeship has to follow the requirements of the VET curriculum and existing regulations of enrolment established by the enterprises, offices or farmers, but *does not prescribe how to combine the requirements of VET curricula with the requirements of employers.*

The legal basis of the organisation of apprenticeship training consists of contracts between trainees, enterprises and formal VET providers. The introduced order of contracting foresees

the legal responsibilities for organization and provision of apprenticeship on the side of the provider of training, but also foresees legal governmental supervision of the provision of apprenticeship through the licensing of all providers of formal IVET executed by the Ministry of Education and Science according to the regulations stipulated by the Government. Requirements of VET contracts and their registration are approved by the order of the ministers of Education and Science and of Social Affairs and Employment on 13th April 2010 (No. V-512/A1-142). This document and subsequent issues, prescribes obligations of the contracting parties. The responsibilities of the organiser of apprenticeship include:

- making the contract with apprentice for the organisation of apprenticeship, that is valid for the period of validity of this contract;
- assuring conditions for the apprentice to learn at the workplace according to the established training plan and requirements of training programme;
- assuring, that the execution of assigned tasks would help to apprentice to acquire learning outcomes, foreseen in the programme or module of training;
- assessing the learning outcomes of apprentices together with the VET school;
- ensuring the conformity of the workplace of apprentice to the requirements of work safety, health protection, protection against fire, hygiene;
- introducing apprentice with the documents regulating internal order of apprenticeship organization on the workplace;
- delegating competent tutor (master) to train apprentice on the workplace;
- assuring sufficient time for theoretic learning at the school during the apprenticeship training period.

Responsibilities of the apprentice include learning according to the requirements of the training plan, training programme or module; working at the workplace of apprenticeship organiser following the period and conditions stipulated in the work contract; respecting conditions and keeping the obligations stipulated in the work contract; keeping the requirements of work safety, protection against fire and hygienic requirements, as well as following the requirements of documents regulating internal order of the organiser of apprenticeship and VET provider.

The VET provider (VET school) is obliged to create the conditions for the apprentice to learn according to the training plan, programme or module; to ensure the conformity of the apprenticeship learning workplace to the requirements of work safety, health protection, hygiene, protection against fire; to introduce the apprentice to the training programme and order, as well as to introduce the documents stipulating the internal order of the VET school; to assess the learning outcomes of apprentices together with the organiser of apprenticeship assuring objective assessment process, as well as to issue the documents evidencing achieved learning outcomes; to provide guidance to apprentice on the issues of learning and assessment of learning outcomes.

This order foresees the possibility of including in the contract additional conditions agreed by the parties if they do not contradict the Civic Law Codex of the Republic of Lithuania, the Law of Education, the Law of Vocational Education and Training and other legal documents. These additional conditions cannot worsen the situation of apprentice in comparison with the status stipulated by the laws of the Republic of Lithuania.

Such distribution of obligations is rather transparent and typical for the dual type of apprenticeship training. The only big difference from the dual model of apprenticeship is the funding regime, because current legislation foresees the state budget as the main source of financing of apprenticeship in IVET. However, the Law on the amendment of the Law of Vocational Education and Training (2007) does not foresee concrete mechanisms of co-funding of apprenticeship, stipulating the financial responsibilities of enterprises and other providers of apprenticeship.

Other important legal acts for the introduction and development of apprenticeship are the *Descriptor of order of the designing and approval of VET programmes of formal vocational education and training*, approved by the ordinance of the Minister of Education and Science No. V-1435 of 27-08-2010 and currently discussed and not yet approved *Descriptor of order of the formal vocational education and training.*

Descriptor of order of the designing and approval of curricula of formal vocational education and training prescribes the following issues related to introduction of apprenticeship:

1. VET programmes must be the same for all providers of VET (including those providing apprenticeship). VET programme is the basic reference document for the planning of training process, material and methodological resources, teaching staff. It indicates learning outcomes, requirements for teachers, methodical and material resources needed for the implementation of programme. This means that the contents apprenticeship training must coincide with the contents of school-based VET. *It is a very important precondition to ensure permeability between apprenticeships, the school-based pathway of VET and higher vocational education.*
2. Two types of VET programmes can be distinguished: modular VET programmes and short VET programmes. Training in the modular VET programme can lead to the acquisition of qualification, while short VET programmes are designed for the provision of competences required for the execution of separate tasks or functions in regulated occupations. Modular VET programmes are designed on the basis of competences indicated in the corresponding occupational or VET standard and consist of obligatory and optional modules, with a minimal of two modules (both obligatory modules or one obligatory and one optional module). *The minimal volume of practical training shall comprise at least 60 percents of the total volume of vocational training.* This order does not prescribe the concrete formal requirements on how to apply modular training in case of apprenticeship. Questions and doubts may be raised as to whether different forms of VET (apprenticeship and school-based) can be applied for different modules in the same modular programme and, if so, how this can be done.

3. Preparation and amendments of the modular VET programmes are organised centrally by the Centre for Development of Qualifications and VET, but these processes can be initiated and executed by different stakeholders: the Centre for Development of Qualifications and VET, provider of VET (including the providers of apprenticeship), citizens of Lithuania and the EU, juridical persons etc. In the process of amendment and development of the modular VET programme must be involved the group of experts, representing providers of VET and employers. This group should consist of at least of three persons, each having qualification or work experience in the related field. Preparation and amendments of short VET programmes can be initiated and executed by the VET provider, citizens of Lithuania and the EU, juridical persons etc. These VET programmes are prepared referring to the governmental requirements issued by the relevant ministries or other governmental institutions. *These stipulations open the possibilities for providers of apprenticeship training to initiate amendments to existing and to develop new modular and short VET programmes. On the one hand, it can be useful for the initial stage of the introduction and development of apprenticeship, when enterprises lack know-how and understanding of the training processes and curriculum design, causing different mistakes and amendments of designed curricula and training programmes of apprenticeship. On the other hand, practices of extensive and multiple amendments of training programmes of apprenticeship can cause deterioration of their quality, attractiveness to learners and their potential to provide solid knowledge and skills needed for longer term employment and professional development. Therefore it is necessary to foresee the mechanisms of monitoring and regulation of the amendments and changes of the training programmes and modules in the field of apprenticeship training.*

Proposed, but not yet approved *descriptor of order of the formal vocational education and training* foresees the following issues related to introduction of apprenticeship:

1. The list of formal VET programmes which can be delivered in the form of apprenticeship is prepared and amended on annual basis by the Centre for Development of Qualifications and VET referring to the recommendations of sectoral occupational committees (which are responsible for designing sectoral-occupational standards). This list is published on the web-site of the Centre for Development of Qualifications and VET. It strengthens centralised regulation of apprenticeships and decreases the decision-making power of providers of apprenticeship in their choice of training contents. On the one hand, *such centralised regulation can help to control the quality of apprenticeship training, if the selection of the VET programmes for apprenticeship is based on the in – depth analysis of the curriculum contents, the specificities of knowledge and practical skills provided by the programme and the ways of their provision. On the other hand, it can limit the development of apprenticeship, if this selection is based only on the current needs of labour market and readiness of enterprises to organise and provide the training.*

2. The Centre for Development of Qualifications and VET is responsible for the external assessment of the activities of VET providers (including those providing the apprenticeship) in the implementation of the formal VET programmes.
3. The training provider shall prepare the plan of training with the indication of VET programme, subjects or modules and the order of learning, duration and the plan of theoretical and practical training. This training plan can be of a consecutive or non-consecutive type. A non-consecutive training plan is applied for apprenticeship. It enables the provision of training modules to be positioned in an order different from that foreseen in the VET programme. This training plan is designed by the provider of training together with the apprentice and provider of theoretical training (VET school) and can foresee completion of the separate modules of formal VET or completion of the whole modular VET programme with certain interruptions. The whole duration of training interruptions cannot exceed the total duration of training foreseen in the formal VET programme. The training plan must be approved in writing by the provider of training and the apprentice. *These features of the non-consecutive training plan give autonomy to the provider of apprenticeship concerning the positioning and sequencing of training modules and take into account the needs and possibilities of apprentices.*
4. General obligations of apprentices are stipulated in the laws of education and VET, contracts of training. The rights and obligations of apprentices shall be also be stipulated by the internal regulations of providers of training (internal orders, rules of behaviour, etc.).
5. The weekly learning workload of apprentices younger than 18 years shall not exceed 36 academic hours (1 academic hour – 45 minutes), apprentices of 18 years of age can have a maximal training workload of 40 academic hours per week. The provider of training must guarantee the conditions of learning according to the programme of general education for the apprentices up to 16 years of age.
6. The person responsible for the organization of training shall have a higher education degree in pedagogy or other fields. Persons having higher education in the other field than pedagogy must complete a course providing psychological and pedagogical knowledge according to the order stipulated by law.
7. Apprenticeship training is undertaken in the following order:
   Apprenticeship training can be provided by enterprises, offices, organisations, farmers and other physical or juridical persons having the license for the execution of formal VET according to the corresponding formal VET programme. This license is issued by the Ministry of Education and Science according to the order stipulated by the government.
   - In case of training of apprentices younger than 16 years, the provider of apprenticeship is obliged to ensure the conditions for learning of subjects of general education and for the acquisition of basic general education. In such cases

the provider of apprenticeship shall conclude a contract with the apprentice and institution providing general education regarding the provision of general education (learning according to the curricula of general education).

- The provider of apprenticeship is responsible for the planning of admission and enrolment of apprentices: the provider shall prepare and approve its internal regulations of admission taking into consideration available technical capacities, number of workplaces for apprenticeship and related stipulations of the formal VET programme, as well as general criteria of admission approved by the Minister of Education and Science.
- Expenditures of apprenticeship, incurred by the provider are reimbursed by the Ministry of Education and Science according to the Government decree of 2008-12-08 No. 1320 *Approval of methods for the calculation of expenditures of VET per student learning according to the formal VET programme.* The Ministry of Education and Science and the apprenticeship provider sign a contract of transfer and usage of allocation.
- The provider of apprenticeship is obliged to provide all information about the execution of apprenticeship to the Ministry of Education and Science upon request. The apprenticeship provider also provides to the Ministry the documents evidencing execution of obligations and usage of assets, such as filled report of the usage of allocation and filled standardised form of report on the execution of apprenticeship training.

Analysing the provisions of this legal document, it should be indicated that:

- *it ensures the legal and financial accessibility of apprenticeship to the learners seeking to acquire their first qualification;*
- *it is oriented to the integration of practical training at the workplace and provision of solid theoretical knowledge (orientation to dual apprenticeship).*

Other legal documents prescribe different procedures related to the quality assurance of apprenticeship provision. There can be mentioned 2 such documents:

- The order of the Minister of Education and Science concerning the approval of the descriptor of the evaluation of preparation to execute the programmes of formal vocational education and training No. ISAK-38 issued on 8th January 2009.
- Amendment of the decree of the Government of the Republic of Lithuania No 822 concerning the approval of the rules of licensing of formal vocational education and training, issued on 7th July 2011 (No. 833).

This descriptor of the evaluation of preparation to execute the programmes of formal vocational education and training foresees that applicants wishing to execute programmes of formal VET (including apprenticeship) have to provide the Centre for Development of Qualifications and Vocational Education and Training, with the application training programme (curriculum); documents evidencing provision of training facilities and resources; and permission

to execute activities of formal VET issued by the territorial office of the public health supervision service (hygienic passport), which is applied only in case of the stationary location of training provision.

The Centre verifies the received documents within 10 days of their reception and makes a decision on the execution of expertise if the received documents are complete and suitable.

Expertise is executed by the Commission established by the director of the Centre for Development of Qualifications and Vocational Education and Training and applying his/her approved methods. This Commission consists of three experts with the expertise or qualifications related to the assessed training programme. Expertise consists of two stages: primary assessment of the preparation of applicant to execute VET programme based on the analysis of provided documents, and final assessment executed on the basis of the evaluation visit to the applicant facilities. At the end of this visit the Commission prepares the act of expertise (2nd annex), presents it to the applicant and delivers to the Centre.

The following criteria are used for the assessment of preparedness of applicant to execute the programme:

- conformity of the qualifications of vocational teachers or candidates to teachers to the requirements of the programme and the Law on Education of the Republic of Lithuania;
- conformity of the training places (for theoretical and practical training) to the foreseen number of students and trainees and to the requirements of the training programmes and legal documents;
- conformity of the foreseen material and methodical resources for theoretical and practical training to the foreseen number of students and to the requirements of the programme.

The preparation of the applicant to execute the training programme is approved only when the assessment is positive according to all indicated criteria. The expenses of expertise are covered by the applicant referring to the order of payment approved by the director of the Centre.

In case of assessment of the providers of apprenticeship the indicators of assessment should be rather diverse and closely related to the specific features and requirements of economic activities and business organization in the related sectors.
We could suggest the following indicators:

Criterion: qualifications of staff

Indicators:

a) At least one qualified tutor available for three trainees.

b) Qualification of supervisor should include vocational qualification and pedagogical qualification issued and approved by a competent institution.

Criterion: availability of workplaces for apprenticeship training

Indicators:

a) Availability of the required number of workplaces for apprenticeship referring to the planned number of apprentices.

b) Fit of functional and technological specifications of workplace to the work contents of occupation for which apprentices are trained. Workplaces could be assessed by the Commission of experts consisting of the expert of the field of work (can be representatives of sectoral organisation of employers), representative of the Chamber of commerce, industry and trade, vocational teacher, employee(s) working in the workplace, work safety and/or hygiene engineer. This Commission should assess the following specifications of workplace:

- Correspondence of workplace to the specifications of the given occupation (produced products, provided services).
- Correspondence of the workplace technology and equipment to the current state of technological development in the sector /branch.
- Conformity of the workplace to the requirements of work safety and hygiene.

Criterion: other available material and methodical resources

Indicators:

a) Availability of materials for training at the workplace:

- Sufficiency of quantity of required materials
- Correspondence of quality of materials to the standards and norms of production/ provision of services

b) Availability of instruments, tools, auxiliary infrastructure of work.

- Sufficiency of quantity of tools and instruments
- Correspondence of the quality of tools and instruments to the standards and norms of production/ provision of services, as well as to work safety requirements.
- Sufficiency and quality of auxiliary materials and supplies: work clothing, protective measures, potable water, supply of heating, air conditioning, etc.

c) Availability and quality of methodical resources.

- Sufficiency and quality of visual measures of training at the workplace (PC software (demos), posters, etc).
- Sufficiency and quality of data sources for training and work at the workplace (PC databases, catalogues, guidebooks, manuals, instructions, dictionaries, etc.)

Amendment of the decree of the Government of the Republic of Lithuania No. 833, issued on 7th July 2011 approves the rules of licensing of formal vocational education and training.

These rules regulate the order of the licensing of providers of formal VET, including the providers of apprenticeship.

The main requirements for juridical and physical persons seeking to execute the formal vocational education and training (including apprenticeship) are the following:

- Availability of VET teachers or candidates to VET teachers with qualifications conforming to the requirements of formal VET programmes and the Law on Education (it also applies to physical persons)
- Availability of workplaces for theoretical and practical training and of material and methodical resources in conformity to the foreseen number of students and to the requirements of training programmes and legal acts concerning health protection, work safety, etc.
- Availability of training facilities equipped with material resources.

The licenses are issued by the Minister of Education and Science upon the reception and control of the application and necessary documents (conclusion of the expertise of preparedness of candidate to execute the formal VET programmes).

The Minister of Education and Science can make the decision to revoke the validity of license for one, several or all training programmes of a provider in cases when:

- the qualifications of VET teachers do not conform to the requirements of the training programme and the Law of Education;
- workplaces for theoretical and practical training and of material and methodical resources do not conform to the number of students and to the requirements of work safety, health protection, public health and hygienic norms etc.;
- organisation of training process, enrolment of students, issuing of certifications and their accounting are not executed in conformity with the requirements of legal acts;
- the possessor of a licence does not respect the conditions indicated in the licensing rules.

The first planned audit of providers is executed within a year of the launch of the training programme. Upon detection of violations and non-conformities the provider of training is given at least 30 calendar days to repair them and only then the decision about the cancelling or suspension of licence is made.

In case of suspension of license the provider is permitted to continue executed training programmes with the duration longer than one year until the end of the year of study and to finish the execution of other training programmes with duration of less than one year. In the period of suspension it is not permitted to enrol the new students to the suspended training programmes.

The monitoring of the licensed providers is organised and executed by the Ministry of Education and Science. This institution executed regular and extra inspections of the owners of licenses. The regular inspections are not executed earlier than six months after the issuing of license, in exception of cases when there is a high potential risk of violations.

Interviewed representatives of VET providers and employers indicated the following recommendations for the improvement of the existing legal basis of apprenticeship:

1. The legal basis of apprenticeship should include more acts that would enhance and motivate enterprises to take part in apprenticeship by granting *concessions and privileges. One of the most urgent suggested corrections is related to the change of the legal treatment of the costs of practical training in the private enterprises. Today's legal basis and fiscal policy cannot encourage employers to invest in apprenticeship, because according to the existing legislation the costs of practical training incurred by employers cannot be considered as direct costs of activity and it imposes higher tax rates.*
2. The legal basis should consider the real possibilities of different stakeholders to take responsibility for apprenticeship training in order to avoid imposing responsibilities which cannot be assured. For example, interviewed employers indicated, that *business cannot accept the laws and regulations if they will strictly regulate the process of apprenticeship and foresee the responsibilities of employers that would not correspond or fit to their competence.* In this regard it is necessary to ensure and monitor that the division of the responsibilities between enterprises and VET schools in the organisation and provision of apprenticeship constantly matches their competences and resources. The legal responsibilities related to contracting of VET schools and enterprises in the provision of apprenticeship could be delegated to the Chambers of Commerce, Industry and Crafts.

Looking to the possibilities of policy learning from the experiences of Germany, France, England and the Netherlands the following **recommendations** can be made:

1. As experience with the development of apprenticeship in Germany, France and the Netherlands shows, strong and long-term development of apprenticeship is better ensured by comprehensive models of contractual and regulatory arrangements based on wide collective agreements and negotiations of the interested social stakeholders. Development of such comprehensive models of contractual and regulatory agreements in Lithuania can be regarded as the long-term objective, which can be achieved only incrementally, by using different tactical decisions according to the requirements of the existing situation. For example, it is possible to envisage providing additional support and assistance to the weaker stakeholders or (and) their temporary replacement by more capable stakeholders in the implementation of the contractual regulatory arrangements. Trade unions can be provided with such additional support (for example, by training responsible staff) and some of their functions in the social dialogue over apprenticeship can be temporarily taken over by government (for example, responsi-

bilities in quality control and access monitoring). Weaker enterprises can be temporarily replaced by sectoral practical training centres.

2. Standardization of the contents of apprenticeship contracts and their linkage to vocational profiles can be useful for assuring smooth management and quality of apprenticeships. The intention to establish a national system of occupational sectoral standards in Lithuania could be a significant supporting precondition for this initiative.
3. Differentiation in fixing the duration of apprenticeship in laws, foreseeing possibilities for reducing the duration of training depending on the progress of apprentices. This provision can be useful and effective given its implications for reducing the costs of apprenticeship.
4. Provision of special apprenticeship programmes and contracts for handicapped persons and other specific groups. Such measure of accessibility can be helpful for using apprenticeship as a tool of social reintegration of disadvantaged individuals. Given the rather low effectiveness of current measures of social reintegration of handicapped persons, apprenticeship contracts offer an attractive alternative to school based training.
5. Enhancing the variety of types of apprenticeship contracts depending on their goals and target groups. This approach can be useful and important considering the variety of potential target groups of apprenticeship in Lithuania: basic school leavers (after 10th grade), secondary school leavers, dropouts from the basic or secondary schools, unemployed youth, etc. The Dutch experience of duality of apprenticeship contracts (traditional apprenticeship integrating learning contract and employment contract and new style apprenticeship with only a learning contract) can be an attractive solution for the introduction of apprenticeship in Lithuania, since there are currently few enterprises capable of providing 'traditional apprenticeship' and more enterprises are familiar with practices similar to new style apprenticeship, when VET schools send to enterprises their students for the short periods of practical training. The main challenge here is to establish the bridges between two pathways of apprenticeship.
6. To foresee in laws the reduction of taxes to SMEs and enterprises in the rural areas and small cities that are involved in apprenticeship training. This is a very important measure to be considered when assuring coherent regional development of apprenticeship in Lithuania because of the different capabilities and readiness of enterprises to accept the status of training providers, especially considering SMEs and enterprises located in the provinces and small towns.

5 SPECIFIC, VET SYSTEM RELATED CHALLENGES AND FACTORS IN THE INTRODUCTION AND DEVELOPMENT OF APPRENTICESHIP IN LITHUANIA

This chapter provides an overview and discussion of the main specific VET system related challenges and factors in the introduction and development of apprenticeship in the VET system of Lithuania. Referring to the analysis of the development of apprenticeship in Lithuania, Germany, France, Netherlands and the UK, the following main factors of this type influencing the introduction and development of apprenticeship in the VET system can be discerned: curriculum design of apprenticeship training; promotion of apprenticeship and enrolment of apprentices; organisation of training and assessment of learning outcomes. Each is considered in turn below.

5.1 Curriculum design of apprenticeship training

One of the main **challenges** of the introduction and development of apprenticeship related to the issues of curriculum design is compatibility of introduction of apprenticeship with the plans to introduce national modular curricula (national system of modular training) in VET. The crucial question here is how the modules are understood and treated – only as measures to structure and organize curriculum, or as instruments to structure qualifications and learning outcomes?

In proposing the solutions to these problems it is recommended to consider the potential of the following **supportive factors**:

- Existing competence-based VET standards and curricula. Currently schools are responsible for the development of VET curricula referring to the established VET standards.
- Established institutional structure for standardisation of curriculum design: sectoral committees consisting of employers, trade union representatives and providers of training.

It is also necessary to consider the following **factors that hinder and limit** the solution of the above mentioned problems:

- Still insufficient involvement of employers and trade unions in the design and updating of VET curricula due to lack of know-how and relevant understanding of importance of their participation in this process.

Introduction of the national curricula of modular training

The planned process of introduction of national curricula or modular training in Lithuania is expected to bring the following changes in the field of qualifications and curricula (KPMPC, 2002 - 2011):

1. Current VET standards will be replaced by the occupational standards. Occupational standards will not prescribe the training aims and specifications of competence assessment – these standards will indicate competences, limits of competences etc.
2. There will be implemented the National Curriculum of Modular Training which will permit to acquire vocational qualification through different modules in the different VET institutions. It will also bring credit transfer to vocational training on the national level. The Qualifications and VET Development Centre initiated a project entitled "Design of qualifications and establishment of the modular VET system". This project unites and combines the designing of qualifications with the development of standardized modular VET curricula. It is foreseen to develop the methodology of design of sectoral standards of qualifications, to prepare qualifications standards in the five sectors and to train about 100 designers of qualifications standards. The modular VET system will be implemented in two stages: during the first stage the model of the modular VET system and prepared plan of development of modular VET curricula will be developed. In the second stage the current subject-based curricula of IVET will be redesigned to modular curricula according to the prepared model. It is foreseen to prepare 40 modular training curricula in at least 25 sub-sectors of vocational education.

What can be the potential impact of this measure on the development of apprenticeship in Lithuania?

Introduction of the system of modular training and national modular curricula in IVET can support and foster the development of apprenticeship, if the introduced national curricula of modular training will consider the following requirements of apprenticeship training process:

- The units of learning (modules) have to be based on the internal logics and order of the work process. This concerns the structuring and positioning of the work and learning tasks in the module, as well as structuring of different modules belonging to the modular VET programme.
- The modules shall lead to the acquisition of competences permitting to execute sufficiently complex and important work processes and objectives (key work tasks), which are sufficiently challenging to motivate apprentices for independent learning and for intensive cooperation with masters or foremen.
- The didactic principles of acquisition of the new knowledge and skills must be considered, especially the principle of learning from simple to complex, or steps of competence development. The logic of consecutive steps of competence development should be followed both in the design of modules (acquisition of knowledge and skills in the

module) and in the design of the whole programme of modular training (acquisition of competences by completing the modules).

Possibilities of compatibility of the modularization of VET curricula with apprenticeship training depend on the following main factors:

- goals of the modularization of VET curriculum;
- objects of the modules.

One of the goals of the modularization of the VET curriculum is to restructure the positioning of the described knowledge, skills and competences, seeking to define and measure their correspondence to the needs of the workplaces. Here splitting qualifications into units or modules is mainly used as an informative measure in the process of development of occupational VET standards and curricula; it has no deeper influence to the processes of the acquisition and assessment of the knowledge and skills. In the training process students learn all modules according to the order prescribed by the VET curriculum and acquire foreseen knowledge, skills and competences in a systemic way. Following this way of modularization can be easily compatible with the introduction of apprenticeship. Such modularization of VET curriculum ensures better matching of training curricula to the changing requirements of workplaces and work processes and provides apprentices and tutors (masters) with clear and effective references for the organization of the training process (allocation of work tasks) and monitoring of training progress. Structuring and positioning modules according to the logics and requirements of work process makes apprenticeship training process more transparent and easier to manage. It is also helpful for the effective planning of apprenticeship by integrating assessment and validation of prior learning and work experience. In this case the main object of modules is the work process with its technological, organizational, communicational and methodical specifications organically and holistically integrated by the internal logics of work. Work process in this case makes a core of apprenticeship what implies necessarily holistic approach of apprenticeship training.

Other, rather different goal of modularization of the VET curriculum can be related to the restructuring of the training process by splitting it into separate relatively autonomous parts which are subject to the choice of the learner. This goal often directs to the development of learner centred approaches of learning and training, what makes learning very dependent on the individual choices and possibilities of learners and much less dependent on the requirements of the work process and disciplines of the knowledge fields. Such modularisation is incompatible with the introduction and development of apprenticeship for multiple reasons. In the training process students can learn different modules in different sequence and order, not necessarily conforming to the requirements of work process. In this case very often the basic object of the module becomes separate work task with very limited scope of technological, organisational and social specifications. Such modularisation leads to the ‘Tayloristic’ provision and acquisition of knowledge and skills. More holistic and integrated acquisition of knowledge and skills very much depends on the willingness and motivation of the learner (as

he/she can choose different modules), as well as on the possibilities and intentions of the training provider.

Looking to the current practices of curriculum design in Lithuania we can state that currently developed VET standards in principle reflect holistic work processes. First of all, in the current VET standards competences are detected from the core areas of activities.

Here is the example of core areas of activity indicated in the standard Electromechanic of electric equipment:

Areas of activity	Competences
Installation work of electric equipment	Safe working Installing electric equipment Reading electric schemes Measuring electric and non-electric values Installing lighting equipment
Assembling and exploitation of low-voltage equipment	Installing and exploitation of electric power equipment Exploiting lighting equipment Installing and exploiting electric gears (actuators)
Assembling and exploitation of high-voltage distribution equipment	Installing and exploiting high voltage distribution equipment Installing and exploiting the equipment of electric substations
Assembling and exploitation of electric energy transfer equipment	Installing and exploiting of the electricity supply lines (wires above ground). Installing and exploiting electricity supply cable lines (underground). Exploiting safety relay and automatic relay equipment.
Exploitation of the electronic equipment	Exploiting electronic equipment
Working with IT technologies	Applying Microsoft Office software (*Word, Excel*)
Metalworking work	Performing main metalworking operations Joining of materials

Table No. 4: Areas of activity and competences in the VET standard Electromechanic of electric equipment (Source: Centre for Development of Qualifications and Vocational Training

Areas of activity in these standards are defined referring to the main objects of skilled work – in the presented case - different technical products. Explicit orientation to the objects of skilled work is very important for the apprenticeship, because these objects indicate important (core) results of the whole work process. Achievement of these results gradually leads to the attainment of the goal of activity and to the mastery of all competences needed for the work process in a given occupation. Besides, orientation to the objects of skilled work requires strong referencing of the training process to the requirements and specifications of work and workplace. Competences are derived from the work areas and each competence presents by itself the generalised descriptor of the heterogeneous sets of knowledge, skills and key skills. Competences in the VET standards are split into more simple and homogenous learning out-

comes called training objectives. These training objectives are described in terms of knowledge, practical skills, key skills and abilities. Here is the example of the set of training objectives from the VET standard Electromechanic of electric equipment:

Competence	Training objectives
Installing and exploitation of electric power equipment	Selecting wires and cables Choosing installation products and their fitting parts Choosing and installing electric power supply equipment and instruments for the measuring and accounting of electric energy supply. Good knowledge of the design and working principle of the low voltage commutation equipment. Choosing the low voltage protection equipment. Performing preventive maintenance operations of electric power supply equipment. Repairing electric equipment. Good knowledge of the application and design of protective earthing measures.

Table No. 5: Competence and training objectives in the VET standard Electromechanic of electric equipment (Source: Centre for Development of Qualifications and Vocational Training)

Description of training objectives integrates theoretical knowledge, practical knowledge and skills. The training objectives present clear references for the designers of the VET curricula and teachers/ trainers of what knowledge, skills and key skills need to be provided and developed for each competence. The sets of training objectives are described in the context of the execution of work objectives. It is favourable for the apprenticeship training process. Referring to this, one of the options of modularisation could be designing of modules on the basis of competences, when each module leads to the holistic acquisition of competence. One of the possible shortages of the existing structuring of competences according to core areas of activities in the VET standards is that this structuring of competences does not explicitly indicate the different levels of the complexity of work process. Therefore existing descriptors do not explicitly indicate and do not enable monitoring of the growth of mastery and competence development process, something that is very important for the organisation and execution of apprenticeship training.

In this case one possible alternative could be the competence matrix developed by the VQTS project. This instrument is based on the horizontal differentiation of the core work processes, when each work process is differentiated into a different number of levels according to the degree of complexity of work requirements. The matrix is composed of the holistically described fields of competence reflecting certain steps of competence development and certain steps of mastery in executing the work process. In other words, 'the VQTS model follows a 'development logical' differentiation of a competence profile (known as a competence development or acquisition model) and thus can also describe the acquisition of competences' (Luomi-Messerer, 2006).

Competence development steps are structured and differentiated referring to the work process related dimensions, providing important parameters for the organisation and execution of apprenticeship:

Dimensions of competence development steps (source: Luomi-Messerer, 2006)	**Parameters for the organisation and execution of apprenticeship**
Ability to perform independent work tasks: marks the degree of necessary support or instruction.	It defines the extent of guidance and support of apprentices by the tutors and masters. Each step of competence development can require different extent of the involvement of tutors and masters in supporting apprentices, depending on the characteristics of the work tasks. However, development of independence of performance requires continuous communication between apprentices and masters, where the extent of support and instruction depends on the level of achievement of know-how, skills and experience, transferability of application of acquired knowledge and skills between the different tasks (here the guidance of masters can be useful) and other factors.
Ability to deal with a certain complexity: e.g. "production of simple work pieces" - for example "simple prismatic wrench parts" is less complex than the "production of work pieces under the inclusion of elements of hydraulics, pneumatics and electronics".	It defines the setting of sequence of work tasks in planning the work process in apprenticeship training. The didactic principle 'from simple to complex' is usually followed here. Here an additional principle can be proposed – from the execution of essential (basic) tasks of work process to the supplementary tasks, although in some cases there can be encountered conflicts between these principles, because the weight of tasks in the work process not always coincide with the levels of complexity of these tasks.
Ability to deal with dynamic situations: for example, are the initial parameters of a problem/system changing or are they constant?	It defines the necessity and steps of the introduction of apprentices into the real work process situations, beginning from the training and learning in comparatively stable work situations and problems in imitated work environments (workshops) and gradually 'inserting' in the real work processes with the increasing dynamic of changing of work problems and tasks.
Ability to deal with opacity: measures the ability to deal with messy situations or with action situations, the variables of which are not visible from the outset.	It defines the requirements and necessity to analyse and understand changing work process in coping with work tasks and work situations. Learning in the process of work should be reflexive, apprentices should acquire the skills to reflect and analyse the work process. Designing and setting of learning and work tasks, management of training process, guidance of masters and tutors have to enhance development of these skills and capabilities of apprentices.

Table No. 6: Parameters for the organisation and execution of apprenticeship provided by the dimensions of competence development steps

In analysing the possibilities of application of the VQTS competence matrix to the adaptation of modular curricula for apprenticeship, one of the key questions is what element of this competence matrix could serve as a basis of training module. One of the potential elements in this regard is a step of competence development. Steps of competence development have the following advantages for their application in designing of the modules of training:

1. Each step of competence development is designed and defined considering holistic contents of work process, including objects of skilled work, tools, methods and organisation of skilled work, requirements for skilled work and technology. Competence

development steps comprise sets of closely related work tasks requiring the same level of knowledge and skills and defined by the closely related technological and organisational specifications of work. These features create learning potential, permitting to acquire systemic knowledge and skills.

2. Looking from the perspective of the goals of modularisation, competence development steps are interesting, because their acquisition permits independent execution of work in certain area and range of work tasks.

Considering these two factors competence development step seems to be potentially a suitable unit for the designing of training module for apprenticeship training.

Amongst potential challenges and difficulties of the application of the competence matrix and competence development steps in the modularisation of VET curricula is that following this approach in curriculum design requires closer integration of different training curricula and programmes within the areas of activities that today lead to the acquisition of rather narrow and specialised qualifications. Looking from the long-term perspective it is a very positive and promising requirement. However, seeking such close integration encounters the challenges caused by the specificities of training curricula, intensive competition of training providers, etc. Nevertheless, the competence matrix should be discussed as one of highly promising approaches for the design of the national curricula of modular training.

Looking to the approaches and instruments of curriculum design in Germany, France, Netherlands and England, the following know-how could be used for developing curriculum design in Lithuania:

1. Experience of curriculum design in Germany proposes the ideas and know-how of work process approach in curriculum design as the most pertinent approach for high-quality apprenticeship training. This methodological approach is very promising in terms of long term returns to the quality of apprenticeship provision, but it is also very challenging in terms of requirements to invest in curriculum design and training provision.

2. Experience of cooperation between enterprises and apprenticeship training centres (CFAs) in France provides the idea that such cooperation can help to achieve complementarity and coherence in the provision of theoretical knowledge and practical skills despite the different potential and possibilities of enterprises in the field of training. These ideas are very pertinent considering the problems related to the high differentiation of potential of enterprises to ensure the quality of workplace based training.

3. The idea of higher apprenticeship curricula, provided by the experience of Higher Apprenticeship Programmes in England is also interesting in the context of introducing apprenticeship in the higher vocational education, considering the increasing interest in higher vocational studies and growing demand of qualifications provided by higher vocational training.

5.2 Promotion of apprenticeship and enrolment of apprentices

The **main challenges** of introduction and development of apprenticeship related to the issues of promotion of apprenticeship and enrolment of trainees are related to the novelty of apprenticeship in the existing VET system:

- promotion of apprenticeship as a new and prospective pathway of vocational training;
- integration of an apprenticeship pathway in the system of existing pathways of VET and skills development.

Raising awareness of apprenticeship

Any new programme can have a perceived novelty value but this alone will not guarantee any level of success in promoting apprenticeships. After initial 'buy in' from progressive and interested parties to secure the success and longevity of the program ownership of the success needs to be under the scrutiny of the key stakeholders. In this case this could be a government institution, Chamber of Commerce or VET providers (or various combinations thereof).

Raising awareness of the apprenticeship programme needs to be coordinated with clear, concise messages that are aimed at potential stakeholders including also young people – potential apprentices.

Transferability/Permeability

After initiating a programme to develop and promote apprenticeships a crucial lesson to learn from the experiences of countries where VET and academic programs are not given parity of esteem is that the VET apprenticeship route can also offer a route to HE. This needs to be mapped from the beginning so that able young apprentices can have an aspiration to attend university level later with their VET qualifications recognised by HE institutions.

The apprenticeship route can be built on existing VET qualifications and adapted to economic and workplace needs. Developing the entire apprenticeship framework completely new will be costly both financially and in terms of time. Also new apprenticeship programmes need to fit within existing education programmes otherwise there will be a lack of understanding between all parties participating and problems with permeability to HE.

Promotion to key participants in apprenticeship programmes

1. Potential apprentices
   Promoting apprenticeships and their value to learners, particularly ensuring that the value of the apprenticeship is promoted from the beginning.

   a) The apprenticeship on completion has an equivalent value to similar academic qualification and that employers will value the VET route and future employment prospects are improved by taking this route to qualification attainment.

   b) The apprenticeship lead body uses a slogan such as 'earn whilst you learn' giving an additional benefit to those who potentially are going to undertake this particular path-

way. For those from less economically advantaged backgrounds this route of being paid to develop skills via a formalised framework has been used as a promotional tool in the UK and with the increase in higher education fees this will become a greater incentive.

c) The VET route also may be a non-traditional routeto HE for those participants who for varying reasons do not see HE as a viable progression for them at this stage of their lives. This could be due to economic circumstances or simply not having been exposed to this pathway.

d) Being economically less dependent upon parents/guardian/state due to earning while studying and working through the apprenticeship programme can be a great motivator and build the esteem of the participant who potentially gains a higher level of confidence.

2. Employers
Promoting apprenticeships and their value to employers both in the public and private sectors.

a) Employers will benefit from developing the skills of apprentices to fit their sector needs and organisational gaps. Apprenticeship can be presented as a cost effective way of addressing the skills gaps that exist within the economy.

b) Employers can develop other skills and competences amongst young workers to ensure a fully rounded employee in tune with the needs of the organisation and able to work with the apprentice to continue to up skill and to achieve promotions and fully pay back the organisations investment.

c) Apprenticeships ensure that the workforce has the practical skills and qualifications organisation needs now and in the future. The mixture of on and off job learning ensures they learn the skills that work best for the business.

3. Parents
Promotion of the VET route with parents or guardians is very challenging, especially when this is the less proven route to, for example, HE which is an understood and now standardised route. A promotional campaign via schools has been effective in countries that are re-introducing or initiating a new programme of apprenticeships but this does take time and needs to have a clear and concise message in-line with government policy and proposals. Although not impossible, apprentices are difficult to recruit without parental support and guidance for the young person to undertake this route.

4. Colleges and any VET providers

a) VET providers need to develop promotional campaigns to ensure a clear understanding of the apprenticeship pathway. Ensuring that they give a clear message about the support they give and the level of tuition that is available.

b) Progression to HE needs to be promoted and initiated from an apprentice enrolling onto the programme developing an aspirational model for promotion.

5. Stakeholders responsible for promoting apprenticeships

   a) Government/state/institution campaigns.
   Government based campaign should seek to promote across varying audiences the benefits of an apprenticeship programme. This can be done via media campaigns aimed at potential apprenticeships and potential employers. Incentivised programmes can also be launched, where the business community is given additional support to engage with the apprenticeship programme. This could be financial, via tax breaks; or sectoral where the government promotes the needs of the specific sector.

   b) VET institutions have a vested interested in success as participant numbers will enable them to deliver a significant amount of apprenticeships which in the competition for enrolment of students between VET schools and HE institutions will enable VET providers to grow in size, status and reputation.

   c) Development of a responsible body for overseeing the apprenticeship agenda. This organisation would be ideally situated within an existing organisation that has an understanding of employers and sectoral needs, as well as experience of working with the VET providers; it would also have a robust structure and capability to deliver good quality apprenticeship opportunities. This could be organisations such as Chambers of Commerce who are ideally placed to know all the key stakeholders' needs. The need for an existing organisation is based on the experiences of other countries that developed new stand alone organisations which were not cost effective and detached from key stakeholders such as employers.

In proposing the solutions to these problems it is recommended to consider the potential of the following **supportive factors**:

- Changing labour market needs – increasing interest in the acquisition of qualifications leading to employment 'at the shop floor level' (qualifies worker qualifications).
  The uniqueness of apprenticeship in this regard is that it can in principle offer the attractive 'package' of practical skills, qualification transferable to higher education, attractive career pathway and wider potential employment opportunities. The apprenticeship programme is unique in that it not only gives a formal qualification but also practical skills that are important for the overall skills level and future employability and aspirational learning of the participant.
- Increasing interest of enterprises and sectoral employer organizations in developing the pathways of professional development and career based on apprenticeship.
  Any sector can become attractive when offering career development, promotional opportunities and the ability to increase earning potential.

It is also necessary to consider the following **factors that hinder and limit** the solution of above mentioned problems:

- General low esteem and status of IVET amongst the population.
  Here the potential advantage of apprenticeship is the possibility to 'earn while you learn' (with high unemployment within young people even with degrees). Earnings whilst working towards qualification and enhanced prospects of good quality employment opportunities could eventually increase VET value amongst young people and wider society.
- Increasing competition for enrolment of students between VET schools and HE establishments due to current demographic developments.
  If there is a potential job, learning new skills and gaining qualifications at the same time, there will always be a group of young people interested in participating in the apprenticeship programme.
- Emigration of youth.
  Here the attractive package of an apprenticeship programme delivered by VET institutions leading to a qualification, a potential job and further development opportunities through education and career can serve as a potential measure to cope with loss of young workforce. Much migration takes place due to a perceived (and real) lack of education and employment opportunities within the home country. Apprenticeships can be a part of the package that enables young people to fulfil their potential with their own country.

5.3 Organisation of training

The following **main problems** can be discerned with the introduction and development of apprenticeship related to issues of organization of training:

- Absence of tutors and trainers in the enterprises
- Lack of experience of apprenticeship process organization and its integration in the production process.

In proposing the solutions to these problems it is recommended to consider the potential of the following **supportive factors**:

- Establishment of the sectoral practical training centres on the basis of advanced VET schools.
- Some big enterprises have experience of the organization of apprenticeship training due to specific problems of skills shortages (shipbuilding, road freight transport companies).
- There is certain experience of established cooperation and partnership between enterprises and initial VET schools in the organization of practical training.

It is also necessary to consider the following **factors hindering and limiting** the solution of the above-mentioned problems:

- Domination of small and medium enterprises in all sectors of economy.
- Strong orientation of businesses to short-term results due to the domination of competition strategies based on price.
- Lack of enterprises with a sufficient level of technological development to ensure high quality apprenticeship in peripheral regions.
- Lack of established networks of cooperation between the big enterprises and SMEs.

Independently of the type of VET system there exist three (possible) learning places: a classroom, a workshop (sectoral practical training centres - either in a plant, a school or separately), and workplaces. Whereas in all systems a vocational teacher is responsible for lectures, the person in charge for the workshop is, depending on the work share (and the place where the workshop is located), either a teacher or a trainer. The third place is the crucial one for apprenticeship: usually there is no specifically skilled (or paid for teaching) person responsible for accompanying the apprentice; it is a skilled worker who is guiding and instructing the learner.
The main issues for success are:

- the interest/motivation of this skilled worker,
- a fair balance of the time needed for instruction and work tasks performed by the apprentice (e.g. preparatory works) and,
- good preparation of the apprentice and the skilled worker and a competent supervision of the apprenticeship-period by the teacher/trainer who runs the course.

Or, as stated by OECD (2009):

"In industry, those who supervise trainees and apprentices need preparation for the task
In industry, a different problem emerges. Trainers and supervisors of apprentices and trainees in companies often have no specific pedagogical training or other preparation, although research shows that such preparation has positive outcomes. Appropriate pedagogical and other preparation for supervisors of interns, trainees and apprentices in workplaces should be provided, adapting the level of preparation to the nature of the workplace learning being provided."

With respect to the sketched Lithuanian preconditions, it is not realistic to establish an elaborated system of training and motivating skilled workers as supervisors, or a stable cooperation between small and big enterprises. On the other hand a top-down approach of appointing workers is misleading; this usually leads to unmotivated supervisors and, as a consequence, apprentices. But when advertising for apprenticeship in a transparent and face-to-face manner, taking the vocational teacher, the candidates for supervising, the managers/employers and the potential apprentice on board, volunteers will be found. But not only the motivational aspects are of relevance; especially managers/employers should see an added value of apprenticeship.

As Lithuanian business is orientated to short-term results only long term arguments "skilled workforce of tomorrow, development of the next generation" are insufficient; very concrete (but informal) agreements on the learning aims and the added value of work-tasks performed by the apprentice should be made. In this aspect mutual trust is crucial. However, as trust cannot be implemented but grows, a close accompanying of apprenticeship by the responsible vocational teacher is needed at the beginning to deal with such questions, as: Are there any uncertainties? Is there the risk of exploitation? Do the supervisor and the apprentice find a common language? Additionally the apprentice should be prepared for the work-tasks; theoretical aspects of materials, tools, processes etc should be provided in classroom or workshop before the apprenticeship period.

The 3 factors for success mentioned above lead to the following recommendations for implementing or improving apprenticeship:

- Accurately choose and recruit the skilled workers taking part in the apprenticeship programme. They should be really experienced in the field (unit, module) chosen, motivated by professionalism (e.g. proud to teach the own skills to the next generation) and should apply voluntarily. This might sound quite challenging on first consideration but experience shows that there are "born, but hidden talents" in each sector and in almost every company.
- State clearly that an apprentice is not only a burden but a support too. When calculating the time-span of apprenticeship it is important to include not only the net time of learning but also the additional period of consolidation and practice. Apprentices certainly cost during their first days in a new work surrounding a certain amount of time. But day by day they become more familiar with colleagues, tasks and tools – and contribute more and more to the success of the department and company.
- Train the vocational teachers/trainers for a different role. Their job during apprenticeship-periods is neither the teaching of knowledge nor skills – but the supervision of the process. This includes clarifying with the apprentice and the skilled worker what the apprentice should learn (and what they know already) in the chosen period, the support of the skilled worker with training methods (in case of a request) based on their own professional (teaching/training) experience and supervising and supporting the period, in case of any problems (e.g. uncertainties about learning outcomes, a fair balance between learning time and working).
- And, finally, do not confuse apprenticeship with training on the job. Every apprenticeship period is part of an initial VET programme of 2-3 years, not the training for a certain workplace. This must be clear for all involved and especially respected by the responsible teacher/trainer: learning outcomes of the chosen field (unit) are not only learnt/performed during preparation and execution of the apprenticeship period but also when the learner is back in the classroom, e.g. by referring on the experiences and including the apprenticeship learning outcomes in assessment.

5.4 Assessment of learning outcomes

The following **main problems** of introduction and development of apprenticeship can be discerned related to issues of assessment of learning outcomes:

- Need to increase the range of stakeholders and institutions, which can take the responsibility in the assessment of learning outcomes. Introduction and development of apprenticeship requires more flexible and less centralised organization of assessment of learning outcomes than exists today, where the dominating role is played by the Chambers of Commerce, Industry and Crafts.
- Development of methodologies facilitating the integration of assessment of learning outcomes acquired in the workplace and in the classroom.
- Development of the funding mechanism of assessment of learning outcomes acquired in the apprenticeship.

In proposing solutions to these problems it is recommended to consider the potential of the following **supportive factors**:

- Existing approaches in the organization of the final examinations of VET graduates executed by the Chambers of Commerce, Industry and Crafts.
- Established centralized system of standardised assessment instruments to ensure standardization of assessment in IVET (standardized tests of assessment are deigned only for the assessment of theoretical learning). *It can also be regarded as a hindering factor*.
- Existing certain experience of the representatives of enterprises in participation at the commissions of examination.

It is also necessary to consider the following **factors hindering and limiting** the solution of the above-mentioned problems:

- Lack of know-how and experience in the field of assessment of learning outcomes amongst the stakeholders from the labour market (sectoral organizations, professional organizations), with the exception of the Chambers of Commerce, Industry and Crafts.

As Lithuania decided to organise its vocational profiles in units, one central issue related to assessment must be clarified at the beginning: Are the units meant as structuring ones with an interim and a final assessment or as qualification units assessed separately?

We strongly recommend the first alternative due to a bundle of reasons:

- Finances and manpower: As a qualification consists of 10-20 units is the time and money needed for a corresponding number of assessments enormous – regarding the lack of skilled assessor in Lithuania and the very limited funding both (money and time) can be spend much better.
- Bureaucracy: as especially the UK experience shows, the additional paperwork is exhausting, additional authorities are needed to supervise all the tests.

- Holistic: VET does not consist of a couple of (more or less) separate subjects (like in general schools) – its units are usually closely related and often learners really understand an issue of unit 1 whilst working on unit 10.
- Pedagogy - learning is development and not execution. Especially in IVET learners develop knowledge, skills, competences, identification, motivation and self-confidence over the whole three years with individual speed and different emphasis in different phases on the single elements.

Another central issue is a fair balance between standardisation and individualisation of assessment. Certainly some basic standards must be fulfilled; an employer should trust that each holder of a qualification has a certain level of knowledge, skills and competences. On the other hand, from a pedagogic point of view an individualised assessment is much better: an expert of the profession, just observing the work of a candidate and interviewing him meanwhile, can better predict the candidates' success on the labour market than any standard test. Additionally due to the specialisation of small medium enterprises the learning outcomes of apprenticeship can be differing: when learning in one company there might be a larger impact on a given unit than in the other company. Individual, local and company-specific conditions should be considered, too (cp. figure 1, if the task would be to chop down the tree probably the woodpecker would win).

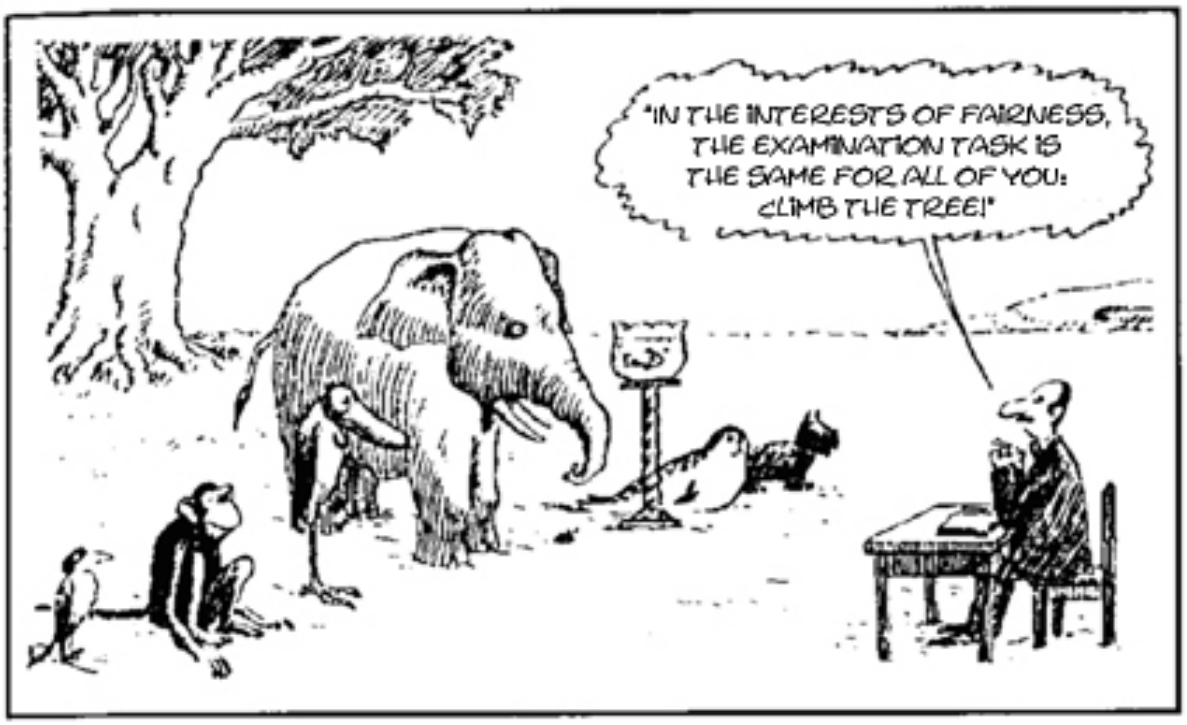

Figure 1: German caricature regarding standardisation: (own translation)

Respecting these introductory considerations, we recommend an assessment style oriented at (not copying) the current 2-step assessment in Germany for the long-term development (scenario): an example is given in table 1. Part 1 of assessment takes place after 18 months of training, part 2 at the end of the qualification period, in the Lithuania case after 36 month. To find the balance between standardisation and individualisation the work tasks in both parts

should be in general identical for all apprentices (e. g. "produce a device" or "repair a system") but the system he is repairing or the device he is producing should be company specific – this reduces the money needed (materials, tools etc. are there and the product can be sold afterwards (despite failure)). The apprentice might even work for some days in a department as a skilled worker to prepare his product – during assessment has he to explain what he is doing, why he is acting this way and how he is producing the work piece.

Stretched final exam Electrician for devices and systems According to the law from 24.7.2007			
Final exam (Part 1) Relative weight: 40%		Final exam (Part 2) Relative weight: 60 %	
Complex working task		Areas of assessment	
- Working task incl. situated oral examination	- Written examination	- Work order "practical task"	- System design - Analysis of the system and the function - Economics and social sciences
Relative weight: 50 % Timeframe: 6:30	Relative weight: 50% Timeframe: 1:30	Relative weight: 50 % Timeframe: 14:00	Relative weight: 50% Timeframe: 4:15
- **Design** - **Performance** - **Control** - **Situated technical discussion** time: 0:10	- **Part A: (50%)** 23 closed tasks and 3 to skip - **Part B: (50%)** 8 open tasks	- **Preparation** Timeframe: 8:00 - **Performance** Timeframe: 6:00 Phases: - Information - Design - Performance - Control Assessment basing on: - The material developed - an accompanying technical discussion - Observation by the examination board - **technical discussion** time 0:20	- **System design** Timeframe: 1:45 Relative weight: 40% **Part A (50%)** 28 closed tasks, 3 to skip **Part B (50%)** 8 open tasks --- - **Analysis of the system and the function** Timeframe: 1:45 Relative weight: 40% **Part A (50%)** 28 closed tasks, 3 to skip **Part B (50%)** 8 open tasks --- - **Economics and social sciences** Timeframe: 0:45 Relative weight: 20% 16 closed tasks, 3 to skip 6 open tasks, 1 to skip

Table No. 7: Tear: Basic data for the assessment of German electricians for devices and systems (PAL, 2010), own translation

Here follows immediately the question on the composition of the examination board. Respecting the lack of skilled assessors, we propose that it should have at least two members: an independent expert for the qualification (as there are no trainers in Lithuania maybe a teacher chosen by the Chamber) and the skilled worker (mentor) on board. They are best suited for evaluating the work and when they were chosen carefully (cf. chapter 5.3.) they will mark fairly – mutual trust will grow.

The main advantage of the sketched general regime of assessment is the holistic approach; it becomes obvious whether the candidate is skilled in the relevant subjects and able to combine knowledge, skills and competences from different units.

A disadvantage is that this approach is clearly not the cheapest; two persons and two times a whole day. But it should be considered that they do not have to supervise the apprentice during the whole time – just visiting the apprentice several times during his work on the day of assessment. So the skilled worker does his job during the main time of the day, the teacher can correct the written examinations (these tasks can be taken from the "standardized tests of assessment" but should be chosen closely to the practical task).

During the piloting of the DEVAPPRENT project only one part of this assessment approach (cp. table 7) should be implemented. As part 2 refers mainly on process-KSC, is more conspicuous and is at the end of the qualification period do we recommend to assess as sketched for part 1 directly following the apprenticeship period – and with a relative weight of around 20% (3 month of apprenticeship and 3 month of theoretical preparation within 36 month).

6 APPRENTICESHIP DEVELOPMENT SCENARIOS

Considering the existing preconditions for the introduction and development of apprenticeship, as well as the experiences of other countries in this field (Germany, France, England, Netherlands) we can discern certain possible scenarios of the development of apprenticeship in Lithuania. Streeck and Thelen (2009) identify five modes of institutional change which can be interesting for modelling the scenarios of apprenticeship development in Lithuania: displacement, layering, drift, conversion and exhaustion. These modes will be further analysed taking into consideration the assumption, that none of these modes can be the only background of development scenarios – different dimensions of institutional change in the scenario of development can have the features of different discerned modes.

6.1 Displacement

Mechanisms of action:

- *New models emerge and diffuse calling into question existing and previous organizational forms and practices*. The emergence of apprenticeship in Lithuania cannot be attributed to this case, because historically it is not a completely new model or approach of VET and its emergence and introduction are considered by stakeholders as a possibility of improvement of existing VET system without questioning its existence.
- *Strong influence of political factors and political decisions in initiating change*. This feature of change was quite strongly expressed in the VET reform after the reconstitution of independent state, which was focussed on reorientation of the VET system from a planned centralised economy to the needs of a market economy. Currently, although the idea of introduction or reintroduction of apprenticeship in the system of VET is strongly supported by the government and indicated in the new laws and political documents, the strength and consistency of political support is much weaker than, for example, in the cases of the VET policy decisions and changes in France or Germany, which are based on extensive consultations and negotiations of social stakeholders.
- *Existence of a variety of institutional arrangements create space for the development of different changes of institutional configurations and for the displacement of traditional arrangements by discrediting them or pushing to the side in favour of new institutions*. Existing range of institutional arrangements in the system of initial and continuing vocational training in Lithuania cannot automatically create space for the development of institutional model of apprenticeship – there is no sufficiently strong alternatives to the dominating school based model of initial VET. Experiences and practices of practical training of initial VET students in the enterprises are too episodic and unsystematic to develop to the alternative for the school-based training. The same can be applied to the practices of continuing vocational training in the enterprises.
- *Rediscovery, activation and cultivation of alternative institutional forms, gradually leading to the defection to a new systems and arrangements of growing numbers of ac-*

tors. There are separate cases when apprenticeship is rediscovered, activated and cultivated in some fields or sectors, which in previous historical periods have had strong traditions of apprenticeship (for example, before the Soviet period). This is a case of training in some sectoral related to traditional crafts or 'rediscovered occupations'. For example, the occupation of the roofer of reed roofing returned in the system of occupations of Lithuania after more than a generation of oblivion. The reed roofs were popular in the period between the two world wars, but in the Soviet period they were displaced by standardized roofing technologies with the application of slate, tin or bitumen. One enterprise found its niche of business in this field and offered to market reed roofings for summer houses. Due to the absence of know-how and skills in this forgotten occupation, these were transferred from foreign partners - the businessman went for training and acquisition of know-how to the company in the Netherlands. Now the necessary knowledge and skills are provided to reed roofers by apprenticeship in the company, because the need for skilled specialists in this field is comparatively small. Such cases are rather episodic to develop to the alternative institutional setting for the school based VET. Another case of rediscovery is related to the ideas of 'reconstruction' of the Soviet model of apprenticeship, when much attention was paid to the practical training of VET students in the factories and plants by using centrally regulated networks of cooperation between VET schools and factories. This approach fails to consider the crucial factor of the differences of socio-economic and political systems in which these mechanisms of cooperation operate (market economy vs. centrally planned economy), which makes such 'reconstruction' impossible.

- *Endogenous change by reactivation or rediscovery of 'suppressed historical alternatives'*. Although apprenticeship can be considered as background of the vocational education and training in the historical periods before the Soviet occupation and subsequent introduction of school based initial VET, it can hardly be treated as 'suppressed historical alternative', because the current socio-economic state, model and structure of society, as well as the objectives of vocational training and skills development, are too different from the agrarian economy and society in the past and related apprenticeship models.
- *Supplanting of indigenous institutions and practices with foreign ones by importation and then cultivation by local actors of foreign institutions and practices*. Importation of the measures and models of apprenticeship from the foreign countries and their implementation in the 'policy borrowing' face serious challenges and difficulties related to the incompatibility of the socio-economic and cultural contexts of 'exporting' and 'importing' countries, which define different ways of action and different effects of the measures and models of apprenticeship training. This issue is widely discussed in the previous parts of these guidelines.

Requirements and preconditions of change:

- requires active cultivation by highly interested agents;
- endogenous changes prepare the ground for the influence of changing external conditions and importation of foreign practices.

These preconditions for the introduction of apprenticeship in the way of displacement are very scarce and weak. Apprenticeship training or related forms of training (for example, continuing vocational training of employees in the workplaces, practical training of initial VET students, etc.) are not widespread or strongly developed in the enterprises.

In conclusion, it can be stated that mechanisms of displacement can play only a marginal role in the scenarios of the development of apprenticeship in Lithuania.

6.2 Layering

Mechanisms of action:

Influence of increasing returns and lock-in effects, making the mature and developed systems difficult to replace. This mechanism fits well to the current situation of initial VET in Lithuania. The school-based initial VET system with its infrastructure, network of training institutions, human resources, developed practices and methods of organisation and provision of training have established such returns and lock-in effects. Therefore radical replacement of this system is neither possible nor rational.

- *Differential growth mechanism – while the established systems are unassailable, faster growth of the new systems can effect profound change, for example by reducing and draining off political support for the established systems*. To some extent it can be applied to the different political initiatives of VET reforms in Lithuania – many of these initiatives aimed to introduce new mechanisms and settings of VET provision seeking to effect profound change in the current VET system. For example, seeking to increase the flexibility of VET provision and higher responsiveness of VET to labour market needs, various measures and instruments have been introduced, such as the public entity status for VET schools opening the possibility for employers to become decision-making stakeholders of schools or legal introduction of apprenticeship training. However, current trends of development of these incentives do not evidence their growth or expansion, not to mention their potential to initiate profound change in the VET system.
- *Different alternatives of institutions and systems are offered alongside the well established and working ones and can be presented as refinements or correctives of existing institutions, gradually provoking counter-mobilization of the defenders of status quo and fundamentally altering the overall trajectory of development*. This can be applied for the intentions of VET policy makers in introducing apprenticeship, as an alternative form of VET. The main 'political' long-term purpose of the introduction of apprentice-

ship is to enable refinement and correction of the school-based model of VET through expansion of the variety of offer of training, much higher and intensive involvement of employers in the provision of training and other features of apprenticeship. The open question is to what extent the introduction of apprenticeship in the current school-based VET system can influence fundamental altering of the development of this system.

Requirements and preconditions of change: active sponsorship of amendments, additions or revisions to an existing set of institutions.

It is difficult to forecast how actively the introduction of apprenticeship and related measures will be supported and sponsored by the different stakeholders and interested parties. The main sponsoring stakeholders could be enterprises (due to the increasing pressures in finding skilled workforce and competing for it in the European labour market) and apprentices (seeing advantages of apprenticeship in helping to find employment).

In conclusion, it can be stated that the mechanisms of layering can have significant influence in the possible scenarios of introduction and development of apprenticeship in the VET system of Lithuania.

6.3 Drift

Mechanisms of action:

- *Absence or weakness of the maintenance of existing institutions (their resetting, refocusing, or more fundamentally recalibrating and renegotiating responding to the changes in the economic and political environment) causing their erosion or atrophy. Existing systems resist and fail to adapt to the changes of external environment, causing slippage between the systems and the real world to which they are applied*. Although the government and VET schools used to be hardly criticised by employers and other stakeholders for the inconsistency and insufficiency of the VET reforms and VET reorientation to the needs of market economy, the introduced changes (competence-based VET standards, optimisation of VET network, introduction of public entity status, investments in the modernisation of equipment and infrastructure of VET, etc.) permitted certain adaptation and maintenance of the VET system in the context of socio-economic transition. Therefore, so far there is no evidence or indicators of a failure of maintenance of the school-based VET system leading to its erosion, atrophy and subsequent change by enterprise-based apprenticeship practices.
- *Gaps in rules allowing actors to abdicate previous responsibilities*. This phenomenon is quite typical in the transitional societies and economies without firmly established relationships of mutual trust between the stakeholders, state and interest groups, between ‘rule makers’ and ‘rule takers’. The field of VET and apprenticeship is not an exception here. Current practices of the organisation of practical training of VET students in the enterprises or in the contractual relationships of the provision of continuing vocational training in the enterprises show rather widespread opportunistic behaviour

of all contracting parties (enterprises do not avoid to exploit the students during the practical training, employees seek to avoid or to circumvent contractual obligations limiting their mobility after the training provided by the enterprises, etc.).

Requirements and preconditions of change:

- *Deliberate refusal of existing institutions to adapt to changing environment.* Despite different tensions and conflicts incurred by the changes and VET reforms, as well as a certain resistance of institutions and stakeholders to these reforms, there have been no signs of deliberate refusal of VET institutions and stakeholders to adapt to the changing environment.

In conclusion, it can be stated that mechanisms of drift can play only a marginal role in the scenarios of development of apprenticeship in Lithuania.

6.4 Conversion

Mechanisms of action:

- *Institutions are redirected to new goals, functions or purposes through the policy-making measures responding to new environmental challenges*. This mechanism has been applied in the VET reform of Lithuania. Transition from a centralised and planned Soviet economy to a market economy and related VET reform have not abolished the institutions inherited from the previous period (VET schools), but changed their status, increased autonomy and redirected to the new goals and functions of training and skills development related to the requirements of democratic society and market economy. Abolition of previous institutional settings concerned only those settings that were related to the ideological backgrounds of the totalitarian Soviet system (for example, ideologisation and indoctrination of vocational training or forcible character of recruitment and enrolment of VET students and trainees).
- *Political contestation over what functions and purposes an existing institution should serve lead to redirection of institutional resources. Unintended consequences of institutional design may open opportunities for political contestation*. If at the beginning of the reform of VET system such political contestation concerned discussions about the overall functions and purposes of the VET system and VET schools, now this contestation is more concentrated on discussions of different stakeholders on the economic effectiveness of the VET system and the potential of IVET to become more attractive to youth, employers and to facilitate the increase of employment both in terms of quantity and quality. These political contestations and discussions between stakeholders help to keep the question of the development of apprenticeship in the centre of attention of policy makers.
- *Ambiguities in the rules that define institutionalised behaviour resulting from the compromises established in the designing of institutions (when actors support new institutions for very different reasons and tend to interpret its rule in their own interests, or*

circumvent or subvert rules that clash with their interests). Such ambiguities have inevitably occurred in the context of tensions and contradictions of the transition from one socio-economic system and order to another. In the field of VET reforms there can be noticed cases when stakeholders supported measures of VET reforms for different reasons than those originally intended by policy makers. One of the reasons for this is the quite narrow outlook and view of stakeholders (especially employers) to the VET system and its institutions, ignoring the missions and functions which are outside their narrow interests. It can become a problem in the implementation of apprenticeship, which requires a consideration not only of economic, but also social and cultural impacts of apprenticeship.

- *Changes in the nature of the challenges actors face or in the balance of power allow for institutions to be redirected to very different and even diametrically opposed goals and ends than those for which the institutions were created. (Ongoing political contestation of the goals and intentions of the existing institutions together with periodic incremental adjustment through which inherited institutions were adapted and fitted to changes in their social, economic, and political environment)*. This mechanism probably can play a significant role in the introduction and development of apprenticeship in the VET system of Lithuania, because the goals and ends of school-based VET system are challenged by various dramatic changes related to demographic, economic, technologic and social development. For example, increasing emigration of the skilled workforce and intensifying competition for skilled workers in the European labour market can encourage employers and government to search for alternative forms and provision of vocational training (such as apprenticeship organised and managed by enterprises), which could be more effective in sustaining a local skilled workforce, than school based vocational education and training.

Requirements and preconditions of change:

- *Strong interventionist power of state facing absence or incapability of societal actors to take part in the processes of changes.*

This precondition is quite present in the current VET system of Lithuania, considering the fact that state regulation interventions and incentives in the field of initial and continuing VET have to 'compensate' the incapability of some social stakeholders (for example, trade unions) to defend the interest of their related interest groups.

In conclusion, it can be noted that the mechanisms of conversion can have significant influence in the possible scenarios of introduction and development of apprenticeship in the VET system of Lithuania.

6.5 Exhaustion

Mechanisms of action:

- *Gradual institutional collapse and breakdown – a process in which behaviours invoked or allowed under existing rules operate to undermine these*. Currently there are no signs of such institutional collapse or breakdown in the school-based system of VET.
- *In the aging of institutions there are faced their limits to growth where their further expansion destroys or uses up resources required for continued operation*. Currently there are no signs of aging of VET institutions and their posed limits for the further expansion of the school-based system of VET.
- *Institutions and their settings become more and more complex in the process by which more and more exceptions and special provisions have to be added to a given set of institutionalised rules, thereby depriving it of its legitimacy or practicability of both*. The development of such mechanisms in the implementation of apprenticeship can occur where trying to adjust enterprise-based apprenticeship, as a provider of practical skills and know-how with the school-based training, as a provider of theoretical knowledge (development of dual apprenticeship). When designing such a system on the basis of school-based VET, different exceptions and special provisions can be demanded for the employers, trade unions and VET schools, thus creating the risk that these exceptions and provisions would contradict basic institutionalised rules and principles of VET and apprenticeship and deprive the introduced measures of apprenticeship (for example, contracting mechanisms or fiscal exemptions to enterprises) of its legitimacy and practicability.

In conclusion, it must be noted that mechanisms of exhaustion can play only a marginal role in the scenarios of the development of apprenticeship in Lithuania.

Scenarios of introduction and development of apprenticeship in Lithuania referring to possible pathways of development of the VET system

In relation to possible pathways of development of the VET system, it is possible to distinguish the following scenarios of introduction and development of apprenticeship in Lithuania:

1. Scenario:	**Development of apprenticeship as a separate track or sector of the IVET system provided exclusively by enterprises on a contractual basis.**

Such differentiation of apprenticeship from school-based VET provision can be expressed by:

a) the different locus of provision (exclusively workplaces or training centres of enterprises);

b) different modes of management and regulation of training (dominated by enterprises and their needs);

c) different models and ways of funding and co-funding (training is funded by enterprises, or co-funded by enterprises and trainees, while state providing support to funding initiatives through the fiscal exemptions and concessions).

Such market-driven apprenticeship pathway could emerge and develop in competition with school-based IVET provision. It may also lead to an unequal speed and extent of development of apprenticeship in different sectors of the economy - such apprenticeship training may concentrate only in those sectors where enterprises have higher financial potential for funding and face a shortage of skilled workers, either because school-based IVET does not prepare such specialists or because there are big gaps between the skills provided and those required by enterprises (for example, engineering, transport). Looking to existing preconditions supporting the development of this scenario, a number of issues can be noted:

- experience of the enterprises in upskilling of the workforce prepared by the IVET providers;
- strong involvement of certain big industrial enterprises in vocational training (for example, through establishment of their own training centres); and
- lack of provision of skilled workers through school-based IVET in certain sectors (for example, transport sector).

However, there are several factors which hinder development of this scenario in the most sectors of economy:

- limited financial and economical capacities of enterprises to invest in apprenticeship training;
- domination of competition strategies based on price in many sectors of the economy, especially in sectors of services which reduce the possibilities;
- potential and willingness of enterprises to provide apprenticeship training;

- intensive emigration of skilled workforce, reducing incentives and willingness of enterprises to invest in training;
- lack or absence of skilled human resources that could be involved in organization and provision of apprenticeship training in the enterprises (tutors, mentors).

What could be the consequences of this pathway of development of apprenticeship? First of all, it would enrich the provision of vocational qualifications and expand the supply of training services in the market by introducing qualifications based on knowledge and skills provided through apprenticeship in the enterprises. At the same time it would create the need to find the ways how to integrate these new qualifications provided by enterprises in the existing national system of qualifications, creating mechanisms of permeability and comparison between apprenticeship and school based qualifications. Secondly, it would open new possibilities for enterprises to satisfy their needs for a skilled workforce, potentially leading to incremental increase of the interest and motivation of enterprises to use apprenticeship as an instrument of human resource management and development. However, the probability that such a pattern of apprenticeship become very marginal and applied only in a few separate cases is highly probable.

Due to the above mentioned lack of preparedness and capacities of enterprises to be involved in apprenticeship training. What political measures and instruments are needed to implement this pathway of apprenticeship? First of all, there can be mentioned the need for a rather liberal legal basis for the contracting of apprenticeship, foreseeing rather wide rights of enterprises and apprentices to define and settle their obligations in the organisation and provision of training. This legal basis should also include the mechanisms for the protection of rights of parties against the opportunistic behaviour and actions of other parties (for example, ensuring the execution of obligations of contract parties after the training), as well as fiscal exemptions and concessions to enterprises providing apprenticeship training. Secondly, it is necessary to strengthen and develop capacities and competences of the sectoral enterprise associations, trade unions and professional organizations in the field of training and human resource development through the provision of know-how of organization of training, methods and forms of training in enterprises, integration of theoretical and practical training etc. The role of these organizations in supporting of this apprenticeship model by providing organisational support and expertise to enterprises, ensuring training quality and trust in provision of training can be essential. Marketing of this pattern of apprenticeship and developing trust in it can also be very important preconditions of its success, because it is a new alternative to the traditional school-based VET. Enterprises can face the challenge of finding and attracting potential apprentices, considering the rather poor image of IVET and strong orientation of youth to seek career through the studies of higher education. It can require significant efforts of enterprises and employers organizations in promoting the apprenticeship pathway of training amongst the youth and their families.

2. Scenario:	**Development of the dual approach of apprenticeship with active involvement of the initial VET schools as providers of theoretical knowledge.**

Such an approach is intended in the proposed projects of the legal acts regulating the apprenticeship. It presupposes that enterprises become responsible providers of apprenticeship training and conclude the contracts with VET schools regarding the provision of theoretical training in the schools. In this case the funding of apprenticeship would be shared by the state and enterprises: state would fund provision of theoretical training in the schools, enterprises would fund provision of practical training in the workplaces. The main existing preconditions supporting the development of this scenario are the following:

- existing network of IVET schools and training centres and their cooperation with enterprises in organising practical training for students, making the provision of theoretical training easily accessible;
- development and improvement of practical training infrastructure of the initial VET schools due to execution of different EU support projects (investments in the equipment of workshops, establishment of sectoral centres of practical training), which makes IVET schools more attractive for cooperation to employers;
- existing legal provisions permitting employers to become real stakeholders in the ownership and management of VET schools (through the establishment of public entities);
- habitual and conventional character of school-based IVET in society, despite its lack of attractiveness (contrary to the radical novelty and related uncertainty brought by enterprise-based apprenticeship), which makes it almost impossible to ignore the involvement of VET schools in the provision of training;
- lack of know-how of the organisation and provision of vocational training in enterprises, limiting their possibilities to provide training outside the public system of IVET.

The main factors that could hinder development of this pathway of apprenticeship are:

- potential disagreements between enterprises and state on the share of funding of apprenticeship (especially concerning funding of practical training in the workplaces of enterprises, where, for example, the state would expect that enterprises would contribute all funding of this training and enterprises would expect more state financial support and reimbursement of costs incurred in training);
- lack of coordination of cooperation and partnership between enterprises and VET schools due to the lack of competent employers' organizations and trade unions in the sectors;
- difficulties of integration of theoretical and practical training time in the work organization and work practices of enterprises having little or no experience in this field and facing various challenges of the transitional economy;

- introduction of the national system of modular training, where modules are based on work tasks and not work processes – such approach can be inappropriate with the logic and methodology of apprenticeship.

What could be the consequences of this pathway of development of apprenticeship? If implemented successfully and becoming the main pathway of VET provision in the country, it could significantly increase the quality of vocational training and the fit of provided skills and knowledge to the needs of enterprises, thus facilitating employability of graduates and improving the image of vocational training in society. It could also significantly contribute to increasing attractiveness of the human resources and economy to foreign investors and attract new workplaces demanding skilled workforce.

What political measures and instruments are needed to implement this pathway of apprenticeship? Legal basis for the contracting of apprenticeship should foresee transparent regulations of rights and responsibilities of enterprises and public VET providers in the organisation and provision of training, based on the negotiations of these stakeholders. Different fiscal exemptions and concessions to enterprises providing apprenticeship training should also enhance the interest of employers to take responsibility for apprenticeship. As in the previous case, it is necessary to strengthen and develop capacities and competences of sectoral enterprise associations, trade unions and professional organizations in the field of training and HRD. These organizations can be crucial for the successful implementation of this model by taking responsibility for coordination, supervision and arbitration of different disputes and disagreements between enterprises, VET schools and apprentices.

Short term impact: recommendation for piloting

The piloting of recommendations for the introduction and development of apprenticeship in Lithuania will be executed by two types of actions:

- Training seminars for VET teachers, trainers, tutors, HRD managers of enterprises and trade union representatives.
- Testing of the recommended approaches in curriculum design in practical training.

Training seminars for VET teachers, trainers, tutors, HRD managers of enterprises and trade union representatives.

Introduction of the prepared Guidelines for the Development of Apprenticeship in Lithuania will be executed by organising the course of training seminars for VET teachers, trainers, tutors, HRD managers of enterprises and trade union representatives. The course will consist of 3 seminars of 4 hours each (in total 12 hours).

The contents of the first seminar consist of the following topics:

1. Introduction of the project, its goals, objectives, partnership, applied approaches and achieved results.
2. Introduction and discussion of the main findings of comparative analysis of the development of apprenticeship in Germany, France, the Netherlands and England. What can be learned from the experiences and practices of apprenticeship development in these countries?
3. General introduction of the proposed Guidelines.

The contents of the second seminar consist of the following topics:

1. Discussion of the recommendations regarding the roles and involvement of social partner organisations in the introduction and development of apprenticeship.
2. Discussion of the recommendations on possible instruments and measures of funding and co-funding of apprenticeship.
3. Quality assurance of apprenticeship training: solutions, procedures and instruments.
4. Legal basis of apprenticeship – what changes are needed in the existing laws and legal regulations?

The contents of the third seminar consist of the following topics:

1. Curriculum design – how to reconcile the plans of introduction of modular training with the introduction of apprenticeship?
2. Organisation of apprenticeship training - the training of expert-workers as supervisors:

- Choosing the right workers (Voluntary, responsible, engaged)

- How to motivate them (added value as work tasks done by the students, identification with company, "pride" of teaching own skills)
- Legal preconditions (e.g. assurance)
- Introducing the roles and expectations (e.g. teaching agreement, what is the aim of the apprenticeship period? fair assessment)
- Basic didactics /methods to be taught to the workers
- Raising awareness of specifics of youngsters
- Supporting the skilled workers (taking part by visiting/calling them, esp. the first day of apprenticeship is crucial)
- Trouble-shooting (e.g. How to react when the student is exploited or often absent)

Testing of the recommended approaches in curriculum design in practical training

The goal of this activity is to test the recommended approach of the VQTS competence matrix in the curriculum design of apprenticeship programmes. This testing activity will be implemented in the following steps:

1. Development of units of qualification according to the principles of competence matrix. These units will be developed on the basis of existing training curriculum by consulting with the stakeholders (employers, VET teachers) who were involved in the curriculum design process.
2. Revising and restructuring the practical training plan according to the contents of developed units of qualifications. The existing work-task-based training plan will be revised according to the logics of the VQTS competence matrix.
3. Execution of practical training according to the improved practical training plan. This training will be observed by the project partners - Centre for Vocational Education and Research and Kaunas Chamber of Commerce, Industry and Crafts.
4. Assessment of the outcomes of testing by interviewing the involved trainees, trainers and teachers.

7 REFERENCES

NATIONAL & SYNTHESIS REPORTS, on the patterns of apprenticeship. www.devapprent.eu

ALLAART, P., Bellmann, L. and Leber, U. (2009): Company-provided further training in Germany and the Netherlands. Empirical Research in Vocational Education and Training, 1: 103-121.

ARRIGHI, J.-J. & Josef, O. (2005): L'apprentissage : une idée simple, des réalités diverses, Bref n°223, Marseille, Octobre 2005.

ASHTON, D., Sung, J. and Turbin, J. (2000): 'Towards a framework for the comparative analysis of national systems of skill formation', International Journal of Training and Development, 4(1): 8-25.

AUBLIN, M. et al. (2001):Le projet pluridisciplinaire à caractère professionnel (PPCP)". Inspection Générale de l'Éducation Nationale, June 2001.

BATENBURG, R.; de Witte, M. (1999): Underemployment in the Netherlands: How the Dutch `poldermodel´ failed to close the education – jobs gap. http://som.eldoc.ub.rug.nl/FILES/reports/1995-1999/themeA/1999/99A44/99a44.pdf

BILLET, J.-C.; Cahuzac, R.; Perrin, J. (2002): Le contrôle en cours de formation: 10 propositions pour 2002. Rapport à Monsieur le Ministre de l'Éducation Nationale et Monsieur le Ministre délégué à l'enseignement professionnel. Paris: CNRAA.

BLOKHUIS, F., & Jellema, M., Nijhof, W.J. (2002): De kwaliteit van de beroepspraktijkvorming: een onderzoek naar praktijken en ervaringen bij ROC Eindhoven, (Quality of work based learning; an investigation on practices and experiences at Eindhoven regional college). Enschede: Twente University.

BRAUDEL, F. (1986): Civilisation matèrielle, economie et capitalisme tome 3, Armand Colin, Paris.

BREMER, R., Saniter, A. (2011): Apprenticeship in Germany: Institutional patterns, organisation and methods (with reference to the sectors of sales, gastronomy, construction, and machinery including metal and electrics) – Report, http://www.devapprent.eu

BRINKLEY, I. (2008): Knowledge Economy and Enterprise. The Work Foundation. London. http://www.theworkfoundation.com/assets/docs/publications/203_Knowledge%20Economy%20and%20Enterprise.pdf

BROCKMANN M., Clarke, L., Winch, C. (2010): The Apprenticeship Framework in England: a new beginning or a continuing sham?/ *Journal of Education and Work,* Vol. 23, No. 2, March 2010, pp. 111–127.

BROWN, A. (2011): The impact of provision of qualifications to the differences of structure and contents between designed and provided qualifications in England, Report for the LLP

KA1 EQF testing Project EQF implementation: impact of national qualifications systems processes. http://www.eqf-proqs.eu

CART, B.; & Toutin-Trelcat, M.-H. (2010): 'Apprenticeship contracts: why they are breached?' Training & Employment, n° 89, October-November 2010, pp.1-4.

CEDEFOP (2010): Learning outcomes approaches in VET Curricula: a comparative analysis of nine European countries, Publication Office of the European Union, Luxembourg.

CEDEFOP (2009a): Relationsship between quality assurance and VET certification in EU Member States, Office des publications officielles des Communautés européenne, Luxembourg.

CEDEFOP (2009b): VET in Europe – Country Report: France, CEDEFOP, REFERNET-France.

CEDEFOP (2008): Formation et enseignement professionnels en France: Une brève description, Office des publications officielles des Communautés européenne, 2008.

CEDEFOP (1999): Apprenticeship in France: 1999, Training village –ETV library.

CLARKE, L.; Cremers, J.; Janssen, J. (2007): The transformation of employment relations or 'undeclared labour', the case of the construction industry, paper presented at the IIRA Manchester, Sep.

CNCP-COMMISSION Nationale de la Certification professionnelle (2010): Consultez le RNCP- Répertoire Nationale des Certifications Professionnelles, http://www.cncp.gouv.fr/

CNCP-COMMISSION Nationale de la Certification professionnelle (2010): La base documentaire du RNCP- Répertoire Nationale des Certifications Professionnelles. http://www.cncp.gouv.fr/grand-public/explorerBaseDocumentaire.

DANTUMA, E. (2010): Dutch Industry Outloook 2010. Is Crisis Over? ING Economic Department,
http://www.nrk.nl/SiteCollectionDocuments/ING%20-%20Dutch%20Industry%20Outlook%202010.pdf

DARES (2010):L'apprentissage en 2008: hausses des entrées et du niveau de diplôme préparé, Dares Analyse n° 024, Avril 2010, publication de la Direction de la Recherche, des Etudes et des Statistiques.

DIF, M. (2011): Apprenticeship in France: Institutional patterns, organisation and methods: with specific reference to the construction and machinery sectors, French national Report, DEVAPPRENT WP3: "Comparative analysis of the development of apprenticeship in Germany, France, the Netherlands and the UK", February 2011.

DIF, M. (2010): EQF effect on national and sectoral qualification processes, paper presented for the VETNET programme of the ECER Conference 2010: "Education and Cultural Change" in Helsinki (25 to 27 August 2010), http://www.b.shuttle.de/wifo/vetnet/ecer10.htm

EURYDICE (2010): Organisation du système éducatif en France : 2009-2010", EACEA, European Commission.

FLEMING, S. (2009): Industry 'has declined more under Labour than Thatcher'. http://www.dailymail.co.uk/news/article-1232897/Manufacturing-decline-Labour-greater-Margaret-Thatcher.html#ixzz1p0kj9sPC

FULLER, A. and Unwin, L. (2003): 'Creating a "Modern Apprenticeship": a critique of the UK's multi-sector, social inclusion approach', Journal of Education and Work, 16(1): 5-25.

FULLER, A. and Unwin, L. (2007): 'What counts as good practice in contemporary apprenticeships? Evidence from two contrasting sectors in England', Journal of Education and Training, 49(6): 447-458.

FULLER, A. and Unwin, L. (2011): Towards Expansive Apprenticeships. A Commentary by the Teaching and Learning Research Programme London: Economic and Social Research Council; http://www.tlrp.org/pub/documents/apprenticeshipcommentaryFINAL.pdf

GESCHIEDENIS van Amsterdam Centrum van de Wereld 1578-1650 (2004) Sun, Amsterdam.

GROLLMANN, P. and Rauner, F. (2007): 'Exploring innovative apprenticeship: quality and costs', Journal of Education and Training, 49(6): 431-446.

HAGEMANN, H., Rukwid, R.(2007) Perspectives of Workers with Low Qualifications in Germany under the Pressures of Globalization and Technical Progress, Hohenheimer Diskussionsbeitrage. Universität Hohenheim, ISSN 0930-8334.

HIPPACH-SCHNEIDER, U., Krause, M. and Woll, C. (2007): Vocational education and training in Germany, Cedefop Panorama series, 138, Luxembourg: Office for Official Publications of the European Communities.

INSEE (2010): Population en emploi selon le sexe et la catégorie socioprofessionnelle en 2010. (http://www.insee.fr/fr/themes/tableau.asp?reg_id=0&ref_id=NATnon03173)

INSTITUT SAGE, (2011): La place des PME dans l'économie française. http://www.institut-sage.com/voir/1312

KPMPC, Qualifications and Vocational Education and Training Development Centre 2002 – 2011. http://www.kpmpc.lt

KRAAYVANGER, G. (1998): DeWet Educatie en Beroepsonderwijs: Achter-gronden en Kanttekeningen," in *De WEB van Regelgeving naar Pedagogische Praktijk*, ed. by G. Kraayvanger, B. HÄovels, and F. Meijers, pp. 7{22, Amsterdam. Max Goote Kenniscentrum voor Beroepsonderwijs &Volwasseneneducatie.

LE BLANC, G. (2005): L'industrie dans l'économie française (1978-2003): une étude comparée. Cercle de l'industrie / Institut de l'entreprise.

LE DEIST, F., Winterton, J. (2011): Comparative analysis of apparent good practice in Apprenticeship System. Report. http://www.devapprent.eu

LEITCH Review of Skills (2006): Prosperity for all in the global economy - world class skills. Executive Summary and Foreword.

http://www.official-documents.gov.uk/document/other/0118404792/0118404792.pdf

LIETUVOS Respublikos Profesinio mokymo įstatymo pakeitimo įstatymas. Valstybės žinios, (2007), 2007-04-19, No. 43-1627.

LIETUVOS statistikos metraštis/ Statistical Yearbook of Lithuania 2010. Statistics Lithuania http://www.stat.gov.lt

LUOMI-MESSERER, K., Markowitsch, J. (2006) VQTS model. A proposal for a structured description of work-related competences and their acquisition, Vienna: 3s. (http://www.vocationalqualification.net)

MEN-MESR (2010): Repères et références Statistiques sur les enseignements, la formation et la recherche (PERS 2010 ", Edition 2010.
http://media.education.gouv.fr/2010/16/9/PERS_2010_152169.pdf

MÜLLER, A.P. (2007): The German Economy. Europe's Faltering Giant / The Independent Review, v. XII, n. 2, Fall 2007, ISSN 1086–1653, pp. 279–283.

NIEUWENHUIS, L.; Shapiro, H (2004): Evaluating systems reform in vocational education and training: learning from Danish and Dutch cases. In: Descy, P.; Tessaring, M. Evaluation and impact of education and training: the value of learning. Third report on vocational training research in Europe: synthesis report. Luxembourg: Office for Official Publications of the European Communities (Cedefop Reference series).
http://www.cedefop.europa.eu/etv/Upload/Projects_Networks/ResearchLab/ResearchReport/BgR2_Niewenhuis.pdf

OECD (2009): Reviews of Vocational Education and Training - Learning for Jobs. http://www.oecd.org/document/16/0,3746,en_2649_39263238_45926672_1_1_1_1,00.html

ONSTENK, J. (2005): Innovation in vocational education in The Netherlands. http://www.vetnetwork.org.au/_dbase_upl/vocal_volume5_onstenk.pdf

ONSTENK, J. and Blokhuis, F. (2007): 'Apprenticeship in the Netherlands: connecting school and work-based learning', Journal of Education and Training, 49(6): 489-499.

PAL, Prüfungsaufgaben- und Lehrmittelentwicklungsstelle (2010): Abschlussprüfung Teil 2; Elektroniker/-in für Geräte und Systeme. http://www.christiani.de/pdf/3191%20S10.pdf

PRANCULYTĖ, J. (2011): Comparative analysis of the development of apprenticeship in Germany, France, the Netherlands and the UK : UK Report, http://www.devapprent.eu

QUALIFICATIONS AND VET DEVELOPMENT CENTRE (2010): A bridge to the future European policy for vocational education and training 2002-10. National policy report – Lithuania. Vilnius. Access via Internet: www.kpmpc.lt/Skelbimai/12-06-VET-policy-report-ReferNetLT.pdf

ROTH, M. (2011): SMEs in they Netherlands. Making a Difference. Deutsche Bank Research. http://www.dbresearch.de/PROD/DBR_INTERNET_DE-PROD/PROD0000000000271742.pdf

SCHNEIDER, Krause, Woll, (2007): Vocational education and training in Germany. Short description. Cedefop Panorama series; 138. Luxembourg: Office for Official Publications of the European Communities, ISSN 1562-6180.

SIEBERT, H. (2005): The German Economy: Beyond the Social Market. Princeton University Press.

SIMON-ZARCA, G. (1996): Apprenticeship in France: Between tradition and innovation, Training & Employment, n° 25, autumn, Céreq - Marseille 1996.

SMITHS, W. (2005): The Quality of Apprenticeship Training: Conflicting Interests of Firms and Apprentices, Maastricht: ROA.

SPANINKS, L. (2011): Apprenticeship in the Netherlands: Institutional patterns, organisation and methods (with reference to the sectors of sales, gastronomy, construction, and machinery including metal and electrics). Report. http://www.devapprent.eu

SPÖTTL, G.; Ruth, K. (Hrsg.) (2011) ECVET-Kompatibilität von Kompetenzen in Kfz-Sektor / ECVET – Compatibility of Competences in the Automotive Sector, Impuls Nr. 42, Nationale Agentur Bildung für Europa beim Bundesinstitut für Berufsbildung, Bremen.

STATISTICS LITHUANIA (2011): Economic and Social Development in Lithuania 2011/08. Vilnius.

STEEDMANN, H. (2010): The State of Apprenticeship in 2011 - International comparisons: Autralia, Austria, England, France, Germany, Ireland Sweden and Switzerland, A Report for the Apprenticeship Ambassadors Network, Centre for Economic Performance, LSE, UK.

STREECK, W., Thelen, K. (2009): Institutional Change in Advanced Political Economies. In: Hancké, B. (ed.) Debating Varieties of Capitalism. Oxford University Press, Oxford.

TŪTLYS, V., Kaminskienė, L. (2008): Social partnership in the accreditation of qualifications in the Lithuanian VET system / European Journal of Vocational Training. No. 45 (2008/3). Cedefop, Thessaloniki, ISSN-1977-0219. p. 32-49.

TŪTLYS, V., Spūdytė I. (2011): Implementing a national qualifications framework in Lithuania. Journal of Education and Work, Volume 24, Issue 3-4, Routledge: Taylor and Francis, p.429-448.

UŽSAKOVAS – Lietuvos Respublikos ūkio ministerija (2006): Lietuvos eksporto plėtros potencialo didinimas, skatinant inovacijas ir kitus konkurencingumą lemiančius veiksnius. http://www.idus.lt/projektai-ankstesni-metai/21-lietuvos-eksporto-pletros-potencialo-didinimas-skatinant-inovacijas

WINTERTON, J. (2007): 'Building social dialogue over training and learning: European and national developments', European Journal of Industrial Relations, 13(3): 281-300.

WOLF, A (2011): Review of Vocational Education – The Wolf Report, London: Department for Education.
https://www.education.gov.uk/publications/eOrderingDownload/The%20Wolf%20Report.pdf

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