

WBL-TOI MANUAL

Manual for planning of work-based learning
– transfer of innovations



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– transfer of innovations

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Development of work-based learning by transferring existing good practices
in Common Quality Assurance Framework

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Preface

Quality in VET (Vocational Education and Training) has been actively developed involving co-operation across Europe during recent years. The quality of learning at workplaces is a key issue in terms of improving the quality of VET. Innovations and good practices of work-based learning developed over recent years should form an important and genuine resource at a time when there is a real need to develop the quality of VET.

Numerous good practices of work-based learning have also been created within VET as a result of innovative projects under Community programmes. A number of national projects and projects funded under the Leonardo da Vinci Programme and by the European Social Fund (ESF) have developed the quality of VET and work-based learning in a goal-oriented manner, gaining remarkable results. Although results are known and published in compendium volumes or databases, they are only marginally exploited both nationally and transnationally. The Commission has specifically urged stakeholders to learn and apply good practices under the new Life Long Learning programme for 2007–2013. The problem is that good practices are considered to be very much dependent on their context and, therefore, their successful transfer seems to be quite challenging.

This Manual has been developed for those organizations intending to improve **the planning of work-based learning**. The main aim of this Manual is to help VET providers, colleges, training centers and enterprises to transfer good planning practices of work-based learning (WBL) from other organizations into their own organizations across Europe.

We hope that you enjoy reading the WBL-TOI Manual – feedback will be very much appreciated!

On behalf of the development group of ‘WBL-TOI Manual’ within the Leonardo project,

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Introduction

In the Leonardo project 'WBL-TOI Manual' ('Work-Based Learning – Transfer of Innovations Manual'), special focus has been placed on planning work-based learning. The tools and methods, which reveal and share the tacit knowledge associated with the good practices and the transfer process, have been developed and described in the Manual. The process to transfer good work-based learning (WBL) practices has been drawn up using the European Quality Assurance Reference Framework (EQARF) as a framework. During the project, the Manual has been piloted and validated in practical situations between partners and other vocational education and training (VET) organizations.

Why a WBL-TOI Manual?

Under Community programmes, numerous good practices of work-based learning have been created within VET, but the results are only being marginally exploited. Although the results are known and published in compendium volumes or databases, they are only marginally exploited both nationally and transnationally. The problem is that good practices are considered to be very much dependent on their context. Therefore, successful transfer from one organization to another seems to be challenging, time-consuming and quite isolated from other processes within organizations.

Who are we targeting?

The main target group of this Manual consists of VET providers, colleges, training centers, enterprises, branch organizations, employment services, etc. Those supporting the process of transferring good practices can benefit from this Manual. The common feature for organizations is a need to improve their WBL planning practices by transferring good practices developed elsewhere into their own organization.

This Manual uses the concept of VET providers, which were mainly vocational schools during the development phase of this Manual. Finally, although not all recommendations will suit all VET providers, we have the impression that this Manual is also, to a certain extent, useful for non-school situations. In some cases, it might need some modifications, but as the Manual presents fairly general suggestions, this appears feasible to us.

Why planning?

The planning phase is a very important phase of any process. It is not possible to implement successfully without proper planning. As it not possible to achieve a high quality WBL implementation, we have to put a lot of emphasis on the planning phase, including all kinds of support tools. In this Manual, the concept of planning includes an overview of the whole transfer of innovation process. In other words, during the planning phase you have to take into consideration the whole transfer process.

Benefits of the Manual

The Manual will help VET providers to select good WBL planning practices and to transfer them either into their own or some other organization. The Manual will reflect the needs to improve WBL, guide users in selection of good practices, help and support the transfer process of good practices and pursue added value.

By using this Manual you can:

- get help with transferring innovations
- find examples of good work-based learning practices
- find support for the transfer process
- provide ways of transferring good practices (GPs)
- find tools
- find justification and provide evidence of the added value of WBL
- save time

How to use the Manual?

There are different ways to use this Manual depending on your needs.

- ✓ If you want to implement a new good WBL planning practice in your organization, you can follow the Manual step by step and get support
- ✓ You can use some features, some tools and/or some parts of the Manual
- ✓ You can deepen your knowledge about the transfer of good WBL practices
- ✓ You can get tips for supplementing the EQARF into your development processes

You can use the Manual as:

- a tool
- a guide
- a European experience

The structure of the WBL-TOI Manual reflects the phases of the transfer of innovations (TOI) process. Chapter 1 presents the key concepts and the framework used by the project development team.

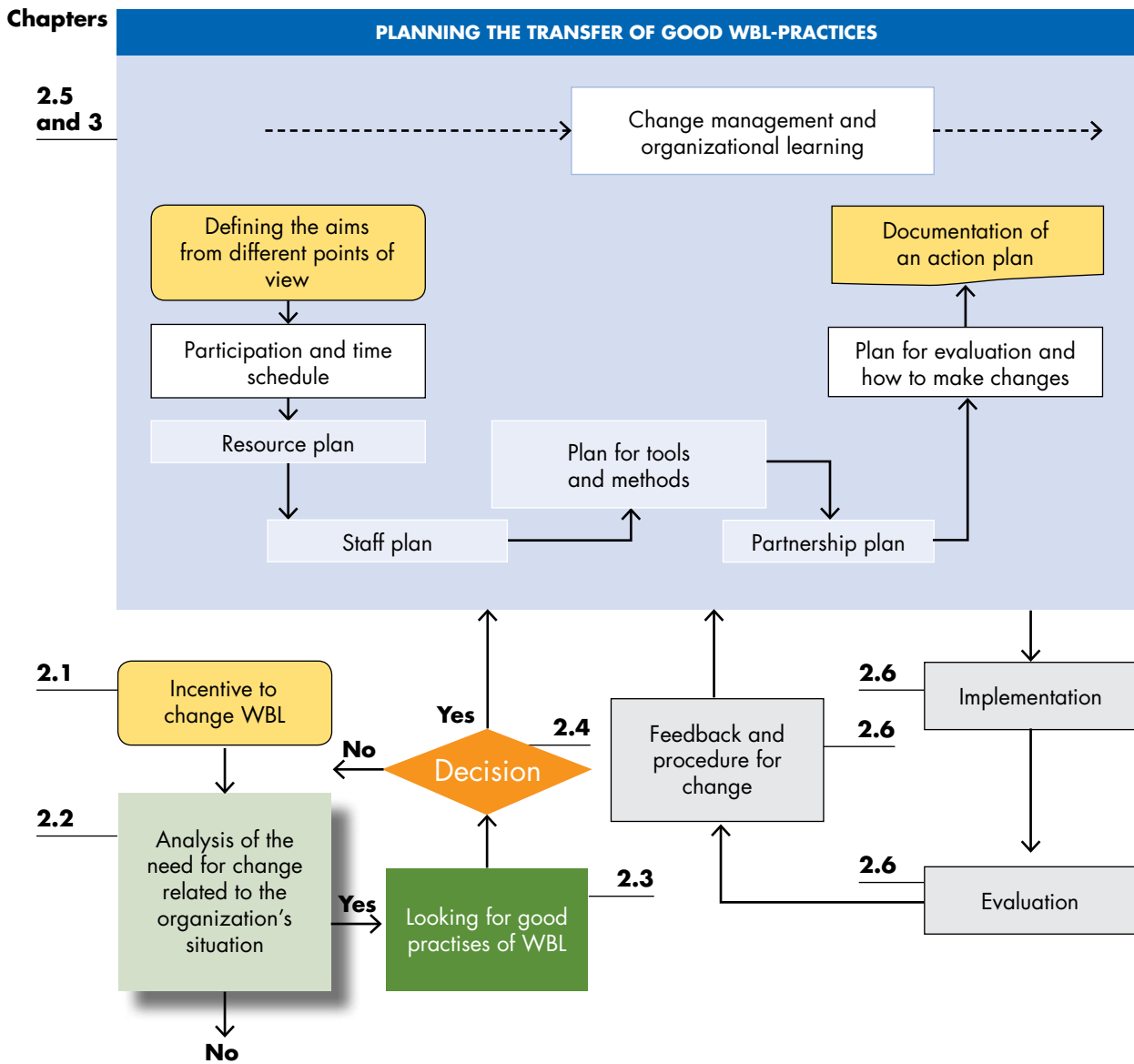
Chapter 2 focuses on practical guidelines during the planning phase of work-based learning. This chapter also describes how to plan the transfer of good WBL practices, how to identify good WBL practices and how to handle the change process.

Chapter 3 includes tools and methods, which can be used to support the transfer process.

Chapter 4 then includes aspects relating to quality assurance, which is an important part of the whole TOI process.

The Appendices provide more practical tools for supporting the transfer process, information about the background of the project and a list of partners too.

The "map" over the Manual



Chapter 4 includes aspects relating to quality assurance as a part of the whole TOI process.

Chapter 1

Continuous improvement by transferring innovation of work-based learning and steps of innovation transfer

This chapter gives a short introduction into some theoretical approaches and different aspects of concepts of work-based learning, innovation and transfer of innovation which have been used as a framework in development of the Manual. The different sections provide a description of the European Quality Assurance Framework (EQARF) and information about change management.

1.1 What can work-based learning (WBL) be?

Work-based learning, as understood in this Manual, recognises that the simple dichotomy between formal and informal learning, intentional and non-intentional learning, formal education and non-formal education or classroom-based education and workplace-based education no longer holds true. It should be emphasised that the workplace offers as many learning opportunities as the classroom.

- Work-based learning should involve a sort of network or partnership between enterprises, educational/training institutions, learners, and possibly public or semi-public parties (involvement from stakeholders).
- Work-based learning is not solely restricted to the workplace, even though a strong focus on work activities, professional roles or the workplace in general is key. The mutual benefits of theoretical learning in the classroom and practical learning in companies are emphasised.
- A structured knowledge transfer takes place: non-standardized curricula in the classroom (non-formal education only) or the workplace (employer-specific education only) are not focused on.
- Work-based learning is about linking formal, informal and non-formal learning.
- A structure to support student autonomy at school and the workplace is crucial. Likewise, institutional learning processes demand some sort of guidance by an ‘agent’.

1.2 What is an innovation and what can transfer of innovation (TOI) and a good work-based learning (WBL) practice mean?

The goal of innovation is to achieve positive change, to facilitate processes for those working on planning work-based learning or to try to improve work-based learning. An innovation therefore does not have to be new to everyone – it is enough that an individual or another unit or organization (a school, a VET-provider, an enterprise) experiences it as being new. In this case, the innovative good practices (see Chapter 2) will be transferred.

The transfer of a good WBL practice means implementing and applying the practice in other organizations or units where it is developed. It is not the practice itself but rather knowledge about it that can be transferred. If a practice is to be applied elsewhere, this should take place in a context that is sufficiently similar to the context where the practice originally proved to be functional and effective. Implementation and application of a practice form a process where the practice and its context are co-produced.

Transfer of good practice is always a learning process. Transfer of a WBL practice is always a mutual learning process for everyone involved in the process and tacit knowledge also plays an important role in the process. It tends to be more successful, if it is done systematically and if all the phases of the innovation-decision process have been taken into account.

The latest innovation research shows that a user-oriented transfer of innovation process is based on interaction between those involved in the transfer process and the beneficiaries. It is important to identify the end-users of the transferred work-based learning practice and involve them in different phases of the transfer process. Transfer of innovation is a whole “service package”, which contains not only transfer of good practice but support services and marketing for those in charge of assuring the success of the transfer process too (Appendix 2).

- An innovation is a new idea, its adaptation for practical situations and the added value as a result of both.
- Transfer of innovation means implementing and applying a new idea into practice in other organizations, where it is developed to create added value. The TOI process is a mutual learning process for everyone involved and tacit knowledge also plays an important role in the process.
- The customer-oriented transfer of innovation process presumes involvement of the beneficiaries in the process from the beginning and the planning of support services needed for the successful transfer of WBL practices. The user-oriented transfer of innovation arises in cooperation between partnerships and beneficiaries.

1.3 How to improve the quality of the TOI process in the EQARF framework?

An important tool for quality assurance of the WBL-TOI process is the EQARF (European Quality Assurance Reference Framework, Figure 1). The EQARF is a reference instrument to help Member States and VET providers to promote and monitor continuous improvement of their VET systems and/or VET provision based on common European references.

A successful WBL-TOI process includes all phases of the EQARF (planning, implementation, evaluation, and review). The focus of this Manual is, however, on the planning phase of the transfer of innovation process. The planning phase refers to setting up clear, appropriate, and measurable goals and objectives in terms of policies, procedures, tasks and human resources for the WBL-TOI process. It includes a continuous improvement cycle for the TOI process.

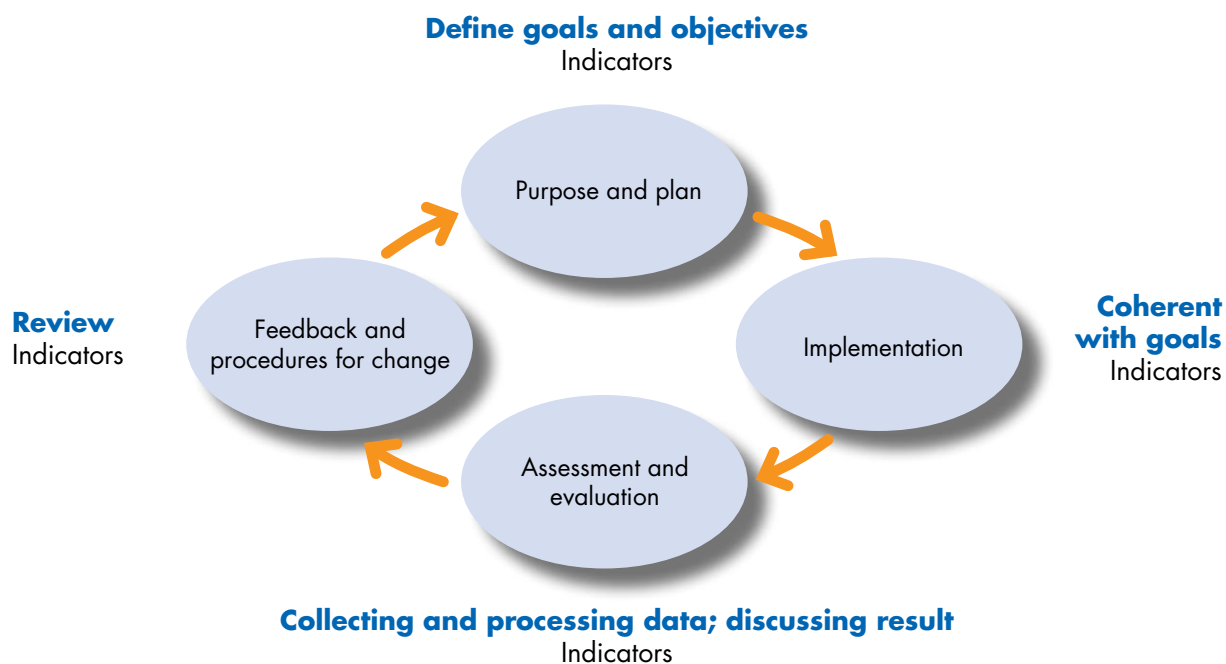


Figure 1. The European Quality Assurance Reference Framework (EQARF)

According to the EQARF, it is very important for all relevant stakeholders to be involved in identifying specific local and individual needs for planning of work-based learning. The targets for work-based learning and for improving it will be set and monitored. The VET providers plan co-operative initiatives with other VET providers. The network of VET providers can join forces and try to identify common areas for improvement in work-based learning and good practices which match their circumstances. Co-operation is also important in the transfer of innovation process.

The planning phase of the TOI process also includes all those phases of the continuous improvement cycle: planning, implementation, evaluation and review. The organization has to decide on aspects such as who will take part in planning, how long it may take and who will take the initiative to implement the planning of the TOI process. It is also important to evaluate how successful the planning has been and how an organization can improve the planning process next time. Self-evaluation is one important tool for that. A detailed description of the planning phase of the TOI process you find in Chapter 2.

- A successful WBL-TOI process includes all phases of the EQARF (planning, implementation, evaluation and review).
- The planning phase refers to setting up clear, appropriate and measurable goals and objectives in terms of policies, procedures, tasks and human resources for the WBL-TOI process. It includes a continuous improvement cycle for the TOI process.
- Although the focus of the TOI Manual is on the planning phase, it is crucial for the success of the WBL-TOI process to get an overview of the whole process even at the planning phase.

1.4 How to handle the change process?

The TOI process can start within an organization by identifying WBL improvement needs or externally by finding a promising WBL innovation, which might match the organization's needs. Process management therefore means all activities to assure quality and improve the effectiveness of processes of successful change. Change management is a systematic approach to dealing with change, both from perspective of organization and individual level. Change management entails thoughtful planning and sensitive implementation and, above all, consultation with and involvement of people affected by the changes. If you force people to change, problems will normally arise. Change should be realistic, achievable and measurable. Pedagogical leadership is one of the key success factors of change management.

- Process management means all activities to assure quality and improve the effectiveness of processes of successful change.
- Change management is a systematic approach to dealing with change, both from the perspective of an organization and on an individual level. Change management entails thoughtful planning and sensitive implementation and, above all, consultation with and involvement of people affected by the changes.

Chapter 2

Planning the transfer of good work-based learning practices

This chapter intends to give very practical guidelines for planning a transfer of innovation (TOI) in work-based learning (WBL). It includes one example situation, which may encourage a revisit of better WBL practices and result in change. This chapter follows the example one step at a time.

Firstly, there is an overview of the whole TOI process of good WBL practices and an explanation of preconditions for change within the organization. Other sections also describe features of learning organizations, followed by a number of criteria for identifying good practices, which might be transferable. At the same time, criteria can be used for assessment of the organization itself in order to provide a proper needs-based analysis. Next, attention will be paid to a number of key issues and questions related to preparation of and the decision to go ahead with the transfer process. All this will then lead to a very tangible plan for the transfer of good WBL planning practices from one organization to another.

An example

School S and enterprise E reach an agreement to organize work-based learning for VET students. The enterprise promises to offer a work-based learning place for at least 10 students every year. The school interviews every student before he or she starts to work at the enterprise. Both the enterprise and the school collect feedback from students at the end of the work-based learning period. Based on feedback from students, teachers at the school find that they previously put little effort into counselling students before WBL period. They decide to improve counselling for work-based learning. They liked to find some good practices and transfer them to their own organization.

2.1 An overview of the whole transfer of innovation process (TOI) of good work-based learning (WBL) practices

In order to keep up with permanent change and to deliver high-quality services it is necessary for every organization to create conditions to become a learning organization. The basic rationale for such organizations is that, in situations of rapid change, only those that are flexible, adaptive and productive will excel. Organizations need to ‘discover how to tap people’s commitment and capacity to learn at all levels’. Organizations that are continually expanding their capacity to create their future require a fundamental mind shift among their members.

The incentive to change can come from many different stakeholders such as working life, educational policy makers or changes in norms etc. The organization will make some kind of self-analysis in order to ascertain what kind of change is needed. After this analysis, decisions will be taken either to make changes in WBL or to leave the situation as is. If they have decided to make changes, they will start looking for good WBL practices. The selected good

WBL practice can be used as a whole concept or only in parts. It may also be the case that the practice will be evaluated to be no better than the earlier one already in use within the organization. Once the decision has been taken, it is possible to continue by applying the new practice or only parts of it. It is also possible to integrate some parts into the existing practice. Once the decision has been taken, planning for the transfer of good WBL practices can start.

The transfer of innovations requires within organization many cultural and operational changes, which take much time.

Change management and pedagogical leadership show the way and give support during the transfer process.

Figure 2 shows the path that an organization can use to progress the transfer of good WBL practices by making a plan. The figure only shows the planning phase according to the EQARF model (see Chapter 1, fig. 1). The next sub-chapters include a description of the process to transfer the chosen good WBL practice to the organization and this is explained in more detail.

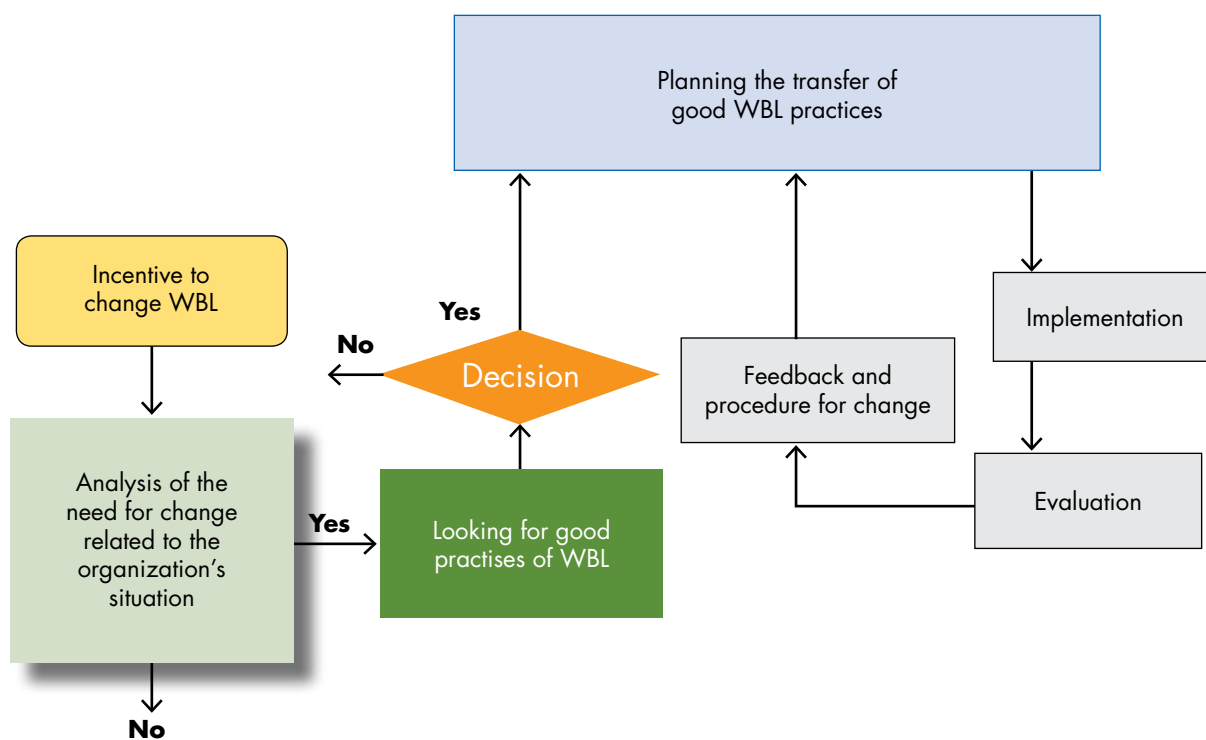


Figure 2. An overview of the transfer of good WBL practices.

An example

At school S the teachers have noticed that the school has no common plan for students' tutoring before the work-based learning period. In order to improve their work-based learning, school S and enterprise E support students by counselling them in more detail and more effectively before their working period at the enterprise.

The headmaster of the school decides to carry out an investigation involving school staff and students. The partner enterprises, school staff and students will also be asked how they find the situation relating to students' tutoring for work-based learning periods. Based on the results of the investigation, the VET provider then decides to improve the planning of work-based learning.

The headmaster of the school will invite some people to form a development team, which will start looking for good work-based learning practices. The team can use the criteria mentioned in this Manual (Chapter 2.3.) for analysing if the practices found are suitable for their school or not. After "cleaning" (i.e. after identification of common, context-independent features) the practice, the group will recommend to the VET provider that the practice is suitable to be transferred to the school.

Once the decision to implement the good practice has been taken, the development group starts to plan how the transfer could move forward. By planning to tutor better, students can follow this Manual and use the tools presented here.
(see fig. 2)

2.2 Analysis of the need for change in work-based learning

Every organization which is open to change is likely to make an in-depth needs analysis in order to decide what kind of innovation can be delivered or transferred. By analysing the operational system of the organization -, both internal and external aspects can be identified. Important aspects include:

Analysis of the operational system of the organization will include:

- In what state is the organization? What coincides within organization?
- In what state are the people? How do the people react to the innovations?
- Is there scope and motivation for new innovations?
- What is the right time to introduce new innovations?
- Are there possible changes in the educational policy concerning WBL?

VET providers mostly collect feedback from their WBL practices. There may exist different needs as students' learning needs, wants, wishes, desires, etc. The process also sometimes involves looking at the expectations and requirements of other interested parties such as companies, tutors, teachers, administrators, financial supporters, and other people who may be impacted by the WBL.

The process will start with an incentive to change WBL. VET providers/organizations have sought feedback from their customers (working life, students, teachers, stakeholders etc.) and noticed a need for change. The VET provider will analyze the feedback and results of internal and external analysis and evaluation in order to evaluate and compare those to the vision and objectives of their own WBL practices. A good way to do the analysis would be to use a SWOT (Strengths – Weaknesses – Opportunities – Threats) analysis (see Chapter 3.1, p. 24).

A SWOT analysis is an important tool for analyzing the overall position of the WBL and its environment. The results of the SWOT analysis will help focus the process and find critical points of the implementation of the transfer of good WBL practices. In Chapter 3.1 you will find more information about SWOT analyses.

The results of the analysis will lead to the decision made by the VET provider/organization:

- either to define in more detail the types of change needed OR
- to bypass the incentive.

When confirming the need for change, the VET provider/organization will start looking for good WBL practices in order to start the transfer of innovation (TOI) process. In order to achieve a positive decision and a successful transfer, the VET provider/organization needs to be open to new ideas.

On the basis of the description of the WBL process, the VET provider will start to look for and review good WBL practices suitable for their own operating systems and purposes.

An example

A good, potentially transferable students' tutoring practice should be analyzed as a whole, versatile "service package" so that different groups like students, enterprise E, teachers at school S and stakeholders can benefit from it. On the other hand, it is important to analyze what kind of resources and support the organization should reserve for implementing the selected new practice. In Appendix 2 you will find a good tool for analysis of the "service package".

2.3 How to identify good work-based learning practices

Alongside the Manual and within the same project, a report has been published, where good WBL practices are analyzed and described in some cases. You can find this publication on the Internet and on CD. (Bacher, D. & Humpl, S. 2009.)

Within the case studies, effectiveness plays a vital role as in the example of 3s (Bacher & Humpl 2009, 13), where evaluations are carried out to assess whether professional internships fulfil their purpose of facilitating better labour market integration. The example of a systematic WBL process at Pirkanmaa Vocational Institute (Bacher & Humpl 2009, 9, 16-17) similarly refers to labour market integration and assessment of client satisfaction.

All cases intend to show new and innovative practices. While the dual system in Austria is a well-established system, the case of TFB/EKE (Bacher & Humpl 2009, 14–15) also illustrates innovative elements of work-based learning which clearly go beyond what needs to be done.

The results of a SWOT analysis or some other type of assessment method can be used as a starting point to identify which practice will be needed given the circumstances of the VET provider.

The following criteria are suggested to be viewed as key criteria for identifying good practices:

■ **Mix of stakeholders**

Work-based learning should integrate key stakeholders. Hence, it is important to establish a mix of teachers and practitioners from working life. In ‘high quality’ WBL, there is always structured cooperation between the educational institution, the employer and the learner.

■ **Degree of integration of stakeholders**

The way in which stakeholders become integrated into WBL is at the heart of a good practice. The question is whether the main stakeholders are all integrated within a formal curriculum. Furthermore, does the involvement of stakeholders take place in the form of consultation and are they regularly involved in the process of development of WBL?

■ **Standardization**

The degree of standardization or institutionalization is central for work-based learning. Similar teaching inputs and learning outcomes of formal education are important for measuring the value of certificates. The question is how convincingly WBL learning outcomes can be communicated to external employers.

■ **Effectiveness**

Effectiveness can be related to various goals and provides information regarding the degree or the quality of achievement. Hence, the effectiveness of WBL can be defined in terms of students finding jobs or in meeting client satisfaction and satisfaction of students and companies in particular.

■ **Adaptation**

Work-based learning curricula need to be adapted regularly to the working environment. Workplace orientation can only be guaranteed by constant improvement of formal curricula. Especially in the case of a dynamic occupational field, such cycles of improvement are vital (e.g. high deployment of modern technology causes fast changes within working processes).

■ **Sustainability**

Sustainability refers basically to the duration and/or stability of an example of WBL. Most examples delivered cannot be described as sustainable, since the time span has been too short as yet. For instance, one could argue that regional sustainability is an important criterion to be achieved for the future. Systemic descriptions are difficult to evaluate in terms of sustainability anyway.

■ **Measurability**

Measurability is certainly an important criterion for all the work based-learning practices, since quantification of the outcomes and results is a key issue of work-based learning. Work-based learning is output-oriented. Examples pertain to measurement of achievement of goals, learning success, client satisfaction or labour market integration.

■ **Quality assurance**

A good WBL practice has to have built-in quality assurance. The way to assure a good WBL practice includes the continuing improvement cycle (see the EQARF, p. 11).

■ **Innovativeness**

Innovativeness is probably the criterion most often named in relation to the case studies.

WBL practices can mainly be found in direct contact with other vocational education and training institutions throughout Europe. Innovative practices are often published in specific journals and project databases of the Agencies involved in European and national projects. It is often the case that identified good practices do not fit into the systemic background.

This Manual includes a description of those steps and processes needed for planning an adaptation of a good practice (for example, a good students' tutoring plan) into the own organization. **How is it possible 'to clean' the good practice from an organization's specific elements?** In 'Cleaning' the following aspects are observed:

- What are the characteristics of context-independent practices?
- What are the preconditions for saving those characteristics within the organization?
- What should be transferred to the own organization?
- What were the good practices of the transfer process?

'Cleaning' can only be done using specific elements of a WBL practice, although some obstacles may emerge as a result. Specific elements might only involve working in specific environments. If you, as a VET provider, do not sense that specific elements of WBL will fit into your circumstances, you can modify the practice during the transfer process.

Possible implementations of a good practice into one's own organization will be described in the next sub-chapter.

2.4 Decision to transfer a good work-based learning practice

Key elements of implementation of innovations depend on the organizational structure, all kinds of resources, change management and staff involvement. An adaptive and flexible organizational structure and processes support decision-making within the organization to departments and operational decision-making devolved to teams enhances the success of implementation.

There are several questions to be answered and resolved within the organization before the transfer of a good practice. Among others the following questions should be discussed:

1. What is the opinion - of a good WBL practice?
2. What is the added value of this WBL practice for the workplace and/or the organization itself?
3. A good practice may even be “bad” and not suitable for the own organization.
4. Does this WBL practice meet the needs of the students and working life?
5. How does this WBL practice fit in with the curriculum?
6. How can further development of the practice be organized?

After taking the decision to transfer a new, good WBL practice into the organization, the next phase is to prepare the whole planning process.

According to Rogers (2003), the innovation process has five stages. In our example, the stages could be as below (table 1).

Table 1. An example of the innovation-decision process.

Knowledge	Knowledge occurs when the headmaster of school S or perhaps a team responsible for organization of WBL are exposed to the innovative students’ tutoring model and gain some understanding of how it functions.
Persuasion	Persuasion occurs when the above-mentioned individuals or the team form a favourable attitude towards the new WBL tutoring model and find it good.
Decision	Decision occurs when the above-mentioned individuals or team engage in ‘cleaning’ the new practice and in evaluating the practice’s eligibility into the own school that will lead to a choice to adopt or reject the innovation.
Implementation	Implementation occurs when the above-mentioned individuals or team implement the new WBL tutoring model. Re-invention is especially likely to occur at the implementation stage.
Confirmation	Confirmation occurs when the above-mentioned individuals or team seek positive feedback and reinforcement of the new tutoring model that has already been made.

2.5 How can the transfer of good work-based learning practices into your own organization be planned?

The transfer of innovation means implementing and applying an innovation in other organizations where it is developed. Transfer of innovation is always a learning process. The transfer will be more successful if it is done systematically.

In terms of the needs for change previously analyzed within the organization, it is necessary to define the aims of the innovation and to make practical plans. There are several milestones and questions to be discussed and resolved when making plans for the transfer of good WBL practices, among others:

1. Who is leading the transfer process?
2. How is involvement/thinking in the organization changed?
3. How are change agents identified?
4. How is change opposition used?
5. How is it possible to withdraw from the organization structure?
6. If necessary, how can barriers from the previous culture be broken down?
7. What resources are needed for the transfer?
8. How much time is needed for the transfer?
9. What are the critical points of the transfer? It is important to identify critical points of the transfer and to find follow-up tools.
10. How can the planning process be assured?

Figure 3 has a description of the processes of the transfer of good WBL planning practices. The transfer of WBL includes several plans, they are not separate plans and are part of the same plan to transfer WBL practices (Figure 3).

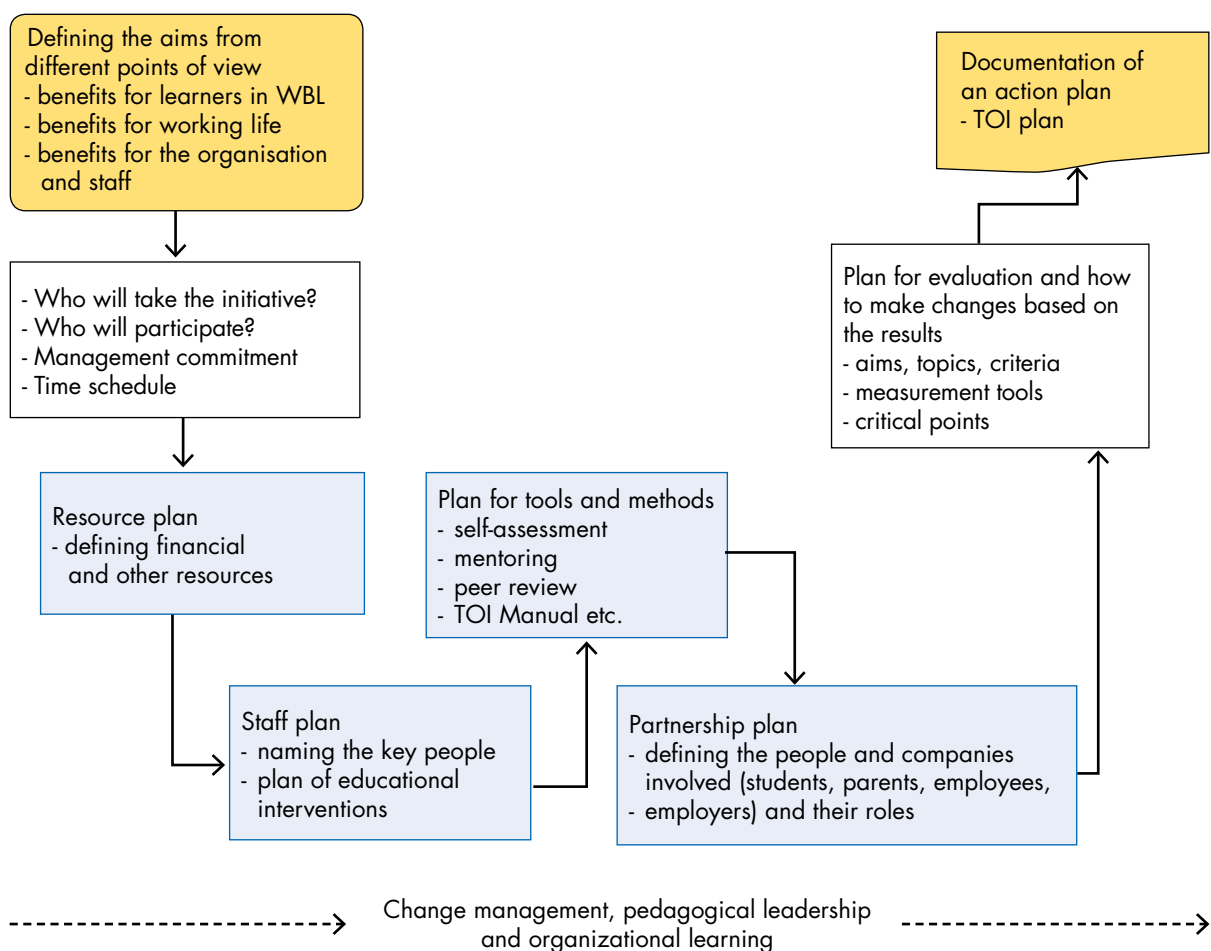


Figure 3. Plan for transferring a good WBL planning practice.

Greenhalgh et al. (2004) have classified the key elements in implementing and creating a routine for an innovation. Table 2 shows the key elements modified.

Table 2. The key elements in implementing and creating a routine for an innovation.

Organizational structure	An adaptive and flexible organizational structure and processes that support devolved decision-making within the organization to departments, operational decision-making devolved to teams to ensure successful implementation.
Leadership and management	Senior management support, advocacy of the implementation process and continued commitment to it.
Human resources issues and timing	Successful creation of a routine depends on the motivation, capacity and competence of individuals and on the right timing for the TOI.
Funding	If there is dedicated and ongoing funding for implementation, the innovation is more likely to be implemented.
Open communication within the organization	Effective communication across structural boundaries within the organization enhances successful implementation.
Socially disseminated cognition (Intra-organizational networks)	The goal and open questions will be divided between groups and every group will familiarize themselves more thoroughly with the specific content. Different knowledge will then be disseminated and shared. The more complex the implementation needed for a particular innovation, the greater the significance of the inter-organizational network.
Feedback	Accurate and timely information about the impact of the implementation process increases the chances of successful creation of a routine.
Adaptation/reinvention	If an innovation is adapted to the local context, it is more likely to be implemented successfully.

An example

After taking the decision to transfer the new good practice for WBL students' tutoring model, the development team at school S starts to make **plans**:

- Who will apply new students' tutoring methods based on the new good practice?
- What is time schedule?
- What financial and other resources are needed for starting to use new tutoring model?
- How can the new model start to be used at the school?
- Who is involved in the transfer process and in what role?
- What kind of tools and methods will be used by transferring the new tutoring model?
- How will the results of the transfer be analyzed and then, based on the results, how will the plan for transfer be modified?

Finally the development team will document an action plan for the transfer of the new students' tutoring model.

2.6 What are the ways to implement, evaluate and make changes in the transfer of innovation plan?

It is not the practice itself but actually knowledge about it that can be transferred. If a practice is to be applied elsewhere, this should take place in a context that is sufficiently similar to the context where the practice originally proved to be functional and effective.

To implement and apply a practice is a process where the practice and its context are co-produced. The more humans and other elements that make up a practice, the more likely it is to change when it is applied elsewhere.

Transferring systematically means planning implementation, evaluation and even possible changes to the transferred WBL process. It means involving all the core groups in the planning process and probably simulating implementation to ascertain implementation strategies and arguments (against preventive groups), evaluation criteria and how they can be used / measured, as well as possible aspects of change if something unforeseen goes wrong during the actual implementation.

Some specific questions related to different phases of the transfer of good WBL practices and critical points in the transfer process can be found in the table 3 and Appendix 3.

Table 3. An example of some key questions at the planning phase.

1. What is the vision/view of the future of WBL?	<ul style="list-style-type: none"> ■ Does the new counselling practice suit our vision/view of the future of WBL?
2. Why do we need a new WBL counselling practice?	<ul style="list-style-type: none"> ■ What is the added value of the new WBL counselling practice?
3. Who takes initiative in transferring the good WBL practice?	<ul style="list-style-type: none"> ■ Do we have change management and change agents? ■ Do we have pedagogical leadership?
4. Does the area of practice concerned relate to learner needs identified as priorities by working life and/or our school?	<ul style="list-style-type: none"> ■ Does the WBL fulfil the needs of students? ■ How do the objectives of learners fit the curriculum?
5. What kind of feedback do we get from working life?	<ul style="list-style-type: none"> ■ discussions ■ questionnaires ■ other contacts
6. What methods will be used in looking after innovations and good WBL practices?	<ul style="list-style-type: none"> ■ SWOT analysis ■ peer review ■ external evaluation

Chapter 3

Tools and methods for supporting the transfer process of good work-based learning practices

This chapter provides a short introduction to some examples of the tools and methods which could support the transfer of innovation process. Examples for tools and methods presented here are: SWOT analysis, mind map, peer review, mentoring, action plan and several tools for process planning. Mentoring was piloted during the Leonardo project “WBL-TOI Manual” as a tool to support the TOI-process of a good WBL practice and is therefore presented in more detail. Internal and external audits and self-assessment are examples of other tools used to identify the needs for changes. Benchmarking can be used to find good WBL practices.

3.1 SWOT analysis

SWOT is an abbreviation for Strengths, Weaknesses, Opportunities and Threats. A SWOT analysis is an important tool for analyzing the overall position of work-based learning (WBL) and its environment. It is recommended to carry out a SWOT analysis after taking the decision to implement or improve WBL and before planning takes place. The results of a SWOT analysis will help focus on the process and finding critical points during the transfer of good WBL practices.

The Key Distinction – Internal and External Issues

Strengths and weaknesses are internal factors. For example, a strength could be an organization’s good cooperation with working life. A weakness could be the lack of sufficient resources for planning work-based learning within the organization.

Opportunities and threats are external factors. For example, an opportunity could be a developing distribution channel such as the Internet that potentially increases demand for an organization’s reputation. A threat could be a competing VET provider which can offer better education and WBL contacts and practices.

It is worth pointing out that a SWOT analysis can be very subjective - two people rarely come up with the same version of a SWOT analysis even when provided with the same information about the same organization and its environment. Accordingly, a SWOT analysis is best used as a guide and not a prescription. Adding and weighting criteria to each factor increases the validity of the analysis.

Areas to Consider

Some of the key areas to consider when identifying and evaluating Strengths, Weaknesses, Opportunities and Threats are listed in the example of a SWOT analysis in Table 4.

Table 4. An example of the SWOT analysis.

STRENGTHS List the positive characteristics of WBL		WEAKNESSES List the negative characteristics of WBL	
I N T E R N A L	<ul style="list-style-type: none"> ■ Versatile and active contacts with working life ■ Good reputation as an innovative organization ■ Highly qualified staff with long experience of working life in the field ■ Motivated students ■ Modern working environment at school ■ Responsible, innovative and open-minded management ■ Good counselling for students to support their decisions relating to on-the-job learning places ■ etc. 		<ul style="list-style-type: none"> ■ Poor contacts with working life and stakeholders ■ Poor communication between educational organizations and working life concerning the qualification needs of enterprises ■ Lack of qualified staff (no close contacts with working life) ■ Weak management – not improvement-oriented ■ Poor resources of all kinds ■ etc.
OPPORTUNITIES List of opportunities for WBL		THREATS List of threats to WBL	
E X T E R N A L	<ul style="list-style-type: none"> ■ Looking after new contacts with working life and stakeholders ■ Creating an innovative working climate ■ Changing planning methods ■ Modern working environment at workplaces ■ Technological progress ■ Integrating different stakeholders and target groups into planning ■ Increasing the importance of WBL within the curriculum ■ etc. 		<ul style="list-style-type: none"> ■ Losing contacts with working life and stakeholders ■ Bad working climate in on-the-job learning places, but also within the VET organization ■ Inadequate planning methods ■ Technological equipment is not updated ■ Staff losing motivation to support WBL and WBL students ■ Not enough competent counselling for students at workplaces because of possible changes at workplaces ■ etc.

Further examples can be found on the websites mentioned in the references of this Manual.

3.2 Mind map

A mind map is one tool which could help to find a good WBL practice, for example.

A mind map is a diagram used to represent words, ideas, tasks or other items linked to and arranged around a central key word or idea. Mind maps are used to generate, visualize, structure and classify ideas, and as an aid in study, organization, problem-solving, decision-making and writing. By presenting ideas in a radial, graphical, non-linear manner, mind maps encourage a brainstorming approach to planning and organizational tasks. Though the branches of a mind map represent hierarchical tree structures, their radial arrangement disrupts the prioritization of concepts typically associated with hierarchies presented with more linear visual cues. This orientation towards brainstorming encourages users to enumerate and connect concepts without a tendency to begin within a particular conceptual framework. (Wikipedia)

Table 5. An example how to find a good WBL practice by using a mind map?

<p>Group work using a mind map → What kind of good practices (GP) will meet our needs?</p> <p>Objective: Make the participants aware of the positive consequences and critical points of the GP.</p> <p>Progression of work: Write the GP in the middle of the flipchart → → Use brainstorming to find out all the effects of the existing GP → Write ideas on stickers (one idea per sticker) → Classify and move the stickers into three different groups showing how the GP will affect</p> <ol style="list-style-type: none">1. his or her own activities2. partners' / partner companies' activities3. the reality of a student <p>Conclusion: What are the positive effects and the core elements that need to be worked on? (Own GP)</p> <p>Points of view for assessing the effects:</p> <ul style="list-style-type: none">■ Beneficiaries' points of view■ Financial point of view■ Staff's point of view■ Technical point of view, equipments, infra structure etc.

Another example how to use mind map as a tool you find in Appendix 5.

3.3 Peer Review

A Peer Review is a form of external evaluation with the aim of supporting the reviewed educational institution in its quality assurance and quality development efforts. An external group of experts, called Peers, is invited to assess the quality of different fields of the institution, such as the quality of education and training provision of individual departments or of the entire organization. During the evaluation process, the Peers visit the reviewed institution.

An important aspect of the Peer Review is systematic learning about good practices and networking between similar organizations, but also between educational organizations and industry or other subjects in the local environment. A Peer Review can present strengths, weaknesses and showcase good practices. It can be a starting point for the improvement of work-based learning and it can help to identify good WBL practices too.

A good peer team consists of people with different kind of expertise. A Peer is a person, who is an equal of or is on an equal standing with the people whose performance is being reviewed and who works in a similar environment (and/or at a similar institution). A peer is external and independent and he/she has specific professional expertise and knowledge in the field.

The figure 4 shows the phases of the Peer Review for VET. More information of the Peer Review can be found in the European Peer Review Manual (European Peer Review Manual 2007, 8).

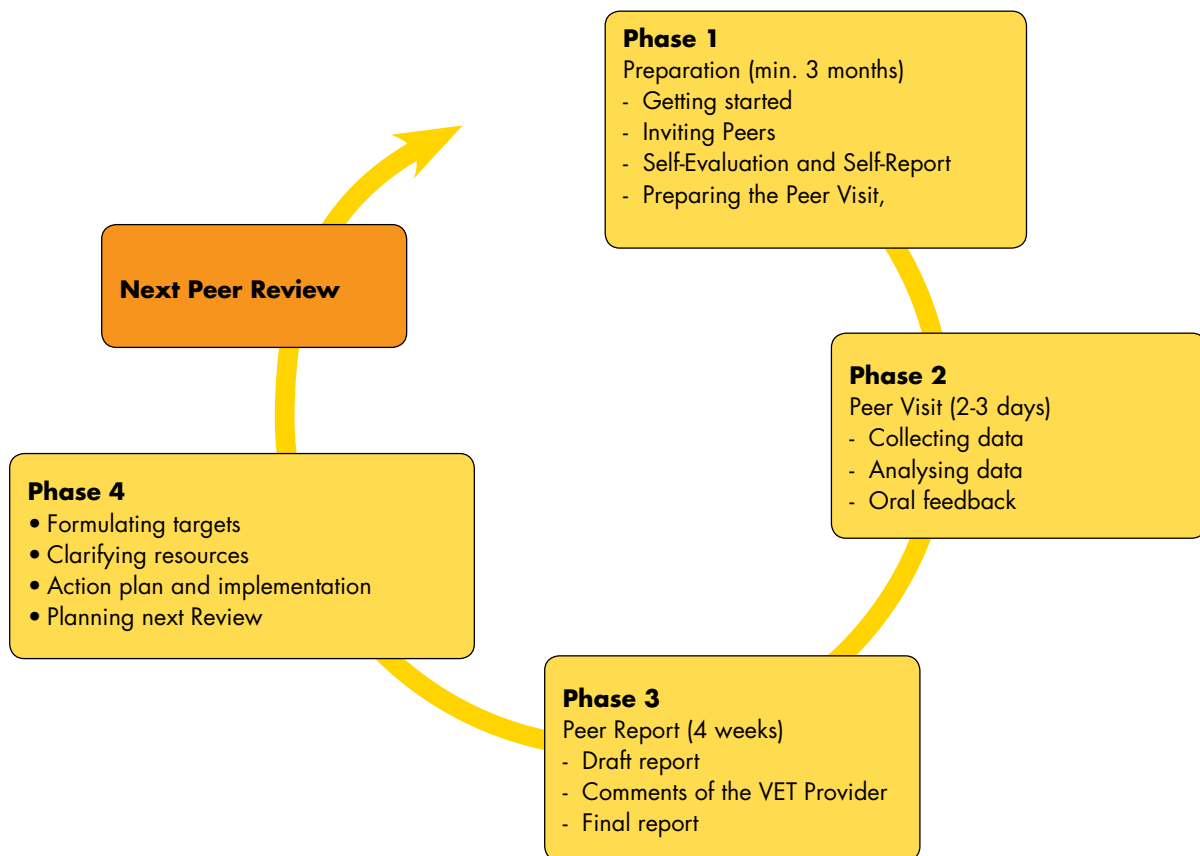


Figure 4. Four phases of the European Peer Review.

3.4 Mentoring

Mentoring involves communication and is relationship-based. In the organizational setting, mentoring can take many forms. In practical terms, mentoring is very similar to consultancy and counselling. Mentoring is a process for the informal transmission of knowledge, social capital and psychosocial support. People acting as mentors are perceived to have greater relevant knowledge, wisdom or experience than their target audience. In many different arenas, people have benefited from being part of a mentoring relationship. The concept of mentoring and how to support the transfer of innovation (TOI) process by mentoring are described detailed in Appendix 6.

- *In the transfer of innovation, the mentor supports the team or a person in charge of planning work-based learning in the organization which has identified the need to find a good practice and transfer it to the organization.*

Who are the beneficiaries and what are the success factors of the mentoring process?

The relationship is always based on trust. The beneficiaries of a mentoring process are all those people involved in the process:

- people connected to the organization where mentoring takes place
- the organization in which or for which this kind of activity is being carried out
- the mentors themselves
- however, in case the mentoring does not take place in the mentor's own organization, the beneficiaries can also be observed there

Good mentors listen without judging, they give directions and advice but not ready-made solutions. They also encourage and inspire those in charge of the transfer of innovation process. The mentoring process assumes involvement, time and vocational talent etc. In terms of experiences of the mentoring process, the success factors of the mentoring process also include:

- Combining professional development with personal development
- The active-participatory character
- Adaptability to any kinds of special circumstances
- Emphasis on the practice-oriented approach

Different ways to implement the WBL-TOI mentoring process

The aims of mentoring may be, for example, development of WBL, mutual learning and long-term benefits for the organization in which the mentoring takes place. In the mentoring process, it is important to implement the principles of quality assurance and continuous improvement (the phases of European Quality Assurance Reference Framework, the EQARF) to assure that continuous improvement and mutual learning will be possible throughout the whole TOI process.

Ways to implement a mentoring process:

- a) Good practice, outside ↔ act as a mentor in own organization
- b) Good practice, mentor ↔ to act as a mentor in other organization in the country or abroad

Phases of the WBL-TOI mentoring process

Mutual learning is a key principle of the mentoring process, which takes place during every phase of the process. It is also important for support to be available before, during and after the process.

1. Choice of mentors

There are different issues which should be taken into account when making the choice and you ultimately have to reach consensus based on different criteria and approaches:

- Common criteria for mentors
- The criteria for the organization to choose the mentor
- The needs and expectations of the mentor
- The targets and content area of the mentoring process

2. Training mentors

Mentors may already be trained and have experience of mentoring. If this is not the case, it is crucial for the success of the mentoring that the mentor has enough knowledge and skills for mentoring and that they can fulfil the required characteristics.

3. Consensus on operational principles and preparatory tasks

- General description of the mentoring process and consensus between the organization and the mentor.
- Operating principles (policies) of the mentoring process are discussed and decided.
- Meetings with the team involved in the mentoring process will be organized.
- Those responsible for the process are identified.
- An evaluation plan for the mentoring process is set up.
The evaluation will be carried out and improvement activities can take place.

4. Get acquainted with the operational environment

It is important that, before the mentoring period, the mentor becomes acquainted with the VET system in the target country, circumstances (companies and other employers), work-based learning and even, for example, the social development of the country and the region.

5. Planning the mentoring process together with the organization

- a. The mentor makes the first contact with the organization.

It is important that the WBL-TOI Manual or other sources of information about mentoring are available for people within the organization before the mentoring can start. Expectations and the targets of the mentoring process will also be clarified. In this phase, the organization will carry out a SWOT analysis on WBL or use another method to position itself concerning WBL. The results of this analysis will be sent to the mentor.

- b. The mentor makes the second contact with the organization
- c. The mentor helps the organization become acquainted with the good practice which has been chosen for the transfer. Common needs should be identified.
- d. A timetable will be prepared and responsibilities will be decided.

The final result of this phase is a preliminary action plan for the mentoring process. Besides that, checklists can be a useful tool for mentors so that the mentor will be able to follow the mentoring process even in an unfamiliar situation.

6. Mentoring

- b. Opening session

The opening session will usually last between 2 hours and half a day. It can involve selected staff members from the target organization, decision-makers (management of the organization), stakeholders (e.g. employers, inspectors, ministry) and – last but not least – the students, who are the final beneficiaries of the WBL process. The students should also have been involved in the early stages of planning. The opening session will involve getting knowledge about the mentoring process and its objectives, therefore it is also meant as an outlining session as well as a “marketing” session for the whole mentoring process. The following questions should be answered:

- What are the benefits of the mentoring process?
- Why does the WBL need to be improved or implemented?

After the opening session, the mentoring process can start with support from the WBL-TOI Manual. Table 6 can be used for planning the tasks for the mentoring period.

Table 6. Planning tasks for mentoring period

	Phase 1	Phase 2	Phase 3	Phase...N etc.
Activities of the mentoring (M) process	Act1	Act 2	Act 3	Act ...N
Tasks for the TOI process	Task1	Task2	Task3	Task...N

- a. A draft action plan for the transfer process will be prepared.
- b. A final session including, for example, decisions on the next steps involved in planning or implementing WBL.
- c. The WBL-TOI plan will start to be implemented within the organization.

7. Feedback and evaluation relating to the mentoring process

Feedback on the mentoring process will be collected and the mentoring process will be evaluated. It is important to get feedback on the success of the process both from the VET provider/organization and from the mentor. The evaluation will be carried out and improvement activities take place. You can find examples of feedback templates in Appendix 7.

3.5 An action plan and follow-up

At the end of the planning phase, a planning document will often be produced to provide every person involved in the implementation with a common understanding of the motivation and planned implementation of the transfer of a WBL good practice. Very often an action plan is used in this case, which allows all the steps of the implementation to be followed. Below is an example of an action plan which the organization can use for following up the planning, implementation, evaluation and review of the transfer of a good WBL practice.

Table 7 includes an example of action plan, which can be used for following up on planning, implementation, evaluation and review of the transfer of good WBL practices.

Table 7. An example of an action plan.

Topic	Concrete activity	Timetable	Person in charge	Status

3.6 Process planning tools

Planning activities are required for almost everything we do in order to assure that implementation of an activity or project runs smoothly. We can use specific tools and most of them are also used for project management. Project management tools are useful for any tasks in which different outcomes are possible - where risks of problems and failure exist - and so require planning and assessment options, as well as organization of activities and resources to deliver successful results. In this Manual, we present some tools that project managers often use and which can also be helpful for everyone in planning the transfer of a good WBL practice.

The tools will be presented detailed in Appendix 9, where we give a short overview of the range of tools for process planning:

- **Estimating Time accurately:** Time estimates drive setting deadlines for delivery of projects or activities, and hence peoples' assessments of their reliability; they often determine the pricing of contracts and their consequent profitability
- **Scheduling activities using Milestones:** Appropriate timetables and action plans are often sufficient to coordinate and implement projects and project-related activities. These should be explained and negotiated with the staff involved in order to improve plans and get understanding, input and approval from staff.

Chapter 4

Quality assurance of the transfer process of good work-based learning practices

This chapter provides a short introduction to quality assurance of the WBL transfer process.

4.1 Different approaches to quality assurance of the transfer process

Quality assurance and the successful transfer of good work-based learning practices comprise both quality assurance and assessment of the effectiveness of a single transfer and as part of an organization's or a VET provider's operating environment.

Related to quality assurance process, in general one way to design, assure, implement and measure the quality of assurance process, is by setting requirements related to the organization's objectives. It is very important to identify the critical points of the transfer process too. These requirements are transformed into specific "quality indicators" which have to be measured permanently by the organization through specific assessment of processes in the form of internal and external audits or reviews, for example. The results of these measurements could create so-called "non-conformances". The quality of work-based learning may be, for example, conformance with the targets of the curricula and individual learners or other beneficiaries. The success of the WBL transfer process is scrutinized in relation to the objectives of that process.

The quality assurance of the transfer of a good WBL practice is not only directed to the transfer itself and its planning but also to identifying, analyzing and selecting the good practice (compare: the overview of the transfer process).

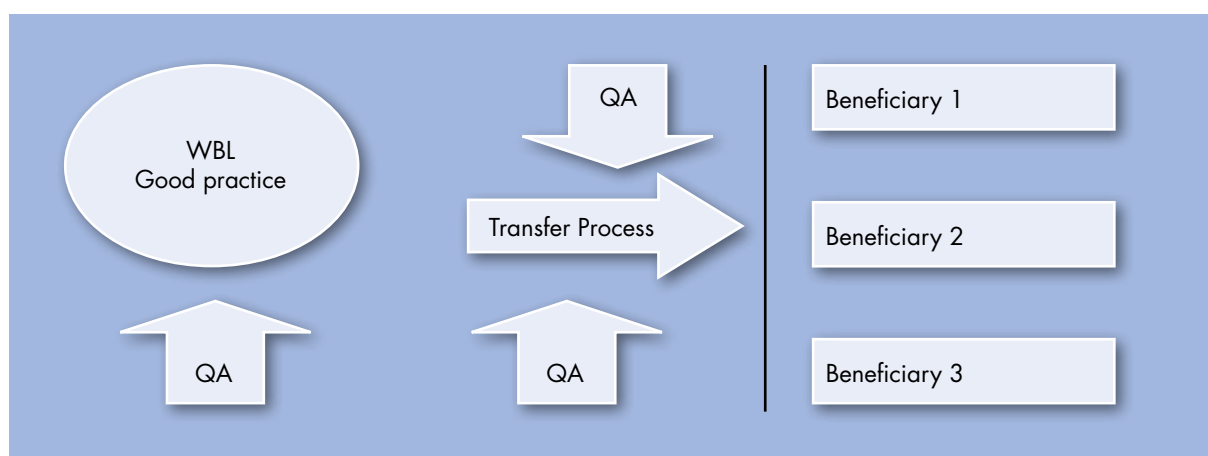


Figure 5. Quality assurance of the components of the good WBL practices transfer process.

Another way is related to the concept of Excellence. Excellent organizations achieve and sustain superior levels of performance that meet or exceed the expectations of all their stakeholders. The main difference from the “conformance” measurement is that the Excellence Model allows identification of the “quality level” of the whole organization. The WBL innovation transfer process will then be assessed as part of the whole organization’s performance. The self-evaluation of the VET provider will cover evaluation of different processes and the relationships between them. There is also focus on how the newly transferred WBL practice can promote the organization’s performance. As part of the transfer, a new practice can appear to new partnerships and new WBL places for students then follow.

The EQARF as a reference framework helps VET providers promote and monitor continuous improvement of their VET provision based on common references. It comprises a quality assurance and improvement cycle, planning, implementation, evaluation and assessment as well as review/revision. The EQARF guides VET providers to pay attention to aspects that are important in terms of the quality of the planning of the transfer process and the process as a whole.

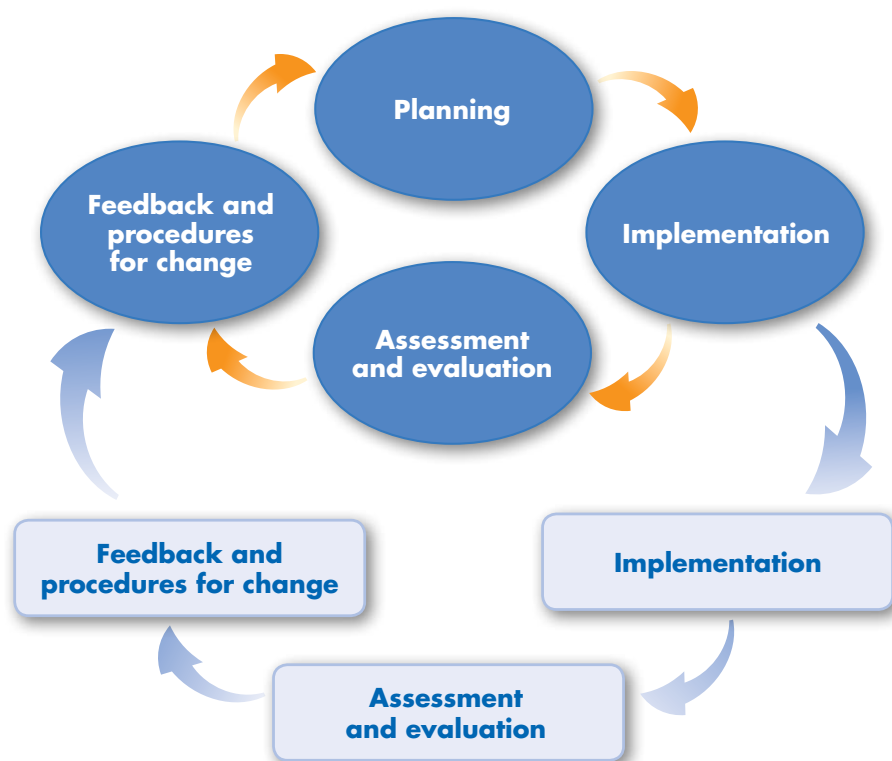


Figure 6. The transfer planning process within the EQARF framework.

4.2 How to assure, evaluate and improve the quality of a planning process

The main aim of the planning phase is to establish the vision, mission, values, policies, strategies, processes, objectives and key indicators for the whole transfer process. The inputs, outputs, resources and good practices also have to be identified for each process or at least for the key processes. Moreover, in order to determine the level of conformance, each input must have allocated quantitative targets which then have to be compared with the real results.

The WBL planning phase does not end with planning the transfer of the good WBL practice. It has to be reviewed and evaluated constantly during the entire phase and also at the end of it, according to the same rules specific to the EQARF methodology. At the same time, evaluation is directly connected to improvements during a planning process.

The evaluation of a planning process is related to a successive process consisting of gathering data and then analyzing it. The resulting information can be used to determine whether the planning process is effectively carrying out the planned activities and if it is achieving the stated objectives and anticipated results.

The measure of success for the planning process would be based on the measurable goals and objectives established during the process planning phase. Measurable objectives or the measures of success should be established before implementation begins. They become the milestone for measuring progress or success.

There is a close interconnection between the evaluation and improvement stages during a planning process. During the evaluation, made both at the planning phase and at the end of it, we can draw some conclusions and analyze whether we can improve the plan before we start to implement it. This step can be considered to be a milestone in the entire WBL planning phase because it can reveal important aspects that had not been taken into consideration at the beginning of the process.

An example of all components of the EQARF methodology is shown in Table 8. Application of the EQARF to VET providers including those offering good WBL practices could be very effective. (Hohan, Quality Assurance in the Romanian CVET, CALISIS project, 2009, p. 62)

Table 8. Checklist for planning phase evaluation.

<p>Plan the Planning</p> <ul style="list-style-type: none"> ■ Design the strategy and sub-strategies ■ Setting SMART Objectives ■ Identification of those responsible for each process ■ Specific legislation ■ Information system data, Intranet ■ Identification of Benchmarking partners ■ Stakeholders 	<p>Check the Planning (Assessment and Evaluation)</p> <ul style="list-style-type: none"> ■ Plan "Self-evaluation" ■ Plan internal or external audits/evaluations ■ Establish conformance with the system using reference documents ■ Set expected results referring to benchmarks ■ Stakeholder involvement in the evaluation process
<p>Implement the Planning (Do)</p> <ul style="list-style-type: none"> ■ Planning operational processes ■ Planning allocation of resources: financial/human/administrative/technical/logistics/information/schedule ■ Planning training/staff development ■ Appointment of the process owner 	<p>Revise/improve Planning (Feedback and procedures for change)</p> <ul style="list-style-type: none"> ■ Develop a corrective action plan for the identified non-conformances ■ Develop a plan for recalibrating the methodology behind setting targets

In planning the transfer process of good WBL practices we should consider the following components: inputs, the transfer channel, resources, perturbations, outputs and feedback measures. Checklist of the components of the planning process of WBL-TOI you find as appendix 10.

4.3 Key points to remember

Planning the transfer process has a very important function to ensure a successful transfer process.

Processes should be planned and carried out under controlled conditions and changes. We can define control as being the act of comparing the progress of the plan so that corrective action can be taken when any deviation from the planned performance takes place. An effective process is one that realizes the planned activities and achieves the planned results.

- Control: to compare progress against the plan so that corrective action can be taken in case a deviation occurs
- Evaluate: to determine or judge value or worth
- If you take no action in response to a deviation, you have a monitoring system, not a control system.

Feedback and evaluation

In order to have a successful planning process, we must have feedback. When drawing up the plan, we should ask for feedback from different people with different functions. They could give their views of our plan, any suggestions for improving it and if they may be influenced by its results or not.

However, such a process review should not only be conducted at the end of the project, but also at major milestones during our planning process. Process reviews should also help the team learn in order to improve their performance. (An example may be when we analyze needs, when we make the plan for implementation of the WBL-TOI process within our organization, when we define how to make the good WBL practice transfer). Assessment of the good WBL transfer process or planning it is done to determine the direction in which the transfer process should continue.

1. What have we planned well so far?
2. What do we want to improve (or plan better) in future implementation of the good WBL practice?

The evaluation and control system should also be designed with these questions in mind:

- What are the aspects of the work that it is most important to track and control?
- What are the critical points in the process at which controls should be placed?
- What are the main factors involved?

The quality assurance of the planning of transfer process of good work-based learning practices can be analyzed against the following criteria, for example:

- Expectations both of stakeholders and the targets of the organization
- National legislation requirements and WBL culture
- EQF and the EQARF requirements

Improvement actions

The evaluation and control system should focus on response. If you do not use the resulting information and take corrective actions, then it is only a monitoring process. If you realize that you did not take into consideration all the aspects when planning implementation of the good WBL practice in your organization and you do not revise your plan, then you are not exercising control over your planning process.

The time taken to answer is also important when planning the transfer of innovation process. The response to evaluation and control data must be timely. If action takes place too late, it can be ineffective.

References

- Arnkil, R. 2006. Hyvien käytäntöjen levittäminen EU:n kehittämissstrategiana. In Seppänen-Järvelä, R., Karjalainen, V. (ed.) Kehittämistyön risteyskäsiä. Stakes.
- Arnkil, T. 2006. Mapping Out Good Practice – and How Can we learn from it? An Overview of the debate, themes and networks of good practice transfer. www.urbact.org/upload/mod
- Billet 2001. In: Lundsteen. 2009. Consequential transition in internships. University of Oxford, mimeo.
- Chesbrough, H Vanhavebeke, W & west, J. 2006. Open innovation: Researching a New Paradigm. Oxford University Press.
- Dewar 2003, in: Hardacre/Schneider (2007): Work-based learning interim project report. Overview of literature. www.heacademy.ac.uk/assets/York/documents
- European Peer Review Manual for initial VET. www.peer-review-education.net
- Greenhalgh, T, Robert, G, Macfarlane, F., Bate, P., Kyriakidou, O. 2004. Diffusion of Innovations in Service Organizations. Systematic Review and Recommendations. University College London. www.blackwell-synergy.com/doi/abs
- Lundsteen. 2009. Consequential transition in internships. University of Oxford.
- Quality Management Recommendation for Vocational Education and Training. 2008. Finnish National Board of Education. Yliopistopaino. Helsinki.
- Recommendation of the European Parliament and the Council on establishment of a European Quality Assurance Reference Framework for Vocational Education and Training. June 2009.
- Rogers, E.M. 2003. Diffusion of innovations. Free Press. New York.
- Seagraves 1996, in: Hardacre/Schneider. 2007. Work-based learning interim project report. Overview of literature. www.heacademy.ac.uk/assets/York/documents/employer
- Staicules, C. Solicitarea cu succes a fondurilor Europene. Editura Forum. Romania.
- Stähle, P. Sotarauta, M & Pöyhönen, A. 2004. Innovatiivisten ympäristöjen ja organisaatioiden johtaminen. Eduskunnan kanslian julkaisu. 6/2004.
- Visscher, Adrie J. (ed.) 2009. Improving Quality Assurance in European Vocational Education and Training. Factors Influencing the Use of Quality Assurance Findings. Springer.
- www.quickmba.com
www.businessballs.com
www.mindtools.com
www.uta.fi/opiskelu/opetuksen_tuki

Appendix 1

Background of the WBL-TOI Manual project

The Common Quality Assurance Framework (CQAF) was adopted by European Ministers in May 2004. The quality assurance of the transfer of good practices carried out according to the CQAF model supports VET providers in successful implementation of good practices and intends to increase interest in applying a common European quality assurance framework. Applying the CQAF to the transfer of good practices and to the quality assurance of the process is aimed at assuring the procedure, which will be one of the challenges in implementation of the new European Quality Assurance Reference Framework (EQARF) at VET provider level. The EQARF was launched in June 2009 after the application phase of this project and it was reasonable to use the new framework in this Manual. The EQARF can also be used as a framework for the identification, support and exchange of best practices at national and local levels.

The critical points of the transfer process and feedback from partners were collected after the pilot phase and they were taken into account when finalising the Manual. Information on transferred practices was also documented. In addition, national transfer strategies were also drawn up in partner countries in order to increase transfer of innovations and use of the Manual.

Shifting tendencies and demands on the labour market

In December 2008, the European Council approved a Communication entitled 'New Skills for New Jobs' with a view to presenting an overview of expected changes in the labour market over the next 10 years. The analysis suggests that there could be approximately 100 million job openings in the EU25 area during the period from 2006 to 2020: most are replacement jobs and 20% are additional jobs.

On the supply side of the labour market, Eurostat estimates an increasing quantitative shortage: the EU's working age population will peak in 2012 and then start shrinking as the 'baby-boomers' retire; as the participation rate of women and older workers will continue to increase, the effective labour force should continue to grow slowly until 2020, at which point the 'ageing effect' will outstrip the increase in participation rates.

On the demand side, the slow but steady shift in the sector distribution of EU employment is likely to continue: in 2020, almost three quarters of jobs will be in services. The primary sector could lose 2.9 million jobs, while manufacturing would experience a net loss of 800,000 jobs. Lastly, efforts to mitigate and tackle climate change and environmental degradation will create a new 'green economy', with millions of new jobs across the world especially in energy, water and waste treatment, construction, transport, industry, agriculture and forestry. The market for environmental products and services is projected to double.

The next decade will see an increasing demand for a highly qualified and adaptable workforce and more skills-dependent jobs. The strength of the services sector and the wide adoption of ICT reduce the labour input for routine cognitive and Manual tasks; technological change also influences the organization of work towards more flexible forms, which affects demand for different levels of skills. The evolution of international trade and globalisation are other factors leading to increased demand for highly skilled workers in Europe and reduced demand for unskilled labour in developed countries.

The severity of the financial crisis adds an exceptional degree of unpredictability to the future of the world's economy – yet in order to put Europe on the road to recovery, it is essential to enhance human capital and employability by upgrading skills.

Transversal and generic skills (problem-solving, analytical skills, self-management and communication skills, linguistic skills, digital competences) and the key competence of learning-to-learn, recognising learning needs and finding opportunities for learning, are essential for everyone in a changing economy where some jobs will disappear while new ones will be created.

Providing high quality early-childhood and basic education for all, improving education attainment and preventing early school leaving are crucial to equip people with key competences. The development of new skills and competencies to fully exploit the potential for recovery is a priority and a challenge for the EU and national public authorities, for education and training providers, companies, workers and students. Ensuring a better match between the supply of skills and labour market demand is just as necessary.

The changes in the labour market will demand readiness and sensitivity for new modes of action in education and working life. The purpose of this Manual is to give VET providers tools for finding ways and methods to recognise good work-based learning practices and to adapt them within their own organization.

Current developments in European VET

The transition to a knowledge-based economy (Lisbon European Council 2000), the challenge underlined in the vision proposed for 2020, requires modernisation and continuous improvement of vocational education and training (VET) systems in order to follow the rapid changes in the economy and society, so that they can help increase employability and social inclusion, improve access to lifelong learning for all and promote the development of workers' skills in order to ensure flexibility and adaptability.

The Lisbon Integrated Guidelines for Growth and Jobs 2005–2008 call upon Member States to develop affordable, accessible lifelong learning systems that are responsive to the changing needs of the knowledge-based economy and society.

The EU Recommendation on the establishment of a European Quality Assurance Reference Framework for VET (the EQARF 2008) provides a reference tool to help Member States promote and monitor continuous improvement of their VET systems based on common European references, in order to promote a culture of quality improvement and wider participation. The Framework should be applied at the VET system, VET provider and qualification-awarding levels.

The importance of quality improvement in VET has been re-affirmed by the new strategic framework for European co-operation in education and training, adopted by the Council in May 2009 (ET 2020). The conclusions identify both immediate priorities for 2009–2011 and long-term challenges for the decade ahead. The long-term strategic objectives are:

1. Making lifelong learning and mobility a reality;
2. Improving the quality and efficiency of education and training;
3. Promoting equity, social cohesion and active citizenship;
4. Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training.

The strategic framework for European co-operation in education and training (ET 2020) reinforces the need for everyone to acquire key competences, placing it as one of the strategic objectives for improving creativity and innovation, including entrepreneurship at all levels of education and training. The tools used to meet the strategic objectives include new education and training benchmarks for monitoring progress across Europe.

Both the EQARF and the ET 2020 Recommendations require a common awareness of all those involved in the VET systems. Work-based learning is seen as being one of the key factors for avoiding problems such as the mismatch between supply and demand and dropouts, which are challenges that the VET system should respond to. Those involved are the Member States, the Regional Authorities and the social partners, while VET providers also play a key role.

Improving the quality and efficiency of education and training is a commitment that requires a contribution from all VET providers by enhancing the quality and efficiency of their actions. That means that, in a world where big changes are expected in the labour market for the near future, it becomes a 'must' to develop the competences needed to read, anticipate and better match the skills requested by the productive system.

In meeting these objectives, a major role could be played by the adoption and increasing role of WBL as an experience included as part of all training courses and as a methodology on which traineeship and apprenticeship programmes are based.

Of all the different education/training systems, work-based learning (WBL) is most directly connected to the labour market. Therefore, WBL is particularly important and a major contributor to fulfilling the revised Lisbon strategy for general economic and social development in the European Union (ET 2020).

Work-based learning assists with development of students' workplace awareness and helps young people to gain:

- a. basic workplace skills (including teamwork, communication, problem solving; customer service and social etiquette skills);
- b. Knowledge of specific occupational skills; and,
- c. An understanding of different industries in order to make informed career choices.

Employers value work-based learning because the competencies acquired by students are those that are specifically needed in the workplace. It's worth is widely recognised.

When properly designed and supported, work-based learning can help schools to prepare students better for an economy that demands workers to have strong academic and career knowledge and skills, to be adaptable to change and to be prepared for lifelong learning.

WBL also provides an opportunity to meet students' demands for work experience as part of education and training. WBL is more focused on practical learning and it can be more motivating for those students whose orientation is more practical.

Appendix 2

Service Process of the Project

The newest innovation research shows that user-oriented transfer of innovation process is based on interaction between persons involved in the transfer process and beneficiaries. It is important to identify the end-users of the transferred work-based learning practice and involve them into different phases of the transfer process. Transfer of innovation is a whole “service package” which contains not only transfer of good practice but supporting services and marketing to persons who are in charge to assure the success of the transfer process too.

Name of the Project		
Transparent matters		
Phases of customer's activity		
Phases of customer service situation (transparent for customer)		
Phases of customer feedback situation (invisible)		
Support service		
Name of transferable service		
Customer Service		
Compact description of service		
Service packages for customers		
Service output		
Benefits:	Value:	Emotions:

Lauri Tuomi, 2010

Appendix 3

Key questions at different phases of the transfer process

Key questions at the implementation phase:

What are the preconditions for starting the transfer of innovation of work-based learning (implementation phase)?	<ul style="list-style-type: none"> ■ How do you illustrate the whole process? ■ How do you make a more detailed description of the first step of the transfer of innovation process?
Who are the key participants in the transfer of innovation process?	<ul style="list-style-type: none"> ■ Do you need change agents? ■ How do you involve representatives of working life in the transfer of innovation process?
What is the target group of the transfer of innovation process?	<ul style="list-style-type: none"> ■ Is the innovation targeted to the whole organization? ■ Do you prefer to use pilots? ■ What is the right time for the target group?
What are the principles and constructions for the transfer of innovation?	<ul style="list-style-type: none"> ■ How do you use continuous feedback? ■ How do you establish forums for promotion of the transfer of innovations? ■ What kinds of changes are needed in the operating environment and structures?
How will the transfer of innovation be carried out?	<ul style="list-style-type: none"> ■ How do you document the process? ■ How do change agents promote the process? ■ What are the checkpoints? ■ How do you assure sufficiency of resources? ■ What kind of support activities can be used (mentoring, peer review, counseling and tutoring)
How will the implementation phase be evaluated?	<ul style="list-style-type: none"> ■ Does it make sense to continue the process or is the existing practice better?
How do you improve the implementation phase?	<ul style="list-style-type: none"> ■ What is the feedback from customers and participants? ■ Does the process have any side effects? ■ How effective was the transfer of innovation process?

Key questions at the evaluation phase:

What evaluation criteria will be used?	<ul style="list-style-type: none"> ■ What are the aims and targets of the evaluation?
What are the key indicators used in the evaluation?	<ul style="list-style-type: none"> ■ Which factors influence the success of the transfer process?
What methods will be used in the evaluation and assessment of the success and impacts of the WBL transfer process?	<ul style="list-style-type: none"> ■ How is the evaluation carried out? ■ Who takes part in the evaluation? ■ Which methods will be used? <ul style="list-style-type: none"> - SWOT analysis - Self-assessment - Peer review - External evaluation.
What are the subjects of the evaluation and assessment?	<ul style="list-style-type: none"> ■ What has been changed? ■ How has the innovation been changed during the transfer process? ■ What do the final beneficiaries think?
What are the evaluation results?	<ul style="list-style-type: none"> ■ Does the innovation fit the purpose? ■ What is the added value of the innovation? ■ What has been learnt about the transfer process? ■ How do you integrate evaluation of the transfer process with the continuous evaluation system?

Key questions at the review phase:

What is the input for the procedure of change?	<ul style="list-style-type: none"> ■ Is the transfer process suitable and effective? ■ Has the innovation been changed during the transfer process? If yes, how? ■ Has our existing practice been improved during the process? Do we refuse the new innovation and decide to improve the practice already in use within the organization?
How do you improve the transfer process?	<ul style="list-style-type: none"> ■ How could we change the timetable for the transfer process? ■ How can all relevant stakeholders take part in the process?
How do you improve the operating system?	<ul style="list-style-type: none"> ■ Is there scope for improvement of the preconditions of the TOI process?
What are the improvement activities?	<ul style="list-style-type: none"> ■ How can we disseminate the innovation in the best possible way? ■ How can the new innovation become a part of everyday life?

Appendix 4

Critical points in the transfer process of good WBL practice

There is important to recognize the critical points of the change process in own organization. John Kotter (1995 and 2002) has described a helpful model for understanding and managing change. Each stage acknowledges a key principle identified by Kotter relating to people's response and approach to change, in which people see, feel and then change. Kotter's eight step change model can be summarized as:

1. **Increase urgency** - inspire people to move, make objectives real and relevant.
2. **Build the guiding team** - get the right people in place with the right emotional commitment, and the right mix of skills and levels.
3. **Get the vision right** - get the team to establish a simple vision and strategy, focus on emotional and creative aspects necessary to drive service and efficiency.
4. **Communicate for buy-in** – Involve as many people as possible, communicate the essentials, simply, and to appeal and respond to people's needs. De-clutter communications – make technology work for you rather than against.
5. **Empower action** - Remove obstacles, enable constructive feedback and lots of support from leaders – reward and recognize progress and achievements.
6. **Create short-term wins** – Set aims that are easy to achieve - in bite-size chunks. Manageable numbers of initiatives. Finish current stages before starting new ones.
7. **Don't let up** – Foster and encourage determination and persistence - ongoing change - encourage ongoing progress reporting - highlight achieved and future milestones.
8. **Make change stick** – Reinforce the value of successful change via recruitment, promotion, new change leaders. Weave change into culture.

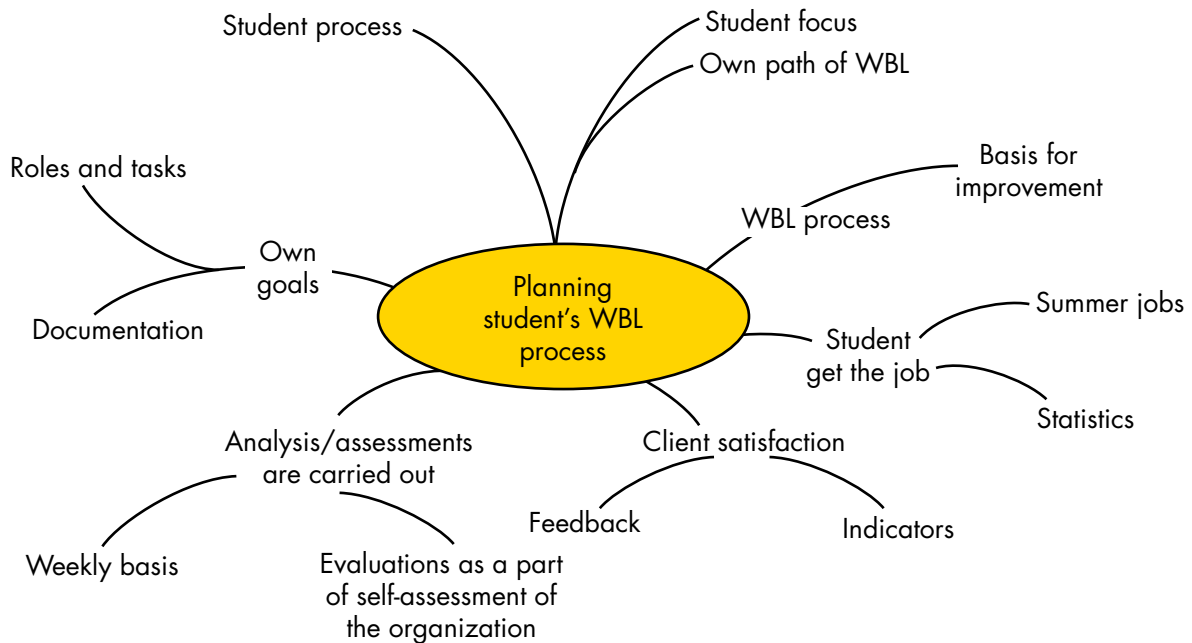
Appendix 5

Mind map as a tool

The objective: To identify what are the opportunities the persons involved in the transfer process can see in the chosen practice or practices.

Phases:

1. The mentor presents the good practice/the good practices which the organization has chosen.
2. Talk about group work (Group work: What are the opportunities/challenges for the organization offered by the good practice presented) and the good practice/practices.



Appendix 6

An example of how to support the WBL-TOI process through mentoring

Preparation of the TOI process:

- Analyze the need for change (SWOT), survey good practices (benchmarking, websites, databases etc), make a decision and a draft for a concrete action plan

Preparation for mentoring (for a Mentor):

1. Participate in mentor training
2. Make a preliminary agreement with a VET provider by email (what, when, where, who will participate, the contact person)
3. Inform the key persons about the agreement
4. Finalize the plan with the VET provider, clarify the role of mentoring, make an agreement about a shared objective/result and send a pre-task by email: What are the participant's expectations for a Mentor

The Mentoring Phase					
	1. day	2. day	3. day	4. day	5. day
Activities of a Mentor	<ul style="list-style-type: none"> ■ get to know the participants better ■ create a confidential atmosphere ■ make agreements about the mentoring phase and the rules ■ introduce the Manual ■ present the GP 	<ul style="list-style-type: none"> ■ talk about the T1 ■ work on the GP by using a mind map (Appendix 5) ■ the Mentor will support and facilitate the procedure by guiding and posing open questions 	<ul style="list-style-type: none"> ■ talk about T2: ■ list the opportunities produced ■ assess them from different points of view ■ record the assessment on a flipchart 	<ul style="list-style-type: none"> ■ talk about T3, ■ discuss the values ■ make a risk analysis (Appendix 8) ■ focusing ■ draft the phases of the TOI 	<ul style="list-style-type: none"> ■ talk about T4 ■ finish the action plan ■ draw up a schedule ■ document it
A TOI task given to participants to prepare for the next session	T1: What are the opportunities/challenges for the organization offered by the GP presented	T2: What are the different forms in which we can utilize the GP?	T3: Make a ranking list about the opportunities assessed and provide arguments for the ranking	T4: What are the challenges of applying the GP and how can we overcome them?	T5: How did the mentoring week succeed? (Appendix 7)
Phase of the TOI-process	Analyze the GP	Purify the GP and reveal the "core elements"	A pre-plan for planting the GP in a organization	A draft for an action plan	A documented action plan; evaluation

Appendix 7

Templates for feedback on the mentoring

Template for VET PROVIDER

Please always write more detailed comments in the boxes after providing your assessment.

Name(s)

Organization

Date

THE MENTOR PROCESS

1. What were the expectations and goals? Were these expectations and goals met through the mentoring process? (Which ones were met, which were not? Why?)
-

2. How prepared did you feel the mentor was for the task?

very well well sufficiently not well

Comments: Areas for improvements

3. How was the planning of the mentoring process together with the mentor?

very good good some conflicts not good

Comments:

4. How was the cooperation with the mentor during the process?

very good good some conflicts not good

Comments:

5. How did the mentoring period succeed in your organization?

very good good some conflicts not good

Comments:

6. What was the main problem during this mentoring process, if any?
How did you managed to solve it?

7. What aspects of the mentoring procedure should be improved?
Please explain your comments in detail.

8. Would your institution like to use a mentor again?
 Yes No

If no, why not?

9. Would you recommend that other institutions use a mentor?
 Yes No

If yes, why? If no, why not?

Other comments / other experiences:

Thank you very much for your answer!

Template for MENTORS

Please always write more detailed comments in the boxes after providing your assessment.

Name

Organization

Date

The questionnaire for VET Providers will give general feedback, this form gives you the opportunity to voice your personal opinions and impressions and reflect on your special role as a mentor.

MENTORING PROCESS

1. What were your expectations and goals? Were these expectations and goals met through the mentoring process? (Which ones were met, which were not? Why?)

2. What are the most important challenges when using mentoring to support the TOI process of WBL planning? Please rank.

- 1.
- 2.
- 3.

3. How should mentor training be improved?

4. Was familiarization with the operating environment appropriate?
Please rank the following options

1. VET system in the country
 strongly agree agree disagree strongly disagree
2. Circumstances (companies and other employers)
 strongly agree agree disagree strongly disagree
3. WBL
 strongly agree agree disagree strongly disagree
4. Social development of the country and the region
 strongly agree agree disagree strongly disagree

Comments:

5. How was planning the mentoring process together with the organization?

- very good good some conflicts not good

Comments:

6. How was cooperation with the VET provider during the mentoring process?

- very good good some conflicts not good

Comments:

7. How successful was the mentoring period within the organization?

- very good good some conflicts not good

Comments:

8. What was the main problem during the mentoring process, if any? How did you solve it?

9. Which aspects were very successful during the mentoring process? Please explain in detail.

GENERAL REFLECTIONS

10. What should other mentors take into account? What should they avoid? Please give some recommendations and/or practical information for other mentors as a result of your own experiences in order to help them implement the mentoring process successfully.

11. What were the most positive experiences resulting from the mentoring process?

What did you learn?

12. What aspects of the mentoring procedure should be improved? Please explain in detail.

13. Would you like to be a mentor again?

- Yes No

If no, why not?

14. What aspects from the mentoring procedure should be improved? Please describe in detail your statements.

15. Would you like to be again a mentor?

- Yes No

If no, why not?

16. Would you recommend other people to be a mentor?

- Yes No

If yes, why? If no, why not?

Other comments / other experiences:

Thank you very much for your answer!

Appendix 8

Risk management analysis

There might be risks, which may have negative effects on the transfer of innovation process. Therefore it is useful to utilize a risk management tool to control and minimize these negative effects. The risks of the TOI process can be analyzed and managed by using a risk analysis tool.

Process or decision-making phase during which assessment will take place	Recognized risks and opportunities	Procedures/risk management activities	Person in charge, timetable	Follow-up and reporting, timetable
Assessing complete activities				
Client orientation (students, companies)				
Management and leadership				
Results-driven orientation				
Life-long learning, innovation and development				
Human resources				
Working procedures				
Working life orientation and partnerships				
Social responsibility				

Appendix 9

Tools for process planning

Planning activities are required for most things that we do in order to assure that implementation of an activity or project is running smoothly. We need specific tools and use most of them for project management. Project management tools are useful for any tasks where different outcomes are possible - where risks of problems and failures exist - and so require planning and assessing options, and organizing activities and resources to deliver a successful result.

Here are some tools that project managers use and which can also be helpful for everyone.

1. Estimating Time Accurately

Accurate time estimation is a skill essential for good planning. It is important to get time estimates right for two main reasons:

1. Time estimates drive the deadlines for delivery of projects or activities, and hence peoples' assessments of your reliability
2. They often determine the pricing of contracts and their ensuing profitability.

Usually, people vastly underestimate the amount of time needed to implement projects. This is particularly true when they are not familiar with the task being carried out. They forget to take into account unexpected events or any unscheduled high priority work. People also often simply fail to allow for the full complexity involved with a job.

This tool helps find ways to estimate time spent on small projects or activities. Time estimates provide important inputs into the other techniques used to organize and structure medium-sized and large projects (Gantt charts and Critical Path Analysis). Both of these techniques reduce large projects down into a set of small projects.

How to Use the Tool:

The first stage when estimating time accurately is to understand fully what you need to achieve. This involves reviewing the task in detail so that there are no unknowns. Inevitably, it is the difficult-to-understand, tricky problems that take the greatest amount of time to solve.

The best way to review the job is to list all tasks in fine detail. Once you have a detailed list of all the tasks that you must achieve, make your best guess as to how long each task will take to complete.

Also make sure that you have allowed time for:

- Other urgent tasks that need to be carried out and that will take priority over this one
- Accidents and emergencies
- Internal meetings
- Holidays and sickness among essential staff
- Contact with other customers, perhaps to arrange the next project
- Equipment breakdowns
- Missed deliveries by suppliers
- Interruptions
- Quality control rejections

These factors may double (or more than double) the length of time needed to complete a project.

If the accuracy of time estimates is critical, you may find it effective to develop a systematic approach to include these factors. If possible, base this on past experience.

Key points:

- You can lose a great deal of credibility by underestimating the length of time needed to implement a project. If you underestimate time, not only do you miss deadlines, but you also put other project workers through unnecessary stress. Projects will become seriously unprofitable and other tasks cannot be started.
- The first step towards making good time estimates is to understand the problem to be solved fully.
- You can then prepare a detailed list of the tasks that must be achieved. This list should include all the administrative tasks and meetings that you need to carry out as well as the work itself.
- Finally, allow time for all the expected and unexpected disruptions and delays to work that will inevitably happen.

2. Scheduling Activities using Milestones

Simple projects/activities involve only one or a few people over a short time. Typically, simple projects/activities will have few tasks dependent on other tasks and will be relatively simple and easy to coordinate.

How is the Tool Used?

Appropriate Timetables and Action Plans are often sufficient to coordinate and implement simple projects/activities. These should be explained and negotiated with the staff involved in order to improve the plans and get understanding, input and buy-in from staff.

This tool consists of a list of key activities/milestones, dates and times for each planned activity. This type of planning is not necessary for planning each task, only the key tasks are planned. Scheduling activities using milestones can be done using the tool presented below:

No	Milestone	Responsible	Period of Time (month or week or day)			Observation
			Period 1	Period 2	...Period n	
1						
2						
...						
n						

Key point

- During the project these will contain sufficient control points and deliveries to monitor project progress and take any appropriate remedial action.

3. Critical Path Analysis and PERT Charts

Critical Path Analysis and PERT are powerful tools that help schedule and manage complex projects. They were developed in the 1950's to control large defense projects and have been used routinely since then.

Critical Path Analysis formally identifies tasks which must be completed on time in order for the whole project to be completed on time. It also identifies which tasks can be delayed if resources need to be reallocated to catch up on missed or overrunning tasks. The disadvantage of CPA, if you use it as the technique for communicating and managing your project plans against, is that the relationship of tasks to time is not as immediately obvious as with Gantt Charts. This can make them more difficult to understand.

A further benefit of Critical Path Analysis is that it helps you identify the minimum length of time needed to complete a project. Where you need to run an accelerated project, it helps you identify the project steps that you should accelerate to complete the project within the time available.

PERT stands for Program Evaluation and Review Technique. PERT is a variation on Critical Path Analysis that takes a slightly more skeptical view of time estimates for each project stage. To use it, estimate the shortest possible time that each activity will take, the most likely length of time and the longest time that might be needed if the activity takes longer than expected.

Use the formula below to calculate the time for each project stage:

$$\frac{\text{shortest time} + 4 \times \text{likely time} + \text{longest time}}{6}$$

This helps bias time estimates away from the unrealistically short timescales normally assumed.

How is the Tool Used?

The essential concept behind Critical Path Analysis is that you cannot start some activities until others are finished. These activities need to be completed in a sequence with each stage being more or less complete before the next stage can begin. These are 'sequential' activities. Other activities are not dependent on completion of any other tasks. You can do these at any time before or after reaching a particular stage. These are non-dependent or 'parallel' tasks.

Steps when drawing up a CPA chart:

Step 1. List all the activities in the plan

For each activity, show the earliest start date, the estimated length of time it will take and whether it is parallel or sequential. If tasks are sequential, show which stage they depend on.

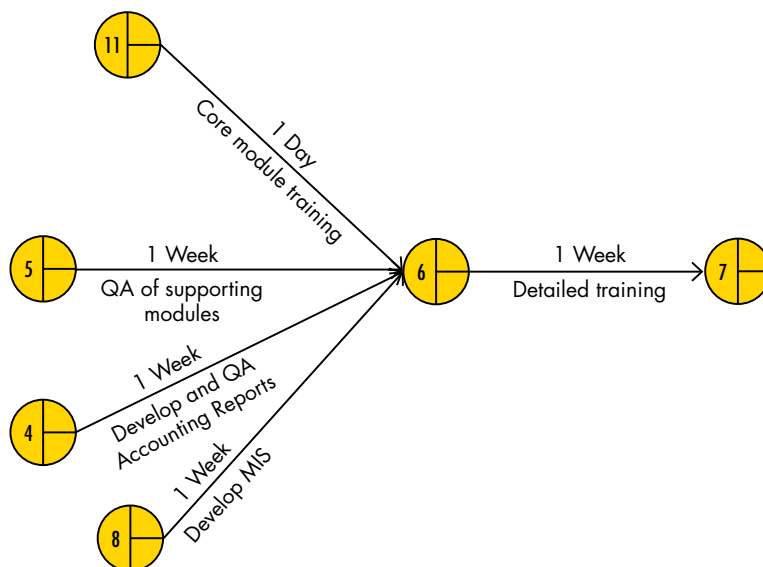
Task	Earliest start	Length	Type	Dependent on...
A. Activity 1	Week 0	1 week	Sequential	
B. Activity 2	Week 1	1 day	Sequential	A
C. Activity 3	Week 1.2	2 weeks	Parallel	B
D. Activity 4	Week 1	2 weeks	Sequential	A
E. Activity 5	Week 3	2 weeks	Sequential	D
F. Activity 6	Week 3	2 weeks	Sequential	D
G. Activity 7	Week 5	3 weeks	Sequential	E
H. Activity 8	Week 5	1 week	Sequential	F
I. Activity 9	Week 8	1 week	Sequential	G
J. Activity10	Week 6	1 day	Parallel	C,H
Etc.

Step 2. Plot the activities as a circle and arrow diagram.

Critical Path Analyses are presented using circle and arrow diagrams. In these, circles show events within the project such as when the tasks start and finish. The number shown on the left-hand side of the circle allows you to identify each one easily. Circles are sometimes known as nodes.

An arrow running between two event circles shows the activity needed to complete that task. A description of the task is written underneath the arrow. The length of the task is shown above it. It is the convention for all arrows to run from left to right. Arrows are also sometimes called arcs.

An example is shown below:



In this figure, activity 6 to 7 cannot start until the other four activities (11 to 6, 5 to 6, 4 to 6 and 8 to 6) have been completed.

Step 3. Analyze the data and assess the planning

You may find that you need to complete a project earlier than your Critical Path Analysis says is possible. In this case you need to re-plan your project.

You have a number of options and would need to assess the impact of each one on the project cost, quality and time required for completion. For example, you could increase resources available for each project activity to bring down the amount of time spent on each one but the impact of some of this would be insignificant and a more efficient way of doing this would be only to look at activities on the critical path.

Key points

Critical Path Analysis is an effective and powerful method of assessing:

- What tasks must be carried out?
- Where parallel activities can be performed?
- The shortest time in which you can complete a project
- Resources needed to execute a project
- The sequence of activities, scheduling and timings involved
- Task priorities
- The most efficient way of shortening time for urgent projects.

An effective Critical Path Analysis can make the difference between the success and failure of complex projects. It can be very useful for assessing the importance of problems that have been faced during implementation of the plan.

PERT is a variant of Critical Path Analysis that takes a more skeptical view of the time needed to complete each project stage.

Appendix 10

Checklist of components of WBL-TOI planning process

When planning the transfer process of good work-based learning practices, we should consider the following components: inputs, the transfer channel, resources, possible obstacles, outputs and feedback measures.

An example of components of the planning process of WBL-TOI.

<p>1. The things that are considered inputs in this process are:</p> <ol style="list-style-type: none"> National context/local context The experiences of the countries related to good practices (GP) of work-based learning (WBL) GP of the WBL identified National experiences related to the EQARF Relevant stakeholders' expectations National legislation related to quality assurance in VET and WBL 	<p>2. The transfer channel components are:</p> <ol style="list-style-type: none"> Mentoring process Benchmarking process Dissemination activities Schools/Training Centers/VET Providers/Workplaces
<p>3. Resources refer to:</p> <ul style="list-style-type: none"> ■ mentoring and other support methods and tools, ■ financial resources, ■ personnel involved, 	<p>4. Obstacles refer, for example, to:</p> <ol style="list-style-type: none"> under-experienced mentors difficulties training mentors national legislation/culture related to WBL and quality assurance in VET not developed the feedback mechanism is not working
<p>5. Outputs expected:</p> <ol style="list-style-type: none"> to be familiar with the good work-based learning practices, transfer of innovation increased awareness of the national VET community related to the TOI of of good WBL practices methods and instruments used for QA of WBL a strategy of the transfer process students with increased specific knowledge and skills local and national experience specific to WBL 	<p>6. Feedback based on:</p> <ol style="list-style-type: none"> measuring the quality of the TOI of good work-based learning practices self-assessment of how project objectives have been achieved measure expected results

Appendix 11

An example of quality assurance tools applicable to a learning organization implementing a good WBL practice.

The example includes tools for quality assurance. The organization has to decide responsible people for every target.

No.	Name of the quality assurance tool	Responsible
PLANNING PHASE		
1.	Set of minimal WBL-TOI operational requirements	
2.	Minimal set of input measurable targets	
3.	List of main processes embedded in a "process map"	
4.	Internal Audit/ Self Assessment plan	
IMPLEMENTATION and EVALUATION PHASES		
5.	Final results of the WBL-TOI process compared with: <ul style="list-style-type: none"> ■ Planned targets ■ Benchmarks of best in class VET WBL providers 	
6.	Measurement questionnaires for quality of WBL-TOI process filled in by: <ul style="list-style-type: none"> ■ Mentors ■ Students ■ Student's employers ■ School staff 	
7.	List of nonconformities identified by audits/ assessments	
8.	System quality management procedures: <ul style="list-style-type: none"> ■ Internal audit ■ Nonconformities control ■ Corrective actions ■ Preventive actions 	
9.	Improvement plans	
10.	Benchmarking plan	
11.	List of measurable outputs	

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