

**Development of a methodology for a long term strategy
on the Continuing Vocational Training Survey (CVTS)
CVTS3 M**

Final Report

Bundesinstitut für Berufsbildung (BiBB)

in cooperation with

3s Research Laboratory

Statistics Finland

Statistics Sweden

FÁS Training and Employment Authority

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Annex 1: CVTS3 Questionnaire Final

Annex 2: Work package 1: Further development of a coherent system of quantitative and qualitative statistics and indicators on vocational training in enterprises (survey output)

- Paper 1: Inclusion of initial vocational training (IVT) in future CVTS
- Paper 2: “Other” forms of continuing vocational training
- Paper 3: Coverage of costs

- Paper 4: Coherence of enterprise-based and individual-based European surveys
- Paper 5: Qualitative questions relating to the training policies of enterprises
- Paper 6: Coherent set of quantitative key-indicators
- Paper 7: Needs and consequences of the extension of coverage with respect to NACE and size of the enterprises

Annex 3: Work package 2: Definition and description of the variables with respect to the survey output (including annex I: Analysis of the questions of CVTS 2 and annex 2: Analysis and proposal for a revision of the questions C4 and C5)
Summary table: Methodological assessment of the variables of CVTS2 and recommendations for CVTS3

Annex 4: Work package 3: Modular European outline questionnaire including the description of the different modules / Work package 4: Improvement of the operational concepts and definitions for the implementation of the survey

- Introduction
- Paper 2: Summary table – Changes between CVTS2 and CVTS 3 / motivation and usage of the questions / data availability in enterprises
- Paper 3: Code book – List of variables
- Paper 4: Glossary
- Paper 5: Qualitative questions concerning the professionalisation of CVT in enterprises (including annex: 3s Research Laboratory - New concepts for the qualitative questions concerning the organisational background of CVT in the enterprises – development of a coherent indicator on professionalisation)
- Paper 6: Note on high performance work systems
- Paper 7: Staging / modularisation approach (including annex 1: Statistics Austria - Experiences with staging and modularisation in conducting CVTS2 in Austria; annex 2: Statistics Sweden – Pros and Cons concerning staging in CVTS3 and annex 3: Statistics Sweden - Two-phase sampling approach in CVTS3)

Annex 5: Work package 5: Survey guidelines (including annex: infas Institute for Applied Social Sciences - infas methodological expertise)

- Paper 1: Data availability in enterprises
- Paper 2: Mode of data collection
- Paper 3: Organisation of the field work

Annex 6: Work package 6: Conceptual informatics framework

Annex 7: Work package 7: Needs and consequences of the extension of coverage with respect to NACE and the size of the enterprises – recommendations for future CVTS surveys (including annex: National Statistical Institute of the Republic Bulgaria - Vocational Training Survey in enterprises – Bulgarian experience in extension of the scope)

Annex 8: Work package 8: European Union Manual

Annex 9: Meeting of the supporting group of German experts – list of participating experts

1. Introduction

This project “Development of a methodology for a long term strategy on the Continuing Vocational Training Survey (CVTS)” lasted from October 2004 until November 2005. The Federal Institute for Vocational Education and Training (BIBB, Germany) led and coordinated the consortium with the following partners:

- 3s research laboratory (Austria)
- Statistics Finland
- Statistics Sweden
- FÁS – Training and Employment Authority (Ireland)

The project supported the methodological preparation and implementation of CVTS3, which is scheduled for 2006. Furthermore the objective of the project was to design a long term approach for future data collections on vocational training in enterprises including the development of the statistical methodology and the organisation of the data collection for future surveys beyond CVTS3.

The final report of this project consists out of five parts. After this introduction chapter two provides a short description of the development of the project, presented with links to the historical background of CVTS1 and CVTS2, as well as to the present official legislation of the survey. The main results of this project are presented in chapter three. Chapter four deals with problems encountered in order to provide information about critical points. Chapter five is focused on central recommendations for future surveys on CVT.

The content of the report reflects the results achieved by the CVTS 3 M consortium. In some rare cases positions of the group members diverged (e.g. on the treatment of training rooms and teaching materials in the cost questions: some partners voted for the separation, some for the aggregation). In those cases the consensus reached within the group is reported.

2. Development of the project

2.1 Historical background

At European level, the first enterprise survey on continuing vocational training (CVTS) was carried out in 1994 in the 12 member states of the European Union at that point of time. The survey (CVTS1) was part of the action programme for the development of continuing vocational training in the European Community (FORCE) based on Council decision 90/267/EEC of 29 May 1990. For the purpose of the survey continuing vocational training (CVT) was defined as “training measures or activities, which enterprises finance, wholly or partly for their persons employed”.¹ The growing policy interest in data on continuing vocational training in enterprises, together with the demand for CVT data to cover all member states, initiated a second European continuing vocational training survey (CVTS2). CVTS2 was coordinated by the Statistical Office of the European Union (Eurostat) and was implemented in 2000, relating to continuing vocational training activities in the enterprises in 1999. CVTS2 was carried out in the 15 EU member states at that point of time, in Norway and in nine candidate countries.² Results of the survey are published in many publications. The most prominent summary of the results can be found on the internet (http://europa.eu.int/comm/education/programmes/leonardo/new/leonardo2/cvts/index_en.htm l). The key tables of CVTS1 and CVTS2 can also be found at the homepage of Eurostat (<http://epp.eurostat.cec.eu.int/>).

The implementation of both CVTS1 and CVTS2 was based on “gentlemen’s agreements” between Eurostat and the EU member states. After the implementation of CVTS2, Eurostat and the EU member states decided to provide a legal basis for the data collection within the European statistical system in the form of a European Parliament/Council Regulation. The third survey on continuing vocational training (CVTS3) will take place in 2006, relating to continuing training activities in the enterprises in 2005. CVTS3 will be based on the “Regulation of the European Parliament and of the Council on statistics relating to vocational training in enterprises” (Regulation 1552/2005/EC). The regulation states that comparable statistical information at Community level, with specific respect to enterprise training, is essential for the development of lifelong learning strategies and for the monitoring of progress in their implementation. The objective of the regulation is the creation of common statistical standards that permit the production of harmonised data and thus establishes a common framework for the production of Community statistics on vocational training in enterprises.

2.2 Objectives of the project

The central objective of this project was not only the methodological preparation of CVTS3; its objective was also to design a long-term approach for future data collections on vocational training in enterprises including the development of the statistical methodology and the organisation of the data collection. Coherence with other European surveys like the Adult Education Survey (AES) are of vital interest. This had to be considered for the CVTS3 approach, taking into account the “Regulation of the European Parliament and of the Council on statistics relating to vocational training in enterprises”.

The main goals of the project were:

- to develop a questionnaire for CVTS3, based on a review of the outline questionnaire used in CVTS2 and the inclusion of new questions because of new demands (e.g.

¹ A more detailed definition of CVT can be found on page 13.

² Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovenia.

- inclusion of initial vocational training in the survey)
- to refine the survey guidelines and the conceptual framework of the survey (codebook, manual with glossary, etc.)
- to seek coherence with other European questionnaires (e.g. Adult Education Survey) in order to promote a coherent system of statistics and indicators concerning lifelong learning in Europe.

In order to achieve these goals the project work was divided into eight work packages. All work packages were delivered on time.³ All final papers are included in the annexes.

Work package 1 (WP1): Further development of a coherent system of quantitative and qualitative statistics and indicators on vocational training in enterprises (Survey output)

Dates of delivery: Draft version 16/11/2004
Final version 25/11/2004

Work package 2 (WP2): Definition and description of the variables with respect to the survey output

Dates of delivery: Draft version 31/01/2005
Final version 23/02/2005

Work package 3 (WP3): Modular European outline questionnaire including the description of the different modules

Dates of delivery: Draft version 29/04/2005
Final version 31/05/2005
Questionnaire Final version 30/06/2005

Work package 4 (WP4): Improvement of the operational concepts and definitions for the implementation of the survey

Dates of delivery: Draft version 29/04/2005
Final version 31/05/2005

Work package 5 (WP5): Survey guidelines

Date of delivery: Final version 22/07/2005

Work package 6 (WP6): Conceptual informatics framework

Date of delivery: Final version 22/07/2005

Work package 7 (WP7): Needs and consequences of the extension of coverage with respect to NACE and size of the enterprises

Work package 7 was separated into two papers: Part 7a provides recommendations for CVTS3 and was delivered together with WP1. Part 7b focuses on future CVTS surveys.

Dates of delivery (7a): Final version 25/11/2004
(7b) Final version 14/10/2005

Work package 8 (WP8): EU-Manual

Dates of delivery: Draft version 31/08/2005
Final version 07/12/2005

³ The work packages 3 and 4 are highly interrelated, therefore the tasks for these work packages were elaborated together in several papers.

2.3 Different needs of users of CVTS data

Potential users of data in the field of enterprise training, and the main users of the first and second survey, range from the European Commission and Parliament, national governments and administrations on different levels, organisations of employers and trade unions, universities, research institutes and enterprises to the general public. Moreover, all these user groups reflect a considerable diversity of user needs and thus different information needs. The description of information needed and the objectives that the information is meant to serve, especially in policymaking and research, had to be considered in defining the intended statistical output. General structural information on the enterprises should help to detect possible relations between the situation of the enterprises and their training policies.

Other points to take into account were the costs of the survey, the burden on the respondents, the availability of detailed data on continuing training in enterprises and the time schedule of the survey and it was not possible to comply with all aspects. Last but not least, aiming at a harmonised survey in order to get comparable results for the countries involved was difficult. The different situations in participating countries regarding the current status of continuing training and the availability of data had to be taken into consideration. Therefore it was necessary to explore whether there are still other sources for some training data and then to decide which information can be collected by other surveys and which can be obtained solely by this survey. It was, moreover, important that a certain degree of comparability with CVTS1 and CVTS2 had to be maintained in CVTS3.

2.4 Composition of project partnership

2.4.1 Core partnership

The project was carried out by an international consortium of key experts in the field of CVTS. Most experts have been involved in the implementation of CVTS2 and some already in CVTS1. Some experts have used CVTS data for national and comparative research activities. The members of this consortium were:

- Federal Institute for Vocational Education and Training (BIBB, Germany) as project leader (Friederike Behringer; Bernd Käßlinger; Dick Moraal; Gudrun Schönfeld; Tanja Tschöpe; Günter Walden)
- 3s research laboratory (Austria) (Günter Hefler, Jörg Markowitsch)
- Statistics Finland (Irja Blomqvist, Hannu Virtanen)
- Statistics Sweden (Lennart Forssén, Henrik Gustafsson, Ann-Charlotte Larsson)
- FÁS – Training and Employment Authority (Ireland) (Roger Fox).

The CVTS3 M consortium worked together in close partnership. There was frequent communication and exchange of papers and comments by email and phone. The consortium had five project meetings in Bonn during the project (21st of October 2004, 14th/15th of March 2005, 9th/10th of May 2005, 20th/21st of June 2005, 23rd/24th of August 2005). With just one exception all partners took part in all meetings. In the project meetings the contributions and papers of the partners, according to the responsibilities of the work packages and the different draft versions of the questionnaire, were presented and intensively discussed. Main tasks of each partner were:

- a) **3s research laboratory**
 - In cooperation with BIBB - WP1 “Further development of a coherent system of quantitative and qualitative statistics and indicators on vocational training in enterprises (Survey output)”
 - In cooperation with BIBB and Statistics Finland - WP4 “Improvement of the operational concepts and definitions for the implementation of the survey”
- b) **Statistics Finland**
 - In cooperation with BIBB - WP2 “Definition and description of the variables with respect to the survey output”
 - In cooperation with BIBB and 3s Research Laboratory - WP4 “Improvement of the operational concepts and definitions for the implementation of the survey”
 - In cooperation with BIBB - WP5 “Survey guidelines”
 - In cooperation with BIBB - WP7 “Needs and Consequences of the extension of coverage with respect to NACE and size of the enterprises”
- c) **Statistics Sweden**
 - WP6 “Conceptual informatics framework”
- d) **FÁS - Training and Employment Authority**
 - In cooperation with BIBB - WP3 “Modular European outline questionnaire including the description of the different modules”

The **BIBB** as project leader was responsible for the final versions of the work packages and also wrote the reports required by the European Commission (inception report, interim report and final report). Furthermore BIBB represented the consortium in all Working Group and Task Force meetings and in three steering group meetings with the European Commission and Eurostat (30th of September 2004, 18th of November 2004 and 27th of June 2005). In addition, BIBB organised all partner meetings in Bonn.

2.4.2 Cooperation with other organisations and experts

For some special topics the CVTS3 M consortium was assisted by other experts in the relevant fields. Statistics Austria, the National Statistical Institute of the Republic of Bulgaria and infas (Institute for Applied Social Sciences - Germany) contributed special expertise on specified items. Statistics Austria provided an expertise on staging and modularisation of the survey. The National Statistical Institute of the Republic of Bulgaria contributed an expertise on the integration of micro-enterprises and additional NACE categories in CVTS, and infas provided expertise on advantages and disadvantages of different modes of data collection, especially on the use of CATI/CAPI and internet. All expertises were summarised in the respective work packages and the original expertises can be found in the annexes of the work packages.

A supporting group of national experts (researchers, statistical offices, government, social partners) was established in Germany. The meeting of this group took place on the 24th of May 2005. The list of participating experts is provided in annex 9. The national experts intensively discussed the first draft version of the questionnaire. With regards to results achieved in this meeting it was jointly agreed that a second meeting was not necessary. The experts preferred being kept informed via email. A new version of the questionnaire was sent to the experts in September 2005, on which they commented via email.

In the tender, an international counselling group was proposed to join in the discussion of papers via email. At the time of writing the tender we did not envisage Eurostat to implement a Task Force with three meetings during the period of working on the project, plus two CVTS

Working Group meetings. In addition the work of the Task Force was accompanied by several national consultation rounds, in which all participating countries had the opportunity to comment on the different versions of the questionnaire. This frequent and intensive exchange fulfilled the purpose of the counselling group. We therefore refrained from establishing the international counselling group.

During the first meeting of the Task Force CEDEFOP volunteered to deliver a proposal for improvement of two of the questions of CVTS2. The consortium welcomed this cooperation with CEDEFOP and their useful contribution to the project.

To make full use of BIBB's expertise in a variety of specific topics related to the subject of the project the work of the team was supported by a group of experts of other departments of BIBB, which gave us valuable comments and support on the subject of the survey and on methodological questions.

2.4.3 CVTS Working Group and CVTS Task Force

The CVTS Working Group composed of representatives from the countries participating (the 25 EU member states, Norway and other candidate countries participated in the preparatory work) met in December 2004. The agreements, results and conclusions of the initial meeting of the Working Group were important for the preparation of the survey and have been the basis for further common preparatory work in a Task Force group, which was mandated by the Working Group. Eurostat stated its new policy on statistical working groups aligned with strategic issues and indicated that this required a mutation of the Working Group to a Task Force structure. Consequently Eurostat proposed the formation of a CVTS3 Task Force to work closely with the CVTS3 M consortium during 2005, and presented a draft mandate and outlined activities for the Task Force.

BIBB as project leader took part in all Working Group and Task Force meetings. The first outline questionnaire was produced and presented by the consortium in June 2005 (see Doc. ESTAT-D5-2005-CVTS3-TF2-14). The results of various work packages were made available and presented in the Working Group and Task Force meetings according to the agenda of the respective meetings:

- Doc. ESTAT/D5/2004-CVTS 05-EN
- Doc. ESTAT/D5/2004-CVTS 06-EN
- Doc. ESTAT/D5/2004-CVTS 07-EN
- Doc. ESTAT/D5/2004-CVTS 08-EN
- Doc. ESTAT/D5/2004-CVTS 09-EN
- Doc. ESTAT/D5/2004-CVTS 10-EN
- Doc. ESTAT/D5/2004-CVTS 11-EN
- Doc. ESTAT/D5/2005-CVTS3-TF-04-EN
- Doc. ESTAT/D5/2005-CVTS3-TF-06-EN
- Doc. ESTAT-D5-2005-CVTS3-TF2-14-EN
- Doc. ESTAT-D5-2005-CVTS3-TF2-15-EN
- Doc. ESTAT-D5-2005-CVTS3-TF2-16-EN
- Doc. ESTAT-D5-2005-CVTS3-TF2-17
- Doc. ESTAT-D5-2005-CVTS3-TF2-18
- Doc. ESTAT-D5-2005-CVTS3-TF2-19
- Doc. ESTAT-D5-2005-CVTS3-TF2-20
- Doc. ESTAT-D5-2005-CVTS3-WG-36

- Some observations on Estat's first version of CVTS3 questionnaire
- Work package 5: Survey guidelines⁴
- Work package 6: Conceptual informatics framework⁵

In June 2005 Eurostat decided to propose its own questionnaire for CVTS3 on the basis of the draft questionnaire of the CVTS3 M consortium. This draft questionnaire was discussed intensively by members of the Task Force. The CVTS3 M consortium also commented on the different versions of the Eurostat questionnaire (e.g. paper "Some observations on Estat's first version of CVTS3 questionnaire", Task Force meeting on the 25th/26th of July in Luxembourg). Eurostat produced six sequent versions of the questionnaire after the national consultation rounds until September 2005. The final questionnaire (version 6) is the product of Eurostat, although the CVTS3 M consortium provided intensive comments on it and produced earlier versions of a CVTS questionnaire which formed part of the basis for the Eurostat questionnaire. Despite some important differences between the final version of Eurostat and the final version of the CVTS3 M consortium (dated 30 June 2005, see annex 1) the CVTS3 M consortium supports most parts of the Eurostat questionnaire. Nonetheless, the CVTS3 M consortium expressed at various times concerns about some questions of the different versions of the Eurostat questionnaire. The main differences between the two versions of the questionnaire will be discussed in chapter 3 of this report.

The CVTS3 M consortium assisted Eurostat by writing the manual for CVTS3 (containing an introduction, the European outline questionnaire, concepts and definitions, survey guidelines and the codebook). The different work packages of the project delivered background reports, which informed substantially the writing of the manual.

Overall, the CVTS3 M consortium supported the work of Eurostat and the national representatives with intensive advice and with preparatory work.

⁴ This document can be found on Circa (http://forum.europa.eu.int/Members/irc/dsis/edtc/library?l=/working_groups/continuing_vocational_1/2005_cvts_forces/cvts_force3_25-26/03-meeting_documents&vm=detailed&sb=Title) and has been discussed in the third meeting of the Task Force. It has been uploaded without provision of a Eurostat document number.

⁵ See footnote 4.

3. Main results of the project

In this chapter, the proposals of the CVTS3 M consortium for the main features of CVTS3 and the main results of the project will be discussed. The proposals are formulated extensively in the work packages prepared by the CVTS3 M consortium.⁶ The work packages are attached to this final report. The chapter is divided into three parts: In section 3.1 the refinement of the questionnaire is discussed. The main conceptual topics are the inclusion of IVT in CVTS, other forms of continuing vocational training, costs of CVT, quantitative key indicators, the reformulation of the questions relating to the training policy of the enterprises and the extension of size or NACE. In section 3.2 possibilities to improve the survey guidelines are examined. The issue of section 3.3 is the handling of the data output (sample design, non-response, imputation, weighting).

3.1 Refinement of the CVTS3 questionnaire

Many of the objectives of the CVTS3 M project were difficult to achieve simultaneously. The results agreed upon by the CVTS Working Group meeting in September 2005, therefore, are a compromise between the conceptual discussion within the CVTS3 M consortium and with the other parties involved (e.g. Eurostat, DG EAC and countries participating in CVTS3), methodological requirements and the interests of the users of the data. This section discusses the conceptual proposals of the CVTS3 M consortium. The main differences between the final questionnaire of the consortium (see annex 1) and the final Eurostat questionnaire (version 6) will be mentioned, too.

An important objective for CVTS3 was to ensure continuity between CVTS2 and CVTS3. A task of the CVTS3 M consortium was to screen the CVTS2 quality reports of the countries and the non-response rates of variables in order to identify problematic questions in CVTS2 and to check the data quality.⁷ On the basis of this screening the CVTS3 M consortium recommended - paying attention to continuity - to skip and reformulate some questions. No major changes to the core questions mainly relating to the quantitative questions (structural data, continuing vocational training activities of the enterprises) were recommended. However, the questions relating to the training policy of the enterprises underwent major changes, because the CVTS3 M consortium decided to reformulate these qualitative questions in such a way that it is possible to construct an indicator of professionalisation on the basis of these questions. The CVTS3 M consortium developed their proposal of a questionnaire on the basis of the methodological assessment of CVTS2 and the recommendations elaborated in the work packages.

Various surveys are conducted through Eurostat in the fields of education and training. Efforts should be made to harmonise the concepts and definitions, at least for the CVTS, the AES, the Labour Force Survey and the UOE collection – as far as it is possible and reasonable.⁸ One of the aims of harmonisation is to be able to build upon the different surveys to provide a comprehensive picture of learning in the European Union. Another aim is to focus each survey on the kinds of information best sought through it (e.g. individual information from individual surveys, company information from company surveys). In some cases it should be possible to complement information collected by one survey with data originating from the

⁶ See chapter 2.2 for the list of the work packages

⁷ See annex 3: CVTS3 M consortium: Definition and description of the variables with respect to the survey output (also available on Circa site as Eurostat Doc. ESTAT/D5/2005-CVTS3-TF-04-EN)

⁸ See annex 2, paper 4: CVTS3 M consortium: Coherence of enterprise-based and individual-based European surveys (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 08-EN)

others. Especially AES and CVTS provide complementary information. But one has to be aware that even with the same concepts and definitions, the results in the mentioned surveys (e.g. on training incidence, training intensity or training costs) will be different, because of the methodological differences between an enterprise based survey (CVTS) and a person based survey (AES). For each question careful consideration is necessary, if the information can be taken from another survey or if the comparison of the results of both is important.

3.1.1 Inclusion of initial vocational training in future CVTS

In line with the “Regulation of the European Parliament and of the Council on statistics relating to vocational training in enterprises“, future CVTS surveys (starting with CVTS3) have to include questions relating to the initial vocational training provided by enterprises. Initial vocational training (IVT) and continuing vocational training (CVT) are two elements in the development of employees’ vocational skills. Both form core parts of lifelong learning and are partially complementary. The different relations between IVT and CVT in European countries are a strong argument to integrate IVT in CVTS. In countries with high levels of investment of enterprises in IVT, the need for CVT may be lower, at least with respect to those entering into their first job.⁹ The inclusion allows examining all vocational training (IVT and CVT) undertaken and/or financed by enterprises for their employees.

3.1.1.1 Comparability with CVTS1 and CVTS2

The past two surveys (CVTS1 and CVTS2) excluded IVT from the survey. In both surveys CVT was defined “as training measures or activities, which enterprises finance, wholly or partly”, excluding activities for apprentices and trainees with a special training contract. The CVTS3 M consortium underlined the importance that the inclusion of IVT in future CVTS should not make comparisons of CVT between the future and past surveys impossible. In order to ensure the comparability with the past surveys, all parts of the questionnaire relating to the provision of CVT by enterprises - with exception of the section on IVT - are limited to “persons employed” by the enterprise, but persons with an apprenticeship or a training contract are to be excluded. The CVTS3 M consortium recommended, like in CVTS2, to include in the CVTS3 questionnaire – relating to questions concerning CVT – a clear indication that persons employed with an apprenticeship or training contract should not be considered.

3.1.1.2 Definition of IVT

In order to collect data on IVT, a clear operational definition of IVT and a clear demarcation between IVT and CVT is essential for the quality of the data and necessary for comparisons with CVTS2. Enterprises have to be provided with clear criteria. The definitions and criteria for IVT and CVT - formulated by the CVTS3 M consortium and proposed in the final questionnaire of the CVTS3 M consortium (see annex 1, page 27) - reads:

⁹ Brunello, G. (2004): Labour Market Institutions and the Complementarity between Education and Training in Europe. In: Checchi, D., C. Lucifora: Education, Training and Labour Market Outcomes in Europe. Palgrave Macmillan.

Table 1: Definition of IVT and CVT by CVTS3 M consortium

For IVT
<p>An apprentice in initial vocational training (IVT) is defined by the following elements:</p> <ul style="list-style-type: none"> - The person has a training contract drawn up between the employer and himself/herself which lasts for half a year or more. - According to this training contract the person is eligible for wage / salary to be paid by the enterprise. - The training of the person has a work based element (<i>at least some parts of the training take place at the workplace</i>). - The training of the person leads to a qualification which is part of the national ISCED mapping (<i>examples for each country have to be selected and inserted by the statistical offices</i>).
For CVT
<p>The qualifying criteria for CVT are the following:</p> <ul style="list-style-type: none"> - The training must be planned in advance. - It must be organised or supported with the specific goal of learning. - It has to be financed wholly or partly by the enterprise. <p>The training can be organised in different forms. For the purpose of this survey a distinction is made between CVT courses and “other forms of CVT”.</p>

Source: CVTS 3 M consortium – CVTS 3 questionnaire Final (see annex 1)

The integration of IVT in CVTS turned out to be a big issue. In WP1¹⁰, possible ways for the integration were outlined. One of them was the demarcation by a list of criteria (e.g. duration, age of participants, certification, costs). However, the systems of IVT in the countries are very different and therefore it was very difficult to find a list fitting to each country’s conditions.

The development of an agreed **common definition of IVT** was a process lasting several months with contributions from many participants in the process: Eurostat, DG EAC, the members of the Task Force including CEDEFOP and ETF, countries’ representatives in the national consultations and the CVTS3 M consortium. In the end a criteria-based solution for the demarcation of IVT and CVT was implemented. The following table 2 was taken out of the Eurostat CVTS3 questionnaire (version 6).

¹⁰ See annex 2, paper 1: CVTS 3 M consortium: Inclusion of initial vocational training (IVT) in future CVTS (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 05-EN)

Table 2: Eurostat framework for the definition of IVT and CVT

	IVT in enterprises	CVT in enterprise
Main activity of the persons	Student, apprentice, trainee, ...	Employed by the enterprise
Type of contract	Non-qualifying criteria as national laws differ	Essential Work contract required
Type of learning activity	Formal learning (leading to a formal qualification)	Non-qualifying criteria
Work based element	Essential Must have a work based element	Non-qualifying criteria
School based element	Non-qualifying criteria Even if it does exist in a majority of situations	Non-qualifying criteria
Costs for enterprise	Non-qualifying criteria	Essential There must be a cost for the enterprise
Time Period of the Study	A minimum period of 6 months	Non-qualifying criteria
<p>With this approach the possible overlaps between CVT and IVT proposed for CVTS are resolved by giving priority to the primary objective of CVTS i.e. CVT. For example, an employee participating to formal education on the company expenses is considered “CVT participant” and the cost is “CVT cost”.</p>		

Source: Eurostat CVTS3 questionnaire version 6 - Doc. ESTAT-D5-2005-CVTS3-TF3-42

However, differences remain between the concept of the CVTS3 M consortium as implemented in their version of the questionnaire and the final CVTS3 questionnaire of Eurostat. The main difference between the two versions is that, in the latter, countries have a lot of freedom to implement their own definition of IVT. As a consequence, countries can decide to some extent what to include and what to exclude in the survey. There is a risk that this will lead to very different decisions and the scope of the definitions will be rather divergent. From the point of view of the CVTS3 M consortium, this may threaten international comparability of the data, and it would have been preferable to use one common definition for all countries.

3.1.1.3 IVT variables and indicators

Article 3 of the regulation indicates the specific data that shall be collected by the member states with respect to IVT in enterprises:

- participants in initial vocational training,
- total expenditure on initial vocational training.

The CVTS 3 M consortium proposed to collect the following variables on IVT:

- on the number of participants: Total number of apprentices in IVT at the end of 2005, total number of those who finished IVT in 2005; in cases of seasonal changes: annual average
- on IVT expenditure: Although total expenditure on IVT is requested in the regulation, we recommend for methodological reasons to focus on costs of the participation of apprentices in training courses and, in addition, on total labour costs of apprentices. Regarding the latter it has to be taken into account that for an assessment of enterprises' real costs of IVT the value of the productive work of apprentices would need to be deducted.

The CVTS3 M consortium called attention to its concern that the concept of IVT participation in the final version of the Eurostat questionnaire is ambiguous. The relevant question asks for the **number of participants in IVT** at any time of the year. We see the problem that some enterprises may fill in an average number, while others may count those who leave the enterprise in the reference year as well as those who enter. In the second case higher numbers of participants are counted. From the point of view of the CVTS3 M consortium, the two further questions we proposed are strongly justified by the gain in certainty of the result. Using the Eurostat approach it will not be possible to create unambiguous ratios of costs of IVT and IVT participants.

The CVTS3 M consortium proposed to collect **costs of IVT** the same way as costs of CVT. CVTS1 and CVTS2 only collected costs of courses and abstained from collecting costs of the “other forms of CVT”. In the consortium’s proposal for CVTS3 the same route is followed for CVT even though costs of the “other forms” are a very important figure. The reason to do so is that it is too difficult for the responding enterprises to estimate these costs accurately. Extensive experience of BIBB with the collection of IVT costs in Germany shows that a much longer and more detailed questionnaire is necessary to receive reliable results in measuring the costs of on-the-job-training. It thus seems to be unrealistic that most enterprises are able to estimate labour costs of IVT trainers or mentors (question F2c) for on-the-job-training. From our point of view this argument applies for CVT as well as for IVT and should therefore be considered in all cost sections of CVTS3.

The CVTS3 M consortium recommends recording the costs of internal and external courses and the costs of staff exclusively or partly involved in IVT as costs of IVT. As some enterprises may have special training centres with very high costs, these costs should be recorded separately and distinguished from the room costs of internal courses. However, in the final Eurostat questionnaire only the IVT costs of IVT trainers and other IVT costs are asked for. The question on IVT costs as it is now in Eurostat’s questionnaire is very general. It is open to different interpretations by the enterprises according to their individual understanding of costs.

Two other issues are to be mentioned concerning the labour costs of apprentices. First, there is a risk of some enterprises providing the annual labour costs of all persons that did some IVT during the year whereas others only report the labour costs for the period when the person is actually undergoing training. Second, it has to be considered that labour costs of apprentices are partially compensated by productive work of the apprentices and therefore are not necessarily real costs.

Considering the difficulties to collect hours in IVT - IVT mostly takes place at the work place - the CVTS3 M consortium suggested focusing on incidence and number of participants in IVT. Furthermore, some information on costs of IVT should be collected. With these, the construction of the following three main IVT indicators is possible:

- Initial vocational training incidence indicator
- Initial vocational training participation indicator
- Initial vocational training cost indicator

3.1.2 Other forms of continuing vocational training¹¹

From the very start of conceptualising CVTS, it was recognised that analysis of CVT is not complete if one limits CVT to the provision of training courses by the enterprises. Information about so-called “other forms” also needs to be collected. These forms often are taking place at the immediate place of work, which makes it difficult to distinguish work and learning, both analytically and empirically. The distinction is analytically useful, but is confronted with a reality where work and learning are increasingly intermingling and therefore are difficult to identify separately. In CVTS1 and CVTS2 a list of activities was presented.

This list looked in CVTS2 like this:

- Planned periods of training, instruction or practical experience
- Planned learning through job-rotation, exchanges or secondments
- Attendance at learning/quality circles
- Self learning through open and distance learning
- Instruction at conferences, workshops, lectures and seminars.

When analysing the outcomes of the two past surveys, it became clear that on the one hand quality of data was insufficient and on the other hand the data were not informative, because no information on the relevance of the other forms was provided. Therefore, the CVTS3 M consortium originally proposed for CVTS3 a more comprehensive approach. However, it was not possible to implement this in the final CVTS3 questionnaire, because of the goal not to increase the burden for the enterprises. It is not clear if such an approach - because of the complexity of the subject - is at all possible in a questionnaire like the CVTS questionnaire.

The consortium, nevertheless, proposed changes for the coverage of the other forms of CVT and concentrated on two points:

- to make definitions clearer
- to collect additional information on the number of participants

3.1.2.1 Definition of the other forms of CVT

The CVTS3 M consortium recommended including the following classification of CVT¹² courses and the other forms of CVT in the questionnaire. The direct comparison of defining criteria for courses and other forms of CVT was proposed with the aim of simplifying the classification for the respondents.

¹¹ See annex 2, paper 2: CVTS 3 M consortium: “Other” forms of continuing vocational training (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 06-EN)

¹² For a general definition of CVT see page 13.

Training courses:

- Mostly clearly separated from the work place (learning takes place in locations specially assigned for learning like a class room or training centre)
- High degree of organisation (time, space and content) by a trainer or a training institution
- Content is designed for a group of learners (e.g. a curriculum exists)

It entails the following forms:

- **Internal** CVT courses
- **External** CVT courses

Other forms of CVT:

- Mostly directly connected to the work and the work place, but
- Also includes attendances at conferences, trade fairs etc. for the purpose of learning
- High degree of self-organisation (time, space and content) by the individual learner or by a group of learners
- Content is chosen according to the learners' individual needs in the workplace.

It entails the following forms:

- Planned training through **on-the job-training**
- Planned training through **job-rotation, exchanges, secondments or study visits**
- Planned training through participation in **learning or quality circles**
- Planned training through **self directed learning**
- Planned training through **attendance at conferences, workshops, trade fairs and lectures**

In the final Eurostat questionnaire countries are free to include definitions in the questionnaire or not. The CVTS3 M consortium is not in favour of this approach, especially in the case of the other forms of CVT. From its point of view definitions of the other forms of CVT should be included in the questionnaire. At its meeting the CVTS3 Working Group decided not to adopt this recommendation in order to give the questionnaire a shorter appearance. The CVTS3 M consortium sees the risk that in the end - because of the complexity of the subject - this will cause problems for enterprises to answer the questions properly.

3.1.2.2 Additional information on other forms of CVT

Besides improving the definition of other forms it seems also to be important to have more empirical information on the other forms of CVT in order to assess the relevance of these activities. In order to improve the empirical information, the CVTS3 M consortium considered how to collect more data about the relevance of the other forms of CVT. Instead of just ticking a certain activity (e.g. "job-rotation" or "quality circle") it would be preferable to ask how much time was needed, what the costs were, which support was offered, which training media were used and so on. Although it is very likely that this data would be based on estimates of the enterprises, it could be useful information about the organisation of other forms in the enterprises and thus help to clarify how these forms are practiced in the enterprises. It could also help to ensure that enterprises' understanding of other forms is more consistent.

During the discussions with Eurostat and the members of the Task Force it was agreed that such a comprehensive approach for the collection of data relating to the other forms of CVT could not be realised in a survey like CVTS. Therefore, the CVTS3 M questionnaire did not propose such a detailed approach. The realisation of such a comprehensive approach seems only possible with an extra survey (as for example realised for CVTS1 and CVTS2 in Germany).

The question relating to the provision of other forms of CVT in the final Eurostat questionnaire represents a reasonable compromise between the problem of just ticking the other forms of CVT and the identification of the relevance of the other forms of CVT. This approach seems to be the best way to get an impression of the relevance of the other forms of CVT and at the same time not to increase the burden on enterprises too much.

3.1.3 Costs of CVT¹³

The costs of CVT made up an important component of the past two surveys. The topic should also have a strong attention in CVTS3. Although the measurement of costs is not easy, it is very important to collect data in this area. Even estimates are very useful, as no alternative source of such data exists. CVTS3 can help to close the information gap, allowing for comparisons across European countries and between different sectors or company size categories. These comparisons can be very useful in identifying investment deficits that need to be addressed at national and European level.

3.1.3.1 Coverage of costs in CVTS2

The goal of cost assessment in CVTS1 and CVTS2 was to record enterprises' investment in CVT courses. The aim was to record the direct and indirect costs for CVT courses. The following direct costs were collected in CVTS 2 (and with some modifications in CVTS 1, too):

- Fees and payments
- Travel and subsistence payments
- Labour costs of internal trainers exclusively involved in managing and delivering CVT courses
- Labour costs of internal trainers partly involved in managing and delivering CVT courses
- Costs of premises

Additionally, in CVTS2, the net contribution to collective funding arrangements for CVT courses against receipts and subsidies was collected, and enterprises were asked to name the different sources.

Problems encountered in CVTS2:

- Many of the direct costs were difficult to report because enterprises had no records.
- There was no possibility to differentiate between "no costs incurred" and non-response.
- Costs of personnel absence from the workplace because of participation in CVT courses were uncertain because labour costs were often estimated.
- The recorded sums of receipts of enterprises for CVT were rather fragmentary.
- Costs for other forms of CVT were not collected.

¹³ See annex 2, paper 3: CVTS 3 M consortium: Coverage of costs (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 07-EN)

3.1.3.2 Recommendations for the coverage of costs in CVTS3

The CVTS3 M consortium recommended changes to the collection of the cost data. In the CVTS2 questionnaire it was often not clear if questions with no particular information were non-response or in fact not incurring costs. Therefore the CVTS3 M consortium recommended to use a pre-question, before asking the respective costs sub-items: thus asking whether costs were incurred or not. The CVTS3 M consortium also recommended not to differentiate any more between the labour costs for full-time and part-time CVT trainers. The question about the number of CVT trainers - as asked in CVTS2 – was deleted. To differentiate between the training rooms and teaching materials was another proposal of the CVTS3 M consortium.

As enterprises do not record their costs of part-time usage of rooms for purposes of training, it is difficult to estimate these costs. Because of this significant estimation problem, CVTS3 will no longer attempt to measure this component and record only costs for special training rooms. Besides the sum of receipts, enterprises were asked in CVTS 2 to name the different sources. A detailed list of the sources of different receipts was used in the questionnaire. The empirical response was relatively low. The questions about the different sources therefore were deleted.

An important cost element are the costs due to the loss of production, because employees are absent from their work during training - the so-called **personnel absence costs**. In CVTS2 the cost of personnel absence while on training courses was not surveyed directly but was compiled ex post by a calculation method, specifically by multiplying the hours on training courses by average labour costs per hour. The central problem in evaluating these costs is the fact that in many cases these costs do not represent real company expenditures on training, because

1. it is common, particularly among skilled and managerial employees, that training takes place during work hours and the employee makes up for the work missed through unpaid work during off-hours.
2. within a team that independently plans and organises its own work employees very often pass on work to colleagues. In general, CVT often takes place during “off-peak seasons”. There is less to do during these periods and employees’ workload would be below average anyway.

The CVTS3 M consortium recommended - despite these conceptual problems - that these costs should be estimated in the same way as in CVTS2.

Costs for other forms of CVT were not assessed in CVTS1 and CVTS2, because this was considered as being too difficult. One main problem is the difficulty to distinguish between work and learning, which results in difficulties in estimating and collecting the related costs. These other forms of lifelong learning seem to be of growing importance with regard to their incidence as well as with regard to their role in policy discussions. Despite these serious estimation problems, the CVTS3 M consortium considered to collect at least some basic information on these costs. For example, some data on participation in conferences, IT materials and IT media or on the investment in infrastructure for learning circles could be collected. In other words, where a company makes actual financial payments to meet the costs of other forms of training they should be included in the survey. In the discussions, the Task Force did not take up these proposals and they did not form part of the CVTS3 M questionnaire.

3.1.4 Coherent set of quantitative key indicators¹⁴

Quantitative indicators are a central element for describing the structure of continuing vocational training in Europe. In CVTS2 four main quantitative indicators were used for the analysis of continuing vocational training in enterprises: an indicator of training incidence, an indicator of training access, a training intensity indicator and an indicator of training costs. From our experience it is very important to state clearly the respective level of analysis of these main indicators, as they lead to different interpretations of the data. The analytical levels are:

Level 1: Performance indicators of CVT on the national level

The following four quantitative performance indicators describe in general the relevance of continuing vocational training on the national level.

1. Enterprises providing training courses in a given country and in a given year (training incidence = training enterprises providing training courses / all enterprises)
2. Access of employees to continuing vocational training provided by enterprises in a given country and in a given year (training access = all training participants / total of all employees of all enterprises)
3. Time investment of enterprises in continuing vocational training in a given country in a given year (training intensity = total of training hours / total of working hours of all employees of all enterprises)
4. Cost investment of enterprises in continuing vocational training in a given country in a given year (training costs = total of direct training costs / total of labour costs of all enterprises)

Level 2: Performance indicators of CVT on the level of training-enterprises

The following four quantitative indicators of the performance of training-enterprises describe the training-activities of training enterprises on the background and in the context of the CVT-indicators of level 1.

1. The provision of training courses by enterprises in a given country and in a given year (training incidence = training enterprises providing training courses / all enterprises)
2. Access of employees to continuing vocational training provided by enterprises on the level of training enterprises in a given country and in a given year (training access = training participants / all employees in training enterprises providing training courses)
3. Average duration of continuing vocational training provided by training enterprises in a given country in a given year (training intensity = total of training hours / all employees in training enterprises providing training)
4. Costs per training hour in training enterprises in a given country in a given year (training costs = total of direct training costs / total of training hours in training enterprises providing training)

These indicators should also be provided by CVTS3 and future CVTS. The CVTS3 M consortium pointed out some additional possibilities to build up further indicators to capture other dimensions. This mainly reflects an increased use of the collected data, rather than a requirement for the collection of additional data. It is possible to use some new quantitative indicators:

- Training access covering the other forms (using the new variables B2a-B2e)
- Training access of different age groups (using the new variables A3a-c and C2a-c)

¹⁴ See annex 2, paper 6: CVTS 3 M consortium: Coherent set of quantitative key indicators (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 10-EN)

The CVTS3 M consortium suggested collecting the training access of different age groups and broad occupational groups to analyse the access and the intensity of continuing vocational training for different groups of employees. The CVTS Working Group indicated that the second subject has no priority and decided not to include questions about occupational groups in CVTS3. The CVTS3 M consortium recommends to continue the discussion about the quantitative indicators and to make another attempt to include variables about occupational groups in future CVTS surveys.

3.1.5 Questions on training policy of the enterprise¹⁵

The prime purpose of CVTS is to collect quantitative indicators of continuing vocational training in enterprises. CVTS2 allowed for a number of supplementary qualitative questions relating e.g. to the influence of technological and organisational changes on enterprises, to the future provision of CVT courses as well as „other“ forms of CVT, CVT courses for particular groups of persons employed and reasons not to provide CVT. Supplementary qualitative questions concerning contents, character and organisational form of CVT offered by enterprises were of particular importance in both surveys, because these questions allow in principle to judge the training policy of enterprises.

3.1.5.1 Situation in CVTS2 – proposals for CVTS3

Some of the questions in CVTS2 provide a starting point for developing an operationalisation of a concept of “professionalisation” of enterprises’ approach to CVT. Questions on training policy of the enterprise should distinguish between enterprises with extensive efforts in the organisation of CVT and those which have little or no institutionalised structures supporting the organisation of CVT. Questions concerning the planning and budgeting of CVT, the existence of infrastructure and forms of outcome control should give an overall picture of the level of organisation of CVT in the enterprises. The tasks mentioned can be seen as necessary parts of professionalisation of the organisation of CVT.

However, in CVTS2, the questions were not answered properly and there were low item response rates in some countries. Possible explanations are:

- Some of the questions were formulated ambiguously.
- Some of the questions could not be applied by respondents to their situation.
- Questions were not defined well, therefore answers depended on the idiosyncratic interpretation of the respondent.
- Some questions used potentially pejorative assumptions, so that it was unlikely that enterprises would agree to the question, even if the item described the situation properly.

Moreover, the questions on training policy of the enterprise of CVTS2 did not follow a clear concept of professionalisation. Therefore, the information drawn from each of the questions could not be formed into a cohesive indicator of the level of professionalisation. In WP1 and WP4 the CVTS3 M consortium discussed in detail problems related to the questions on training policy of the enterprise. The CVTS3 M consortium recommended a set of questions on training policy of the enterprise, partly revised CVTS2 questions, partly new questions. The aim of the revision of the CVTS2 questions was to enhance the discriminatory power. Therefore, the CVTS3 M consortium proposed new wordings of questions and a new

¹⁵ See annex 2, paper 5: Qualitative questions relating to the training policies of enterprises (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 09-EN) and annex 4, paper 5: CVTS 3 M consortium: Qualitative questions concerning the professionalisation of CVT in enterprises (also available on Circa site as Eurostat Doc. ESTAT-D5-2005-CVTS3-TF2-18-EN)

structure of the answering options. New questions were proposed because the CVTS3 M consortium noted that some dimensions of the professionalisation of CVT were missing in the qualitative questions in CVTS2. Others were dropped to ensure not to increase the response burden.

3.1.5.2 Development of an indicator of professionalisation

The CVTS3 M consortium recommended developing an indicator of professionalisation based on a set of questions on training policy of the enterprise: Thus, the aim was to integrate the questions into a concept of an overall indicator, measuring the level of professionalisation of the organisation of CVT in an enterprise. The indicator should be able to classify enterprises by the scale of measures already taken to institutionalise CVT. The indicator concept measuring professionalisation should avoid a size bias and should deliver good information for small and medium enterprises as well as large ones. In addition, it should be able to properly distinguish companies with high, from those with low, professionalisation within each size class.

3s Research Laboratory has elaborated a paper on „New concepts for the qualitative questions concerning the organisational background of CVT in enterprises”.¹⁶ This paper discusses one of the models of the functions of human resource management with the different phases distinguished analytically. Applying this model to professional organisation of CVT, six elements of professional organisation of CVT are discussed and – with a view on the number of questions in the questionnaire – eventually condensed to three phases:

- planning (demand analysis and defining goals),
- executing (selection of the training, organisation and implementation of the training measures),
- assessing (assessment of results and support of transfer).

A high level of professionalisation means that

- all important parts of the CVT process are systematically developed,
- parts of the CVT process are executed in a periodic manner, usually at least once a year,
- the quality of the parts of the CVT process is assessed regularly, and experiences are used as a base to improve the quality of the process.

Enterprises which organise their CVT systematically should have no problem to answer questions which refer to typical instruments of the management of training. It is likely that they can understand the question, even if they use instruments with other names or slightly different functions.

The tasks of analysing the demand for CVT and of assessing systematically the outcome of CVT are seen as crucial parts of the organisation process. The potential to make training more effective and efficient depends mainly on the demand analysis and the measurement of outcomes. Therefore, more questions should be devoted to the planning phase and the assessing phase than to the executing phase.

However, a major problem of measurement arises. The use of formalised procedures and written documents as an indication of the level of professionalisation is subject to a bias related to enterprise size. As is known from the literature, small enterprises are more likely to organise and manage CVT informally. A higher degree of division of labour in big enterprises

¹⁶ See annex 4, paper 5, page 11-31

per se may require more files and documents. Even in cases where there is no other difference regarding management and organisation of CVT, these bigger enterprises – just because of the existence of a written document – are regarded as having a higher level of professionalisation.

But restricted by the need not to extend the number of questions, the CVTS3 M consortium decided to consider only formal procedures of quality management. Special attention was paid to the linguistic fit between questions and answering options. The use of scales should help to distinguish enterprises with an extensive use of instruments from others. The results of CVTS2 had shown that a revision of the questions with respect to a better discriminatory power was necessary. It is recommended to use scales with four possibilities to answer and with a clear distinction between the second and third alternative. All answers on the first two levels (e.g. “no”; “rarely”) should be interpreted as “no”, the answers to the two remaining categories (e.g. “yes, regularly”; “yes, often”) as “yes”.

Eurostat in their version of the questionnaire rephrased the answering options and made them equal for some questions (D3-D5 and D8-D11). As a consequence, in some cases questions and answering options do not linguistically fit any more. We see a risk that this may lead to irritations and perhaps even non-responses by the respondents. The answers to these questions may therefore be inadequate to build an indicator of professionalisation.

3.1.6 Recording of participants

In CVTS, participants in training courses are defined as “persons employed who have taken part in one or more CVT courses at some time during the year”. Usually enterprises collect data on the participation of individual employees. However, sometimes enterprises collect only data on participant events. In CVTS2 some countries reported problems with converting data on participant events into participants. The CVTS3 M consortium recommended to collect both, participants and participant events, if possible. This would allow statistical offices to convert participant events into participants based on ratios of participants and participant events (see the German CVTS2 approach). In the final Eurostat questionnaire another approach is realised. Enterprises are asked to fill in participants and countries should implement whichever method they consider appropriate to ensure that participant events are not reported. For this noncommittal approach we would like to point at the risk of lower international comparability.

3.1.7 Needs and consequences of the extension of coverage with respect to NACE and the size of the enterprises¹⁷

CVTS2 covered enterprises employing 10 or more persons and excluded the NACE-categories A, B, L, M, N and Q.¹⁸ At its meeting in December 2004, the CVTS Working Group decided that there would be no compulsory extension of enterprise size or NACE coverage for CVTS3. However, the CVTS3 M consortium discussed possible extensions for future CVTS.

¹⁷ See annex 7: CVTS 3 M consortium: Needs and consequences of the extension of coverage with respect to NACE and the size of the enterprises - Recommendations for future CVTS surveys and annex 2, paper 7: CVTS 3 M consortium: Needs and consequences of the extension of coverage with respect to NACE and size of the enterprises (also available on Circa site as Eurostat Doc. ESTAT/D5/2004-CVTS 11-EN)

¹⁸ A: agriculture / forestry, B: fishing, L: public administration, government and municipal institutions, M: education, N: health, Q: extra-territorial bodies

The integration of additional NACE classes as well as the integration of micro-enterprises would have consequences regarding sample size and survey costs. The possibility of integration also depends on the state and coverage of national business registers. The results of a short questionnaire concerning the coverage of national business registers¹⁹ showed that the coverage of enterprises in the NACE categories A, B, M, N and L is good enough to make their coverage in CVTS possible. However, the national business registers, especially for NACE L, should be improved in cooperation with the statistical offices. The additional efforts required to integrate micro-enterprises and additional NACE classes will vary widely between the countries.

Probably the integration of the sectors A and B could be done without any significant difficulties, the integration of L, M, and N implies additional conceptual and practical work:

- An equivalent of the statistical unit “enterprises” has to be identified in the NACE-classes mentioned.
- The questionnaire for the statistical units of the NACE-classes mentioned may have to be modified, so that all questions can be applied appropriately to the organisations surveyed.
- In the categories L, M and N the definitions regarding which enterprises are private or public are not identical. Furthermore, these administrations and services are more amenable to policy interventions regarding the implementation of CVT than private enterprises.

The policy interest for inclusion of micro-enterprises is, of course, high, because their share concerning all enterprises and all employees is rather high, too – even if it differs widely across European countries. Special problems with the integration of micro-enterprises are:

- They would probably have lower response rates, because they do not feel obliged to answer a questionnaire regarding a topic in which they often are not engaged. It can also be the case that they have less staff and time resources to answer to a questionnaire. Both could imply a positive selection bias of those micro-enterprises who freely choose to respond to the survey as those who are generally more likely to invest in training.
- High rates of birth and death of micro-enterprises make sampling more complicated. Business registers may insufficiently cover the dynamics in this field.
- Even small changes in the numbers of employees affect the question whether a company is in or out of a stratum. Definitions concerning who is an employee and who is not are affecting this.
- The sample has to be enlarged substantially to cover micro-enterprises.

Despite these problems the CVTS3 M consortium recommends an extension in further NACE sectors and micro-enterprises in future CVTS surveys. In WP7²⁰ the consortium provided recommendations for a leaner version of the questionnaire for micro-enterprises, which for example contains less questions in the section on training policy of the enterprise.

¹⁹ Designed by the CVTS3 M consortium and distributed during the Working Group meeting in December 2004. Results from 23 countries were collected.

²⁰ See Annex 7, page 27, Table 30: Proposal for a leaner version of the questionnaire for micro-enterprises (based on CVTS3 questionnaire version 5 / 26.9.2005)

3.2. Refinement of the survey guidelines

In this chapter considerations about a refinement of the survey guidelines are discussed. The CVTS3 M consortium elaborated proposals in work package 5²¹ and work package 4.²² Different themes were treated and advantages and disadvantages of the proposals were examined. Contents are the data availability in enterprises, the mode of data collection, the organisation of the field work and staging and modularisation.

The conclusions which were drawn are based on the expertise of infas and the experience of Statistics Finland with enterprise surveys and web based surveys in particular. Further analysis was based on information included in the national quality reports of CVTS2 and on the results of a German extra survey that accompanied CVTS2 in Germany and contained some questions on data availability in enterprises.

3.2.1 Data availability in enterprises²³

Data availability is one of the key factors for CVTS3 data quality. Enterprise surveys, because of the nature of the information required and data availability, are often more difficult than surveys of individuals. Some information on all the variables included in the CVTS3 questionnaire is usually at hand, but the information is not always recorded in the enterprises' accounting systems in a way that can be easily extracted when answering the questionnaire.

The CVTS3 M consortium analysed the information of CVTS2 (non-response tables and additional information from the quality reports) and the German extra survey and identified the most problematic items. The results were similar to those of the infas expertise and the most critical data can be summarised as follows:

1. Data on participants (age, gender, occupational status)
2. Data on training hours, especially the subdivision by subject and provider
3. Data on training costs

Problems are either caused by the circumstance that the information cannot be found in the accounting systems or because their classification systems do not correspond to the questions of CVTS. Data availability depends on the size of the enterprise and the biggest problems can be expected in medium-sized enterprises. They often do not have accounting systems of sufficient quality, but already have too many employees to reconstruct the answers correctly from individual memory.

Difficulties with qualitative questions do not depend that much on accounting systems but on the wording of the questions, the clear explanation of concepts and the choice of adequate answering categories.

The CVTS3 M consortium provided recommendations on ways of making the answering of the problematic questions easier for the enterprises. First of all a national phone or email hotline is a very important measure to support the enterprises with advice. Other possibilities are drop-offs for telephone or face-to-face interviews. As enterprises nowadays receive lots of surveys, the motivation of the respondents is of outstanding importance. The legal basis of the survey, the policy importance of the survey in general and the possible utilisation of the

²¹ See annex 5: CVTS 3 M consortium: WP5: Survey guidelines

²² See annex 4, paper 7: CVTS 3 M consortium: Staging / modularisation approach (also available on Circa site as Eurostat Doc. ESTAT-D5-2005-CVTS3-TF2-20-EN)

²³ See annex 5, page 3-16

national and international results with respect to the enterprise's own training strategies must be highlighted in the survey introduction and during the process of contacting enterprises.

3.2.2 Mode of data collection²⁴

For CVTS3 the data collection method was determined nationally. At the date of delivery of WP5 (22 July 2005) countries had already made their choice, so the task of WP5 was rather to provide countries with information on what to consider with the implementation of the different methods. For each method national pilots or other kinds of tests are recommended as well as follow-ups within the enterprises. As there is no central control about the realisation of concepts in the national versions it is of outstanding importance to assess reliability and validity of the survey. It is more or less impossible to know if concepts were understood in a similar way in the different countries.

The recommendations for the different modes of data collection can be summarised as follows:

- 1) Prerequisites for **face-to-face interviews** are a good organisation of the field work and a staff of experienced interviewers. The advantage of a rather high acceptance has to be considered together with the fact that CVTS contains some questions that can hardly be answered without checking records. This can be solved by drop-off questionnaires. In order to realise the benefits of good field control and documentation and to make them more independent from subjective biases, computer assisted interviews like CAPI are recommended. They contribute to other advantages like automatic filtering and data checking during the interview.
- 2) The last mentioned points also count for **telephone interviews**: They should be prepared with drop-offs to facilitate answers to critical questions and computer assisted versions like CATI are helpful. In any case, telephone interviews are a good method to combine with other data collection methods: to get contact information about the respondents in advance, motivate respondents and to remind them to participate in the survey.
- 3) The biggest advantages of **postal questionnaires** are that they allow time to check records and free time-management for the respondents. This may be the reason why in some cases a better quality of data for the critical questions like the cost questions can be received with this method of data collection. Another advantage is that it seems to be a cheap alternative. These advantages of postal questionnaires have to be considered together with some serious problems: first of all with postal questionnaires the expected response rate is very low. At least preliminary telephone contacts should be made to motivate the enterprises to participate and to control the selection process within the enterprise. Another problem is the missing field control. The definitions therefore have to be longer and complicated filters have to be avoided. To assist enterprises at least a national phone or mail hotline is necessary. Re-contacting the enterprises may also become necessary because of errors that are detected in the phase of data checking. All together, postal questionnaires necessitate a lot of accompanying measures and may therefore switch from a cheap to an at least medium expensive mode of data collection.
- 4) **Web based questionnaires** unite advantages of the other methods of data collection. Like postal questionnaires they allow time management for the respondents and therefore lead to better results for data that has to be looked up in the accounting systems. At the same time they have a higher acceptance, higher response rates and are less error-prone than postal questionnaires. In addition, web questionnaires introduce

²⁴ See annex 5, page 17-35

some new possibilities: the automatic routing of questions, automatic data entry, data checking routines and documentation. Additional information can be presented in a very convenient way in help buttons. To receive good results with this method the design of the questionnaire should be carefully considered. The user interface should be easy and functional. In addition, the respondents should have the possibility to print the questionnaire and to save results and continue data entry later. As with postal questionnaires, a service centre or a national phone hotline will help to raise the quality of the data and the participation rates. Until now technical standards have not developed far enough to recommend this method for all countries. For future CVTS surveys national conditions will have to be checked again. In the case of good results of this check web based instruments can be recommended for the future.

3.2.3 Organisation of the field work²⁵

Under the headline “organisation of the field work” the CVTS3 M consortium addressed issues like the respondents in the enterprises, training of the interviewers, the supervision and monitoring of the field work and the use of BLAISE in CVTS2 and presented some recommendations for the survey organisation:

- The interviewers should be experienced, preferably permanent and full-day involved. In the ideal case they should already be familiar with enterprise interviews. In addition, they should be paid for the working time (not questionnaire completions).
- The organisation should provide good interviewer training for the survey. Interviewers have to be familiar with all the concepts of CVTS3 and with the composition of the survey.
- All procedures for the survey operation like guiding, monitoring and reporting have to be well-established.
- A sufficient amount of contacts with the enterprises should be allowed. The role of the interviewers should also be to motivate and persuade the enterprises to respond.
- A very important accompanying measure especially for postal and web questionnaires is the implementation of a national survey-specific helpdesk or phone hotline. This guidance work should be administered by researchers and their assistants.

3.2.4 Staging / Modularisation

Staging was carried out by a number of countries in CVTS1 and or CVTS2.²⁶ Some countries have been satisfied with the process and believe that it helped them to achieve better results. The example of Statistics Austria is very positive in this regard, even if they did not reach better response rates.²⁷ However, other countries are less positive and some have not used staging in CVTS.

²⁵ See annex 5, page 36-44

²⁶ CVTS1: staging approach for screening the training and non-training enterprises in Belgium, Denmark, Spain and Portugal, staged survey combined with a modularisation of the questionnaire in the Netherlands and Germany; CVTS2: staging approach for screening the training and non-training enterprises in Spain, France and the Netherlands, staged survey combined with a modularisation of the questionnaire in Austria

²⁷ Although Statistics Austria implemented the survey much later than the other CVTS2-countries, the complete survey, starting with the fieldwork up to the final data set, was accomplished in eight months. The main advantage of this approach according to Statistics Austria is the efficiency and flexibility of the approach, better collection of data of non-training enterprises, a better identification of the unit non-response and minimizing the response burden for enterprises.

Advantages of staging are more likely:

- when using postal questionnaires,
- under the condition of high response rates in the first stage (at least 70%),
- provided that time and money allow for intensive re-contacting to avoid unit non-response in the first stage,
- in countries with a high proportion of non-training enterprises, if questions concerning non-trainers are included in the first stage.

Further advantages are the better collection of data of non-training enterprises, the better identification of unit non-response and minimising the response burden for enterprises. The staging/modularisation approach makes it possible to divide enterprises into training and non-training enterprises and to send tailor-made questionnaires in the second phase.

Staging is connected with some disadvantages and risks:

- Staging reduces the possibilities of correcting wrong answers received in the first stage.
- A staging approach implies a two-phase sampling design. This requires application of other statistical theories than in a more common one-phase survey and adaptation of weighting procedures. Variance in results will be higher than in a one-phase sampling design, too.
- Non-response and incorrect answers in the first stage affect the second stage, e.g. delivering the correct version of the questionnaire in stage 2 is contingent on obtaining correct answers in stage 1.

In view of these arguments and the differing circumstances that apply in each country, the CVTS3 M consortium does not assess a firm recommendation in favour or against staging as appropriate. It recommends that each country examine the issue from its own circumstances.

3.3 Conceptual informatics framework

This section presents the requested contents of quality reports, sample design, weighting, re-weighting and imputation for CVTS3. Although most procedures and rules for CVTS2 can be applied again, some important recommendations for improvement on the basis of the experiences of CVTS2 are made.

3.3.1 Quality reports²⁸

The quality report should inform users of the data on factors of vital importance for an adequate interpretation of the statistics. Each process during the development of statistics should be described in detail, for example collection of data, editing, treatment of non-response and estimation. This information should include the concepts and methodology used in collecting and processing the data and other characteristics of the data that may affect their quality, use or interpretation. For example, users should be able to evaluate if the objects, variables, statistical measures and reference periods correspond with his/her interests. A general rule of thumb is that the quality report should contain information which makes it possible for a user to evaluate if he/she can rely on the statistics from an overall point of view.

In CVTS2 countries were asked to prepare reports about the data quality. Almost all countries delivered quality reports, but the comparability of the different reports is rather low. The reports are differently structured and the information provided differs a lot. Some reports are rather brief. Thus the CVTS3 M consortium stress the need to implement the criteria of quality by Eurostat. The definition of quality is described on the web page <http://forum.europa.eu.int/irc/dsis/coded/info/data/coded/en/gl011043.htm>. The following criteria are included:

- Relevance
- Accuracy
- Timeliness
- Accessibility
- Comparability
- Coherence
- Completeness

Work package 6 deals with the components that need to be covered in the quality reports to enable users of the data to assess the quality of the data and briefly discusses the aspect of comparability, including comparability over time. The focus is on accuracy.

3.3.2 Sample design²⁹

It is likely that in most countries the CVTS3 survey is going to be carried out in a rather similar manner to the CVTS2 survey. Therefore, most of the guidelines and recommendations used in CVTS2 can be applied again to CVTS3. Countries should make use of their best up-to-date information on training enterprises to make an efficient sampling plan. The sample design is simple random sampling within strata without replacement, with strata defined as cross-classification of 20 NACE categories with 3 size classes (division into substrata is allowed, and in small countries uniting similar strata might turn out to be necessary). These 60 cells are defined by the cross-classification of 20 NACE categories, C, D (15-16, 17-19, 21-22, 23-26, 27-28, 29-33, 34-35, 20+36+37), E, F, G (50, 51, 52), H, I (60-63, 64), J (65-66,

²⁸ See annex 6: CVTS 3 M consortium: Conceptual informatics framework, page 5-9

²⁹ See annex 6: CVTS 3 M consortium: Conceptual informatics framework, page 10-19

67), K+O with 3 size classes (number of persons employed), 10-49, 50-249, 250-. The results from CVTS2 can be used in order to estimate the number of “training enterprises” within each of the 60 cells defined above. For countries that never carried out a survey on enterprise training, results from a country with similar national conditions might be used.

Using this information it is possible to allocate the sample in such a way that the expected number of training enterprises within each cell will be equal to the desired number. The allocation principle is based on the expected response rates within each cell, and on the estimated proportion of training enterprises within each cell (see new excel tool in the annexes of WP6: Conceptual informatics framework). Usually it is good practice to use also a minimum sample size limit as an insurance against non-response.

The procedures and rules used for the sampling frame and allocation principle are the same as in CVTS2. There is only one special recommendation. Non-response rates were quite high for most of the countries in CVTS2 and therefore each country should give particular attention to the expected non-response rates within each cell when calculating the sample sizes for CVTS3. This will not solve the problems with non-response bias, but it may help to ensure that there are enough enterprises in each cell for the estimation process. It is suggested to use national CVTS2 results as a basis for estimating the latter proportion. The point made is that a good business register with up-to date information is most important and that the time between sample allocation and data collection must be short.

If staging or modularisation of the survey is used, this means that the statistical theory for two-phase sampling should be applied when calculating the estimates for the parameters of interest and the confidence intervals.

3.3.3 Weighting, re-weighting and imputation³⁰

There are two types of non-responses:

- **Unit non-response** arises when no survey data are collected for a unit (information is missing on all the questionnaire variables)
- **Item non-response** arises when some data are collected for a unit but values of one or more items are missing.

Non-response causes at least two types of problems. Firstly, by reducing the achieved sample size, non-response might cause less precise estimates for important indicators regarding different population groups. The second and more essential problem caused by non-response is the introduction of bias. Non-response can lead to over- or under-representation of some groups in the population. If these groups have different training patterns compared with other groups in the population, the estimates based on the respondents in the sample will be biased and therefore not representative for the entire population.

For CVTS3 it is important to have enough resources for re-contacts with the enterprises in order to reduce the unit and item non-response rates as much as possible. However, in practice, some amount of non-response certainly arises. It is recommended in CVTS3 that re-weighting is used to treat the problem of unit non-response, while imputation is used to treat problems of item non-response. It has not been possible to make a complete analysis of the imputation methods in CVTS2. In order to do that, it is necessary to have access to micro data before imputation of the variables and a data set after imputation of the variables for all participating countries. This is a prerequisite to analyse the effects of the imputations in different countries and for different variables. Unfortunately, most CVTS2 countries only sent

³⁰ See annex 6: CVTS 3 M consortium: Conceptual informatics framework, page 20-40

the imputed dataset to Eurostat. For CVTS3 it is recommended that both the dataset before imputation and the dataset after imputation will be sent to Eurostat.

The imputation methods used may have an impact on the accuracy of the data. In general, the greater the degree and impact of imputation, the more careful you need to be in using the data. In the following situations, imputation should not be made:

- Imputations are not allowed in the case that a record or a case (the “questionnaire” of one enterprise) has a score on less than 50% of the variables (in particular if this concerns the core questions on training).
- Imputations are not allowed if more than 50% of the responding enterprises in a stratum have missing data on more than 25% of the quantitative variables (in particular if this concerns the core questions on training).

Imputations for which other sources can be used as an alternative source of information are only allowed if the quality of these data can be guaranteed and the data are sufficiently recent.

It is difficult to develop detailed rules for imputation at this moment. On the one hand it requires a theoretical analysis of possible relations between variables, which can be used as a “predictor” of the score of a particular enterprise on a particular variable. On the other hand, fully sound hypotheses regarding this can only be based on running empirical analyses on the collected data (with a potential difference in hypotheses between countries). This type of analysis can only be made if the countries submit a dataset before imputation and a dataset after imputation to Eurostat as recommended by the CVTS 3 M consortium.

Two types of data are being collected in CVTS3, quantitative and qualitative, for which different imputation procedures are required. It would be ideal if missing values for both types of data could be imputed so that enterprise records sent to Eurostat were complete with respect to all variables. However, it is not possible to base the imputation of qualitative variables on a model which uses a combination of other information in the enterprise record. This means that there exist doubts if imputation of qualitative variables will give better quality in the estimates than simply distributing the “not known” or “not available” totals in a table. It is therefore recommended that quantitative variables will be imputed in the first place. If qualitative variables are imputed the item non-response rate should not exceed 20% in a stratum. Otherwise, it is better that the item non-responses for the qualitative variables are shown in the tables under the category “not known”. It is also recommended that qualitative variables which have been imputed will not be used for further breakdown of enterprises within a NACE group or size class when the results are presented. It is important that the original data records (before imputation) are kept and that a detailed description of the imputation procedures used is contained in the quality report.

4. Problems encountered

Some of the objectives of the CVTS3 M project were difficult to bring in accord with each other and difficult to reach at the same time. As mentioned before the main restrictions to be considered during the preparation of the CVTS3 questionnaire were

- costs of the survey
- burden on the respondents
- availability of detailed data on CVT in enterprises
- time schedule
- different situations in the participating countries

For example, considering costs of the survey and the burden on the respondents led to conclusions and recommendations differing from those reached when focussing on information needs and users. Information needs, in addition, had to be assessed with respect to data availability. Therefore, finding a compromise regarding range, depth, detail and purpose of information between the different groups involved was the main problem to be solved.

Another conflict was to assure comparability with CVTS1 and CVTS2 and – at the same time – with other European surveys like the AES. To assure comparability with former CVTS and to improve at the same time the questionnaire is hardly realistic. The proposed final version of the questionnaire of the CVTS3 M consortium therefore is a compromise between the conceptual discussion within the consortium and with the other parties (e.g. DG EAC, Eurostat and Task Force), the methodological requirements and the interests of the users of the data.

In this chapter the main problems encountered will be presented. Some of them lead to recommendations for future CVTS that will be treated in more detail in chapter 5. Some of the problems mentioned are to some extent unavoidable, hence no recommendations are provided. Nevertheless they are to be mentioned here in order to facilitate assessing the results.

The fulfilment of the project tasks necessitated a close cooperation between the CVTS3 M consortium and the European Commission (DG EAC and Eurostat). There was a fruitful discussion of concepts between the parties leading to common concepts in many cases, but on some issues no common position could be found. The final proposal for the CVTS3 questionnaire of the CVTS3 M consortium therefore differs to some extent from the final Eurostat version integrated in the EU manual. The main conceptual differences between the two versions have been discussed in chapter 3.

A technical problem to be mentioned was the time schedule of the project. The contract of the project was signed 21st of September 2004 and the project lasted until 30th November 2005. It overlapped with the development of the Regulation. Furthermore some countries will start the survey right at the beginning of 2006, and hence there were necessities to further progress the work and to deliver even ahead of schedule of the project. Things that should be done step by step actually happened at the same time or sometimes even in the wrong order. For example work package 8 – the EU Manual – had to be delivered by end of August 2005, but at that point of time the final version of the questionnaire was not fixed yet. So the Eurostat draft version of the questionnaire (version 4.0) together with the according list of variables and the checking rules was included in WP8. After the Working Group meeting in September the manual had to be revised in order to fit to the latest version of the questionnaire. This

procedure caused double work for some of the work packages and for the final checking of the manual.

Eurostat's time schedule for implementing CVTS3 and the timelines of the CVTS3 M project were not matched well. For example, the grant applications of participating countries already had to be delivered before the work packages treating some of the issues relevant for the grant applications were available. The papers of the CVTS3 M consortium were delivered according to the timelines agreed upon in the steering group meeting, and the dates for grant application were not announced to the consortium. As a consequence countries could not make use of the recommendations and tools of the consortium, as issues treated in following work packages - for example sample allocation or the mode of data collection - were already decided and fixed by the national statistical offices before the date of delivery of the work package, because of the requirements for the grant application.

One of the most serious restrictions in developing the questionnaire was the burden on the respondents. In most countries CVTS is voluntary at the enterprise level, hence all efforts should be made to motivate enterprises to participate. Participation rates of enterprise surveys are generally low and seem to be decreasing in the last years – an observation that in the case of Germany was affirmed by the expertise of infas. Length of the survey is one of the deciding criteria for enterprises' participation in the survey. This problem was raised in the CVTS Working Group in December 2004 and a promise was made that CVTS3 would not be more burdensome than CVTS2. As some new issues had to be treated in CVTS3, some of the old questions had to be deleted. Decisions had to be made as to which of the questions from CVTS2 were replaceable. Furthermore, some of the interesting topics could not be considered to an adequate extent. For example, the "other forms of CVT" were seen to be an issue for revision in CVTS3 as they are of growing importance and were only covered in a few questions in CVTS2. Furthermore, analysis of the results of CVTS2 and of the German extra survey for CVTS2 had shown that there were many misunderstandings and misclassifications of the different training measures. For CVTS3 the progress in this area was strictly limited by the obligation not to enlarge the length of the questionnaire. Even though the introduction of a quantitative question on each of the other forms is an important improvement from our point of view, this is not sufficient for the future.

5. Recommendations for future CVTS

In chapter 4 some problems encountered were discussed, while the various work packages and discussions with other bodies indicated other issues of concern. Chapter 5 will go one step further and try to provide recommendations for future CVTS. Some of them are directly related to the problems mentioned in chapter 4, some are on a more general level. All of them evolved during the course of the project and out of the experience of the involved experts.

First of all we strongly recommend starting **preparatory work earlier next time**. The extremely narrow time schedule caused some problems (see chapter 4) and in addition prevented some accompanying measures to be realised. In detail these are:

1. Time to let the translation be checked by experienced institutions like CEDEFOP or ETF. As we see it, this is an extremely important step to improve international comparability. There is a big risk of blurring of the concepts during the project process.
2. Time to test the questionnaire between translation and implementation.
3. Time to inform enterprises beforehand about the survey. In the ideal case enterprises could be informed before the beginning of the reference year about the data that will be collected. In addition they could be provided with a tool for the collection of the relevant data, especially the more critical quantitative data.
4. Time to allow countries to make best use of the recommendations while planning the survey at national level. As mentioned in chapter 3.2.2, with CVTS3 this was not the case. Countries had to fix the mode of data collection and the sample design before advice from the relevant work package was available.

To enlarge validity and international comparability we recommend to **introduce some central guided events** (meetings) like

- central training in Luxembourg, for those responsible for the training of the interviewers
- working groups for informaticians.

If such central events are not possible at least standardised written material should be provided.

Another point that should already be considered during the planning phase is **how to deal with the data**. Until now the use of CVTS data remains sub-optimal, because access to micro-data is very complicated (e.g. because of data protection concerns). We appreciate that Eurostat is planning a simplified, standardized access to micro-data for CVTS for scientific purposes.³¹ To ensure that data can and will be used not only averages but analyses on the micro-level should be done. Furthermore, some dissemination activities in the countries should be undertaken. The dissemination experience with CVTS2 has shown that there are not enough national activities. A possibility to promote publications could be a call for proposals for an assessment group as in CVTS2. The access to micro-data for this group has to be guaranteed from the beginning of their work.

As there are nowadays different international surveys that cover training issues **the scope of CVTS** has to be clearly defined. Training of the employees in enterprises should remain the special contribution of this survey. On the question of extension or reduction of content of CVTS the quality of data from the different sources – especially from AES, LFS and CVTS - should be compared and decisions made as to which information can be best taken from which sources. All together we assess CVTS should remain a stand-alone-survey, as in an individual survey like AES there is no clear definition of CVT in enterprises. Analyses on the

³¹ http://epp.eurostat.cec.eu.int/portal/page?_pageid=1913,47567825,1913_47567846&_dad=portal&_schema=PORTAL

micro-level only remain possible if some key information on the participants is recorded in CVTS at enterprise level. On the basis of the results of CVTS3 and the first implementation of the AES it has to be proven if the definitions and concepts of AES and CVTS are sufficiently harmonised.

Overall, there is still a danger that insufficient co-ordination of approaches to statistics on training and education is taking place. It is recommended that a **review** be undertaken by Eurostat, possibly in consultation with DG EAC and CEDEFOP, of the **full range of statistical surveys in the area**. This would include the CVTS, AES, LFS, ECHS, Eurobarometer and once-off surveys by other European institutions such as the European Foundation for Living and Working Conditions. A “mapping” of the data available from these sources should be constructed with a view to identifying duplication and gaps. Such an analysis is recommended to help inform all related Eurostat surveys. It should be completed within the next year and discussed with the Eurostat Working Party on Education and Training Statistics in 2006.

Another point we strongly recommend is the **implementation of detailed post-survey studies**. The instruments could be of the following nature to answer different questions:

1. Case studies after the survey can help to answer the question, **how the concepts were understood** or if any major **misunderstandings occurred**.
2. The same objective can also be followed by a short questionnaire accompanying the main survey for 10% of the enterprises.
3. As indicated in work package 4 the development of an **indicator of professionalism** depends on the results of CVTS3 and necessitates a detailed analysis of the results of the section on training policy of the enterprise.

Some recommendations evolve from the fact that **future IT developments** will open new possibilities for CVTS4. Progress in the standard of IT equipment and knowledge in the enterprises and in the statistical offices as well will allow some modifications in the implementation of the survey. For example, we can expect to have **more documentation** in the future. Due to this enterprises may be able to answer difficult quantitative questions of the survey more easily and accurately. Furthermore, with the development of business registers and other standards in data collection the statistical offices will probably have better possibilities to use other sources to amend or link CVTS data (e.g. success, productivity, profit, net gain per employee). Concerning the **data collection and analysis approach**, an expansion of electronic equipment in the statistical offices and the enterprises will probably allow more elaborated concepts to be used. For example, all countries should be able to use **weighting procedures with calibration**. In work package 5 we outlined the advantages of web based surveys, which are nowadays still limited by technical problems. In a few years technical standards will hopefully have developed far enough to let new approaches of data collection compensate for sinking response rates in enterprise surveys. As mentioned in chapter 3.2.2 in case of better technical standards in all participating countries the consortium recommends an enlargement of the application of **web based modes of data collection**.

As a last point, we would like to mention some **topics that are not or not yet sufficiently treated in CVTS**. As mentioned before, the restriction of not enhancing the burden on the respondents limited the possibilities to cover some issues in CVTS to a satisfying extent. One topic that was affected by this restriction was the coverage of the “other forms of CVT”. We would strongly approve the idea to expand the survey with respect to this issue. Closely related to this is the proposal to reconsider the integration of some questions on the organisation of work in the enterprise. In paper 6 of the combined work packages 3 and 4,

elaborated by FÁS, we proposed a first approach to this area.³² We still think that combining the organisation of training in enterprises with questions on the organisation of work is an interesting and enlightening approach. Another idea is to investigate the relation of training issues to other enterprise policy. Other important items are benefits of training, quality of external continuing vocational training and certification of CVT.

Finally, we would like to point at some topics that will probably become more important in the future and may necessitate further consideration for CVTS4: ECVET and the European Qualification Framework. In the European process of growing together, exchange programs and questions of permeability become more and more important. For CVTS4 it would be an interesting question how far changes in this area cause changes in outlook or even in behaviour of enterprises.

³² See annex 4, paper 6: CVTS 3 M consortium: Note on high performance work systems (also available on Circa site as Eurostat Doc. ESTAT-D5-2005-CVTS3-TF2-19-EN)