



A.Th.E.Net
**Anticipation of
Training Needs
for a
European Network**

LEONARDO II Programme
Final Report on Germany

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1. INTRODUCTION

1.1 *The project's purpose*

With the aim to learn from European comparison, the two central questions of the ATHENET project are

- how training needs analysis is carried out and organised and which methods are used; and
- if and how social partners are involved in their respective national systems of training needs anticipation.

Given the fact that the project as it has been initiated does not specify a level or range of activities of anticipatory training needs analysis which is to be looked at, we had to select the cases dealt with in detail from a vast number of projects and activities dedicated to this purpose. Therefore, in order to make the research and study manageable, two basic demarcations had to be drawn:

- Firstly, the report has been produced with the intention to draw a distinction line, as clear-cut as possible, between labour market research and training needs analysis. It will only present those institutional characteristics, projects and activities which are closely related to the anticipatory analysis of skills, qualifications and related training needed. Where both perspectives are within the scope of interest of such activities, exclusively those related to training will be commented on.
- Secondly, the report focuses on national and regional approaches and methods of training needs analysis cutting out completely the vast number of more or less similar methods and tools of company-based training needs analysis (TNA). As the project focus lies on the involvement of the social partners, it can generally be said that company-related methods and tools of TNA usually imply the involvement of a company's Works Council as well as of the individual employees, theoretically and practically. The author himself has developed a grassroots approach to a do-it yourself TNA tool which has been formulated on the basis of extensive and intensive (own and alien) experience and corresponding case studies. It is called "Sustainable Personnel and Organisation Development" and is soundly grounded on a learning organisation approach (Franz 2002).

1.2 *Anticipation of training needs in Germany*

A relatively systematic approach to training needs analysis on a national level is of relatively recent origin in Germany. Its necessity has become evident with the rapid technological and economic change of the nineties and urgent with the German unification and the subsequent problems of employment in the German East. A real thrust occurred when in 1995 the German Congress of Chambers of Industry and Commerce suggested to create 20 new vocational profiles (*Beruf*) and the question arose on which grounds such suggestions could be made. In the following years, a fervent debate led to the recognition (Alex 2000) that a more systematic observation of the development of training needs and of its origins was dearly needed in order to be able to steer with more foresight the various elements of life-long learning in future Germany instead of exclusively steering on the basis of a view

through the rear mirror. In 1997, the German Federal Institute for Vocational Training suggested to establish an Early Intelligence System (Früherkennungssystem) aiming at:

- observing the long-term development of macro-structures; and
- achieving the collection of detailed and differentiated information on the micro-level, i.e., below the category of *Beruf* and or on the basis of actual occupational activities. (idem)

This Early Intelligence System is the most interesting innovation in the German TNA scene starting to turn it into a processing system. Therefore, in Chapter 4, it will be the most extensive case study.

This brief introduction will lead to an overview chapter outlining the German "institutional system" of training needs analysis. It will be followed by a chapter presenting the main technical resources and data bases. The subsequent chapter will study in more detail some specific cases of projects and methods used. A final chapter will draw conclusions concerning the governance of the system of anticipation of training needs in Germany.

It must be mentioned that this report considers itself to be complementary to an earlier LEONARDO report on the anticipation of training needs in Germany produced by Jürgen Schultze and Heike Reimers (1999). Cases studied in this earlier report, especially those on regional employment and TNA methods, have not been repeated or reviewed. The present report is focusing on new development or different aspects.

2. INSTITUTIONAL SETTING ON THE NATIONAL LEVEL

In this chapter we will describe the institutional setting of training needs anticipation in Germany on the one hand, and the technical resources and data bases providing the raw material of all forecasting, on the other. By doing so, we will not only outline the “system” but also analyse the involvement of the social partners in this setting concluding with a description of the governance .

Two federal institutes with their different task profiles are the central pillars of the institutional setting and the principal observation platforms of the evolution of employment and occupational profiles:

- the **Institute for Labour Market and Vocational Research** (German abbreviation: **IAB**) of the Federal Institute for Employment, soon Federal Employment Agency, with its predominantly quantitative and labour market, i.e., employment-related, forecasting, and
- the **Federal Institute for Vocational Training (BiBB)**, with its predominantly qualitative research related to *Beruf* and continuing vocational education and training (CVET).

Both institutes which will be described in some detail below are, at the same time, the central elements of a broad network of scientific research at universities and institutes throughout Germany (cf. 4.3.4) and political decision-making on issues of vocational education and training.

As education and training have been radically decentralised after the war, the highest political organism in education and training policies is the **Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany** (Ständige Konferenz der Kultusminister der Länder – **KMK**: www.kmk.org). The further harmonisation of interests between the Federal Government and the Länder as well as within the federal states themselves, is the mission of the Bund-Länder Commission for Educational Planning and Research Promotion (Bund-Länder-Kommission für Bildungsplanung und Forschungsförderung – **BLK**: www.blk-bonn.de). This joint commission of Federal Government and Federal States Governments based in Bonn, for example, has published in October 2001 its latest report on “the Future of Education and Labour. Perspectives of demand and supply of labour up to the year 2015” (BLK 2001).

2.1 The Institute for Labour Market and Vocational Research of the Federal Institute for Employment (IAB)

Since 1967, the year of its foundation, the institute has been operating as the research institution of the Federal Institute for Employment (Bundesanstalt für Arbeit) fully integrated in the Federal Institute as its division VI.

The Federal Institute for Employment is a self-governing tripartite body whose management board “decided to establish the IAB, because they were convinced that a sound scientific basis is required if the Federal Employment Services want to perform their duties with foresight.” (www.iab.de) Its guiding principle was the notion that active labour market policy means taking the necessary provisions against labour market imbalances.

The Social Code III (Sozialgesetzbuch - SGB III) is the legal basis for IAB's research efforts, defining it as one of the obligations of the Federal Institute for Employment.

"There are joint employment research committees of the Federal Employment Services' self-governing organs, the Board of Governors and the Executive Board, to co-ordinate their co-operation with the IAB.

As employment research is by nature interdisciplinary the IAB's staff comprises researchers from various disciplines. Currently there are more than 120 regular research positions at the IAB. Each of the ten regional employment offices has a department for information, controlling and research to ensure the flow of information throughout the Federal Employment Services' system. Staff with special responsibility for employment research is assigned to 13 selected local employment offices and carry out surveys.

Research activities are defined in consultation with the Federal Minister of Labour and Social Order; research results are submitted to him. In addition, they are available as orientation aids to the general public, particularly the social partners and all interested parties in politics, industry and science. The regular, swift and complete publication of working reports and results ensures the public airing of such research. These publications are to be understood as academic reports and not as business policy statements made by the Federal Employment Services" (quoted from: www.iab.de).

According to its online-presentation "the following keywords describe the IAB's work:

- own research work;
- surveys;
- theoretical and methodological basic work;
- information and documentation;
- medial transformation of research results;
- advisory function in policy matters;
- co-ordination of relevant research activities;
- improvement of labour market statistics;
- maintaining close links with university research;
- commissioning research projects;
- research projects commissioned by institutions incorporated under public law."

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2.1.1 Research activities

It is IAB's task to offer relevant labour market analyses and projections under diverse aspects and horizons, including structural research, e.g. in connection with technological innovation, the diagnosis and forecast of the development of employment and opinion polls on the evolution of vocational profiles and professions. IAB is divided into 10 work areas of which six are dedicated to research or research and advice, the other four being oriented to internal or external services like publications etc.

Work Area 1 carries out research into *long-term forecasting and international analyses*. Its work is structured along the following lines: projections of labour force supply on one, demand on the other hand; structural change, and international studies. The supply and demand projections include relevant quantitative data on structural changes of skill, qualifications and training needs.

Work Area 2 is dedicated to *short-term (mainly annual) analysis and forecasting of labour market development* and to research into *working time* issues.

Work Area 3 covers *sociological labour market research* mainly oriented towards specific social groups like handicapped people, migrants, senior workers, women and equal opportunities, but also biographical studies, structural change, e.g. of risks and hazards, and evaluation of labour market programmes.

Work Area 4 is the one of the highest interest for this report as it is dedicated to *Beruf and qualification research* covering qualification research, youth and labour market, research on

the structure of professions (*Beruf*), specific labour market segments, new developments of the training and employment system, and information systems on training and *Beruf*. One of its outstanding activities was a quantitative long-term forecast (horizon 2015) on occupations and skill structures of the "labour landscape of the future" together with Prognos AG (cf. 3.1). Another important periodical activity are the BiBB/IAB Surveys, a joint activity of both central federal institutes allowing structural analyses e.g. of specific developments in economic sectors, different types of VET, occupational mobility or specific labour market populations (cf. 3.7 and 4.3.2).

Work Area 5 carries out *research on company-related labour force demand and innovation*. One of the outstanding tasks of this area is the maintenance of the company-related survey panel and current research with this very important database (cf. 3.4). Other strands of this area's work are oriented towards company-related innovation processes concerning new technologies and other structural changes, also those related to collective bargaining and agreements.

Work Area 6 deals with *statistical methods and analyses and regional labour market research*. This latter subject will become more important as the soon so called Federal Labour Agency has started a large decentralisation effort which will be backed by the present reorganisation of the whole organism.

With its scientific results and its active discussion of labour market policies, IAB has made major contributions to the solution of current and foreseeable labour market problems over the past 35 years. It has achieved a high scientific reputation. An abundance of analytical surveys and forecasts have been conducted and submitted to politics and the public. This has not only involved the development and employment of a number of individual, scientifically-based instruments; in this respect a theory-based, inter-linked series of instruments has also been created.

2.1.2 Involvement of social partners

The Federal Institute for Employment whose integral part IAB is, has been constituted as a self-governing, non-profit corporation of public law, and all its governing bodies have a tripartite composition. The Administration Board (Verwaltungsrat) is formed by 21 representatives of employers (7), unions (7) and public bodies (SGB III § 367). The Board's chair is elected annually alternating between the social partners; the vice president must always be from the opposite social representation (§ 382). Board members are entitled to participate in all meetings of commissions or the Management Board or Presidency managing the ongoing work. They also have the right to ask for information and advice, e.g. from IAB. This structure and these rules of self-government are also valid on both lower levels of the organisation: the employment services at the *Länder* and the local level.

2.2 The Federal Institute for Vocational Training (BiBB)

BiBB, seated in Bonn, was established when the first Vocational Education and Training Act (Berufsbildungsgesetz, BbiG) became effective in 1970. Its present legal basis is the Vocational Education and Training Promotion Act (BerBiFG) from 1981 in its amended version from 1994. With its 474 employees (August 2002), it is financed from federal budget funds and is subject to legal supervision exercised on behalf of the Federal Government by the Federal Ministry of Education and Research.

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The aims of its research, development and counselling activities are to identify the future functions of vocational training, to promote innovation in vocational training at national

and international level and to develop new and practically viable solutions for use in initial and continuing training, more exactly, in:

- initial training in companies and *Beruf*schools,
- continuing training (Fortbildung) for people employed,
- and retraining (Umschulung) for those who are unemployed or threatened by unemployment and who want to learn a new trade or acquire new competences.

2.2.1 Research activities

"The work of the Institute, which is geared to vocational training delivery, focuses on ten task areas:

- Sociological principles of vocational training
- Key and structural data on vocational training
- Qualification research in the field of vocational training
- Teaching and learning in vocational training
- Personnel engaged in vocational training
- Learning venues for vocational training
- International research and development in the field of vocational training
- Vocational training standards and qualification development
- Education and training technology
- Education economics and organisation

Through its work in these ten task areas, the Institute is instrumental in

- ensuring that all young people have the opportunity to undergo an initial vocational training which will equip them well for the future;
- adapting Germany's vocational training system to the needs of the knowledge society;
- continuously updating initial and continuing training, e.g. by developing new vocational qualifications and through quality assurance and quality management systems;
- raising the efficiency and attractiveness of vocational training, e.g. by supporting the development and more efficient use of interactive, multimedia systems;
- developing the necessary support to allow high-achievers and low-achievers alike to obtain the highest possible vocational qualification;
- supporting efforts to enhance the transparency and marketability of vocational training in Europe;
- conducting vocational training research to detect correlations between technological and societal change on the one hand and labour market developments on the other, to identify emerging trends in this respect and to analyse their implications for vocational training;
- disseminating the findings of its activities and further refining research methodologies by engaging in co-operation schemes at national and international level to promote the exchange of information and experience and the advancement of vocational training research;
- stimulating and promoting vocational training development at international level by engaging in international projects to advance the reform of vocational training systems;
- developing scenarios for the future development of initial and continuing vocational training;
- helping co-ordinate an approach to education and training planning which attaches high priority to future viability." (taken from BiBB's homepage: www.bibb.de)

One of BIBB's major activities concerning this report's interest is in the field of "Früherkennung" (early intelligence) of skill developments. Here BiBB (as IAB) is a very active part of a vast network (FreQueNz) of German institutes dealing with the different aspects of researching future labour market necessities (cf. 4.3.4). Several projects developed in the framework of this network will be presented below such as: Qualifikationsstrukturbericht, a non-periodical report on the development of the structure of occupations and qualifications (cf. 3.9.1)

2.2.2 Involvement of social partners

The Institute is run by three statutory bodies: the Board, the Standing Committee, and the President.

- The Board is a forum for co-operation bringing together, on an equal footing and with equal voting rights, the representatives of the four societal forces which bear responsibility for vocational training in Germany, namely employers' federations, trade unions, the governments of the *Länder* (i.e. the 16 federal states) and the Federal Government. The Board adopts the Institute's research programme and budget. It advises the Federal Government on matters of vocational training policy and submits recommendations and position statements intended to promote the regulation, implementation and further development of vocational training. The Board also has a particular responsibility in its being called upon to submit its comments on the draft of the report on vocational training published annually by the Federal Ministry of Education and Research.
- the Standing Committee conducts the Board's current affairs in the interim between Board meeting and carries out the preparatory work for the decision-making process.
- the President is responsible for conducting the business of the Institute and represents its interests vis-à-vis third parties.

2.3 Governance in training needs analysis on the national level

As could be shown, the role of the social partners is crucial for the institutional functioning of training needs analysis in Germany. Both central institutes are governed by boards with a strict rule on the basis of equal shares in decision-making. In the case of the Federal Employment Institute, the direction of the Administration Board is annually rotating among employers and trade unions.

2.3.1 Autonomous institutes on both social partners' sides

Moreover, both social partners have institutes of their own who are highly competent in issues of employment and skill development and who comment regularly on these issues thus giving scientific support to their representatives. On the employers' side, we have IW (Institute of the German Economy; Institut der deutschen Wirtschaft) seated in Cologne (www.iwkoeln.de) and several other institutes for research and advice, e.g. for the German Congress of Chambers of Industry and Commerce or the German Congress of Chambers of Crafts, also a well renowned institute of the Bavarian employers (bfz Bildungsforschung; <http://bildungsforschung.bfz.de>) seated in Nuremberg. On the side of the unions, there is WSI (Institute for Economic and Social Research; Wirtschafts- und Sozialwissenschaftliches Institut) linked to the Hans-Böckler Foundation of the Confederation of German Trade Unions (DGB) and seated in Düsseldorf (<http://www.boeckler.de/wsi/>). All these institutes have well-reputed publications and reviews in which they currently comment on training and employment issues.

Finally, a major forum of discussion and decision-making is the Bündnis für Arbeit, the Alliance for Employment convoked and installed by the red and green government since 1998. Employment and training have been major topics in this political forum (see Bündnis

für Arbeit 2000) which after the 2002 elections and for the time being has not been renovated.

2.3.2 The Dual System as a training needs indicator

What must not be forgotten is the generation of (data on) training needs requirements by the mere structure of the Dual System, the German vocational training system, which through all its institutional levels has a tripartite constitution and which in itself is the main continuously functioning indicator for what is needed in terms of training. This is due to the fact as in Germany it is the companies who decide whether and what to train and who establish the formal contractual basis of training between the employer/training company and the trainees. Indeed, it is not an anticipatory indicator in the sense as training needs analysis is being used and understood in the framework of this study. Nevertheless, and as a distinctive feature the German system tends to produce and show general trends earlier than other more or exclusively school-based vocational training systems as this decision-making process on the company level as well as on all representation levels of enterprises and trade unions is a continuous and institutional one. Thus, training needs appear in empirical terms not only when already trained people are looking for employment on the labour market, i.e., at the threshold to the employment system, but there is a first threshold of access to the training system which produces evidence as to what and how much of it is needed in terms of training respectively trainees. Given the legal circumstance that companies do not have an obligation to employ a person which has been trained in this company, there is also, and in recent years to a growing extent, a second threshold between the training system and the employment system which may lead to additional adaptive training requirements and efforts.

Moreover, there is a continuous exchange on vocational training issues on all levels of enterprise and entrepreneurial representation: sectorial and even branch associations, employers' associations, Chambers of Industry and Commerce and Chambers of Handicrafts and their respective associations, on the one hand, and inside the trade union organisations, on the other hand, as well as between the representatives of the different social partners.

Constantly, there are so called company-based pilot projects (Modellversuche) going on where a number of relevant companies along with other training providers and scientific evaluation, describe, experiment and develop and review new, existing or hybrid vocational profiles. Initiated and co-ordinated by the BiBB, they are co-financed by public funds and company contributions, normally at equal conditions.

2.3.3 Collective bargaining and training needs analysis

Collective bargaining, in general, is not a place where training needs analysis takes place. Nevertheless, a great amount of relevant framework conditions for initial and continuing training is formulated on the longer-term level of collective bargaining on general employment conditions (Manteltarifvertrag) which usually deal with aspects like general pay structure terms (e.g. recently: skipping the blue and white collar separation), basic working time issues (annual working time, general overtime working conditions, working time accounting, etc.) and continuing vocational training conditions (who decides; which groups of workers are to be considered how; co-investment of learning times, etc.). It is only in this sense, that collective bargaining interferes with training needs anticipation setting conditions and practical terms of learning and continuing learning in companies.

These general collective agreements have a regional and/or sector specific scope of application and may include special requirements concerning certain workplace conditions or technologies, e.g., screen work, i.e. work at computer interfaces, or particular social

groups and their working conditions, e.g., low skilled workers, equal opportunities of men and women (Bispinck 2000).

3. TECHNICAL RESOURCES AND DATA BASES

In this paragraph, an overview will be given about all permanent data bases and periodical activities providing an ample basis of mainly quantitative data for analytical and prognostic approaches to labour market and vocational developments will be briefly presented and characterised in some detail. Some of the following data bases will be presented in more detail in Chapter 3 on relevant ongoing projects as they are permanently updated and deserve deepened methodical presentation.

The general statistical framework of economic data is provided by the Federal Statistical Office located in Wiesbaden/Hesse (www.destatis.de), together with the corresponding statistical offices of the federal states. They elaborate the official market data on the economy and publish them together with the data on the labour market. For the individual branches of the economy, regular branch statistics are issued. Moreover, demographic statistics and school statistics at the federal level are kept here. This periodical accounting includes all figures on the macro-economic cycle determined in the calculation of the national product and assigns them in a system of accounts to firms, private households, the State, foreign countries and assets. This comprehensive set of currently collected data is completed by a number of individual surveys which permit more detailed and individualised analyses such as the Microcensus and the Socio-economic panel.

3.1 *Microcensus*

The Federal Statistical Office conducts an annual survey in one percent of all households, called "Mikrocensus". Its main purpose is to create a reporting system, which is able to provide the most important structural data in demographic and labour market statistics and their changes (see www.destatis.de/themen/d/thm_mikrozen.htm). It includes data on education and training according to the different ages of. These data are available online (Data series service among others) and they are regularly published in a report on "Living and working in Germany". As the Microcensus does not provide more detailed information on skill developments and needs, it will not be further commented.

3.2 *Socio-Economic Panel (Sozio-oekonomischer Panel SOEP)*

The Socio-Economic Panel is a representative longitudinal survey carried out annually since 1984. In the year 2000 it had a sample of some 12,000 household with 20,000 individuals. The institute in charge of SOEP is the German Institute for Economic Research (Deutsches Institut für Wirtschaftsforschung, DIW) seated in Berlin, a well renowned independent, non-profit-making academic institute which is involved in basic research and policy advice (www.diw.de). The interviews are organised by Infratest Sozialforschung (Munich) (www.infratest-sofo.de). Its questions focus on the composition of household, occupational and family biographies, occupational mobility, incomes, health and personal satisfaction with life. Topical survey modules may also cover issues like social security, education and training, allocation of time, family, and social services. The data are available to researchers in Germany and abroad in SPSS, SAS, TDA, STATA, and ASCII format for immediate use. Extensive documentation in English and German is available online.

3.3 Employment statistics (*Beschäftigtenstatistik*)

The current labour market data are prepared and published by the Federal Institute for Employment with the support of IAB. The employment statistics provide an up-to-date set of data. In addition to information on items such as working hours, amount of gross wages, full- or part-time work, further information as to the job, qualification and training and the economic focus of the respective company employing the person in question is collected.

On the basis of the employment statistics, IAB disposes of a number of instruments to complement the current data through the evaluation of further surveys such as representative samples or selected interviews with experts.

3.4 IAB Company-related Survey Panel (*IAB Betriebspanel*)

IAB's company-related panel has first been established and used for surveys in 1993. In 1996 it was extended to Eastern Germany nearly doubling the number of companies involved. Based on a one per cent representative random sample from the totality of German companies with more than one employee registered by social security, it is carried through annually in more than 16,000 work centres. The field work is done by interviewers from Infratest Sozialforschung (Munich) (www.infratest-sofo.de). Extensive information and publications can be found on the homepage of www.iab.de (cf also Bellmann et al).

3.5 Labour Landscape 2010 and the IAB/INFORGE Model

The IAB/PROGNOS "Labour Landscape 2010" is indeed the broadest and best-founded forecast on the long-term development of the labour market and occupational evolutions available for Germany. It comprises the quantitative and qualitative level and takes into consideration shifts between sectors and between individual tasks. It has been carried out for the first time in 1985 building on data from 1973 to 1982 with a projection scope of 18 years, i.e. till 2000. In following years three further projections till 2010 have been conducted (for more details cf. 4.3.1).

In 2002, a new long-term employment forecast model has been used for the first time. This IAB/INFORGE Model is part of the international GLODYM network and operates with a bottom up construction with some 600 variables for each of the 59 economic sectors (IAB Kurzbericht 10/2002 and Lutz et al. 2002)

3.6 Labour Market Monitor for the newländer (*Arbeitsmarkt-Monitor für die neuen Bundesländer*)

The annual Labour Market Monitor for the New *Länder* aims at making transparent the development of employment and occupational evolutions in Eastern Germany after unification. Commissioned by the Federal Employment Institute and published by IAB, it is carried out by Infratest Sozialforschung (Munich) (www.infratest-sofo.de).

3.7 BiBB/IAB surveys (*BiBB/IAB-Erhebungen*)

As its name indicates, these surveys are a joint activity by both central German institutes for labour market and qualification research. While BiBB has a legally established focus on vocational education and training (BerBiFG §2.1) and IAB's task (according to SGB III §280) extends to the whole of vocational and professional qualification and competence, both have the mission to contribute to educational planning. As the official statistics on

economic, employment and population data do not provide sufficient detail and transparency as to comply with this planning mission, both institutes have created their own empirical basis allowing them to carry out selective studies on very different issues (Parmentier/Dostal 2002). The first survey of this series was carried out in 1979. For more specific information please see Chapter 4.3.2)

3.8 Total Education Accounting (*Bildungsgesamtrechnung BGR*)

These data bases and tools are completed by the so called Total Education Accounting. Based on all existing statistical resources and a number of additional surveys and studies, it aims to overcome the partial perspectives of each of these sources, thus allowing to carry out a large range of longitudinal and transversal studies and evaluations on the educational careers of cohorts and very diverse types of analysis of changes within the education and training system as well as at the thresholds between the education and training system to the employment system (Reinberg/Hummel 2002). In recent years, it has been further optimised by an entropy method (Blien/Reinberg 2002).

3.9 Reporting on trends and structures

A number of reports is prepared every year or in larger periods. Some have been mentioned above. Three reports must be highlighted when talking about training needs analysis.

3.9.1 Report on Qualification Structures (*Qualifikationsstrukturbericht*)

This report has been prepared for the first time in the year 2000 mainly initiated and inspired by Laszlo Alex, one of the *elder statesmen* in the German scene of experts on training needs analysis who now is retired. The report is the first one to give an overview of the German system of training needs analysis on the national level. It has been prepared by four German institutes: BiBB, IAB, DIW (German Institute for Economic Research, cf. SOEP above), and WZB (Science Centre Berlin, Wissenschaftszentrum Berlin, www.wz-berlin.de). Further reports will appear although not strictly periodically every five to six years.

3.9.2 Report on vocational education and training (*Berufsbildungsbericht*)

A report on the changes and developments in vocational education and training (VET) is produced annually by BiBB, IAB and the statistical institutes implied. Its focus is on initial VET, i.e. the Dual System. Recent editions (see VET 2002) can be downloaded from the homepage of the Federal Ministry for Education and Research (http://www.bmbf.de/brosch_535.html). Due to its increased importance, continuing vocational education and training (CVET) has received growing attention in this report which eventually led to the edition of a specific report on CVET.

3.9.3 Reporting System on CVET (*Berichtssystem Weiterbildung*)

Up to date eight reports on CVET have been produced, Report VII (CVET 2000) as an "integrated report on the situation of CVET in Germany", Report VIII (CVET 2001) with "first results of the representative survey on the situation of CVET in Germany". The report is mostly produced by Infratest Sozialforschung (Munich) and closely linked to the name of Helmut Kuwan. It can also be downloaded from the homepage of the Federal Ministry for Education and Research (http://www.bmbf.de/brosch_533.html).

3.10 *Atlas of Occupations (Berufe-Atlas)*

The so called *Berufe-Atlas*, also "Berufe online", more precisely, "Berufe im Spiegel der Statistik" (Occupations in the mirror of statistics), is the most complete statistical overview or listing of the German occupational scene as seen from a *beruf* perspective. The listing contains 319 legally established occupations, aggregated in 83 occupational groups which belong to 20 occupational fields in three occupational areas or sectors: production, primary and secondary services. It is online accessible via the homepage of IAB (www.iab.de) or directly via <http://www.pallas.iab.de/bisds/erlaeuterungen.htm>). The information system pallas is still under construction but gives already now a fairly comprehensive overview on long series of data concerning occupations and employment.

4. CASE STUDIES

In this chapter a number of cases and projects relevant for the AthENet context are selected, analysed and described in some detail. Up to this point, only national forecasts, methods and tools linked to the two central federal institutes, BiBB and IAB, have been described. This chapter also includes a method used on the regional level. Nevertheless, a focus has been laid on such cases which have *not* been studied in the interim report prepared by Jürgen Schultze and Heike Reimers for the former LEONARDO project "Anticipation of Training Needs" (1999). Taking both reports together may be useful for a more complete view including the pure employment aspects which have been excluded from this report.

Company-based tools have generally been excluded as the tools in use in this field are they are a standardised field of action due to the German Works Constitution Act which attributes active participation and control rights to the Works Council elected by all employees. If in the further course of this project more evidence on this level of training needs analysis is wanted, it can be easily delivered as there are lots of case studies available. One of the methods in use has been synthesised and developed as a systemic learning and implementation tool by the author of this report (Franz 2002).

4.1 Study features

These case studies elaborate the following features where applicable or available following a similar analytical pattern as Jürgen Schultze's report:

- criteria for analysing the case:
Importance and coverage of the experience (geographical range, institutional, scientific), available documentation, contribution to the identification of solutions to the crucial issues: logic of the local reference.
- characteristics of the demand;
- global methodological approach and system of hypothesis;
- methodologies used for the field work and survey tools;
- techniques and methodologies of analysis and of data and information organisation;
- translation of the results achieved and processed in terms of training and support of decision-making;
- governance: role of the social partners;
- real use of results in the concrete decision-making process.

4.2 Short presentation of the case studies selected

Case 1: IAB/PROGNOS forecast Labour Landscape 2010

The IAB/PROGNOS forecast Labour Landscape 2010 refers to the national level, and for Germany it is the most extensive and well-based forecast of the long-term labour market development. The study contains data subdivided according to sectors, as well as explanation patterns on the development of the economy and the labour market. The results of the study serve as the basis for further regional forecasts (cf. 4.3.3).

Case 2: BiBB/IAB Surveys

The representative BiBB/IAB Surveys based on a random sample of 0.1 per cent constitute a link between large surveys with large samples but a reduced number of contents and variables (e.g. Microcensus), on the one hand, and surveys among selected populations with detailed and sample-specific questions and items, on the other hand. (cf. 4.3.2)

Case 3: Prospect

The Prospect Method as it is used in North-Rhine Westphalia

Case 4:

The project **Analysis of Qualification Structures and Qualification Needs in Lower Saxony – Regional Report (3.7)** also works with a regional orientation. This project can be taken as an example of the combination of labour-market analyses and forecast of needs. As a results, this regional analysis provides a survey on the strong and weak points of the economic, qualification and labour-market structure by comparison of two regions with Lower Saxony as a whole.

Case 4:

At the regional level, the project **Labour-Market Forecasts Rhine-Main Company Interviews (3.8)** will be portrayed. This forecast is based on data gathered through on-going interviews in companies in the Frankfurt economic region. They permit well-grounded forecasts with regard to labour-market development and the structure of labour.

Case 6: FreQueNz

FreQueNz is a large national network of institutes and projects dedicated to early intelligence (Früherkennung) concerning training needs.

4.3 The case studies

4.3.1 Labour landscape 2010 – IAB/PROGNOS Forecast¹

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| Importance, context and coverage | <p>The IAB/PROGNOS "Labour Landscape 2010" is indeed the broadest and best-founded forecast on the long-term development of the national labour market available for Germany. It is a quantitative study with qualitative back ups and takes into consideration employment and occupational shifts between sectors and between individual occupations.</p> <p>The content of the study is made up of data and explanation patterns on the development of the economy and the labour market as well as on the development of the structure of jobs. The results are projected in three alternative scenarios for the years 1995/2010. The study aims at a quantitative assessment - and thus at giving orientation - on the basis of the</p> |
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¹ (4.3 is partly based on earlier work of my colleague Jürgen Schultze in a different project context. Any shortcomings are of my responsibility; HWF)

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| | <p>impact of various framework conditions.</p> <p>Since 1985, the survey has been conducted in irregular intervals but at least every five years in West Germany. Since the German unification, there have been corresponding reviews of and changes in the survey. But a new forecast on the basis of this model has not yet been elaborated. Instead a different model (see 3.5.) has been used for an employment development forecast till 2015.</p> |
| Definition and classification of the demand | <p>The demand for this type of studies was originated by the ongoing technological change and its fundamental importance for the evolution of the labour market. The original basic question was (and is): Are the new technologies job killers or job machines?</p> |
| Methodological approach | <p>As usual, the IAB/PROGNOS long-term assessment procedure is based on an open econometric model which is interpreted in a modified trend extrapolation supported by qualitative expert ratings and quantitative scenario techniques. The respective results are evaluated in three alternative scenarios each under the different framework conditions documented and portrayed as orientation aids.</p> <p>The latest study works with a relatively differentiated sectoral subdivision into 37 chapters. In the qualitative aspect, a subdivision of work exceeding the individual sector into 9 occupational groups (with a total of 33 individual activities) has been defined.</p> <p>Data and explanation patterns on the economic development, including the labour market and the development of the structure of jobs, each subdivided into sectors, were projected into three alternative scenarios for the years 1995/2010.</p> <p><i>Methodically covered elements of changes in and between the economic sectors:</i></p> <ul style="list-style-type: none"> • economic developments, • organisational developments, • market developments, • governmental regulations, • changes in the socio-economic framework conditions, • changes in the structure of jobs. <p><i>Quantitative data basis and data source:</i></p> <ul style="list-style-type: none"> • national census, • microcensus • additional data provided by the Federal Office of Statistics • as well as data on national accounting • and expert interviews. |
| Methodologies for field work and survey tools | <p>interview-based expert ratings</p> |
| Techniques and methodologies of analysis | <p>An iterative procedure permits both the disaggregation into sub-models and their aggregation into procedures involving several stages. In this way, the repeated testing of the consistence of individual results in the overall context and a corresponding feedback including the newly arising circle</p> |

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| and of data and information organisation | <p>connections are achieved.</p> <p>In addition to the changeable parameters which the model provides for, changed framework conditions may be integrated (e.g. technological changes) which are determined on the basis of expert interviews.</p> <p>Framework conditions for the procedure involve the demographic development – including the development of the number of gainfully employed, the world economy and international division of labour, of science and technology and their translation in the individual sectors of the economy, and this includes the structural changes possibly resulting therefrom – and the potential economic policy.</p> <p><i>The elaboration of the forecast takes place in two steps:</i></p> <ul style="list-style-type: none"> • The central projection data on the demographic development and development of the share of gainful employment, on the world-economic framework, on the technological development and its implementation in the economy as well as on possible strategies in economic policy are elaborated. On this basis, the three initial situations for three alternative scenario variants (optimistic, medium, pessimistic) are developed. • In the following, these data are broken down into the sectors and their further subdivision, and their development is then projected for the complete sector division in all three respective scenario alternatives. • In the next step, these actually complete results become subject to a new classification of the sectors and to a comparison by a new data basis (microcensus). The institutional classification from overall national accounting is translated into an activity-related functional systematics. In this way, preliminary work for the second part has been simultaneously accomplished (development of structures of activities). |
| Translation of the results achieved and processed in terms of training and support of the decision | <p>As far as it may be admitted for any long-term forecast, reliability is very high. This is guaranteed by the very sophisticated mixture of econometric models and qualitative expert interviews. Thus, for instance, the high basic rate of unemployment in West Germany could be forecast in the scenarios.</p> <p>One of the study's further essential aims is to provide aids for orientation which illustrate the impact of the diverse assumptions and the reactions in their respective scale.</p> |
| Governance: role of social partners | None within the project; indirectly via the IAB management context |
| Results and use made in decision-making process | Its relevance for political action is disputed. The trade unions, for instance, complain that politicians hardly take note of scientific labour market surveys and long-term aids for orientation. Yet, the discussions on the results of the study, and especially the direct attempt to take influence on the results of the forecast submitted by a change of prerequisites, show the study's controversial effect in politics. |
| Sources: | <ul style="list-style-type: none"> • www.iab.de • Parmentier/Dostal 2002 und Dostal 2000 |

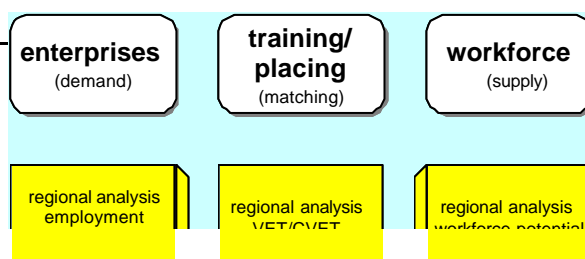
4.3.2 BiBB/IAB Surveys

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| Importance, context and coverage | As its name indicates, these surveys are a joint activity by both central German institutes for labour market and qualification research. While BiBB has a legally established focus on (mainly initial) vocational education and training (BerBiFG §2.1) and IAB's task (according to SGB III §280) extends to the whole of vocational and professional qualification and competence, both have the mission to contribute to educational planning. As the official statistics on economic, employment and population data do not provide sufficient detail and transparency as to comply with this planning mission, both institutes have created their own empirical basis allowing them to carry out selective studies on very different issues (Parmentier/Dostal 2002). The first survey of this series was carried out in 1979, four in total up to date. |
| Definition and classification of the demand | <p>These surveys clarify aspects which the classical surveys and data bases cannot focus on, e.g. issues like:</p> <ul style="list-style-type: none"> • usefulness of vocational qualifications at the workplace; • activities carried out at the workplace; • competence progress • equal opportunities under aspects of employment and vocational qualification; • age-related differences of qualification and competence; • working instruments used; • the degree of penetration of ICT in daily work life; • learning at the workplace; • occupational satisfaction; • change of traditional occupational qualifications and roles, e.g. <i>Meister</i> and <i>Techniker</i>; • forms of precarious employment; • occupational mobility; • consequences of changes in working conditions for private life. |
| Methodological approach | Representative empirical analysis into varying aspects and questions concerning vocational training and employment. The BiBB/IAB Surveys form a link between large surveys with large samples but a reduced number of contents and variables (e.g. Microcensus) , on the one hand, and surveys among selected populations with detailed and sample-specific questions and items, on the other hand. In the last survey, the sample was of more than 34,000 employees. On the basis of an ADM Master sample of 0.1 per cent of the active population (employed) are selected in a random route procedure and interviewed. |
| Methodologies for field work and survey tools | 34,343 (last survey from 1998/99) personal interviews with individuals at home (one person per household) over more than half a year by two institutes (infratest Sozialforschung/Munich; infas Bonn); interviews with laptops, aided by the CAPI programme. |
| Techniques and methodologies of analysis and of data | No detailed information |

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| and information organisation | |
| Translation of the results achieved and processed in terms of training and support of decision-making | <p>One of the immediate consequences of the survey results is more detailed and precise demarcation between the occupational fields and activities of individual vocational qualifications and hence what has to be considered in training for them. The transfer of results happens via BiBB into the vocational training system or, for example, into the governance system of preparing new vocational training profiles; and via the IAB into labour market policies of the Federal Employment Institute.</p> <p>As the data can be used by scientific research for further studies (up to date, about 50 additional studies) also via a number of other ways which may lead to different scopes of use (national, regional, sector specific, other specific uses).</p> |
| Governance: role of social partners | Not different from the one in BiBB or IAB. |
| Results and use made in decision-making process | Not clearly discernible. |
| Sources: | <ul style="list-style-type: none"> • www.bibb.de • Dostal/Reinberg/Schnur 2002 und Alex 2000 |

4.3.3 Prospect

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| Importance, context and coverage | Prospect is a regional approach of employment and qualification needs analysis and monitoring. It has been developed and practised by ACTIVA in the Dutch Twente region and is now generally used in the German <i>land</i> of North-Rhine Westphalia (NRW) in a version which has been greatly modified by Gudrun Richter and Jürgen Schultze from sfs (Richter/Schultze 1998) and which has been experimented in six NRW subregions (www.gib.nrw.de). |
| Definition and classification of the demand | Collection, analysis and decision-making in and for regional employment and training is the substance of this modular approach. |
| Methodological approach | Prospect is a systematic modular approach to regional employment and training needs analysis with a top down (macro, meso, micro) data collection and analysis path and a bottom-up path of data interpretation and evaluation. It is dialogue-based and oriented towards matching supply and demand. Being modular, the use of individual steps is open to specific needs and conditions. |



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| Methodologies for field work and survey tools | On the basis of regionalised macro-level statistics like Microcensus (cf. 3.1), Socio-economic Panel (cf. 3.2), Company Panel (cf. 3.4) or the NRW specific LISA data basis (Local information System Labour Market), in the modules of the subsequent levels several survey methods are used like phone interviews or (less successful) mailing surveys with, for example, experts from companies, the Employment services or unemployed people in training measures. On the micro level, analytical methods (like mismatch analyses) and action methods (e.g., networking of experts from companies and training providers, political consensus building etc.) can be used. This needs experienced networking co-ordination. Basically, the Prospect method is open to all methods and instrument which promise to produce valuable results. |
| Techniques and methodologies of analysis and of data and information organisation | Typical methods used are shift-share analysis, portfolio analysis, secondary analysis of regional data, simulation of evolutionary trends, input-output analysis, scenario method and dialoguing. |
| Translation of the results achieved and processed in terms of training and support of the decision | <p>One of the important advantages of the Prospect method is the fact that each module or step of analysis or action produces individual results with multiple possible uses. Typical products are:</p> <ul style="list-style-type: none"> • forecasts of employment development, structural change or sector developments; • quantitative and qualitative demand expectations; • regional qualification structure tables and maps; • workplace profiles with evidence concerning skill and training needs; • evaluations of training programmes or individual measures; • development of curricula; |

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| | <ul style="list-style-type: none"> • and many others |
| Governance: role of social partners | Social partners are or can be fully involved at least on the meso and micro levels. |
| Results and use made in decision-making process | Products can be used by local actors: employers, trade unions, economic development, training providers, labour market institutions, e.g. the social partners on the Administration Board of the local Employment Services, etc. |
| Sources: | <ul style="list-style-type: none"> • www.gib.nrw.de • Richter-Witzgall/Schultze 1998 |

4.3.4 FreQueNz

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| Importance, context and coverage | FreQueNz is a national network project initiated by BiBB and dealing with all levels and scopes of training needs analysis aiming at collecting and analysing information on future vocational requirements at the earliest possible stage. |
| Definition and classification of the demand | <p>With the accelerated change of employment and occupations due to technological and economic change, especially the trend towards a more service-oriented economy, the continuous adaptation of occupational profiles (<i>beruf</i>) and vocational training and the rise of new ones has become an urgent issue which will decide on the survival of the Dual System. Over the last three years, nearly 30 new occupational profiles have been introduced and about 70 existing ones have been modernised in rather short lapses of time of sometimes less than two years despite the rather complicated consensus building procedures with the social partners which have to be followed according to German vocational training laws.</p> <p>This has led to a number of shortcomings and questions such as: Where do we know from what is needed and will be needed in the future? How do we know how much of what is needed? How can information on trends of change be gained and transferred into the vocational training system at an early stage? How can training policies turn from reactive to proactive?</p> <p>Therefore BiBB and a number of other research institutes work together for developing a so called Early Intelligence System (Früherkennungssystem) and instruments to be used for this purpose.</p> |
| Methodological approach | <p>The project has been developed as a comprehensive research network which is new as a research method, at least for Germany. The network claims to be open for further institutes to participate in this joint endeavour. Additional money for more projects is available from a specific programme of the Federal Ministry of Education and Research. Being a network, a variety of research themes, projects and consequently methods is used; plurality of themes and methods is the approach chosen. Moreover, social actors are not only included in the governance structure of the project but are active co-operators in the research design and implementation.</p> <p>A total of 12 projects has been started in 11 research institutes cross-co-</p> |

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| | operating in a number of projects. |
| Methodologies for field work and survey tools | <p>The project started in the summer of 2001. Relevant information can on the methodologies followed and tools used is regularly distributed via the news area of the network's homepage (www.frequenz.net). Here we can only give a brief overview of the projects from the interim reporting (Ergebnisse 2002).</p> <ol style="list-style-type: none"> 1. "Qualification needs in the OECD member states: surveys, analyses and implementation" is a project launched by WZB (Science Centre Berlin). Results of a first conference from September 2001 have been published in early 2002 (Rouault et al. 2002). The project aims to give an analytical overview of the surveys, methods and results of training needs analysis in the OECD member states. 2. "Early intelligence on qualification needs of handicapped people" is a project by bfz Bildungsforschung, the research institute of the CVET centres of the Bavarian Economy, a non-profit company with a well-renowned research branch seated in Nuremberg. Due to a number of organisational changes in many companies, new opportunities for employing handicapped people have arisen. The project will analyse organisational and work conditions and situations to find such opportunities. A "co-operative analysis procedure" is implemented aiming to imply actors from the companies actively in the organisation, analysis and evaluation of the project. 3. "Close-to-work permanent observation of the evolution of skills for early intelligence into changes of work and organisation" is a joint project of Fraunhofer Institute for Industrial Engineering (Institut Arbeitswirtschaft und Organisation; www.iao-fraunhofer.de) Stuttgart and Infratest Sozialforschung, Munich (www.infratest-sofo.de). The project will derive training needs from a close-to-work observation and analysis of changes in the work and organisation practice of 25 companies (in-depth case studies) and by a survey among experts in 440 companies from the sectors logistics and facility management. The survey has been concluded and results are available. 4. "Trend qualifications as a basis for the early intelligence of the evolution of skills" is a project of the Institute for Structural Policies and Economic Development, Halle-Leipzig (isw - Institut für Strukturpolitik und Wirtschaftsförderung; www.isw-online.org). It aims to scout innovative sectors of economy and to find changes of work and organisation requirements which will lead to new training requirements. First results on so called "trend qualifications" have been presented for the sectors: leisure time economy (wellness), ICT, and (traditional resident) retail commerce. 5. "Taking advantage of the networks in the economy for the early intelligence into the evolution of skills" is a project carried out by The Board of Trustees of the German Economy for Vocational Training, Bonn (KWB – Kuratorium der Deutschen Wirtschaft für Berufsbildung, www.kwb-berufsbildung.de) and the Research Institute for Vocational Training in the Crafts Sectors at the University of Cologne (FBH – Forschungsinstitut für Berufsbildung im Handwerk an der Universität zu Köln; www.uni-koeln.de/wiso-fak/fbh/index.html). The project follows a regional approach using the advisors of the regional Chambers of Industry and Commerce as researchers. On the basis of a survey tool developed by the project, these advisors will collect information on work and |

organisational changes in the companies they visit anyway. The expectation is that the analysis of this information will allow to detect trends towards modified, additional or new skill requirements. A second strand of the project is a survey among experts from the great number of sector specific employers' associations with the same target. The first wave of data collection took place in 1999; it included 74 Chambers of Industry and Commerce; information was gathered from 800 companies (two thirds from industry and commerce, one third crafts); 95 per cent were SME (according to the German definition: below 500 employees).

The second project phase is concentrated on creating a tool kit for the permanent observation of skill developments, a so called "sector monitor" (Branchen-Monitor): It includes experts from economic associations who collectively define a catalogue of key concepts for sector specific monitoring which then is carried out on the basis of information available via internet, from fairs, specialised reviews and specific literature. After collecting these data, they are elaborated by the project team and presented to the experts in specific workshops aimed to select relevant items for sector specific questionnaires to be used for a survey among an extended sample of experts like: members of Vocational Training Committees; management responsible for VET in companies and associations on all levels; teachers from specialised VET schools and company advisors. After evaluating the returned questionnaires, a final workshop will debate the results. In this phase which concentrated on 4 sectors with 10 employers' associations, the initial monitoring led to 612 sector specific items relevant for detecting training needs or for the provision of training which were to be ranked from "not at all important" (1) to "extraordinarily important" (5). As a result the ten most important items per sector could be identified. Further processes of this type for other sectors are under way.

6. "Analysis of job ads" is a BiBB project. It analyses job ads in national and regional newspapers which in Germany are a very important employment market mainly for academic professions and important functions or management. They express the requirements and wishes of the companies in ever new combinations, thus highlighting modified or new skill needs. The analysis is carried out for all sectors but concentrating, as a first result of the starting phase, on specific sectors like health and wellness, banking, ICT activities, logistics and others as they seem to show particularly relevant shifts and innovations. Advertisers then are asked in a mailing survey whether they have found what they wanted or not, who eventually was contracted and what this person's qualifications and competences were like.
7. "Innovations in CVET supply" is also a BiBB project. As CVET suppliers must respond to the needs of their clients they act as an early mirror of trends and developments in companies, especially in those sectors where new requirements are developing very rapidly. But instead of collecting and analysing thousands of programmes of training providers, the project is organised as a competition with an award for the most innovative training measures. The providers participating in the competition must give a well reasoned statement on why they think their offer is innovative. The results of the two first rounds (2000 and 2001) were very positive. The awards are handed over in a celebration act at a very important educational fair.

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| | <p>8. "Reference Companies System" is a further BiBB project, a periodical representative survey in about 2000 companies (with and without initial training in the Dual System) who are willing to answer a number of questions two or three times a year. These reference companies provide information on new tasks and, hence, skill requirements as a result of changes in products, processes and organisation.</p> <p>9. "Qualification developments in personal services" is a the last BiBB project within this network. For the occupational profiles of training within the Dual System the development of new profiles is clear. Less information is available how new profiles come into existence in those sectors which are outside the Dual System and governed by other or no standards at all. The project aims at observing, in a systematic and permanent way, the genesis of new occupational profiles or competencies. Up to now, the project has reconstructed the genesis of eight new <i>beruf</i> or competence profiles in four occupational fields: health and social assistance (health advisor, nurse for dying people, assistant for operation technologies); education and training (learning advisor, auditor for training providers); leisure/sports (fitness trainer); and at the interface of the latter fields (social assistant, "day mother", a sort of private child nurse).</p> |
| Techniques and methodologes of analysis and of data and information organisation | The network besides being a research network is an information network in the internet (www.frequenz.net) which makes all results available to whoever wants to use and base decisions on them. A periodical newsletter reminds subscribers of new results. Additionally, a specific series of books will be launched along with the regular publications of the institutes involved. |
| Translation of the results achieved and processed in terms of training and support of decision-making | The transfer of results into practical or political decision-making differs depending on the individual project, as each project produces results not only for the scientific part but also for the social parts involved, every partner can draw conclusions separately. As BiBB is the official institute with the mission to give advice to the social partners who review existing and formulate new occupational profiles, results are also taken in consideration for these processes. |
| Governance: role of social partners | Given the strategic scope of the network, is has been provided with a large halo of advisory representation and feedback mechanisms to: political institutions, the Employment Services on several levels, companies, training providers, social partner organisations and other social associations. |
| Results and use made in decision-making process | Still to be seen. |
| Sources: | <ul style="list-style-type: none"> • www.frequenz.net and www.bibb.de/beruf/fram_be3.htm • Ergebnisse 2002 |

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| | <ul style="list-style-type: none">• Schmidt 2003a• Schmidt 2003b |
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5. CONCLUSIONS

5.1 *Anticipation of training needs in Germany*

Systematic forms of training needs analysis are of relatively recent origin in Germany. What is becoming a system has been growing over the last no more than 20 years. Spurious precursors as the first IAB/Prognos long-term forecast (first published in 1985) cannot hide the fact that most activities in this field were oriented towards the labour market and much less or not at all towards the initial and/or continuing training system or market. Consistently most analyses were quantitative and dominated by a fiction: the sheer fear of dramatic employment losses due to structural change mainly seen as a consequence of technological change.

Only in the course of the last decade the situation has changed substantially, due to the growing pressure on the education and training system, initial and continuing, from increased and ever more rapid technological, organisational and structural innovation and, last not least, induced by the vast labour market and training problems and effort linked to the German unification, more and more efforts really focused on qualifications, skills and competencies, and on the training system as such have been made. Quantitative methods and tools have been substantially improved and refined, supported by more and more sophisticated methods of qualitative research geared and backed by the two central pillars of the federal labour market and CVET research structure, IAB and BiBB. The most recent and, in our view, most elaborated approach to tackle the problem is FreQueNz (cf. 4.3.4), the research and action network, also action research network initiated by BiBB which for the first time in Germany intends to build a coherent and, nevertheless, open, dynamic and flexible structure and process for continuing research, evaluation and implementation of skills, competence, qualification and training needs analysis.

Only over the last five years, something similar like movement has entered the Dual System too. It is true that the system of *beruf* and dual training still is as untouchable as the Holy Grail among German politicians and both social partners, but a timid debate about how the Dual System could be flexibilised and something like a system of lifelong learning could be installed has come up. While the review and reformation of the initial training for (all the different types of) metal workers and electricians has taken 17 years between the first stirrings and its final and real implementation, recent review and modernisation of such profiles and training supply has been achieved within less than two years. Given the complicated procedure of generating new occupational profiles due to the democratic structures of participation and representation in the development and political decision-making, this is an astonishing achievement. Also the modularisation of initial vocational training within the principle of *beruf* seems to become a viable option of consensus, thus, opening the initial training system (the Dual System) towards something like a far-away silhouette of a life-long learning approach including the much more competence-based and market-oriented German CVET system.

5.2 *The Governance of training needs anticipation in Germany*

Roughly speaking, two aspects determine vocational training policy in the Federal Republic of Germany: regulatory state benefits on the one hand and decisions of the sponsors of initial and continuing vocational training on the concrete design of vocational training, on

the other. In this context, as far as initial vocational training is concerned, the state sets more comprehensive and detailed framework conditions for private firms and other private providers of training than is the case in continuing vocational training.

The guidelines of vocational training policy and thus the character of co-operation in Germany are marked by the following characteristics:

- A far-reaching *integration of the social partners* into vocational training corresponds to the German tradition of a "policy of consensus". Even though, as a consequence, controversies give rise to delay with regard to new regulations, the acceptance of governmental regulations and the utilisation of the competence of all agents prove to be the essential strong points of the German system.
- Many aspects of the German system of vocational training policy are based on a *principle of consensus* forcing all parties involved to reach an agreement: the Government (National Government, States and local authorities), the social partners, i.e. the Chambers of Industry and Commerce, and employers' associations, on the one hand, and the trade unions on the other. In addition, the governmental side relies on the agreement between employers and social partners in some fields and thus frees itself from the details of a regulation which is partly achieved outside the institutionalised framework. Despite all divergence and differences of interests, the basis here is the comparably high willingness of employers and trade unions to co-operate in factual matters.
- Due to the national federative structures, there is a *specific mixture of central state and decentralised regulation competence* in training policy. This applies, on the one hand, to the indispensable co-operation between the National Government and the Federal States owing to the divided regulation competence. On the other hand, this fixed framework permits a certain variety at the local level and in the firms, which is balanced by the instrument of statutory - and thus uniform - minimum technical requirements.

These principle guidelines are characteristic, too, for the system of training needs anticipation as a framework and basis of social and political decision-making. The two central institutional pillars of the German system, BiBB and IAB, have a strictly social instead of political governance structure. The social partners are of crucial importance in both structures, as has been pointed out above (cf. 2.1.2; 2.2.2.; and 2.3). For IAB, this is even true in a double sense, as the social partners are the real governors of the Federal Employment Institute and its services on all levels: central, federal state, and local.

Nevertheless, it remains clear that this bi- and tripartite system is an institutional one reaching only formally as far as the actual research work of the two institutes – which is important to be stated as no incidences of political influence or social wishful thinking can be reported. Both, employers and unions, have their own research structures co-operating or disputing on equal terms on the research results produced and presented by BiBB and IAB. Real involvement of the social partners in terms of active research participation is only given and sought for within the FreQueNz network structure build up since 1999 (cf. 4.3.4).

Concerning the regional level, involvement of the social partners is structurally inbuilt into all known regional systems of employment and training needs analysis. In this report, only one such method has been presented (cf. Prospect; 4.3.3), more in the earlier report from 1999 (Schultze/Reimers 1999). The same applies to all methods including sector-specific approaches.

Finally, regarding the company level, all issues concerning training needs are subject to the co-determination of the elected employee representation (Works Council) where it is existing. This level has been excluded from this report for reasons commented on above.

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