Scenarios and strategies for vocational education and training in Germany

Final national report, phase 2

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1. Project goals and design (at European and national levels)

1.1. Project goals

The beginnings of the scenario method can be traced back to the American futurologist H. Kahn in the sixties. In the midst of scientific planning and euphoria about the future new methods were explored that would represent an alternative to traditional methods of forecast in the social sciences. The scenario method finally proved itself, in particular as an instrument of medium and long-term strategic business planning.

Strategic instruments like the scenario method came to be favoured by large oil companies, like Shell, after the shock of adjustment following the oil crisis in the 1970s. Traditional methods of planning had as one of their tenets the stability of time. The assumption was that, in decision making, certain marginal conditions remained constant, i.e. that the course of development of a certain quantity regarded as marginal remains constant. Based on this starting-point, certain important quantities for business planning could now be forecast (e.g. expected sales and demand for a product).

All theoretical and practical scenario approaches have in common that they are alternative action-guiding drafts about the future of a particular subject matter and decision-making process. The following citation expresses the core of all planning activities carried out using the scenario method:

‘A scenario denotes a description of the future development of a particular object of prognosis under alternative marginal conditions.’ (Hansmann 1983, 11-12)

A further essential feature of a scenario is that it is not the aim to produce correct prognoses. It seeks to influence the decision-makers and persons involved in such way that they become aware of the different implications of certain possible developments in order to be able to react flexibly. Scenario planning is not a scientific method but a practical tool that aids decision-making when future circumstances are uncertain. As a tool it also opens up shaping options. The method’s main priority is not a precise forecast of developments and data for specific variables, but the creation or sharpening of different action-guiding ideas about the possible future of an individual subject area. In Germany, there are two roots to the scenario-method as applied to questions of vocational education, one being a project of the Federal Institute for Vocational Education. This project resulted in two scenarios for the year 1995 (cf. Kau, Ehmann1986) one of which was a rather optimistic scenario, the other pessimistic. The scenario method was also employed for vocational training in the context of the project ‘Berufe 2000’ (‘occupations 2000’) (cf. Heidegger, Rauner 1989). The emphasis in this particular context was on the importance of scenarios as images of possible or desirable future events within the process ‘discursive communication’ and as an instrument of vocational training based on the idea of social shaping. Its mediating function between science and practice represents an important addition to so-called early recognition systems (cf. e.g. Alex, Bau 1999).
Recent literature on management stresses not only the usefulness of the results, but also, perhaps more importantly, the benefits of designing scenarios and the weighing up of action strategies. These collaborative design processes enable organisational members to develop common ideas about organisational goals, or at least to find a common language that makes it possible to communicate about possible problem areas and conflicts of interest. Scenario planning is thus – to use contemporary terminology – a contribution to the creation, or maintenance of a ‘learning organisation’ (cf. van der Heijden 1995 and 1996, Schoemaker 1995).

As a rule, the formation of scenarios proceeds as follows: first, the different contextual conditions for the relevant area are presented, which are then, in a second step, varied in different ways. By taking into consideration variation bundles of contextual conditions, different scenarios can then be worked out for the subject area.

With the help of these scenarios, strategies and action alternatives can now be examined for effectiveness or put into more concrete terms.

*Figure 1: Different periods and suitable planning methods (from van der Heijden 1996)*

According to the Dutch organisational developer Kees van der Heijden, scenario planning is optimally positioned precisely where the number of possible uncertainties with respect to a particular object of planning coincides with the number of predictable quantities (point S in the diagram). For shorter planning periods traditional forecast methods will be most effective (F= Forecast) and for longer periods – as van der Heijden remarks tersely – there is only hope (H).
1.2. Design of the project

The Cedefop/ETF scenario project ‘Scenarios and strategies for VET in Europe’ was designed as a pilot study that tests the above-mentioned approach for the area of vocational education and training in Europe. The project’s difficulty, as well as its attraction, lies in the fact that we are, on the one hand, dealing with different countries’ various systems of vocational training in their economic and social context and, on the other, that all participating countries are oriented towards the goal of European integration. The participating countries were: Greece, Luxembourg/Belgium, Austria, the UK, the Czech Republic, Estonia, Poland, Slovenia, Hungary and Germany.

The project’s first step was to find out what kind of attitudes and ideas there are about vocational training by employing a similar investigation procedure in all the countries. To this aim, in the period between March and June 1999, ten European research institutes sent around 600 (750 in Germany) questionnaires each to persons from the following ten categories:

(a) politicians;
(b) civil servants in public authority and in ministries;
(c) businesses and business groups;
(d) employer organisations;
(e) employee organisations;
(f) industries and professional associations;
(g) vocational training institutions;
(h) research institutes, universities;
(i) consulting agencies;
(j) independent experts, non-governmental organisations, the media, charities.

The questionnaires contained statements on trends in the social areas relevant for vocational training, namely, ‘economic and technological development’, ‘work and social welfare’ and developments in ‘education and knowledge’, as well as possible political strategies. Those questioned assessed these statements according to their importance and the likelihood of their future occurrence, and also according to their relevance for the next ten years. After the evaluation of the data, all participating countries held expert seminars during which the results were presented. This procedure was to rule out misconceptions and superficialities that tend to go along with the ‘closed’ structure of standardised questionnaires.

In the second project phase we constructed three scenarios for vocational education and training in Germany which took into account the results of phase one as well as the results of a comprehensive literature and document review on the current reform discussion within the German system of vocational education. We also constructed four context scenarios on the overall framework of the system taking into account possible relevant developments in the three quoted contexts. This approach differed to some extent from the approaches taken by
other partners but was necessary to attract the interest of the highly institutionalised VET expert network (cf. also chapter 2).
2. Position of the country in the European context - description of the German VET system

Because of huge differences between the participating member and non-member-states, we considered it important to describe properly the respective systems of vocational education and training.

One of the common denominators of comparisons regarding vocational education and training is the problem of ensuring a transition from school to work more or less without risk to the individual. The characteristics of German VET will be analysed from this problem as a starting point.

2.1. Alternative ways of undertaking the transition from school to work

A distinction can be made among the four ways of making the transition from school to work.

Figure 2: Vocational and university training as ways of entering the working world

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(1) A revised and updated version of Rauner 1998a with amendments and additions regarding German VET within the European context and the last available data.
The majority of young Germans who finish school in a certain year take up vocational training in the dual vocational training system. The proportion of 16- to 19-year-olds completing vocational training exceeds 70%.

School-based (full-time) vocational training, in contrast, is favoured by approximately 10% of young people in a given year. Most of the occupations involved are in the fields of health, social care, and education. They encompass certain assistant occupations too, which correspond in terms of content to para-academic professions and comprise curricula clearly oriented to the specialised knowledge of those professions. In company organisation those assistant occupations are allocated alongside management or academic professions. A relatively small portion of school-based vocational training in the overall system results from a specific demand for semi-academic qualifications or for areas of responsibility in which specialised, systematic knowledge clearly dominates. Assistant occupations that are oriented to the natural sciences, such as physical technical and medical technical assistant, fall under this type of school-based vocational training, as do the majority of social occupations (e.g. health care, kindergarten teachers etc.). To this extent, school-based vocational training does not compete with dual vocational training.

Health and social care occupations are becoming more important as the age structure of the population changes. Training in this field is undergoing radical transformation. Becker and Meifert (1994) advocate a corresponding professionalisation of health and social care occupations in view of the European process of integration towards a training organisation that turns away from traditional school-based training and is oriented to the concept of dual vocational training.

Young people with learning difficulties (who have not completed nine-year secondary modern school – *Hauptschule*) represent a special problem. In 1993, this group accounted for 6.2% of all newly concluded training contracts. Most of these youths are trained in craft trades (see Pütz, 1993). Statistical data on young people with learning difficulties, when analysed over a longer period of time, show that the proportion classified as having learning weaknesses increases, with a certain time lag, in times of shortages of traineeship places within companies. This can be seen, for example, in the yearly proportion of school leavers taking part in vocational preparation in order to enter a job or occupation without formal training (see figures below).

Conversely, the proportion of young people with learning problems always drops when there is a lack of skilled labour and a large supply of traineeships. The school-to-work transition problem for those with learning weaknesses cannot be solved through training measures, but only by increasing the quality and quantity of jobs and traineeships on a long-term basis.

More than 30% of young people in a given year acquire the academic standard required to enter university, the majority actually pursuing university studies. Approximately 30% of university students, however, have formerly completed vocational training in the dual system. The duality of vocational training and university education is held in very high regard by students (see BMBW, 1993, 1994). In 1985, only 21% of university students had participated
in vocational training. At polytechnics (Fachhochschulen) more than 50% of current students have completed an apprenticeship within the dual vocational training system.

A comparison of the proportion of university students of a given age with the proportion of youths in the dual vocational training system is not very helpful if the interrelationship between vocational training and studies is neglected. For the transition of university graduates to the labour market, this tradition of a combination of both aspects offers a considerable degree of mobility and labour market flexibility and, at the same time, job security.

A special form of dual training - vocational academies (Berufsakademien) – has been established within university education, with about 15,000 students participating in Baden-Württemberg. The students receive equal portions of training at the vocational academy and through practical work at the training enterprise. This dual training model at polytechnic level now has a firm place within the university system and is widely recognised without being a formal part of it (Tesmer, 1994). This contrasts with the provisions of the University Framework Law (HRG) regarding the freedom of research and instruction, the autonomy of university bodies, examination autonomy, and so forth. Vocational academies feature a three-year training period, practical orientation coupled with knowledge acquired on a scientific basis, and acquisition of social qualifications (such as the ability to work in teams). A high level of competence combined with company-based socialisation distinguishes graduates of the vocational academy from those of universities.

The transition from a general education school to the working world in Germany entails on average a three-year vocational training period, excluding university and polytechnic students. The legal foundation of this training system calls for a permanent dialogue and planning process, in which the Bundesländer, the federal government, management and labour participate. Programmes that are, by their nature, limited in time and that react to specific situations play a marginal role in this system. Even when the baby boom generation entered the labour market, between 1975 and 1990, the dual vocational training system proved to be astonishingly elastic. In 1984, for example, 705,600 training contracts were signed. Today there are about 600,000, see including contracts concluded within the New Länder (the former German Democratic Republic).

The great decline in training figures stems from two effects. First, periods of low birth rates after both world wars, followed by a birth-rate slump caused by the birth control pill, have resulted in declining youth populations over several successive generations, including the current one. This cumulative effect led to an unusually sharp decline in school leavers and potential applicants for traineeships at the beginning of the 1990s.

\(\text{(*) Hochschulrahmengesetz}\)
The decrease in demand for traineeships coincided with a significant recession and a deindustrialisation process in the new Bundesländer. Extensive rationalisation measures in industry and trade resulted in a great reduction in traineeships. In the end, therefore, the great drop in traineeship applicant numbers has corresponded to the decline in traineeships so that there is a lack of traineeships today despite the low birth-rate years. The relatively large decrease in traineeships contrasts with a considerable demand for skilled labour. During the phase of very high demand for traineeships, the Bundesländer and the federal government developed a comprehensive set of instruments to eliminate the shortage of traineeships. Since 1973, the federal government has promoted the construction and maintenance of industry-wide training centres (Überbetriebliche Ausbildungseinrichtungen, Überbetriebliche Berufsbildungsstätten, ÜA, ÜBS) in accordance with the guidelines for granting subsidies for the promotion of industry-wide training centres (Federal Gazette No. 211, 1973) as well as the guidelines for granting subsidies for the running costs of industry-wide training centres (Federal Gazette No. 77, 1978). The centres are part of company-based vocational training and are occasionally designated as the third learning site after the training enterprise and the vocational school. They are responsible in particular for portions of craft trade vocational training that cannot be provided at all, or not to an adequate extent, by individual enterprises, but that are obligatory in training based on the corresponding occupational profiles and training regulations (Ausbildungsordnungen). The centres thus supplement company-based vocational training outside of directly productive work. To this extent they are comparable to training centres in large industrial enterprises. In 1986, for example, DM119 million was
provided from this specialised programme. An additional DM335 million was available to
industry-wide training centres in the same year within the scope of a programme for foreign-
born, learning- and socially-disadvantaged youths who did not find a traineeship subsequent to
vocational preparation. In the process of structural adaptation in the new Länder ÜBS also
play a prominent role. Since re-unification an amount of DM1,2 billion has been granted from
the federal government for ÜBS in the new Bundesländer.

Also in 1986, the Federal Minister for Education and Science (BMBW) and the Minister for
Labour (BMA) provided another DM60 million within the framework of a special one-time
programme for roughly 7,000 applicants who had not found a company traineeship. In
addition to these programmes, the Bundesländer have participated in the industry-wide
training centres with their own subsidies. The Federal Employment Office (BfA) provides
funds for financial support of the participants in vocational preparation and further vocational
training programmes. In 1986 these funds amounted to approximately DM4.4 billion and in
1997 about DM21 billion (see BMBW, 1993).

Although the enterprises normally bear the costs of company-based vocational training,
training companies also receive direct support from elsewhere in special situations, as in the
baby boom years. In 1986, for example, DM11.6 million were made available from funds of
the European Reconstruction Programme (ERP) Special Assets in the form of loans for the
creation of company traineeships, and investment grants were furnished within the framework
of the Community task ‘improvement of regional economic structure’ (BMBW, 1987). In 1998
a sum of DM190 million from the same programme was spent for the development of 6300
training placements (BMBF 1999). For 1999 the federal government agreed on a sum of
DM200 million for the same purpose.

During periods of high demand for or shortages of traineeships, the Bundesländer have
provided structural support to solve problems connected to the transition from school to work
through the setting up and extension of one-year vocational preparation schools (BVJ) and the
basic school-based vocational training year (BGJ).

The basic vocational school year is a form of vocational training that integrates theory and
practice at the vocational school. It comprises the first year of training in one of the 13
occupational fields (e.g., metal technology). The part of the year devoted to practice takes
place in school workshops. The high investment, maintenance, and constant modernisation
costs for these workshops as well as the additional costs for instructors have rarely been
provided to the necessary extent by the Bundesländer. For some branches of industry and
regions, the basic vocational training year has regained its original educational policy
significance, namely, improvement of the quality of vocational training through closer linkage
of vocational and general education as well as through a systematic basic vocational training.
During the phase when the training market was tight, the basic vocational training year
became a reservoir for young people without training contracts (see figure).
The basic vocational school year has not been able to compete with the dual vocational training system during the first training year. The vocational preparation year benefits pupils who have not received training contracts after completing general education requirements, with or without a certificate of graduation from the secondary modern school (Hauptschule). The establishment and extension of a one-year vocational preparation phase for young people without traineeships, therefore, aims at entry into vocational training (first threshold).

Instruction during the vocational preparation year is extremely practice-oriented and includes practical training. Both types of school have lost a great deal of their importance with the easing of the shortage of traineeships since the end of the 1980s. The basic vocational school year is controversial from the point of view of education policy because, in the opinion of critics, its existence essentially results more from the lack of suitable traineeships and less from shortcomings in the education system. The increase in pupils within the BVJ from 1992 can be interpreted as a warning signal in terms of the need for structural reform serving young people with learning problems.

In addition to the system of vocational education and further vocational training based on it (e.g., technician training and master craftsman training), a market of institutions has developed in the areas of further vocational training and retraining that offer certificate-based and vocational, as well as nonregulated training. Continued training programmes are offered with funds provided by the Federal Employment Office and relevant EC programmes. All studies confirm, however, that the structural transformation of the economy and the labour market primarily takes place via replacement of departing employees and only secondarily
through continued training of workers (see Blossfeld, 1993). The dominant source for qualified employees is, therefore, the vocational training system. Training programmes perform the function of supporting vocational training within the entire system of transition from school to work.

2.1.1. The dual vocational training system in Germany as a key to a smooth transition from school to the working world

The number of trainees as a proportion of the total number of employees increased from 6% in the 1970s to approximately 8% in the 1980s. The rate dropped to 4% in 1994 due to the interplay between greater rationalisation efforts in traditional industrial sectors. Announcements from the federal government, trade unions and business associations on coping with the training crisis as well as a corresponding agreement with the former German chancellor show that a lack of traineeships in the dual vocational training system has triggered talks and actions at the highest levels of these organisations. This focus on vocational education and training has been continued with the new federal social democratic government since autumn 1998, as seen from the crash programme for the reduction of youth unemployment (funds: DM2 billion including 600 million from the ESF). This short-term measure was accompanied by the inclusion of the topic within the negotiations of the alliance for employment, training and competitiveness (Bündnis für Arbeit, Ausbildung und Wettbewerbsfähigkeit) comprising the social partners’ central organisations and the federal government.

Vocational training traditionally has had a very high political significance in Germany. The funds spent by industry, the individual Bundesländer, and, to a lesser extent, the federal government exceed by far the total expenditure for the entire university system. The enormous political and economic importance attached to vocational training is reflected in an extraordinarily well-developed legal construction of occupations and vocational training; a historical tradition of commitment by industry, trade unions, and the state in structuring the dual vocational training system; and the high esteem enjoyed by the dual vocational training system among young people and their parents. This can also be attributed to the fact that nearly all those who complete dual vocational training – in 1990 the figure was 98% – succeed in finding regular employment after passing the examination (Falk & Thiele 1993). Youth unemployment is relatively low in relation to the average unemployment rate.

The sometimes popular thesis of a departure of young people from gainful employment, as was universally advocated in youth research, has, in the meantime, been refuted by the studies conducted by Baethge (1991) and Heinz and Krüger (1990). Even during, the baby boom years from the end of the 1970s to the end of the 1980s, with the related shortage of qualified traineeships, there was no significant erosion in youth work orientation. Life concepts that centre on work and occupation have not lost any of their importance for young people.

The situation is different in the new Bundesländer (eastern Germany). The trust placed in the vocational training system by youths and their parents has been substantially shaken, due particularly to the lack of traineeships and a dramatic deindustrialisation process that
commenced after the re-unification of Germany. This is reflected in the extremely low proportion (4%) of young people in eastern Germany with the academic standards required for university entrance who completed vocational training in 1993/94. In contrast, the figure surpasses 15% in western Germany, with the proportion in industry and trade as high as 24% (BMBF, 1999). Nevertheless, there are clear signs of considerable turbulence in this internationally recognised, dual organisation of vocational training, so that the future and attractiveness of the German vocational training system in a united Europe are called into question.

As European integration advances, the question of the central constitutive aspect for a European labour market is becoming more and more pressing. Two alternative solutions offer contrasting approaches for determining the basis of future European vocational training policy. The open labour market model, based on occupation, occupational structure and professional ethics, (as in Germany) competes with the model based on a high degree of general education, on-the-job training, work morale, and corporate identity, with divided labour markets and a well-developed, in-company labour market for the core workforce (as for example in Japan). If one assumes companies depend on employees who have both the appropriate qualifications and a high degree of commitment to maintain competitiveness, then the two models show that competence and motivation can be achieved in very different ways. The modular structure of the British system of vocational and general education could be ordained somewhere between these two poles. The idea of modularisation of courses and qualification in its unreserved form can be seen as a considerable threat to the traditional German system and is being processed in all recent reform proposals more or less consequently. However, most political affiliations and researchers (Deissinger 1998, Pilz 1999) are still strongly committed to the ‘Berufsprinzip’ and favour forms of modularisation which do not question this basic principle. The ‘Berufsprinzip’ can be regarded as a supra-individual institution which balances different needs, perspectives and political interests, such as the economic, the sociological and individual biographical perspective of working life.

Occupations in Germany are deeply rooted in the protestant work ethic. Historically they represent both socially and state-regulated spheres of responsibility in the employment system. They form the basis of the labour market for skilled workers. Within the company, occupationally organised skilled work is a central element in work and plant organisation. Occupations are widely regarded as identity-creating institutions that aid personality development and provide employees with qualifications to perform company-related tasks, while at the same time making them independent of the individual enterprise. Skilled workers define themselves first and foremost in terms of their chosen occupation, not by the company for which they work.

The approximately 380 occupations regulated by the Vocational Training Act (Berufsbildungsgesetz BBiG) are less an expression of qualification needs being defined purely in terms of these occupations than a reflection of a specific central European industrial culture. The pragmatism and history of the German occupational structure, however, is certainly not a sufficient basis for a forward-looking professionalisation of occupations. The examples of electrical engineering and metalwork technology, each of which contains a
certain number of occupations that can be allocated to the respective technology, show that occupations tied to a specific technology or a technologically defined product are highly unstable. They allow neither the long-term creation of occupational identity nor the constitution of stable labour markets for skilled workers.

Just as medical doctors and their (academic) profession have maintained a specific profile and code of professional ethics for centuries, regardless of changes in the field of medical technology, it is important to develop further the present occupational structure of German vocational training so it complies with the criteria for professional occupations. The German system finds itself at a historical fork in the road, in which the choice is between a path toward a system based on a modern concept of occupations or one toward the dissolution of occupations and vocational training and hence toward a labour market concept that poses great political and economic risks. Up to now, however, a decisive course for elaboration and further development of a forward-looking occupation concept has been lacking (Heidegger, Jacobs, Martin, Mizdalski, & Rauner, 1991).

2.1.2. The structure of the dual vocational training system

Dual vocational training is based on private employment contracts concluded by trainees (or in some cases their legal guardians) and training enterprises. As institutions of self-administration for the enterprises, the responsible Chambers guarantee appropriate structuring of these employment relationships in accordance with the Vocational Training Act (Berufsbildungsgesetz, BBiG) and, based on that law, the various training regulations stipulate the content and quality of training for the respective occupation.

On conclusion of a training contract, the trainee has the right, and in fact the obligation, to take part in lessons at a vocational school one or two days per week. The specific course at the vocational school is based on a basic curriculum drawn up by the Bundesländer on the basis of a recommendation by a commission of the Permanent Conference of Education Ministers, the so-called framework plan of the Conference of Education Ministers. In some cases, this plan is adopted in its entirety by a particular Bundesland.

The vocational school is part of the education system of the Bundesländer and is, therefore, governed by legislation enacted by each in exercising its educational sovereignty.

Numerous legal and institutional prerequisites have been established for joint educational planning on the part of the Bundesländer and the federal government in order to ensure extensive harmonisation of occupational curricula. In their educational laws, all Bundesländer have given the vocational schools, as a sort of legal self-obligation, the task of actively shaping vocational training as provided for in the Vocational Training Act and related training regulations.

According to the respective training regulations (in-company vocational training) and curricula (for vocational schools), dual vocational training directed at the job profile occurs at both places of learning. To a certain extent, enterprises are able to take into consideration company-specific contents and interests in their training that otherwise would involve a
fundamental abstraction from specific company features. This spectrum of variations for structuring the training is expressly stipulated in the training regulations. It applies especially to examinations that are, in practice, standardised nationally.

In addition to occupation-specific lessons, vocational schools offer a more or less comprehensive range of instruction in general subjects such as German, political science, and English. The time spent at the vocational school during dual training amounts to between eight and twelve instruction hours per week. Co-ordination between the two learning sites is carried out on the basis of training regulations and the curriculum at the level of vocational training planning. Vocational schools and enterprises or teachers and instructors only rarely co-ordinate the subject matter in school and enterprise-based training.

A focal point of support for cooperation between learning sites and a learning site network was created within the framework of the pilot programme of the federal and Länder governments on vocational training. This permits enterprises and vocational schools to carry out pilot projects jointly within a learning site network to improve cooperation between vocational schools and enterprises in designing the subject matter for dual vocational training. Vocational schools do not set any part of the final examination themselves. According to the Vocational Training Act, these examinations remain the exclusive responsibility of the chambers. Vocational schooletachers take part in this framework only as examiners.

In most occupations the three- to three-and-a-half-year vocational training is divided into a one- to one-and-a-half-year basic training and then specialised training based on the former in a certain subject area. This can be illustrated in electrical occupations, which were restructured in 1987 and which make up one of 13 major occupational fields (see the following figure).

The 37 former metalwork occupations applicable until 1987 have been replaced by six modern metalwork occupations with a much broader profile of responsibilities. These restructured occupations mark a fundamental change in perspective in the history of vocational training in Germany. The overriding objective of training, which was clearly characterised by Taylor’s concept of scientific management, that is, training for simple operational tasks according to detailed specifications from management (Taylor, 1911), was replaced by training for participative company organisational development, that is, the ability to share in shaping the working world.

With this change in perspective, which was initiated at the end of the 1980s, it became possible to preserve and improve the attractiveness of vocational training as the decisive instrument for school-to-work transition for both young people and the economy. The quality and scope of this modernisation process, which has only just begun, becomes obvious if one looks at the history of German vocational training.
The great variety in the structure of company-based vocational training is documented in the 1989 vocational training report (BMBW, 1989). According to the report, in addition to learning related to the workplace or work process, training enterprises make use of the following additional learning sites in the areas covered by the Chamber of Industry and Commerce and by the Chamber of Craft Trades:

(a) 35% of training enterprises make use of industrywide instruction in their training (62% of craft trade enterprises and 18% of enterprises covered by the Chamber of Industry and Commerce);

(b) 27% of these enterprises provide additional in-company courses (38% of enterprises covered by the Chamber of Industry and Commerce and 8% of craft trade enterprises);

(c) 15% send their trainees on external courses (18% of enterprises covered by the Chamber of Industry and Commerce and 11% of craft trade enterprises);

(d) 13% make use of a teaching workshop, teaching corner, practice office and so on (14% of enterprises covered by the Chamber of Industry and Commerce and 2% of craft trade enterprises);
(e) 7% organise a training network or co-operate in training in some other form (9% of enterprises covered by the Chamber of Industry and Commerce and 2% of craft trade enterprises) (BMBW, 1989).

A generally applicable period of time cannot be specified for training within the work process. The proportion of enterprise-based training that takes place within the work process varies between 0% and 100%. In rare cases enterprise-based training takes place exclusively in training workshops and training centres. The other extreme is just as rare, that is training that is completely integrated into the work process.

A trend away from school-oriented training at the enterprise and toward a return to training within the work process has been observed since the mid-1980s (Dehnbostel, 1994). This development is supported by vocational training research, specifically through enterprise-based pilot projects. The didactic concepts of learning at the workplace and learning within the work process include the aspect of designing learning-oriented workstations and work processes (Kruse, 1987; Rauner, 1995).

2.1.3. The historical background

Studying both the common and different historical roots of the development of occupations and vocational training is of great interest within the European context. With the formation of nation-states in the previous century and the transition from skilled work organised on the basis of occupations to industrial production, Europe lost a tradition of vocational training organised through guilds (apprentices becoming master craftsmen). Instead various national vocational training systems and traditions developed in the 19th and 20th centuries. Relatively little study has been directed at the degree and type of influence exerted by religions (Protestantism and Catholicism) or by the different constitutions and organisation of nation-states.

In Germany, the special orientation of, and belief in, the state exerted a powerful influence in repressing traditional skilled vocational training as an obstacle to the implementation of economic liberalism in the previous century. By the turn of the century, state legislation was playing an equally important role in forming the dual vocational training system, which clearly differs from the traditional apprenticeship system in several decisive respects. Modern skilled occupations within the dual system are based on activity analyses that are significantly shaped by the basic principles of scientific management formulated by Taylor (1911), and the synthesis of activities into activity bundles and profiles that are finally allocated to occupational designations (e.g., electronics technician for industrial equipment). This tradition was primarily established in during the 1920s.

A decisive political source for the dual vocational training system lies in the striving of the state or German governments since the end of the last century to achieve social stability, not only with social legislation aimed at countering the growth of trade unions and social democracy, but also by reviving the occupational organisation of work and vocational training that had previously existed within the feudal class system. Vocational training as an institution
for educating good citizens (Kerschensteiner) and for adapting to economic and political conditions has acquired varying degrees of importance since that time.

During the Nazi regime, this political rationale behind the vocational training system was exaggerated beyond proportion. The concept of occupations was abused by the national socialist state (the number of formal job profiles rose to 900 between 1936 and 1945). The state defined ‘occupation’ in terms of a general ideology of community and the Führer principle, according to which the definitive aspect of occupational work is the way in which one does something and not what one does. The familiar virtues ascribed to skilled workers (i.e., secondary virtues such as punctuality, precision, and following instructions to the letter) were raised to heights of perversion during this period.

Through reductions in the number of occupations to fewer than 400, and especially through the reorganisation of occupations during the 1980s, the decisive steps were taken for a concept of occupations that strives for skilled workers who are qualified for participation and codetermination. The Enquete Commission of the Bundestag, Education 2000, attached great significance to the major vocational education debates during the 1980s regarding the reorganisation of vocational education as education for active shaping: ‘If the humanity of future society depends critically on whether we succeed in eliminating divisions and fragmentation . . . then education must help, as a first priority, to develop the will to shape the world about us and must . . . strive for shaping capability’ (Deutscher Bundestag, 1990, p. 30).

Shaping competence is expressly demanded for technical education as well. The commission’s recommendation that all appropriate educational mandate be anchored in the Vocational Training Act is not only a logical consequence, but also calls on federal and state governments, particularly in view of the constitutional objections repeatedly raised in this context, to close the legal loophole that exists in order to ensure the quality of vocational training in the future.

This recommendation is being increasingly integrated into the new training regulations and laws of the Bundesländer. Initial experience and results from pilot projects regarding shaping-oriented vocational training are now available (Heidegger, Adolph & Laske, 1997).

2.1.4. Actors involved

2.1.4.1. State institutions

At the federal level, the following are particularly involved in vocational training:

(f) the Federal Ministry for the Economy (Bundesministerium für Wirtschaft und Technologie, BMWi);

(g) the Federal Ministry for Education and Science (Bundesministerium für Bildung und Forschung, BMBF);
(h) The Federal Institute for Vocational Training, which is allocated but not subordinate to the Federal Ministry for Education and Science (Bundesinstitut für Berufsbildung, BiBB).

The Federal Institute for Vocational Training (BiBB) is headed by a secretary-general or president who is nominated by the federal president at the suggestion of the main committee (Hauptausschuß) of the Federal Institute for Vocational Training. The BiBB employs a staff of approximately 400 (200 of whom are academic staff members) in six main departments. They conduct research on the fundamental principles of vocational training, supporting those involved in the constant further development of the vocational training system through research and development.

The trade unions, employers’ and industrial associations, federal government and Bundesländer each hold a quarter of the seats on the main committee of BiBB. The institutional structures created by the federal government for planning and control of vocational training indicate a relationship between the right to education and self-fulfilment – also in one’s occupation – and the provision of appropriately qualified workers for the economy. This structure is intended to achieve the following objectives.

First, the main committee of BiBB is a platform that enables, and to a certain extent forces, those involved in vocational training to reach agreement (Konsensprinzip) on structures and contents, as well as on constant modernisation of these based on the research results provided by BiBB. BiBB’s research is carried out within a research programme that is codetermined by the main committee. Since the establishment of BiBB, this programme has clearly improved the quality of the debate on occupational and vocational training policy in the Federal Republic of Germany.

Second, BiBB’s research and development work takes place in close cooperation with the scientific community of the universities as well as with those involved in vocational education and training practice. This strengthens the independence of BiBB’s research, although it falls significantly short of the free research conducted by universities. This is because the parties represented in the main committee and the federal departments connected with BiBB (especially the Federal Ministry of Education and Science) attempt to make use of BiBB’s research potential for their respective vocational training policy interests and objectives. This relationship is desired by legislators; the task of shaping it productively is assigned and left to the actors.

Third, the appointment of the secretary-general or president by the federal president (and not by the minister for education and science) reflects the special importance attached to vocational training in the Federal Republic of Germany. At the same time, the special status of the appointment emphasises the independence of research conducted by BiBB vis-à-vis the federal government, especially the Federal Ministry of Education and Science. The explicit aim is also to achieve a balance of power between the social interests and forces represented by the main committee, on the one hand, and BiBB scientists represented by the secretary-general and president, on the other.
Finally, the duality between education and training is expressed, for example, in the fact that the federal minister of the economy is responsible for issuing training regulations. This fulfils his or her responsibility to provide the economy with the skills and qualifications it needs. The federal minister of education and science, on the contrary, is responsible for BiBB and represents the federal government in joint educational planning with the Bundesländer. He or she thus represents the vocational training system as part of the German education system.

2.1.4.2. Social groups participating in vocational education and training

In addition to membership of the main committee of BiBB, employers’ and industrial associations and the trade unions are involved in the further development of vocational training in other ways. Thugh there are formal procedures for developing new training regulations in the subcommittees of BiBB, the collective bargaining organisations often reach agreement on the essential features of vocational training in joint commissions, even before an official procedure for reshaping occupations is actually initiated. Only then is the minister for the economy prepared to initiate the formal procedure for such reshaping.

In some cases, employers and trade unions regulate issues relating to vocational training within their own region, provided that this does not conflict with existing regulations. For example, they may agree that for their particular area (collective bargaining region) they will not apply training regulations that involve successive stages of training in order to provide all apprentices and trainees with the opportunity to obtain full training. The scope for collective bargaining agreements is even more pronounced in the field of continued training.

2.1.4.3. Teachers, instructors and academic experts

Teachers at vocational schools have different official titles in the various states of Germany, but all receive their education at universities. There, in addition to one of the 13 occupational fields (e.g., electrical engineering or metalworking technologies, which account for roughly half the number of degree courses), they usually also study a second, general subject and education, specialising in vocational education.

Vocational school teachers teach at vocational schools, which include technical colleges (Fachschulen) as well as at technical grammar schools (Berufsschulen). These teachers are equivalent to upper-secondary school teachers in terms of payment and tenureship regulations. Many have work experience in a relevant occupation and an engineering qualification with which they were then able to obtain a university degree. One problem faced by tertiary education that remains unsolved to this day is how to relate academic learning to the occupation itself. The work-related knowledge skilled workers possess is still given inadequate consideration within university research and education. As a consequence, university curricula for the various occupational fields tend to be based too much on established academic disciplines.

Criticism has been directed for some time at the tendency for vocational school teachers’ degrees in the field of electrical engineering, for example, to be too biased toward degree
courses in electrical engineering and divorced from the skilled worker’s and technician’s know-how regarding the actual work process. Initial drafts for independent university and polytechnic curricula for vocational subjects have been submitted and implemented mostly at the Universities of Bremen and Hamburg (Bannwitz & Rauner 1993).

In-company training is carried out by instructors (Ausbilder). If vocational training is provided in a craft trades enterprise, the master’s examination is a means of ensuring that masters (or supervisors) are qualified to train apprentices. Vocational training in industrial companies is governed by instructor aptitude regulations (Ausbildereignungsverordnung) laid down by the central government, which stipulate that in-company instructors possess appropriate qualifications in practical, theoretical, and vocational education.

Training for vocational school teachers has progressively shifted to the universities since the beginning of the 19th century (this process was finally completed in the 1960s), with the result that vocational education has developed into an independent discipline in the field of education. All German universities where vocational teachers are trained have a special vocational education institute for this purpose, but this is still the exception as far as specific vocational fields are concerned.

This situation is further supported by the German Research Council, which provides input via a special commission set up by the German Association for Education Studies and, in particular, by a pilot study programme organised by the individual Länder and central government (see above). Within the framework provided by the latter programme, schools and enterprises have the opportunity to experiment with new, innovative forms of vocational education and training. These pilot studies must be supported and evaluated by academic advisors. The programme has contributed not only to a special innovative climate in the actual practice of vocational training, but also to the development of vocational training research. This explains why university research in the vocational education field and on vocational training for specific occupations is relatively well developed and established in Germany.

2.1.5. Problems and perspectives

2.1.5.1. Didactics and processes of vocational training

In general terms, the tasks involved in vocational education and training are allocated to enterprises and vocational schools according to the basic principle that the enterprise provides the practice and the school the theory. This commonly held view not only says little about how the system functions, but is also misleading. It overlooks the elementary aspect that cognitive processes and genuine learning are intimately linked to concrete action or, as vocational education has realised for some time, to learning-by-doing processes.

Every modern vocational school can, therefore, provide an experimental learning environment with dedicated rooms, laboratories and workshops. Instead of having separate rooms for theoretical instruction and laboratories for experimental units, some schools have started to integrate theoretical and experimental learning by providing all their classrooms with
experimental equipment (integrated rooms for instruction). New training regulations oblige enterprises to orient themselves to holistic action processes at work and to ensure that planning, execution, and monitoring are closely integrated into training. Such a training concept requires substantial cognitive skills that enterprises also furnish in the course of training.

Still, vocational schools and enterprises have different approaches to training. In providing specialist knowledge, schools orient themselves to the systematised content of interrelated disciplines and acquire the content for specific subjects by simplifying academic knowledge for educational purposes. According to the prevailing tendency, this implicitly ignores the special knowledge that the skilled worker has of work processes. In this context one must distinguish between the architect’s knowledge and building site knowledge. The latter should receive more recognition in vocational training than it does now. More importantly, building site knowledge cannot simply be derived from academic knowledge. When vocational schools attempt to preserve a tradition of semi-academic curricula, this is primarily a result of the problematic nature of the degree studies pursued by the teachers (see earlier discussion).

However, in-company vocational training was heavily influenced for a long time by a specific understanding of basic training, according to which the first step must be the acquisition of basic skills. Future tasks and the basic skills that would be needed to accomplish them were thus absent in such a perspective.

In the case of the traditionally organised dual system of vocational training, this ultimately leads to duellist training in which company- and school-based learning are inadequately co-ordinated. Efforts to reform vocational training to relate it more to the interrelationships between planning, execution, and monitoring of specific tasks has led, especially in innovative regions, to a form of practice in both vocational schools and enterprises in which each of the training partners is able, in his or her own right, to shape the entire training process.

In such cases, however, there is a lack of an educational concept aimed at co-operative, dual training. What has been missing to date is a convincing concept for dual shaping of vocational training processes that provides for cooperation between enterprises and vocational schools with respect to specific competences, contents, and objectives. Progress on this front will determine to a major extent whether the dual system for vocational training in Germany can survive.

2.1.5.2. Trends and Prospects

As the main bridge in the transition from school to work, the dual vocational training system in Germany has been under pressure from two sides since the beginning of the 1990s. This pressure has come partly from demographic developments (low-birth years) and the resulting intense competition between dual vocational training and university studies (3). It has come as

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(3) The Ministry of Education and Science stated in this connection: It must still be examined whether a general change in behaviour on the part of young people independent of the current labour market situation is
well from both the recession and unification of Germany and the related cost pressures on enterprises. This has resulted in a reduction in traineeships, especially in the industrial sector.

At the same time all studies indicate that there is a significant shortage of skilled labour. This shortage has already led to production restrictions at about 20% of the enterprises.

The gap created by the shortage of skilled labour and the reduction in traineeships, triggered by company rationalisation in industry, has increased and heated a nation-wide discussion on enhancing the attractiveness of vocational training. Falk and Thiele (1993), for example, suggested 11 measures (see the following Table).

Table 1: Measures to Enhance the Attractiveness of Dual Vocational Training

<table>
<thead>
<tr>
<th>Measures</th>
<th>Median</th>
<th>importance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment steps</td>
<td>1,5</td>
<td>93,5</td>
</tr>
<tr>
<td>Intensification of continued training</td>
<td>1,5</td>
<td>94,3</td>
</tr>
<tr>
<td>Qualitative improvement in training</td>
<td>1,8</td>
<td>85,9</td>
</tr>
<tr>
<td>Improved opportunities of promotion for those who complete the dual system</td>
<td>2,1</td>
<td>71,2</td>
</tr>
<tr>
<td>Material incentives for skilled labour</td>
<td>2,2</td>
<td>68,5</td>
</tr>
<tr>
<td>Training for unskilled and semi-skilled labour</td>
<td>2,2</td>
<td>64,0</td>
</tr>
<tr>
<td>Training for those doing A-levels</td>
<td>2,7</td>
<td>41,9</td>
</tr>
<tr>
<td>Elimination of the distinction between blue-collar and white-collar workers</td>
<td>2,8</td>
<td>38,0</td>
</tr>
<tr>
<td>More training for foreigners</td>
<td>2,9</td>
<td>32,2</td>
</tr>
<tr>
<td>Assignment of university graduates to clerical positions</td>
<td>3,0</td>
<td>27,1</td>
</tr>
<tr>
<td>Retraining programmes for university graduates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[a\] The median is based on a four-point scale: ‘very important’, ‘important’, ‘less-important’ and ‘unimportant’ (From Sicherung des Fachkräftenachwuchses, Falk, R und Thiele, G., 1993, Köln: Deutscher Institutsverlag.)

A striking aspect of this survey is that the shaping of work is only indirectly and partially touched on in points 4 (opportunities for promotion), 5 (material incentives), and 8 (elimination of the distinction between blue- and white-collar workers). The key to increasing the attractiveness of vocational training in the dual system lies in upgrading the status of developing at the expense of vocational training. The high social esteem for school-based education, particularly the Abitur followed by university studies, speaks in favour of such a change. It will presumably continue until vocational training, provides comparable opportunities of personal development and options for occupational advancement (BMBW, 1994, p. 1).
occupationally defined skilled work. This requires a redesign of work and organisation aiming to achieve quality work, independence, and scope for shaping tasks (Althoff, 1994; Dybowski, Haase, Rauner 1993; National Center on Education and the Economy, 1990).

There is extensive agreement on upgrading vocational training by giving it equal status with education related to academic studies (Abitur) and the implementation of greater transferability of vocational training to higher education in polytechnics and universities. In this connection new projects are being carried out for the integration of vocational and general education in which vocationally based education for occupations is assigned a crucial function.

The training behaviour of enterprises is still the key aspect for the functioning of the dual vocational training system and thus for a smooth transition from school to work. Lutz indicates in this context that a major prerequisite for stable skilled labour markets is provided if a structural balance exists between training and the demand for trainees. In sectors with relatively high training costs (estimated at approximately DM80,000 per skilled worker) the situation is tight because only one-third of German enterprises take part in training (IAB, 1994).

Investments in vocational training are worthwhile for enterprises only if qualified skilled workers are available to the company in sufficient number after completion of the training. If the proportion of training enterprises drops below a critical mark, then these enterprises are faced with the fear that well-qualified skilled workers will change companies, and thus their investments in human resources are lost. If an enterprise calculates the costs for vocational training in the context of a structural balance between training and demand for trained workers, then costs turn into investments. In training sectors in which low or no training costs are incurred, such as in the craft trades, skilled labour markets are more stable (see Cedefop, 1992).

A European vocational and labour market policy is required for the formation of a European skilled labour market; this may substantially assist in creating basic conditions to support and reinforce the training behaviour of industry and crafts. A collapse of skilled labour markets can be expected if the gap produced by a shortage of skilled labour and a decline in training commitment increases. As the survey conducted by Falk and Thiele (1993) show, this would provoke a collapse of entire sectors and markets.

2.2. Continuing vocational education and training and lifelong learning

In contrast with the transparent and regulated area of initial vocational training, continuing education and training is little regulated and has a low degree of transparency. However, there is also a lack of meaningful data and statistics. According Ministry of Education and Science estimates, more than DM80 billion has been invested being in continuing training.
Continuing vocational training is increasingly regarded as an important innovation and labour market policy instrument. Initial vocational training is already considered of strategic importance on the level of technological and organisational innovations. Nevertheless, controversy has arisen over whether to work towards more systemic continuing training. Critics object that it is ineffective from a labour market policy point of view and is characterised by an allocation of funds for inappropriate purposes.

Table 2: Expenditures for continuing training

<table>
<thead>
<tr>
<th>Actor</th>
<th>Spending in billion DM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprises</td>
<td>Approximately 35.0</td>
</tr>
<tr>
<td>Agriculture, independent professions, churches, trade unions, associations</td>
<td>Approximately 15.0</td>
</tr>
<tr>
<td>Federal Employment Office</td>
<td>Approximately 18.5</td>
</tr>
<tr>
<td>The Bundesländer</td>
<td>Approximately 3.0</td>
</tr>
<tr>
<td>The participants themselves</td>
<td>Approximately 10.0</td>
</tr>
</tbody>
</table>

Another problem is highlighted by Ehmann (1995), who since 1991 was chairman of the main committee for further and continuing education/ training of the Standing Conference of Ministers for Education and Culture. He believe that continuing training managers are not prepared to accept continuing training participants as adult, mature, and responsible persons.

In public discussion the following tasks are allocated to continuing vocational training:

(a) updating skills and knowledge during employment (usually in the form of enterprise-based further training);

(b) qualifying workers for advancement (e.g., from skilled worker to supervisor or technician);

(c) retraining and subsequent training (unskilled workers who learn an occupation, or those having occupations for which job placement is not possible learn a different occupation);

(d) opening new fields of further training for which formal training or continuing training regulations do not yet exist (see BMBW, 1994);

(e) providing information for those holding executive positions through conferences, lectures, and seminars.

Most of this continuing vocational training is linked to personnel and organisational development within the enterprise and does not directly serve the purpose of improving the transition from school to work. Only continuing training programmes aimed at retraining workers, vocational training of unskilled labour and unemployed persons, and training for new, non-regulated occupations, can be classified under the heading school-to-work transition.
2.2.1. Quantitative development of continuing education and training

The scope of continuing training has approximately doubled since the 1970s. Whereas only 20% of those gainfully employed during the 1970s took part in continuing vocational training, the figure reached 40% between 1987 and 1992. In spite of this increase, the same structural weaknesses remain in the continuing training sector. In small enterprises (particularly in the craft trades) significantly fewer employees than in large enterprises take part in continuing training. Unskilled labour and blue-collar workers are clearly underrepresented in relation to university graduates, white-collar workers, and civil servants (see Figure).

Further and continuing training programmes financed according to the job Promotion Act (AFG) play a significant role for better job placement on the labour market. In 1992, 427,802 participants in the new Bundesländer alone took part in retraining and further training programmes. In the old however, 396,800 people took part in such programmes (see Figure 6.11). Of these participants, 574,700 were supported by the AFG of whom 62.6% were unemployed. Continuing vocational training in a recognised training occupation opens up the opportunity for adults to acquire occupational qualifications for the first time or to learn another occupation if the old occupation holds no employment opportunities.

Figure 6: Participation in continuing vocational training (Source: BIBB/IAB Survey 1991/92)
Comparison of the further training and retraining programmes that have led to the attainment of a recognised training occupation over a longer period of time (see Figure later in this chapter), confirms that training programmes performed outside of enterprises have increased rapidly. In contrast, enterprise-based further training and retraining programmes financed by the AFG for the attainment of occupational qualifications play a minor role.

Roughly 5% of skilled workers are currently being trained through adult vocational training (according to the Vocational Training Act) financed with AFG funds. The chances of job placement in the labour market are considerably poorer for those trained outside of an enterprise than for those trained within the dual vocational training system.

Figure 7: Entries in AFG-supported (*) continuing training in the old and new Länder according to gender and type of programme in 1992 in percentages (Based on data from the Federal Employment Office, 1993 and calculations of the Federal Institute of Vocational Training)

(*) AFG: Arbeitsförderungsgesetz
2.2.2. Continuing education and training instead of unemployment

Particularly in regions with a high rate of unemployment - this applies to many regions in the new Bundesländer - the wide variety of continuing training programmes frequently provide quasi-employment. Portions of the system have been taken from a labour market policy integrated into regional innovation policy in the form of a commercial continuing training market provided by private institutions. These institutions have a positive effect on the placement of unemployed persons in the labour market, however, which is difficult to assess clearly. The quality of commercial continuing training institutions that essentially finance their continued training courses via public programmes is generally not very high.

*Figure 8: Those who left further training and retraining programmes after completion in a recognised training occupation according to institutions from 1971 to 1992 (based on statistical data of the Federal Employment Office)*

Established standards of quality control have done little to change this situation. Therefore, the trade unions demand regulations in accordance with the Vocational Training Act not only for enterprise-based, nonformal further training but also for the transition from initial vocational training to continuing vocational training. They also demand that the transition to university be made more effective.

In its present state, continuing training depends greatly on the economic situation. Although greater deregulation of continuing training tends to be pursued by enterprises and business associations, trade unions demand greater regulation as the basis for modernisation of continued training. These demands encompass five main points:

(a) a legal foundation for continuing training in the form of a federal framework law permitting a concentration of continuing training programmes to date (financing, responsibilities, quality control);
(b) the creation of an integrated, co-ordinated system of initial vocational training and continuing training with a high degree of interchangeability of elements;

(c) establishment of continuing training for unemployed people as a contribution to an active labour market policy;

(d) intensification of continuing training research and counselling;

(e) development of networked continuing training institutions and co-operative continuing training institution structures based on a division of labour (Bayer, 1995).

These demands basically aim to achieve an active labour market policy. Moreover, within the framework of the work and technology programmes in Saxony, Bremen, and North Rhine-Westphalia, initial approaches have been developed for a preventive labour market policy in which funds for continuing vocational training are invested in joint, integrated, regional, work-technology and training projects. These structural development projects involve vocational training as a dimension for promoting innovation on local and regional levels. Because these innovation policy approaches initially consist only of regional research and development programmes and are of experimental nature, they merely assume a model or pilot-function. Initial results of an integrated regional innovation policy aimed at cooperation among regional innovation institutions are promising (Pollmeyer, 1995). An improvement in the innovative environment of regions has also had an indirect effect on an improved transition from school to work (Camagni, 1991).

2.3. Summary and conclusions

Satisfactory transition from education to employment for as many young people as possible depends on the training commitment of enterprises to provide attractive traineeships and occupational careers within the framework of dual vocational training. Implementation of lean corporate concepts supports the upgrading of qualified skilled labour in the value-added areas of production, maintenance, and services. This is the crucial linkage point for modern vocational training. Industry-wide labour and training markets require an occupational form of skilled labour. They offer the chance for both a humane and an economically effective shaping of the transition from school to work.

A dual vocational training system based on modern occupation profiles is the decisive factor in the transition. The great variety of programmes and measures concerning further and continued vocational training can then have a productive effect on school-to-work transition if they do not become a substitute for the deficiencies of national vocational training systems.

In the further development of a European labour market, the European Union is faced with a historical fork-in-the-road situation. The question to be answered is whether the European tradition of occupational labour and professional ethics or increased flexibility and modularisation of labour will form the future basis for the creation of competence and readiness to perform on the part of employees. Everything seems to indicate that the European tradition of occupationally-shaped skilled labour and dual vocational training will continue to
develop, even under the conditions of international quality competition. Competitiveness between world economic regions can only be realised in the long run if it aimed for both economic and social stability. A dual vocational training system as a bridge between school and the working world is an effective prerequisite.
3. **Summary of results of phase 1**

3.1. **Data collection procedure**

Following the agreements of the first project meeting in Amsterdam three different questionnaires containing items on three different societal spheres of relevance for the future of VET were sent out. Questionnaire A contained possible trends and strategies within the domain of technological and economic development, B within the labour and work environment and C within the education and knowledge environment. As well as personal information on the respondents, the questionnaire comprised trends which had to be evaluated for importance and likelihood, each on a five point scale, and a number of strategies which had to be evaluated on relevance and possible actors. The respondents were also asked to comment on the trends.

In the context of the German study, 742 questionnaires were sent out to experts matching the ten categories defined at the first European seminar.

The three contexts were weighted equally within the distribution of sent letters. Just under 250 experts per context were approached, resulting in a distribution of between 20 and 30 in each cell of the matrix setting the three environments A, B, C with the ten categories.

A deadline was set in the accompanying letter and a reminder sent two weeks after this date. A return rate of 210 (28%) was achieved. The experts were selected according to different criteria for each group. The guideline for the selection of active politicians was the share of parliamentary seats in the *Bundestag*. Beside federal politicians, persons from Thüringen, Sachsen, Nordrhein-Westfalen and Niedersachsen were sent questionnaires. A further criterion was involvement in one of the parliamentary committees for economic, social or education matters, analogous to the Contexts A, B and C.

The civil servants approached were from a variety of Ländere, including Nordrhein-Westfalen, Thüringen, Sachsen, Rheinland Pfalz, Hessen, Schleswig-Holstein and Niedersachsen. The employer and employee experts were members of the respective committees of their umbrella organisations. Providers of VET comprised directors of vocational schools (*Berufsschulen*) from Niedersachsen and Nordrhein-Westfalen. A small number of experts from private or semi-public institutions were also sent questionnaires. Experts from regional chambers of commerce, crafts and industry, collected under professional or sector organisations, came from regional branches in the same Ländere as public sector administrative staff. University personnel were selected from existing working-contacts (especially with regard to context B and C), from the list of members of the Verein für Sozialpolitik, the traditional German association of researchers in social and economic sciences, and from their statements on research interests. Category nine gathered together the foundations of the four major German parties, others such as the Bertelsmann Foundation and private consulting agencies. For the
last group we took the address list of the Bremen University public relations department and selected persons from relevant newspapers, magazines and other media.

Experts from enterprises were selected via already established contacts and a survey of advertisements in the larger German newspapers. Civil servants at national, regional and local levels responded in the highest numbers (24.8%) and ‘providers of VET’ came second with 15.7%. Enterprises (10.5%) and employer associations (11.6%) were fairly equal. With the exception of the unions (5.7%) the other groups listed in the questionnaires were all under 5%. Distinguishing by employment in the public sector or employment in the private sector, the distribution of respondents varies from just under 60% to just under 50% (see figures).

*Figure 9: Affiliation of respondents for the three contexts*
This distribution is a fairly close match for the actual situation in relation to actors influencing the VET system (see first chapter).

The distribution of male to female responses is a quarter to three quarters, which slightly favour the female sex in comparison with the strongly male-dominated reality.

It is interesting to look at the size participating enterprises. Only two of the respondents from group three (enterprises) work in SMEs (less than 250 employees) the majority of the remainder coming from large enterprises with more than 1000 employees.

Context C questionnaires account for 40 % of questionnaires returned, each of the others accounting for about 30 % (see figure).
3.2. Synthesis of results of the analysis of data, comments and national seminar

The following sections detail the results of the statistical analysis of the data, the analysis of comments and the outcomes of the first national seminar, along with a summary of phase one results.

3.2.1. Results of the factor analysis of the statistical data

The factor analysis of the data at European level has proved to be a good way of finding some basic common dimensions of change for the scenario construction, to which the partners can relate their findings. However, on the national side, the results of this procedure fall to some extent behind the quite advanced and highly institutionalised discourse on vocational education reform in Germany. This made it difficult to restrict the discussion at the national seminar just to the results of the survey carried out in the first phase. However, we will present the different preliminary scenarios which evolved from the first phase for the three contexts. We mainly used them as a stimulus for the discussion at the national seminar. (*) Following the method proposed by the co-ordinating institute, we finally selected those two

(*) The matrices used in the context of the seminar differed to a slight extent from those shown in this section (cf. paragraph 3.2.3) For a more detailed overview on the data and its analysis see the first interim report (Grollmann, Rauner 1999).
factors for each of the contexts which showed the highest correlation between importance and likelihood ratings across the respondents. For each context we then built a 2x2 Matrix which resulted in four preliminary scenarios for each of the contexts.

Table 3: Preliminary scenarios for the context: ‘economic and technological development’

<table>
<thead>
<tr>
<th>EURA2 Insecurities caused by economic structural change and competition</th>
<th>Low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>EURA1 Globalisation and Cooperation</td>
<td>Low degree of cooperation and innovation under condition of moderate pressure through international competition</td>
<td>Old national state framework</td>
</tr>
<tr>
<td>High degree of cooperation and innovation under condition of strong pressure through international competition</td>
<td>‘defensive’ networks of enterprises</td>
<td>Fragile networks</td>
</tr>
</tbody>
</table>

The three tables provide an overview on the first scenarios. Trying to interpret the collection of items within the factors in the first context, we come to the following picture: EURA1 emphasises the dimensions of globalisation and cooperation between the different actors whereas EURA2 emphasises insecurities caused by economic and technological changes.

Table 4: Scenarios for the context ‘work and social welfare’

<table>
<thead>
<tr>
<th>EURB2 change in working conditions driven and accompanied by processes of life-long learning</th>
<th>Low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>EURB1 degree of social risks and political awareness</td>
<td>Smoothed risks through public institutions and rising political awareness</td>
<td>Neo-taylorism</td>
</tr>
<tr>
<td>Socially fragmented society</td>
<td>Neo-Manchester capitalism</td>
<td>learning as a life sentence (Lernen lebenslänglich)</td>
</tr>
</tbody>
</table>

The second context offered the following picture. EURB1 is composed of trends which stress questions of social risks mediated by educational processes, public responsibility and political awareness for those matters. EURB2 stresses the importance of lifelong learning for successful processes of change in the immediate workplace, such as new forms of management, as well as in the macro-structure of employment, such as new flexible career patterns.
For the education and knowledge context the first factor (EURC1*) comprises items indicating fundamental changes in the structure and scope of VET. New media will play an important role in both medium and content of VET. Co-operation between public and private institutions and between individual enterprises will lay the foundation for an innovative climate. Education and training will be measured more on its outcomes than before. EURC3* contains items which stress the importance of broad foundational knowledge and skills and show a comprehensive responsibility for education and its effects by all actors.

Table 5: Preliminary scenarios for the context ‘education and knowledge’

<table>
<thead>
<tr>
<th>EURC3* integrative educational policy and transferable skills</th>
<th>EURC1* degree of cooperation and education- and training- driven innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Two-tier educational system as a barrier for innovation</td>
<td>Low 'ivory-tower' education</td>
</tr>
<tr>
<td>High Losers and winners of educational innovation</td>
<td>High sustainable balance</td>
</tr>
</tbody>
</table>

3.2.2. Analysis of comments

The respondents were asked to support the rating of each of the items with a short qualitative motivation. In the analysis of comments we concentrated on those items which showed a considerable high standard deviation to discover the cause of the high dispersion.

3.2.2.1. Comments in context A

‘Economic growth will loose its dominance. Economic growth will not remain the ultimate goal to strive for. Personal awareness - and ecological, cultural, social, and life-style issues - will become increasingly significant.’

The twenty comments provided can be divided in into two groups. On the one hand we have very sceptical statements on this issue reflecting on the powerful internalisation of values connected with the goal of economic growth or even those who argue that economic growth is a necessary pre-condition for developments in other spheres. On the other hand we have supportive answers which comprise references to the Maslowian pyramid of needs and preferences or agree with the exception that this might only be true for developed industrial nations. Some even argue the opposite to those belonging to group one, that the gratification of individual, social and ecological needs is a necessary pre-condition for economic wealth.

It is worth looking at item 7:

‘Regional structures will develop to strengthen the links between the local/regional economy and the providers of vocational education and training. Increasingly, the economy and the labour market will be regionally based. This will enable companies to identify their need for
training and for new recruits more clearly, and to establish better links with education and training providers.’

Nine comments showed a sceptical attitude to this trend, seven provided a positive rating, and two offered an elaboration of the problem without favouring gaining or diminishing importance or likelihood. In the first group an important argument seems to be the either-or of globalisation and localisation. Emerging trends of globalisation are seen as barriers to local or regional development. Others doubt if public-private partnerships can work at all, or if there are enough resources for that purpose. The three indifferent statements can be divided into two groups: one agrees, provided that there are political institutions that prevent free-rider problems, and the other two explain that there is a conflict of goals between regionalisation and federal consistency, as in qualifications. The positive group sees such regional arrangements as a powerful measure against the threats of modern economic competition which allows SMEs especially to group their forces.

The next controversial item (10) deals with the potential of SMEs to show good performance under the conditions of global competition:

‘Small and medium-sized enterprises (SMEs) will be in the best position to innovate in technology. Although large enterprises may become more flexible, smaller companies will lead in innovation. As markets change and new technologies provide new opportunities, SMEs will be in a stronger position to grasp the new opportunities.’

In most cases agreement on increasing importance is associated with the reservation that SMEs can only show outstanding performance in less capital-intensive domains such as services and IT so that a global positive judgement is not possible. One respondent comments on this trend with an allegory:

‘A Mini-cooper is faster than a truck. In case of a traffic jam the truck will be able to overruns the Mini, though.’

3.2.2.2. Comments in context B

Interesting comments were made in relation to the positive ratings for item 13:

‘Social acceptance of technology will be increasingly problematic. Education/training will become a fundamental condition for the acceptance of technology.’

Respondents see the danger of social exclusion dependent on whether individuals can acquire skills in new technologies or not. In addition, several comments make a distinction between the tasks for general or pre-vocational education and training and continuing vocational education. Whereas the latter’s genuine task is the delivery of applied knowledge, the task of the former is to lay the foundation for general acceptance of new technologies. One respondent gives precedence to the fact that new technologies will have a fundamental effect on the shape of educational activities.
Item twenty-three consists of two statements which have to be distinguished according to how respondents commented:

‘As a consequence of collective bargaining/negotiating, companies will have an increasingly direct involvement in training. The structure, content and funding of vocational education and training will be influenced by collective bargaining and collective negotiating. Firms will become more active in this field.’

Most respondents agreed that individual enterprises will invest more time and resources in training their staff. As part of bargaining processes, the importance of questions concerning matters of education and training will decrease or remain at existing levels, as social partners currently emphasise especially questions of salaries and wages in the present debates.

The following cases were examined because of the uneven distribution of importance ratings.

‘The workplace will become more multicultural. With the development of the European Single Market, people from different countries, cultures and ethnic groups will learn to work more closely together.’

Respondents rating this as important stress the importance of associated skills and competences for the process of European unification, its importance for know-how transfer and the attractiveness of Germany for foreign workers. In contrast, half of the respondents who have commented are rather sceptical and suggest that this is only valid for certain better-qualified groups in company hierarchies. One respondent emphasises that there are more or less universal goals of economic action which are not subject to strong cultural influence.

The ageing of the population is also interesting:

‘The ageing of employees will inhibit change and innovation. An ageing population will be less innovative and competitive, and society will become less adaptable. This will slow down the renewal of human potential and diminish the base needed in order to maintain or develop social security and other welfare provisions.’

Respondents mention the importance of work-experience which cannot be achieved with younger people. The so-called ‘inflexibility’ of older workers is a question in itself and the elderly will have such political power in ten years, that they will not have a problem in pursuing their interest as a lobby. Some respondents see the educational system having the responsibility to widen its offer in this direction. Others do not see age correlated with inflexibility, but argue, that this is a problem of old-fashioned forms of management.

‘Unemployment among young people under 25 will increase, compared to other age groups. In general, young people will have to face increasing difficulties in finding work as they make the transition from education to employment.’
Those rating this trend as important see the educational system as responsible for equipping students with the necessary preconditions to be ‘employable’. Employers are often reluctant to employ younger people due to their lack of work experience. This problem will increase if full-time school education increases in importance. One respondent quotes Ulrich Beck, using the term ‘Brasilianisation’ of labour and work. More optimistic respondents answer that there will be demographic developments which will smooth this problem with effect from 2006.

‘The attention paid to social cohesion will increase. Public authorities and the social partners will, increasingly, recognise the importance of giving a high degree of priority to maintaining and improving social cohesion.’

Some comments on this trend are sceptical, that social cohesion is not an end in itself and should be an effect of other political decisions or that such a trend cannot be seen at the moment, rather the opposite. However, other comments stress the importance of social cohesion as a pre-condition of success in other societal or economic spheres or even as a locational factor. Other respondents suggest that due to globalisation and the mobility of capital this problem can no longer be resolved at a national level.

Concerning the role of the state in education and training, initial and continuing education have to be distinguished. For the latter the importance of individual enterprises will increase. Many enterprises benefit from the education and training offered by public universities, so support for SMEs is especially regarded as necessary.

‘The migration of labour will increase. The international movement of labour will grow within the EU/ CEE countries but also from countries outside of Europe.’

Most respondents see processes of migration as especially relevant for more highly-qualified Germans. That aside, migration is seen as relevant for people from the new accession states in particular, because the reason for migration is usually the search for better economic conditions.

3.2.2.3. Comments in context C

‘Regionalisation will have a major impact on vocational education and training. The importance of the regional or local basis of VET will increase. VET will, increasingly, be organised on a regional (or local) basis to meet regional (or local) needs.’ ‘SMEs will benefit from an increase in the transfer of knowledge, through the agency of education and training providers. A priority of VET providers will be to activate the group of SMEs that adapts slowly to innovation. SMEs will get a better link with the knowledge and technology yields of educational providers.’

Analysis of both these items shows a high deviation in importance ratings. In the case of the first there is emphasis on the possibilities of better adaptivity to competition and the responsibility of schools for the development of a community at the local level. This is connected with the argument that more extensive regulations are too inflexible to meet actual needs. The second line of argument sees possible processes or regionalisation as barriers to
the mobility of labour and as an offence against the ‘Berufsprinzip’. Another group of respondents argues that the effects of globalisation will dominate processes of regionalisation or even question regional needs. Concerning knowledge transfer as a function of institutions of vocational education, two positions can be distinguished. On the one hand there is the group of respondents making references to already existing examples and considering it as a good way to enhance the importance of VET institutions. On the other hand there are opinions which doubt the capability of those institutions to take over such a role and whether enterprises are at all interested in such processes.

‘Specialist and technical skills will gain in importance. Education and training will focus more explicitly on specialisation. Students will be expected to become increasingly more specialised because of the specific demands from the enterprises.’

Responses here show a low mean but also a high standard deviation. This could reflect the different meanings of ‘work-oriented, specialised knowledge’: for a certain group of respondents this implies overspecialisation and a fragmented share of work and rather place on ‘Schlüsselqualifikationen’. Another group favours the idea of what is called ‘work process-knowledge’ in academic discussion and rates it with increasing importance.

‘Training organised by the various sectors will become more important. Sectoral organisations will play an increasingly significant role in stimulating and organising training for employees across the sector. Training courses are likely to be better geared to the innovation cycles - both within and between enterprises - in certain important sectors of industry.’

This gained a low mean score, as sectoral organisations already play a prominent role in German VET.

An emerging system of accreditation of non-formal learning seems to be difficult to imagine for respondents in terms of the following:

‘Knowledge and skills gained outside formal training (non-formal learning) will be better recognised. As well as continuing to recognise qualifications gained through formal education and training, better systems for recognising skills gained outside formal settings will develop. As this kind of recognition grows in importance, certification based on outcomes and competencies will be developed’.

Respondents emphasise the importance of knowledge and skills achieved outside of the formal education system but do not favour further formalisation in terms of certification. Any such measures can only be an extension to already existing forms of certification which could contribute to the parity of esteem between general education and actual processes of occupational learning.
3.2.3. First national seminar (†)

The German national seminar took place on September 17th 1999, one of the first in the overall project and so unable to benefit from the experiences of other countries. The participants were selected by their affiliation to one of the 10 respondent groups, with actual participants as follows:

(a) civil servants at the national, regional and local level;
(b) employer associations, chamber of commerce, etc.;
(c) employee representatives, trade unions, chamber of labour, labour administration, etc.;
(d) sectoral organisations, professional associations;
(e) education/training providers, institutes for VET;
(f) universities, research institutes;
(g) consultancy agencies, advisory agencies.

Altogether 20 important actors within the VET arena joined the national seminar. The list of participants can be found in the annex. About one week before the seminar the participants were sent a letter with a detailed description of the purpose and on the course of the seminar. This letter also contained an introduction to the scenario method and scenario analysis as well as preliminary results of the data analysis. The agenda of the seminar began with a welcome by ITB and Cedefop, followed by an introduction to the scenario method and the presentation of preliminary results of the overall European study by MGK. Then, the results of the German part were presented as a stimulus for further discussion and the strategic orientation of the project, as opposed to pure research, was emphasised. After the lunch-break the same procedure was pursued for the strategies. The seminar finished with an overview on perspectives of the project by Cedefop and MGK and a feedback round. We can divide the results of the seminar in three parts: discussion of scenarios, strategies and overall comments. All three gave rise to criticism as well as encouragement on methodological questions and questions concerning the subject matter.

The first German analysis (including national trends) produced the three following scenario matrices (similar to the matrices in the previous chapter in this report) which were presented to stimulate the discussion. It was pointed out that the scenario matrices only reflect the results of the statistical analysis and that there is no claim to absolute explanation. It was the function of the seminar to compensate existing shortcomings.

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† The travel and organisational costs of the seminar were supported by a financial grant from the BMBF. Thanks are due to Ludger Deitmer who took the minutes of the scenario seminar and to the participants for their constructive participation.
3.2.4. Discussion on scenarios for context A

Some of the participants argued that the trends listed in the questionnaire overemphasised global trends when they are of particular importance for enterprises acting on a global level. The important role of SMEs within German VET might be underrated as a result. Only 30% of employment in Germany is with global enterprises. This concern is connected with the need for cooperation on the local and regional level.

Table 6: Preliminary scenarios for context A

<table>
<thead>
<tr>
<th>Technological change and innovation</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Globalisation and Cooperation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High degree of cooperation under condition of strong pressure through international competition</td>
<td>‘defensive’ networks of enterprises</td>
<td>‘innovative’ networks of enterprises</td>
</tr>
<tr>
<td>Low degree of cooperation under condition of moderate pressure through international competition</td>
<td>Separated co-existence</td>
<td>intensive competition on the national level</td>
</tr>
</tbody>
</table>

Unfortunately the actual situation in Germany often resembles the scenario of ‘separated co-existence’. Pre-conditions for innovation, such as a working research and development infrastructure, were underlined as being an important factor for the prosperity of developed (post-)industrial nations. The possible shift of tasks of Berufsschulen and Fachhochschulen to centres for regional innovation was emphasised and examples were given. The scenario of ‘defensive networks’ was seen as relevant for ancillary industries which are under great pressure as a result of the conditions of modern competition and hence lack the necessary resources to invest in long-term actions. Here VET institutions could also work as a catalyst. The effect of modern information technologies has to be analysed intensively.

The coupling of cooperation and globalisation in one scenario dimension might obscure important insights, as the two do not necessarily occur together. The emerging trend to monopolisation in some industries is also overlooked by the items in the questionnaire. Besides there were remarks on methodology which will be summarised in a comprehensive paragraph for all contexts.

3.2.5. Discussion on scenarios for context B

As with context A, it was remarked that there is not necessarily a connection between the dimensions flexibility and mobility. The problem was raised of segmentation of labour into one part living under conditions of coerced flexibility and mobility and another part as the permanent staff of enterprises. This shows that rigid organisation of work can be associated with constraints mobility. To shed light on this point, further questionnaires which make
sector specific features part of the discussion were suggested. The sphere of working conditions has to be increased by other dimensions, such as new forms of gratification.

Table 7: Preliminary scenarios for context B

<table>
<thead>
<tr>
<th>Mobility and flexible organisation vs. stagnation</th>
<th>rigid organisation of work, low degree of mobility</th>
<th>Flexible work environment, high degree of mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>individual risks and social inequality</td>
<td>low</td>
<td>‘neo-taylorism’</td>
</tr>
<tr>
<td></td>
<td>high</td>
<td>Modern ‘Manchester-capitalism’</td>
</tr>
</tbody>
</table>

The ‘Berufsprinzip’ was stressed as an important topic for further discussions, as it might be able to integrate all the three overall scenario-dimensions. In the case of labour and employment environment, the distinction between process-oriented and task-oriented company organisation could be an interesting point for further elaboration. The shaping of non-employment in different scenarios should be discussed on as well as the shape of employment situations in different scenarios. For the European discussion, a special interest was expressed in the competing models and degrees of regulation within the employment and labour environment and possibilities and limitations of integrating those different paradigms into one single European way.

3.2.6. Discussion on scenarios for context C

The scenario matrix for context C encountered the least criticism. The Japanese situation was cited as an example for the field in the matrix on the bottom right-hand side. The importance of public-private partnerships in the development of new forms of education was stressed as an important factor for the achievement of a situation as described in the top right-hand side of the matrix. The topic of on-going modularisation should be integrated in further scenario construction as this is an important innovation for traditional German VET. A possibility of connecting scenarios from context B and C was seen through the use of labour market segmentation theories.
### Table 8: Preliminary scenarios for context C

<table>
<thead>
<tr>
<th>social and employment implications of education</th>
<th>Increasing importance of work-process-knowledge and in-company organisational and personal development</th>
<th>Low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>high collective responsibility, smoothed processes of selection</td>
<td>Scholastic, academic orientation of VET</td>
<td>harmonic share of work between different learning sites</td>
<td></td>
</tr>
<tr>
<td>strong degree of selection, individualisation of social and economic risks</td>
<td>Two tier education</td>
<td>polarisation of academic and vocational education</td>
<td></td>
</tr>
</tbody>
</table>

### 3.2.7. Discussion of strategies

The discussion on strategies began with the presentation of all strategies rated as not relevant by more than 10% of the respondents. The participants were then asked to present their ideas of strategies for possible futures of VET with regard to what had been said in the first part of the seminar and the listed strategies in the questionnaire. Again – with regard to strategies A11 and A14 – the regional and local level were pointed out as central units of action. Even if strategies and trends aiming to integrate or highlighting social partner involvement in VET achieved comparatively low ratings, this point should not be underrated in further strategy development. What matters here is not if social partners should be involved, as they are already, but rather what mechanisms can be found to make their influence more effective for the actual processes and outcomes of VET.

For context B the strategies B2, B7 and B20 encountered special attention and were seen as important despite their low ratings. The same is true of B14; the need to find opportunities for better integration of the disadvantaged into the labour market was pointed out as a question of increasing importance.

The accreditation of skills and knowledge acquired through processes of informal learning was seen as relevant if attention is paid to preventing of a jungle of qualifications. Modularity was rated as an attractive model, especially for continuing education. It was remarked with reference to C21 that universities’ efforts to find a place in continuing education should be greatly extended. The polarity of specialisation and general, transferable skills was synthesised in the idea of flexible specialisation which allows individuals to adapt their knowledge to different changing situations in their working life. The model of community-colleges following the Danish or northern American examples was mentioned as good model for integrating educational, sociological and economic needs.
3.2.8. Methodological remarks and perspectives

The scenarios were found to be too multidimensional in their scope and without with the necessary degree of plausibility; this sometimes made the discussion somewhat complex. The analysis of comments and further analysis might compensate the lack of the initial findings. It was felt by some that there was a domination by mainstream-trends that lacked the sociological fantasy for scenario-construction, which might have led to lower cohesion between the scenarios. However, the discussion process was appreciated and the potential for further scenario construction welcomed. As an important side-effect, the project could also increase the awareness of German actors in the European dimension, which is almost and end in itself. A request was made to describe the background of the study from the data collection to scenario-construction very thoroughly and transparently.

3.3. Summary of results of phase one

The following summary of results of phase one served as a basis for further scenario construction and investigation together with the results of the discussions in the European project team.

3.3.1. Trends within German VET as identified by experts in the first phase

Globalisation is seen as a major challenge for the economy and technological development. The rapid development of information technologies is seen as provoking international competition but also leads to new possibilities of international economic cooperation. The rising importance and omnipresence of those technologies will result in new skill profiles which combine IT skills as well as traditional knowledge of industrial work-processes (e.g. mechatronic profiles). Compared with the importance of new technologies, the relevance of political strategies dealing with this topic fared badly in the quantitative part of the study, opening questions for the second phase. The described trends will be accompanied by a process of increasing importance of the conditions for, and the ability of, enterprises to adapt their structures quickly to changing external conditions. Prognostic measures and analyses are seen as an appropriate means of coping with the challenges caused by increasing globalisation. In terms of human resources needs, the education and knowledge of employees will increase in significance as an important reaction to needs. The enhancement of conditions for lifelong learning is rated especially high by those who think that insecurity caused by technological and economic developments will increase in the next ten years.

Some of the respondents expect a tendency to refrain from traditional values of economic growth and a shift towards a higher esteem of other domains, such as ecological or cultural issues. Others understand growing economic wealth as a necessary pre-condition. Cooperation at regional level and the adjustment of regulations to regional needs are seen as accompanying the developments described above. However, there is doubt over whether such measures can stand the constraints imposed by globalisation. One result of the national seminar very clearly was the approval of regionalisation and cooperation as an appropriate
strategy, especially for SMEs. If SMEs could develop such regional structures they might be able to overcome the problems of lack of infrastructure in competition with big business. Companies are expected to invest more resources in continuing education of their employees, though there will remain to be a strong difference between public education and in-company training. This trend is seen to result from the view of enterprises that training and education can be an appropriate means of adapting to external changes, than from the pressure exerted by labour organisations. Concerning appropriate strategies for the next ten years it is partly astonishing what is seen as not relevant for the German context. This might be an expression of taking a lot of proposed measures for granted in the German context. The national seminar contributed to more clarity in those cases. For example the active participation of social partners within the VET system is formally covered by institutional regulations at federal level as described in the first chapter, such as the BIBB’s Hauptausschuß and subordinated bodies. However, there was complaint about a lack of coordination through cooperation at regional level and the ‘distance’ between actual workplace needs and the decision-makers’ information base.

As a consequence of rapid structural change, the flexibility and mobility of labour will increase, which will have considerable effects on individual workers’ occupational biographies. This, to a certain extent, questions the ‘Berufsprinzip’, which, with structural adaptations, was pointed out as a comprehensive principle with the potential to integrate conflicting interests of the three contexts of the study. The issues evaluated as most important by the respondents are transferable skills and broad competences combined with the ability to work in teams to equip individuals with the preconditions to act in a complex environment under constantly changing conditions. From an organisational perspective, collective learning processes and the promotion of them are important cornerstones for success in the market. Organisational development and the further expansion of continued education is also seen a relevant response to the ageing of the workforce. As this part of overall societal educational activities will gain in importance, there might be shifts in the division of tasks and the traditionally ascribed responsibilities. Employers are seen as increasingly responsible for the education of their workforce. While some respondents feel that young people under twenty-five are not exposed to great risks in the labour market for demographic reasons, others fear that this age group will be especially affected by changes. This raises the question of social cohesion which was highly rated by the respondents – it is one of the traditional strengths of Germany in comparison with its international competitors.

The degree and shaping of regulation of the interplay between education, work and social policy aspects was distilled as a focal point for the discussion on the European level.

These trends will result in an increasing emphasis within the education system on social and communicative skills. Developments in the IT sector will have effects on both the content of education and didactical processes. As in the other contexts respondents expect an increasing importance in in-company training and education combined with a shift in the tasks and scope of public education. It is also expected that individuals will increasingly have to account for their own educational biography, though it is also expected that processes of social exclusion and their prevention will feature highly on the political agenda. A shift of VET institutions
towards emphasising their role as regional mediators, combined with an adjustment to regional needs in terms of regulations, seems to be a controversial topic from the results of the quantitative part of the project. Analysis of comments shows that VET-institutions in particular have to work on their capacity to take over such a function. The topic ‘accreditation of prior learning’ is regarded as of little significance within the German context.

Despite the high rating of communicative, social and transferable skills for the future development of VET in Germany, corresponding strategies are comparatively lowly rated for relevance. The reason might be that German experts think already much has been done within this field but there are also indications that this question has to be clarified on a more substantial level.

3.3.2. Methodological perspectives as derived from the experiences of the first phase

The section on data-analysis and scenario construction showed the analytical potential of the overall project design, with the quantitative section offering an interesting base for transnational comparisons. However, problems occurred when trying to interpret the extracted factors due to the heterogeneity of the preliminary scenario dimensions. Scenarios can be regarded as ideals of possible futures in the classical weberian sense. This makes them exaggerations of particular dimensions of possible futures, which is not too far away from the underlying ideas of scenario construction. Nevertheless, the dimensions of this operation should be as pure as possible, which leads to a desire for further development of suitable items on trends to get scenario dimensions with more plausibility. Purity in terms of scenario dimensions will also make them more useful as a tool for public discussion. The analysis of controversial items and the national seminar showed the value of qualitative, open comments. A shift to a stronger consideration of qualitative research methods as a complement to the methods used seems appropriate from this experience. This would also provide a way to approach the topic from an inductive direction. This way we can cover ourselves against the danger of merely duplicating mainstream discussions. As already proposed by MGK, a reduction to one single questionnaire would help achieve more informative results especially concerning the correlation with background variables.
4. Further development of scenarios and strategies

4.1. First results on a German and European basis as a starting point for the refinement of scenarios and strategies

Through the statistical tool of factor analysis, which in this case functioned as an aid to organise and reduce large sets of data, the participants of the different countries reached a reasonable consensus (with only minor differences on the relative importance) on the following dimensions of change ('):

*Figure 12: Common future problem dimensions of vocational training as result of the first project phase*

<table>
<thead>
<tr>
<th>Economic and technological development</th>
<th>Work and Social Welfare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnerships and cooperation in economic development</td>
<td>Work mobility</td>
</tr>
<tr>
<td>Restructuring due to competition</td>
<td>Changes in the workplace</td>
</tr>
</tbody>
</table>

Increased flexibility of training and further training

Changing Roles of providers and institutions or vocational training

Training and further training as a social task

Individualisation of training and further training

Education and knowledge

(') A complete description of the Europe-wide results can be ordered from: Ms drs. Gh. Schmidt, Max Goote Expert Center, Universiteit van Amsterdam, Wibautstraat 4, PO Box 94208, 1090 GE Amsterdam, The Netherlands, email: ghislain@educ.uva.nl. The German provisional report (in English) is available from bookshops. Philipp Grollmann, Felix Rauner Scenarios and Strategies for VET in Europe. German report on the first project Phase, Bremen 2000. ISBN 3-9802962-9-6, DM 20,-.
The basis of these dimensions is the statistical evaluation of 2455 questionnaires that were filled in by experts on vocational training from the participating countries. During a project meeting, which took place after the evaluation, the European partners agreed to formulate three scenarios per country based on the dimensions of change.

Similar analyses were carried out on a national basis. The results of the country-specific evaluations were discussed during seminars of about 20 participants each. The aim of these seminars was to generate additions and corrections as well as further detailed information on the assessment of the future of vocational training in each country. During the second phase of the project, the Europe-wide results served to generate points of comparison, while the country-specific results facilitated further advancement of the practical side of the scenarios within the individual countries. The German experts regarded the following problem areas as of particular importance (see paragraph 3.2.7):

(i) increase in international competition;
(ii) the connection between internationalisation and the development of new technologies;
(iii) the relationship between traditional work process knowledge and new technologies;
(iv) small and medium-sized companies and their place within a region;
(v) the relationship between economic prosperity and social integration;
(vi) vocational principle and other forms of social order of the connection between occupation, education and socio-political questions;
(vii) the relationship between training and further training;
(viii) the significance of so-called key qualifications;
(ix) the relative distribution of responsibility in education and training;
(x) the changing role of institutions in vocational training;
(xi) the significance of European integration for general education and vocational training.

The drafting of the following scenarios was guided by these results. Results of recent publications, i.e. research results and politically motivated statements and reports on the subject of the future of education, work, economy and technology were also considered (\(^\star\)). The alternative future settings were mostly constructed in such a way as to emphasise system traits, or system development traits. These traits are merely representative for a particular alternative and are thus presented in an exaggerated way in order to be able to distinguish the different scenarios easily. The alternatives are idealised – they are intellectual constructs – and are not to be regarded as ‘actual’ possible future settings for vocational training in its social

\(^\star\) Cf. bibliographical references in the appendix. Incidentally, the integrated final report of the Delphy study, which was commissioned by the BMBF also refers to an insufficient number of concrete scenarios (Stock, Wolff, Kuwan, Waschbüsch 1998).
and economic context. While other combinations of system traits are possible, the present arrangement seemed plausible for the German context. In order to arrive at these scenarios we worked out a framework using the results of the German expert seminars and the extensive literature on the reform of the ‘dual system’, which guided our work.
5. Three scenarios on the future of vocational training and further training in Germany

5.1. On the structure of scenarios

The last ten years have produced a large body of literature (9) on the ‘crisis of the dual system’ and, especially in more recent years, there have been a number of related reform proposals. This points to the importance that many significant social groupings currently attach to vocational training and further training and possible reforms. This cannot be ignored, especially because of the highly institutionalised discourse on vocational education reform. The people interviewed are ‘experts’ in the very narrow sense as well as stakeholders who are at the core of decision making for VET. Hence, it would not make any sense, and did not function - as observed in the two national seminars – merely to take the results of the first phase scenario survey as an input for the scenario interviews carried out in the second phase. It was also not possible, because of the timescale proposed by the co-ordinating institution, namely the year ‘2010’. Anticipated larger changes in the strongly institutionalised setting of the German VET environment will take a little longer. Another issue in the German setting is that VET-policy is comparatively strongly integrated into other policy domains such as labour market policy and social policy (see chapter 2). This was the reason why we decided first to develop ‘pure’ (which is a contradicio in adjectu) VET scenarios and then relate those to ‘meta-Scenarios’ (see chapter 5.6) not according to our own expertise, but as a result of the interview processes and interviewed experts’ statements.

In order to develop plausible and valid VET scenarios, we presented a first draft in a second smaller scale national seminar and used the results of discussion for the further improvement and elaboration. This has led us to the following alternative pictures of VET in the year 2010.

In order to resolve any structural ambiguities that might result from the joining together of the results of the questionnaires and the existing material on the dual system and its developmental prospects we evaluated the following three scenarios according to these dimensions (in scenario terminology they could also be seen as ‘descriptors’):

(a) relationship between general educational and vocational training;
(b) relationship between training and further training;
(c) work, labour market and occupation;
(d) institutions, status (public/private) and financing of vocational training and further training.

(9) In order to maintain the readability of the text and to avoid rash opinions we have not included any precise references.
Before we go deeper into these dimensions we will introduce each scenario with a title and brief description.

5.2. On the content of the scenarios ‘2010’

One of the more fundamental structural questions with respect to the development of vocational training in the next ten years is whether most of the suggestions for improvement of vocational training and further training will be implemented in a particularistic and fragmentary way, or whether there will be broader changes.

Additionally, there is the question of how to place the different reform options within education and further education. In view of the call for lifelong learning it is an important question whether changes will mainly take place within post-secondary education and further education, or whether there will continue to be a strong integration of vocational training within the secondary school sector (as is typical for dual education systems like the one in Germany). This question is of particular relevance in view of European unification. In this context, an analytic polarisation of first or further education seems to be particularly useful.

Education is also always a question of educational content: two opposing empirically identifiable models are an increased ‘work-process-orientation’ of education and vocational training on the one hand and a more ‘academic’ orientation on the other.

The first scenario represents a situation where currently existing trends are exaggerated. In the second scenario, existing institutions of vocational training are changing, and in the third, vocationally utilisable education increasingly takes place post-school.

5.3. Scenario I: from the dual to the plural system of vocational training

Many of the trends and changes that took place in the late eighties and early nineties have persisted. In the last ten years, there have not been any major political or legal changes with respect to vocational training and further training. In view of all the significant dimensions of vocational training, such as contents, decision-makers and addressees, only the concept of ‘plurality’ can adequately describe the reality of vocational training.

5.3.1. The relationship between general education and vocational training

Apart from a few minor exceptions, the loss of attractiveness of the dual vocational training, since the early nineties described as ‘the crisis of the dual system’ has carried on. The creation of new occupations in IT and personal services did not significantly change the situation. Numerous non-traditional possibilities of entry also offer access to these vocational fields.
The proportion of young people within a single age group with university or college entry qualifications has increased. Because of an easier syllabus, the two pre-Abitur years have become the rule. As a result of the changes of the real function of grammar schools, vocational orientation is increasingly a part of the curriculum even of non-vocational schools. Practical training has been extended for the last five years of grammar school, which goes along with orientation offers from local labour market officials.

The extension of higher education colleges and the newly introduced bachelor courses at universities have led to an increase in vocational studies and number of students. The range and quality of these individual offers, however, is rather unclear.

5.3.2. On the relationship between training and further training

Many colleges and universities offer commercial courses of further training. Most businesses, however, cover their needs via private offers. Larger businesses offer business-internal prospects of promotion, which are shaped to a large extent by their own personnel and organisational development policies.

Further education departments are increasingly being outsourced to international large businesses and consulting agencies. Further education is increasingly being imported, which puts pressure on German providers. It is increasingly organised and carried out in English, in particular for occupations in middle and high management and in technology-intensive areas. Modern ICT technologies are utilised for these purposes. Some further education providers have now joined to create international professional organisations with their own standards of quality and certification.

5.3.3. Occupation, labour market and employment

The tendency for pupils to work alongside study is on the increase, which has lead to a larger number of pupils not finishing their secondary education. Frequently, school leavers carry on working for the same employer after finishing grammar school. A number of university students follow the same pattern and often enter more or less fixed employment before finishing their studies. This, in turn, has led to an increasing number of higher education students not finishing their degree. The idea of a vocation thus looses significance, especially in modern employment.

A paradoxical situation has arisen in traditional areas like the craft professions. Existing apprenticeship places are not occupied as there are not enough applicants, while there are many complaints about advance concessions of the education system in making available suitable apprentices. Many apprentices leave their position before completion. In both the east and the west, many state subsidised training establishments that are not connected to businesses take on a socio-political rather than an educational role.
5.3.4. Institutions, status (public/private) and financing of vocational training and further training

In addition to public vocational schools, there is an increasing number of vocational academies for certain commercial vocations. These academies are usually run jointly by businesses, employers’ associations and public corporations. Similar solutions are increasingly taken up by the commercial technical sector. For teachers, these academies offer better salaries, considerably better equipment and relatively high-performing apprentices, and thus represent an interesting alternative to teaching in public schools. This increases the teacher shortage for vocational schools with public status.

In addition to these publicly and privately maintained schools there are also business-external trade educational establishments which, as a rule, receive significant state funding.

5.4. Scenario II: work process-related and shaping-oriented vocational training

As a result of the vocational training reforms (amendment of the law of vocational training, 2007) in the last ten years, a number of reorganisational procedures led to new, wider professional outlines, which in turn fit into a new professional structure. The significance of vocational schools has risen due to core professions and a change of direction towards more open and dynamic professional outlines. Integrated vocational training plans led to a greater acceptance of vocational schools by company internal training personnel and the cooperation between companies and schools has taken on a new shape.

5.4.1. Relationship between general and vocational education and training

It is increasingly possible to acquire university entry qualifications while being engaged in vocational training (double qualification). This has made vocational training more appealing for pupils and parents. The cooperation between vocationally-oriented colleges and universities and vocational schools has made it possible in some areas of training for additional courses to be recognised by the college or university. Vocational training has thus gained in attractiveness for both parents and pupils and now represents an alternative to grammar school.

The setting up of local advisory committees for various vocational fields that are taught in vocational schools enables teachers to combine academic with vocational content in a practical way. In this context, education is organised in a domain-specific way within regional vocational training dialogue.
5.4.2. On the relationship between training and further training

In addition to private providers of vocational further training, vocational schools and universities are now more involved in the area of further training. As well as traditional training for master craftsman, technical expert and business management graduate, there is now a wide range of additional further training courses, which can, in certain circumstances, lead to a degree. Such further training modules are mostly state-approved and tailor-made for certain vocational fields within initial vocational training. These modules are taught at new training and further training associations and their contents are overseen by regional advisory committees.

5.4.3. Occupation, labour market and employment

Europe-wide standards of qualification have developed in large branches such as the automotive and chemical industries. Supported by the relevant employers’ and employees’ associations, these standards exert an increasingly strong influence on the development of vocational training in the various Member States. In Europe, the principle of duality of place of study and the integration of vocational training into secondary education are now the basis of educational for the above sectors. Within these sectors, it has now become possible to complete part of one’s studies abroad.

5.4.4. Institutions, status (public/private) and financing of vocational training and further training

Some federal states have established public-private-partnerships within the area of further training, such as the legal institutions of ‘Foundation of public law’ and ‘charitable GmbH’ syndicates developed between providers of regional training and further training - vocational schools, colleges and chambers or associations. Many of the further training offers presented came from demand and task analyses in SMEs. Due to more relaxed attitudes towards cooperation and design, it is now once again an attractive option for SMEs to employ apprentices.

Relaxation of civil service law has led some federal states to develop so-called vocational lectureships. In addition to teachers recruited in the traditional way, it has now become possible for schools to employ experts from science and practice for certain vocational training contents. These lecturers mostly teach courses that lie within the scope of regionally developed curricula. As many of the lecturers are still involved in company training and further training, this innovation, too, has contributed to an increased communicational exchange between regional businesses and vocational schools.
5.5. Scenario III: revaluation of formal education and lifelong learning

New professional outlines and process reorganisation have contributed to innovation in the area of vocational training. Technical colleges have gained further significance in some professional areas. Dual vocational training, however, now only serves to bridge the gap. In the last few years, the majority of the innovations concerning educational policy took place within the traditional area of education and further training. The most important innovation of the last ten years is the further training outline legislation, which is in force nationwide.

5.5.1. Relationship between general education and vocational training

The proportion of pupils gaining university entry qualifications increased. High-performance pupils, however, have the option of taking a short-cut and completing their education after only twelve years. Due to a number of changes in the curriculum, general education schools have opened up to the work market. Practical training periods in the last five years of school have been extended. The new subject of professional orientation has been introduced in many federal states. Optional courses have been introduced that allow pupils to acquire basic and more in-depth knowledge of new technologies and economic sub-disciplines.

Colleges and universities now also put their focus increasingly on vocational and practical qualifications. In the last few years, the average period of study has decreased and the number of students leaving college and university with a bachelor or college degree has increased. The structure of courses includes more project-like and didactic organisational forms, and six-month practical training courses have become the norm for most courses.

Universities no longer offer the entire range of subjects. Instead, there are competence centres for specific occupational fields and subject areas. Cooperation between colleges and universities has become more common.

5.5.2. On the relationship between training and further training

At federal level, a nationwide outline legislation for further training has been set up, which regulates questions of quality and financing.

Questions of quality are regionally regulated via an unbiased further education council and corresponding committees. The regional further education councils and consultation agencies are usually located at or near universities and colleges. This ensures coordination with existing courses of study.

More than before, business-internal further training courses teach new employees the basic practical knowledge necessary for the job.
5.5.3. **Occupation, labour market and employment**

For secondary school pupils, dual initial training or education increasingly only bridges a gap, e.g. when waiting for a university or college place.

More and more pupils now work during the final one or two years of school. In some cases, pupils stay with these employers after finishing school. On the one hand, this enables pupils and students to gain valuable experience in the job market and they take the opportunity to try out different businesses, but on the other hand, this has led to an increase in students not finishing their courses. Some universities and colleges have introduced so-called part-certificates, which document students’ achievements before their break off.

5.5.4. **Institutions, status (public/private) and financing of vocational training and further training**

A state and federally subsidised fund has been set up which helps finance further training. When businesses fulfil certain criteria their further training expenses are tax deductible. Financial resources from the further training fund are distributed to employees via individual training accounts.

In addition to private providers of vocational further training, the regional and subject-specific competence centres that have been set up at colleges and universities now represent competition in the market. As a rule, these institutions are organised as public-private partnerships between public corporations, associations, professional organisations and, occasionally, businesses.
Table 9: Overview on German VET- Scenarios

<table>
<thead>
<tr>
<th>Scenario I</th>
<th>Scenario II</th>
<th>Scenario III</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the dual to the plural system of vocational education</td>
<td>Work-process related and shaping oriented vocational education</td>
<td>Revaluation of formal education and lifelong learning.</td>
</tr>
<tr>
<td>Dual vocational training continues to lose attractiveness with the exception of a few sectors</td>
<td>Increase in attractiveness of vocational training</td>
<td>Increase of number of pupils gaining university entry qualifications</td>
</tr>
<tr>
<td>Extension of vocational courses of study at higher education establishments</td>
<td>Regional subject-specific advisory committees and regional vocational training dialogue</td>
<td>Increase in vocational preparation in the area of general education</td>
</tr>
<tr>
<td>Higher education establishments increasingly get involved in further training. Further increase of number of pupils taking Abitur</td>
<td>Integrated occupational training plans</td>
<td>Increase in vocational and practical orientation of colleges and universities</td>
</tr>
<tr>
<td>On the relationship between general education and vocational training</td>
<td>The relationship between training and further training</td>
<td>Specialisation of colleges and universities</td>
</tr>
<tr>
<td>Regional subject-specific advisory committees and regional vocational training dialogue</td>
<td>Double qualification and increased accreditation of qualifications from vocational education within post secondary education</td>
<td>Regional and national further training councils</td>
</tr>
<tr>
<td>Integrated occupational training plans</td>
<td>Tailor-made further training modules</td>
<td>Co-ordination and accreditation of further education measures and university studies</td>
</tr>
<tr>
<td>Increase of number of pupils gaining university entry qualifications</td>
<td>Co-ordination with regional advisory bodies</td>
<td>Mini-certifications for university drop-outs</td>
</tr>
<tr>
<td>Increase in vocational preparation in the area of general education</td>
<td>On the relationship between occupation, labour market and employment</td>
<td></td>
</tr>
<tr>
<td>Increase in vocational and practical orientation of colleges and universities</td>
<td>Specialisation of colleges and universities</td>
<td></td>
</tr>
<tr>
<td>Specialisation of colleges and universities</td>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>The exploitation of learning-potentials through alternating modes of work and education develops to a guiding principle for Europe Pan-European occupational profiles jointly supported by social partners especially in the bigger economical sectors</td>
<td>In most cases, dual initial training takes on a bridging role</td>
<td></td>
</tr>
<tr>
<td>Occupation, labour market and employment</td>
<td>Fundamental occupational practical skills are developed after university studies within in-company training measures</td>
<td></td>
</tr>
<tr>
<td>Number of pupils is not complemented by sufficient pool of adequate candidates</td>
<td>Pupils and students increasingly take on second jobs</td>
<td></td>
</tr>
<tr>
<td>Traditional vocational training increasingly takes on a socio-political function</td>
<td>Institutions, status (public/private) and financing of vocational training and further training</td>
<td></td>
</tr>
<tr>
<td>Vocational academies are privately and publicly maintained</td>
<td>New Law on VET from 2007</td>
<td>outline legislation for further training</td>
</tr>
<tr>
<td>State subsidy of business-external educational establishments</td>
<td>Associations between vocational schools, colleges of higher education and others ‘public-private-partnerships’ Close cooperation between VET-Institutions and SME</td>
<td>Setting up of a further education fund</td>
</tr>
</tbody>
</table>
| Colleges and universities as further training providers | }
5.6. The context scenarios

Figure 13: The German Context Scenarios

Taking up two different polarities which are observable in the broader German policy discussion we came to the Context-Scenarios shown in

Those context scenarios were also part of a brochure sent out to the interviewees before the actual interviews were carried out. The interviewees were asked which of the VET scenarios they see related to the context scenario. It is quite evident, that Scenario A in the upper left corner of the matrix is quite unlikely for the German context because it is an overexaggeration of two ‘basic’ trends in the policy environment which are in a strong contradiction to traditionally strong corporatist German policy tradition (see also chapter 8).
6. Strategies further developed

There are thirteen strategies that emerged from the European scenario discussion, which now have to be evaluated for their significance for Germany. The dynamic of the open, thematically-guided expert discussions neither allowed for the treatment of all 13 strategies in detail nor in the form of a check list. Rather, the question of strategies was posed in a more general and open manner, representing options that can lead to some scenario or other. The result was that, by and large, only those strategies were mentioned that were judged to be of significance for one’s own goal scenario. Additionally, goals of action, plans and options, which should really be added to the ‘scenario complex’ were mentioned repeatedly in passing during the course of the discussions. We have thus reviewed each interview with regard to strategy relevance and have then matched this to the thirteen strategies ourselves. The following remarks are, therefore essentially an interpretative assignment of interview statements to the thirteen strategies, for which we are entirely responsible.

6.1.1. Clusters of strategies

An attempt to compare and relate the thirteen strategies with the statements of the expert discussions quickly reveals that these thirteen strategies are not all situated on the same level of generalisation or level of policy. Instead they are arranged hierarchically and group together in varying ways. They mostly differ with regard to their goal orientation and their orientation towards means and instruments. In other words: some of the suggested strategies focus more or even exclusively on what should be achieved and others focus more or exclusively on how. Means-oriented strategy drafting, however, often implicitly also refers to goal orientation, at least as far as the people involved in the discussion are concerned. And vice versa: for the actors involved, certain goals strongly imply particular instrumental strategies. This has a lot to do with established goal-means-relations of (vocational) policy strategies. However, they are neither valid in principle nor long-term. Not only do the interests of the persons involved differentiate the respective goal-means-goal-models, but the very attempt to re-orient the goal-means assignment reveals important social learning processes: they could, for instance, show that previous instruments or solutions are no longer appropriate for the goal.

There is not just the fact that the choice of strategy is not free but tied to the relevant context of action (scenarios), but also the fact that the individual strategies that are taken from the existing arsenal of strategies (which, for the sake of simplicity, we will equate with the thirteen strategies of the UK project), group together into clusters with internal connections.

In the expert discussions it is possible to make out three strategy clusters that differ according to their dominant goal orientation. The dominant goal orientation suggests which group of problems are thought to be particularly risky and thus should be addressed emphatically and as a matter of great priority. That does not mean that other goal orientations do not play a role at all, but rather that they are of secondary importance from our given point of view. This may be
the result either of the overall assessment of social problems or of a supposed division of labour with regard to taking care of social problems, or both.

So what are the different headlines of the three clusters of strategies?

6.1.1.1. Cluster 1: supporting the development of the modern, flexible worker (strategy 4)

The strategy cluster that is marked by this goal is regularly tied to the following:

(a) providing accurate and up-to-date information about the change of vocational demands (strategy 2);
(b) focusing on the development of basic skills (strategy 8);
(c) making optimal use of IT within vocational training (strategy 12).

6.1.1.2. Cluster 2: addressing particular target groups (strategy 6)

The strategy cluster that is marked by this goal is regularly tied to the following:

(a) developing information, guiding material and support structures for individuals (strategy 5);
(b) focusing on the development of basic skills (strategy 8);
(c) finding a new way of using public funds (strategy 10).

6.1.1.3. Cluster 3: increasing the ‘weight’ of learning in the lives of individuals, businesses and communities (strategy 3)

The strategy cluster that is marked by this goal is regularly tied to the following:

(a) providing accurate and up-to-date information on the change of vocational demands (strategy 2);
(b) developing information, guiding material and support structures for individuals (strategy 5);
(c) establishing transparency of qualification structures (strategy 7);
(d) finding a new way of using public funds (strategy 10);
(e) recognising and promoting non-standard skills (strategy 11);
(f) promoting a policy of agreement between work and life (strategy 13).

6.1.2. An additional strategy cluster (4th cluster)

It has already become evident that identical instrumental strategies can be found in different clusters. One of the labels of the present arsenal of strategies, however, has not been
mentioned above, namely ‘Support for the private sector and for employers and employees, so that they become involved in vocational training’ (strategy 1). The implied orientation towards in-company vocational training in a system the design of which employers and employees have decisively contributed is the central structural trait of the German system of vocational training. From a slightly different point of view, this could justifiably be understood as goal-orientation for an independent strategy cluster, motivated primarily with reference to labour market policy.

6.1.3. Outline of the strategy clusters as a result of desk-research and interviews

We arrived at these strategy clusters by balancing the – strategy-related or strategy-relatable – statements from discussions on the 13 strategies as contained in the arsenal of strategies of the European scenario project. First of all it was necessary to outline what is meant by each headline and, in the context of the individual sub-strategies, in the German debate.

6.1.4. Individual strategies

In the following, we will comment on the individual strategies from the arsenal of strategies of the European project as they were explicitly or implicitly mentioned during the expert discussions. Then we will add a few remarks that will facilitate understanding of the specific contexts for readers outside Germany. Because the strategic options are related to the future, we will attempt to evaluate the individual 13 strategies using a point system from 1 (very important) to 6 (not very important).

6.1.4.1. Strategy 1: support for the private sector and for employers and employees, so that they become involved in vocational training

Such a strategy is never mentioned so broadly. It does not form part of the discussion in Germany because the German tradition of vocational training emphasises the involvement of businesses and employers and employees in vocational training. It is the substratum of the law of vocational training from 1969, which regulates company-based vocational training in Germany. In a certain form, namely from the point of view of the satisfying the demand among young people for apprenticeships, this strategy did, however, play a role in the last few years – and, to a lesser extent, still does today. In the last few years, the demand for apprenticeships was considerably above supply. This is partly for demographic reasons and partly due to structural shifts; in the new federal states this is mainly the result of pioneering work by large industrial companies.

Different strategies of financial support were introduced in order to persuade businesses to provide additional apprenticeships. The main strategy was the so-called Sofortprogramm [immediate programmeme] which was introduced by the new Federal Government shortly after its election in 1998. The new federal states received even more funding, though this did not lead to the desired balance of supply and demand. In our opinion, these strategies were
motivated primarily by social policy and, in the new federal states, by structural policy. In the context of the apprenticeship crisis, and following a far-reaching diagnosis of quantitative and qualitative developmental obstacles in the education system, there was demand for a new law for the financing of vocational training, which was supposed to include a share of costs by businesses. This strategy has, so far, not been successful and no longer plays a significant role in the debate.

For the future, this strategy does not play a leading role regarding financial support in the expert discussions (value: 3).

From a different perspective, the options as presented in the arsenal of strategies of the European project, namely that businesses as well as employers and employees mostly bear and are responsible for vocational training, is linked to a key question of German vocational training policy (see above and below).

6.1.4.2. Strategy 2: providing accurate and up-to-date information on the change of vocational demands

This strategy does indeed play a role, although the value of such information is a matter of interpretation. Different demands on the source of information and its emergence and its preparation follow from this. The Federal Institute for Vocational Training pointedly follows this strategy using the ‘early identification system for skill development’ supplemented by activities from the respective promotional focus of the Federal Ministry for Education and Research (10).

In all, it is precisely the statutory agreement for the Federal Institute for Vocational Training (BiBB) and its current concretisation (11) in the context of the German vocational training system that is of particular significance from the point of view of orientation toward the future. This holds not only for the different forms of prediction or early recognition and the continuing documentation of developments in the system of vocational training, but it also applies for the new classification of training professions as a uniform, country-wide standardised classification tool. New classifications are done on the basis of negotiations between the social partners, which the BiBB technically prepares and conducts. In order to continually guarantee the future significance of training professions, professional vocational groups or professional vocational commissions, which are to serve to a certain extent as links

(10) Noteworthy here is FreQueNz – a research and information network for early recognition of qualification requirements, which is coordinated by the Fraunhofer Institute for Industrial Engineering in Stuttgart. An important source of information for the Federal Institute for Vocational Training are the large, representative surveys for collecting and evaluating professional qualifications carried out in conjunction with the Institute for Labour Market and Vocational Research of the Federal Institute of Labour (IAB). These so-called BiBB/IAB – suveys were carried out for the fourth time in 1998/99, see also: Rolf Jansen: The Effects of Structural Change in the Workplace, in: BWP – Occupational Education in Science and Practice, 2/2000.

between early recognition and new classification, are initiated. These groups comprise commissions of experts from the social partners of a certain industry, and have the purpose of both observing and jointly discussing technical and organisational changes with regard to vocational requirements.

6.1.4.3. **Strategy 3: increasing the ‘weight’ of learning in the lives of individuals, businesses and communities**

This is evidently a super-ordinate strategic option (see above) that is realised in different sub-strategies. Without doubt, all strategies putting emphasis on further education belong in the same category. The focus here is on the broad inclusion of different groups of employees and of unemployed people in further education, in a demand-driven re-orientation of further education and the systematisation of further education that is close to the place and process of work. Further education will increasingly be a normal part of working life, but will still display a number of socially selective effects. Several strategies are geared towards general access to further education and towards securing recognition and certification of further education.

Understood as ‘further education’ and thus extremely limited (see below), strategies concerning the increase of the ‘weight’ of learning, even ones that are in conflict with each other, currently play an important role in Germany (value: 2).

6.1.4.4. **Strategy 4: supporting the development of the modern, flexible worker**

This is one of the most central and predominant strategic orientations, with several sub-strategies, hence its selection as a model for one of the clusters. The discourse addresses the question of how the development of the modern, flexible worker can be fostered: by making vocational training more flexible, both, horizontally and vertically.

In this context one always has to bear in mind as an historical starting-point the relative standardisation and frame of a training syllabus in dual vocational training: a three-year qualification process which takes place mostly in the business and is supplemented by courses in a vocational school. The certificate is not gained until the end of the course after a final exam.

Two sub-strategies are beginning to change the status quo with considerable prospect of success. The first is modularisation, i.e. the division of vocational training into individual parts, each of which can earn a certificate. These modules are to a certain extent (or according to some drafts mostly or even entirely) selectable. The other strategy concerns the development of further education modules, which have a close relationship to vocational basic education modules. Further education is seen as the central strategy for development of the flexibility of the worker.

These strategies mostly concern jobs with high and constantly changing demands. They are not merely a means of keeping the worker flexible – by strengthening the individual
responsibility for their education, for example - they are also a means of attracting those that are well qualified from school for these apprenticeships and activities. These internal flexibility strategies are often supplemented with strategies such as:

(a) developing information, guiding material and support structures for individuals;
(b) addressing particular target group;
(c) establishing transparency of training structures;
(d) focusing on the development of basic skills, modularisation;
(e) encouraging individuals to invest in their own education;
(f) finding a new way of using public funds;
(g) recognising and promoting non-standard skills;
(h) making optimal use of IT within vocational training;
(i) promoting a policy of agreement between work and life.

New classifications of training professions are also to be tied to this strategic relationship, which not only pertain to modern educational topics, but also mainly provide, or even promote, greater flexibility due to their broad foundation. This corresponds to an increased learning area orientation (12) on the part of the vocational school, which leads to increased context learning and also brings about changes in the traditional form of small business training. Approaches such as ‘business and work-process oriented training’, which are set up as attempts at modelling, likewise designate the option toward modern, flexible workers – from an educational point of view.

6.1.4.5. Strategy 5: developing information, guiding materials and support structures for the individual

This strategy also applies to Germany, which by no means implies entering new territory. Vocational guidance from the labour office (13) is, to a large extent, already a component of vocational convergence for elementary school students and offers access to elaborate information systems, which can currently be used also by information seekers online or in on-site information centres (vocational information centres of the labour offices). Supplementary information materials have also been prepared for various target groups. Diverse organisations

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(12) See also, among other things: Trade Union for Education and Science, The Learning Field Concept in the Vocational School. Revolution of educational theory or educational policy and didactic reform option? Frankfurt am Main 2001 and: from the Scientific Accompaniment to the BLK Programme New Learning Concepts in Dual Vocational Training programme letters from the project sponsor Institute of Technology and Education of the University of Bremen (www.itb.uni-bremen.de/projekte/blk/programmentraeger.htm).

(13) Information Services of the Labour Administration Office for Persons seeking Apprenticeships has been recently expanded. Now there is a free online-info-service called Apprenticeship Positions Information Service (ASIS), which was visited by a daily average of 98,000 Internet users in September of 2000. Trainee and regional consulting services were promoted, etc.
take part in orientation and consulting activities, daily newspapers publish regularly special information inserts for choosing a career. Vocational orientation instruction takes place in local schools, with company internships also being included. During the years where demand for apprenticeships sharply exceeded supply, specialised sets of material and consulting and support measures were developed for young people with specific career start-up difficulties. It is in this context that one can speak of an established system of information, guiding materials and support structures, which in the meantime have tended to lean more toward non-transparency and therefore required a clear regional network.

The Vocational Training Report, which dates back to the Vocational Training Regulation of 1969, provides information on developments in the field of vocational training on a yearly basis.

In addition, the question recurs as to whether the available information and the preparation of it are adequate with regard to the specific problems and personalities it pertains to and, above all, whether it gives an adequate picture of further developments in the world of work.

The decisive limitation on the information and support structures up to now has been, however, the fact that it concentrates on only one individual time period, which is considered to be neuralgic, specifically the first transition from the school system to vocational training. Approaches to a systematic and individualised vocational training system (coaching) have only concerned the first transition from schooling to vocational training as a single, albeit a very important, single decision point in an individualised, somewhat drawn-out placement process, during which various improvements and revisions are a normal part of the process. Experiences in other countries, new learning challenges, etc., would also need to be a part of this type of long-term, well thought-out acclimatisation process. In Germany, vocational consulting and orientation still concentrates primarily on the first transition from school to training in the traditional model of a biographically earlier life/career decision, although this approach is now being viewed as less and less suited to reality. The close connection of the dominant player in career consulting, the labour office, in labour market issues – to which the partial system of business-based vocational training is also attributed - is part of this model. It is to be expected that becoming acclimatised to one’s career can thus be viewed primarily as individual adaptation to market conditions.

6.1.4.6. Strategy 6: addressing special target groups

The issue of addressing special target groups in Germany follows, to a great extent, variations in supply and demand for apprenticeships, where demographic developments also play an important role. In the context of the social importance of vocational training as the ‘royal path’ to the world of work, certain phases, in which a business apprenticeship is a scarce commodity, have been socially selective with regard to the generations of school ‘drop-outs’ seeking training. Since companies make the decision on who will be trained, they can select candidates from among the large numbers of applicants in accordance with their own criteria. In spite of the different influences on these such decisions the results show certain specific
characteristics in young people who have difficulty obtaining an apprenticeship: lack of accomplishment in school, belonging to an ethnic minority, and young women \(^{(14)}\). In such phases, which are often designated as educational market crises in Germany, strategic options are often specified and pursued, which demonstrate the social responsibility of the educational system for both the future of the young and for the coherence of the society: i.e. a perspective of inclusion. The dominant position of the business-based system of vocational training as a chance distribution system poses a special risk for the disadvantaged young in the sense that they may not fit in there. Since companies assume the main responsibility for vocational training in Germany, which is affirmed by the vocational training regulation of 1969, the demand for social integration is aimed primarily at these companies and in fact creates a problem of legitimacy. At the same time, this type of ‘narrowing down’ also confirms the isolation of vocational training as the special system similar to the operational work markets and causes non-operational vocational training measures to appear as less satisfactory substitute solutions. Nevertheless, they have still achieved their own considerable independent quantitative and qualitative weighting in the course of the apprenticeship crises occurring over the last ten years, mainly in the new federal states. And this means that today one can make reference to an existing mixed system, which has replaced the classic ‘dual system’ – even though it may not yet have gained the appropriate social, political and legal recognition. One widely recognised aspect is that young people with special career start-up problems need additional support, mainly in the sense of adequate forms of learning and a primarily social-pedagogic support system in the course of organising their individual work / life situation. \(^{(15)}\). This also calls for a new network-type support system on a regional level \(^{(16)}\).

Currently the situation is changing in Germany. A very different picture is emerging in the face of a slowly easing educational market. There is a significant minority of young people having career start-up problems, and this group would, therefore, reap very little benefit from the revival of a specific position training programme. As before, many students who have left school in the new federal states are still experiencing great difficulty finding an apprenticeship due to the negative structural conditions in various regions. There is also an increasing number of company apprenticeships that cannot be filled. One reason for this is the fact that young people with good to excellent school records are utilising the more favourable educational market situation to their advantage to acquire more attractive apprenticeship

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\(^{(15)}\) For issues on vocational training for disadvantaged youth, see also *Forum on Training, Qualified Educational Training for all! Business meeting of the Forum on Training on 27 and 28 September 2000 in Bonn, material of the Forum on Training 4, Bonn* and: *Trade Union on Education and Science, professional education of disadvantaged young people. Discussion paper. Decision of the GEW executive management on 13 November 1999, Frankfurt/Main 2000.*

positions on their own. Another reason is that many business sectors – including certain dynamic and modernised trades (17) - find themselves in a particularly difficult situation. Their demand for well-educated and flexible new talent is growing, but they cannot fill the demand due to the negative image that prevails from the past among students who have left school. At the same time, their traditional pool of clientele is no longer able to fulfil the job requirements. This tendency of companies to continually increase the requirements of a job - which is also reflected in the required learning levels for newly established positions – is also a reason why the chances of young people with career start-up difficulties of obtaining a company apprenticeship will not be ‘automatically’ improved with increasing apprenticeship offers (18). In connection with the renewed increase in competition for new talent, certain measures for making the operational training more attractive to young people with good educational backgrounds have become evident, particularly the various packages of additional qualifications and ‘bridges’ to (technical) college education.

In this regard, the question of strategies for addressing special target groups can be answered in different ways and this question is also being considered by various players. It is more likely for the ‘under-qualified segment’ to be addressed, where the issue is more opportunity for the young with special career start-up problems, i.e. a group of people having few options. In the ‘upper segment’ it is more a matter of a group of persons needed urgently than new talent, a group which is comparatively rich in options. The issues having to do with the specific group of ‘female candidates’ is found throughout the various segments. But addressing special target groups is also an important strategy for the future, since it implies in every case a content-based, methodical-didactic and institutional expansion of the previous traditional ‘dual training.’

It is no longer a matter of debate that demographic developments have recently put Germany in the position of being in constant need of new immigrants. The current debate centres around the issue of structuring a suitable immigrant regulation. Thus the integration of migrants has become one of the central tasks of education and vocational training. The particular high levels of unemployment and the lack of education for young migrants – and in particular young male Turks in the respective communities of large cities (19) – give a clear

(17) For the position of the trades, see the Central Association of the German Trades, Training and Continuing Education made to measure. Recommendations and help on implementation in practical application, Berlin.

(18) This version is becoming more widely accepted. Such is the report from the Vocational Training Report of 2001: ‘The Task Force Training and Continuing Education in the Alliance for Work, training and competitiveness has also grappled with this problem in the last two years and has reached some decision in this regard. Two critical agreements have been drawn up: Advancement of the disadvantaged is now to be viewed as a long-term task and integral component of vocational education, independent of the current development on the apprenticeship positions market. Thus it is a primary goal of the educational policy activities to enable young people who have fewer qualifications and who are at a disadvantage to participate in some type of vocational training’. BMBF, Vocational Training Report 2001, pp. 29f).

(19) The Berlin Foreign Agent John at the end of March 2001 stated that the portion of unemployed Turks of the Turkish population living in Berlin amounted to 42 percent and the participation of Turkish youth in vocational training programmes was declining, although the training opportunities had not declined.
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existed together, which provided the trainees with a programme of specific training for qualification at a job, after which they would be able to competently assume the responsibilities of a vocational career. A degree of reorientation to basic skills in the sense of skills ranging across broad vocational careers emerged; this focus covered the first year of training, followed by specialised stages. The main purpose was to achieve a higher degree of flexibility and differentiation (21) within the scope of a vocational field. Based on the total time frame for this vocational training – usually three to three and a half years – a higher level of vocational specialisation was achieved. Another developmental route is based on the pre-vocational area as in a type of training preparation course. This was introduced in the federal states in various forms within the framework of the compulsory school subjects and was intended to promote maturity toward a career, either as a basic year of vocational education or as a preparatory course for a vocation. Concepts for basic vocational skills also became effective in these formats, partly tied with the goal of target group-oriented advancement. Currently a controversial discussion (22) is taking place on whether available activity clusters should be grouped together into careers which have ‘less theory’ and shorter training duration, in order to enable young people with special start-up difficulties to start working in a recognised vocational career. This can also be viewed as another form of the theme of ‘basic skills’ problematics, since it was a case of setting up this type of short-term training not as qualifying subject paths, but as the foundation for possible later training procedures which might be desired. A strategy of concentration on basic skills in conjunction with the perspective of a total reform of the training system presents a totally different emphasis. If the German training system were to be strengthened in start-up periods, i.e. in the area of preschool training as well as the basic educational training, and if the educational training were more intense than before, open to its social environment and to the world of work, then a high-level vocational specialisation would lose a good deal of its importance as a component of the secondary stage two in its current form. If the vocational educational theory were also systematically intensified within the framework of general education, then specialisations could be added later within the framework of labour relationships. In this case, the vocational basic skills would need to be completely re-vamped as a statutory component of educational training. This possibility plays only a very subordinate role in the current German discussion regarding training.

(21) Particularly pointed considerations have been brought forth here by the German Industry & Commerce House: IHK/DIHT, Guidelines to training reform. Pathways to a modern vocation, Bonn 1999, and also: IHK/DIHT, Guidelines to Continuing Vocational Education. Pathways to competence development, 2nd edition, Bonn 2001.

(22) See also the position of the Alliance for Work as formulated in the results of the top discussion of 4 March, 2001: It says there, among other things, that ‘Follow-up certification for recognition of a partial qualification acquired in a career preparation programme or in an interrupted vocational training programme, in order to improve the chances of the respective candidates of achieving a recognised training certificate in a graduated process or to gain employment.’ In addition, with regard to the current controversy on ‘new’ professions: Hamburg Chamber of Commerce, 100 vocational professions, which currently do not exist but which could exist!, Hamburg 2001, and pertinent to this: A Commentary of the DGB Regional District North, in: Educational Trade Union Policy 1/2 2001.
Strategy 9: motivating individuals to invest in their own training

In a very general, morally normative, way this strategic option is also relevant in Germany. It is little in evidence as an explicit request for material investment for the entire, relatively closed, phase of training up until completion of the first vocational phase. This is due to the fact that training at basic level and in the secondary stages is generally free of charge; for those in need, there is federal training funding to help with the completion of studies, partly in the form of a loan.

In the in-house ‘dual’ system of training the relationships are actually reversed: here trainees receive training compensations which are agreed upon in terms of fees and modelled according to actual salary (in the same way that the training agreement is a special form of the labour agreement). In the case of vocational training in the ‘dual system’ it is thus not a matter of investing something in training, but rather putting up with a payment which is clearly lower than the respective work salary in exchange for the training. In any case, compensation for training, which means the ability to earn one’s own money, often leads to a decision to undertake training and against direct commencement of work – and in cases of doubt also against attending a continuing education school. And since compensation for training varies from industry to industry, and in part also from company to company, the training compensation also works as an allocation mechanism for vocational training: access to certain training programmes is influenced also by the compensation. Trainees, although involved in training, thus have more money than students in the same age group; along with the idea that this money is ‘self-earned’, comes the awareness that their training programme actually takes on the character of ‘work’ rather than the character of ‘training.’ Families are, in fact, investing in training for their children: directly in the pre-school area, in that kindergarten fees are paid just as for any other additional tutors, but then later primarily ex negativo due to the long period of time in which the children are not able to contribute to family finances due to schooling. The built-in social selection mechanisms here, which have an effect on an early inequality of training opportunities, after many years of being a non-topic, are only very recently brought back into the discussion.

Direct investment in training is currently only relevant in Germany in the area of continuing education, a largely non-transparent market. However, it also applies to those continuing education programmes in the narrower sense of referring to a profession, for which fees are to be paid or which cannot be managed (alone) in addition to the work, and thus are tied to a temporary wage renunciation or loss of salary/pay.

In the area of on-the-job continuing education, which is becoming ever more important (the so-called new type of continuing education) there are some signs that co-investment by employees for continuing education will be regulated in company agreements, especially in the sense of time investment. The criteria for the type of continuing education included in this co-investment, concern links between training content and the respective workplace. One important aspect is that such a formula would appear to enable in-house training programmes to be more open to demand on the part of the employees.
6.1.4.10. **Strategy 10: pursuing a new direction for the use of public funds**

As far as can be seen, currently in Germany there is no new direction being pursued for the use of public funds in connection with vocational training. The proposals for discussion which have been forwarded to date on this subject are being considered to only a very limited extent (23). In the course of the educational market crisis, which took on dramatic dimensions after reunification, particularly in the new federal states, public funds for the procurement of apprenticeships were paid extensively - primarily also in off-the-job and extra-plant establishments. This was again accentuated by the new federal government in the so-called immediate action programme (24) in 1998. During this time, requests were brought forth from various sides for re-organisation of the financing of vocational training and thereby also bringing about a thorough improvement in the quality of training. But these deliberations did not come to fruition. (25). In the Alliance for work a ‘cut back’ in public funding for apprenticeships was amicably agreed (26). In the new federal states, however, the share of publicly funded apprenticeships still managed to reach 40 % of total apprenticeships in the year 2000. In light of the foreseeable easing of the training market, a new concentration of state funds is being earmarked for initiatives for modernising the vocational training programmes, with an agenda that basically follows the agreements within the framework of

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(24) See also Dietrich 2001, JUMP... Approximately DM 2 billion was made available in the years 1999 and 2000 for the Immediate Action Programme by way of the Labour Administration, which originated from federal grants and ESF means. In 1999 there were 176,032 young people registered in the various programmes of the Immediate Action programme, and in 2000 another 92,173 young people for the first time. From the Immediate Action programme somewhat more than 40 percent of the measures were funded in the new federal states, whereby from 1999 to 2000 the funding focus in general was transferred to measures related directly to finding employment. The results at the end of implementing all measures show, in part, a massive decrease in labour market opportunities, which could not be fully compensated for by the implemented measures. A third of the participants first migrated into a period of unemployment, one fifth found employment opportunities, approx. 16 percent are starting a vocational training programme. The young people in the new federal states, in spite of more favourable school grades, have even slimmer chances of migrating to a training programme or actual employment according to one measure. Foreign youth have been represented sub-proportionally, even at the beginning of the implementation of these measures, with regard to their proportion of the total unemployed young people. Diedrich summarises provisionally: "The characteristics of being disadvantaged, such as low level of accomplishment in school, family background or regional structural deficiencies appear to be only somewhat compensated for by the new measures alone on any type of long-term basis." Foreign youth have been represented sub-proportionally, even at the beginning of the implementation of these measures, with regard to their proportion of the total unemployed young people. Diedrich summarises provisionally: "The characteristics of being disadvantaged, such as low level of accomplishment in school, family background or regional structural deficiencies appear to be only somewhat compensated for by the new measures alone on any type of long-term basis."


the corresponding labour group of the Alliance for work (27). There is a clear re-alignment of the flow of public funds in the training system in the direction of pre-school and primary education, with initiatives from various federal states. It centres on comprehensive maintenance and qualitative improvement of the kindergarten education programmes and the introduction of all-day schools and/or guaranteed half-day schools in the primary area. In addition to training-related components, these developments have been motivated primarily by considerations as to how to make better use of the female labour force potential.

6.1.4.11. **Strategy 11: recognising and promoting non-formalised qualifications**

The high degree of formalised qualification, based on the completion of schooling and traditional in Germany, above all due to the strong impact of formalised vocational training in the ‘dual system’, means that the recognition and promotion of non-formalised qualifications is not to the fore in the current agenda. This situation is now slowly changing due to the increased importance of on-the-job continuing education and training, which is directly related to work processes. Along with this comes the understanding that vocational competences can also be achieved and further developed through informal learning. And questions then arise regarding working conditions which promote learning and those which hinder learning – especially in connection with the development of innovative work organisation. Procedures for the recognition of non-formalised qualifications have previously been structured along the traditional pattern of advancement: they are evaluated along with higher compensation when they lead to the acquisition of a higher-level position within the organisation. But this holds true only partially for the informal and vocational learning procedures which are increasingly being promoted and which are directly connected to actual work. Learning takes place and is supported, even when it does not lead directly to a transition to a higher level position, because the technical, product-related and work organisation changes need to be managed or the actual work performance needs to be improved (e.g. the continuous improvement process). Qualifications thus acquired need recognition in the individual qualification profile in a concrete way, e.g. in the form of certifications. Up to now there have not been any widespread, recognised procedures for this. Thus, the employees who find themselves to an increasing degree in permanent, continuing education vocational situations, do not gain increased labour market value.

6.1.4.12. **Strategy 12: using information technology in vocational training to the optimal extent**

Information technology is now widespread in Germany as part of vocational training, with several career-specific variations. The preferred business basis of dual training also means that trainees come into contact with advanced information technology systems that are already being used in practical application (28). The decisive question here, of course, is precisely what ‘optimal benefit’ means. And so again the systematic problem of structuring of the German ‘dual’ vocational training comes to the fore. Learning in on-the-job applications has a tendency to see mainly the functional side of information technology. But modern information technologies have a tremendous impact on the way we work and live in society today. The addition of a critical and reflexive approach to the application of information technology is also required, which would have its systematic ‘place’ in state-run, on-the-job vocational training schools. This question is just one of the society and personality-related implications of vocational learning and working in a changing society. These make the definition of the future role of the ‘vocational school’ learning location - i.e. the dimension and impression of its independent educational mission and its cooperation with other learning locations in vocational learning – a central and very controversial issue regarding the future form of the vocational training system in Germany.

In addition to the issue regarding the benefit of information technologies (29), the current German discussion also touches on the development of basic and further training in information technology professions, for which four vocational training programmes were developed over the past few years (30). And based on the lack of qualified IT personnel (31), one of the initiatives of the Alliance for work, for example, is focusing on the mobilisation of respective apprenticeships (32).

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(28) The Federal Government and the Federal States have already agreed upon additional measures, primarily regarding information technology equipment in vocational schools. See also *Task Force Training and Continuing Education* of the Alliance for Work, Decision of 5 February 2001.

(29) The Federal Ministry for Education and Research presented a funding programme entitled *Connection instead of Exclusion – IT in Education* in August 2000, which was to be implemented in the areas of schooling, vocational training and college and which had total funds available in the amount of DM 1.4 billion for the years 2001 to 2004.

(30) And specifically: IT systems electricians, professional computer scientists, IT system sales personnel and computer science sales personnel. For careers and qualifications in the IT area, see also *BWP – Vocational Training in Science and Practice*, 6/2000.

(31) This lack of skilled labour motivated the Federal Government to introduce a "green card" for residence and work permits for foreign IT skilled labourers and thereby opened up a broad public debate with regard to immigration.

(32) See also the *BMBF, Vocational Training Report 2001*, p. 39f, which also maintains that young women have been taking little advantage of the training opportunities in IT career positions up until now. Therefore, new initiatives and measures, which the Federal Ministry of Education and Research is currently working on, are aimed at granting access by women in career fields in the area of information technology.
6.1.4.13. **Strategy 13: a policy of unifying work and life**

Strategies for unifying work and life – primarily from the viewpoint of gender mainstreaming – are becoming increasingly important in Germany. There is not only a different understanding of work distribution and cooperation between the sexes, but also an intensified labour force requirement. These questions played a rather minor role with reference to vocational training up until now, because they traditionally concentrated on the biographical phase of older youth or younger adults, for whom the problem of unifying work and life only arose in exceptional cases in the context of the tasks of practical life. There is one important exception that viewed the unification issue from a very general perspective. For more than twenty years, various state-sponsored funding measures have been attempting to expand the traditionally limited career opportunities for young women and also to open up new career possibilities for women in what were traditionally considered ‘masculine careers.’ Behind this was the thought of paving the way for unification concepts through the net influence of professional perspectives – with little actual success in the direct sense, but a degree of ‘reinforcement’ for a change in the livelihood opportunities for women. In recent times the question of unifying work and life for vocational training has also become more pressing due to the increase in importance of continuing education, for which long-term recognised solutions are yet to be found. But even in the area of vocational start-up training programmes, the first modelling approaches are coming into play to help young women with serious life unifying problems – e.g. single young mothers – through the emergence of more flexibility in vocational training programmes, which were previously rigidly organised even with regard to time, and through increased social-educational support.

6.1.5. **‘Place’ for strategies**

In our understanding of the project, the strategies are ‘signposts,’ pointing to different directions from the current situation to the imagined situation in 2010 (scenarios). The signposts can either point directly to the goal or lead into a labyrinth or dead-end, alternatively, they could unexpectedly and unintentionally lead away from the desired scenario and point into the direction of another. The ‘scenario’ approach created a perceived tension between participants in the expert discussions reference the current situation and an imagined future: that means that their own (strategic) actions mediate between ‘today’ and ‘2010’. When asked how strongly this tension is perceived, i.e. how great the qualitative difference is estimated to be between ‘today’ and ‘tomorrow,’ one must bear in mind that all those consulted considered the nine years until 2010 a very short time span considering the complexity of the developments mentioned. This means that the projections about that which is probable (but not desirable) differ from ‘today’ only in degree. In the case of Germany this is also partly due to the fact that vocational training as a system is socially established to a high degree and its inner structures and procedures are consolidated. When discussing the scenarios, the German system of established and consolidated vocational training can function as a kind of thought-reserve *vis-à-vis* possible alternative paths of development.
During the Europe-wide discussion – but also in Germany itself – it is taken for granted in this context that a didactic or curricular principle has been established and consolidated successfully in Germany, a fact that is so obvious that it can hardly be denied: the duality of vocational learning. But this is an oversimplification.

It is crucial to proper understanding that the German vocational training system has a well-established connection with the employment system and is to be understood as its special education sub-system. It therefore exhibits a special legal and material basis which is clearly separated from the general education system. Vocational training thus proceeds mostly and typically on the civil-law basis of an apprenticeship contract between apprentices and the training company, representing a special type of contract of employment. The regulatory weight of employers and employees is a result of this or: labour market parties within the German vocational training system (33). In this context, it makes sense to talk about a strategy cluster (which reflects powerful established special interests) that is primarily motivated by labour market policy rather than educational policy.

The high and very system-specific manner of vocational training in Germany distinguishes the situation from that of many of the other countries. A reform of the education system that includes vocational training is currently not a matter of debate in Germany, nor is it judged to be realisable. At the same time, however, all experts agree that there is an urgent need for reform. How far-reaching and drastic is this need for reform depends to a high degree on the strategic goal orientations, which lead to the above mentioned clusters of strategies. In other words, on the basis of the expert discussions, strategic goal orientations can be empirically separated and they mark different reform platforms. This means that, in the pursuit of the different clusters of strategies there will be differing degrees of intervention into current states of affairs. This triggers varying degrees of reform dynamics – especially with regard to the question of how many sub-areas of the education system and their connections and effects should be considered or mentioned. We will return to this aspect.

6.1.6. Developmental dynamics

However the dynamics within the individual strategic options or fields are assessed, they emerge and develop mostly from the borders (from one point of view) or transitions (from another point of view) of the ‘vocational training system’ to other areas of the education-work-training-system. This may happen vertically, i.e. at the transitions of entry into or leaving vocational training, or horizontally, that is, if there is a change within the organisation

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of the ‘duality’ or in case of the development of a ‘mixed system’, a system of free interchange. In summary, from the perspective of a greater integration of vocational training into the educational career of the individual (in the sense of learning as a constant guide through life) and also into a reformed education system as a whole.

It thus follows with respect to the clusters of strategies that even an additional partial inclusion of new strategic orientations can necessitate new answers to questions that seemed to have been answered already. This has, for instance, become evident in the problem of ‘disadvantaged young people’ (from the second cluster of strategies), which may find entry into the ‘modernisation cluster’ (first cluster) reformulated as the demand for the establishment of ‘theory-reduced vocations.’ Within the area of ‘further education,’ comparable processes can be found (here, the elements from the ‘modernisation’ cluster and ‘life-long-learning’ converge).

Given the fact that in most political speeches of recent years education has been treated as the number one future challenge, partly with explicit reference to the competitive position of Europe, it is astonishing that, from our discussions, the three discourses, called strategies, largely go separate ways. The discourses concerning modernisation, inclusion and life-long learning are largely separated from one another, including their respective institutionalisation. As a result, the relevant milieus that carry these discourses seldom meet, or at least seldom meet systematically. What is more, these milieus are now established and consolidated expert systems. The members of these expert systems, although they belong to different interest groups, can, when in doubt, communicate better with members of the expert system than with members of their interest group from different expert systems.

We get the impression that the vocational training expert system (34), which is centred on the company-internal, dominant part of vocational training, is particularly separate. This is mainly due to this area’s many and diverse overlaps with employment and pay agreement. (This is also evident in that the participating associations often interconnect the competences of vocational training and pay issues). The low discourse force of lifelong learning is thus also linked with its low degree of institutionalisation.

The underdeveloped interaction between the different discourse milieus is also evident from the fact that the forum for education (35) largely ignores vocational training, partly because it


(35) The technical forum meeting Qualified Vocational Training for all! on 27 /28.9.2000 in Bonn is one of the exceptions, in which mainly the perspectives of disadvantaged youth were at the forefront (documented in Materials of Forum Education 4). For the work of the Educational Forum see also the materials 1 through 5, in particular the documentation First Convention on Forum Education on 14 and 15 July 2000 in Berlin
belongs to the sphere of the Alliance for Work. As far as we can tell, only the Expert Advisory Committee for Education, which was initiated by the trade-union linked Hans-Böckler (36) Foundation, deals with the horizontal and vertical and explicitly includes vocational training. Its results have not been taken up by other discourses, indicating that relatively closed expert milieus are able to reject new ideas as not belonging to their field of competence.

It follows, as was evident from the discussions, that only changes in perspective – enquiries from a point of view of different clusters of strategies – are able to stimulate awareness of problems. Our observation is, therefore, significant: the closer we came with our expert discussions to the focal area of the sub-system ‘vocational training,’ in particular concerning experts in professional associations, the more the modernisation cluster dominated. Despite larger differences in individual cases, we can say that wherever there is direct involvement in vocational training, other strategic options are either represented only to a small degree, or they appear as an incidental addition as desirable further ideas with little significance next to the other option. And vice versa, those experts mainly focused on inclusion, are less focused on the modernisation perspective. The lifelong learning perspective, however, is most likely to link together the different options, though it is the least developed – conceptually, institutionally and as far as resources are concerned. With regard to the options, the emerging picture is rather fragmented.

(Materials of Educational Forum 3) and the six-month financial statement of the educational forum of March 2001 (www.forum-bildung.de).

7. Experts’ opinions and conceptualisation of scenarios

A similar picture emerges when we summarise the experts’ assessments of the proposed 2010 scenarios. It appears that there is a rather close connection between the cluster of strategies that is opted for explicitly or implicitly, and the estimation of the three 2010 scenarios.

7.1. Scenario 1

Given what we have said so far, it is natural to assume that scenario 1 ‘From the dual to a plural system of vocational training’ was the experts’ main focus. This is partly because scenario 1 was seen as a description of the actual situation, as a starting scenario. For some of those questioned, this was also because scenario 1, with a number of modifications derived from scenario 2, can also persist as a desirable goal scenario for 2010 if viewed from a different perspective. This depends on how closely related the modernisation perspective is to the current institutional set. Those who opt for the strategic modernisation cluster can identify with the basic ideas of scenario 1 as a future scenario.

Why is this so and what are the most common criticisms and modifications expressed concerning scenario 1?

Most of the objections, not only from the camp of the modernisers but from virtually everybody, are directed against the assumption mentioned in the first sentence of the scenario – from the point of view of 2010 - that the loss of appeal that became evident in the late nineties has increased further. The experts believe that this is not to be expected, at least not to any great extent. It can be seen clearly that the scenarios work with the assumption, especially in the more highly skilled areas, that the individuals’ and companies’ interest in traditional vocational training is beginning to wane. This is because vocational training will prove too narrow for both parties, too specialised and containing too few options. There are two arguments against this assumption. First, there is no indication whatsoever that young people find vocational training less appealing. Demand for apprenticeships is high and there is no indication that there is a re-orientation towards degree courses – on the contrary. Vocational training is established as the normal and customary training preparation for working life for the majority in each given year. The public anger at the shortage of apprenticeships is a good indication for the development of what might be called a ‘social demand attitude,’ a demand for apprenticeships for society’s sons and daughters. This is seen as the opposite of a loss of appeal and legitimacy, and the purposeful combating of the shortage of apprenticeships, including the Sofortprogramm of the Federal Government, has contributed to a renewed – legitimisation, and finally to a strengthening, of the system of vocational training.

However, this mainly concerns the weaker of those waiting for an apprenticeship, for whom, according to scenario 1, traditional vocational training is the first choice anyway. According to
the scenario, the loss of appeal is a threat from ‘above’: One of the counter-arguments is that even in new employment fields like IT, regular vocational training is taken up again after a certain period of experimentation. The increase in trainees and others entering the field is seen to be a transitional phenomenon. One of the arguments is the internal modernisation force of the vocational training system, the increasing rate and density of modernisation, whose accelerated rhythm is linked to the effects of the Alliance for work (37). According to some experts, so many modernisation projects have been initiated in the last few years that it makes more sense to talk about a stagnation of implementation than of reform.

With reference to the developments cited above, it is assumed that the many expert positions, which emerged in connection with the lack of apprenticeships and have diagnosed a general functional crisis of dual training, are mostly refuted (38).

As further evidence for the continuous functional strength of the German vocational training system, it is pointed out that the ‘dual principle’ is expanding further and now also largely comprises further education (in this context, elements from the 2nd scenario are identified as future proof).

This constant revitalisation, however, is evaluated in different ways, depending on the dominant strategic option. It also reveals large differences within the camp of the modernisers. From the point of view of the inclusion strategy and of lifelong learning, this revitalisation is linked to a strengthening of the separation of the sub-system of vocational training. It has, at least, made its relaxation more difficult. This will have long-term effects, which correspond to the expectations of negative effects of scenario 1. The strong position of the employers and employees in the system of vocational training, further emphasised by the establishment of the Alliance for work, means, on the one hand, a low risk of deregulation in this sub-system, and, on the other, a significant rigidity and inflexibility and a high degree of separation above and below. (39) – ‘above’: comparison European development of higher education ‘Bologna-case’).

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(38) Very near to the end of the series of the various reform experts, the Berlin Memorandum for the Modernisation of Vocational Training in the autumn of 1999 attempted a critical, but integrating position capable of finding a consensus position among the vocational training experts on modernisation: Senator for Labour, Vocational Training and Women, Berlin Memorandum on the Modernisation of Vocational Training, Berlin 1999.

(39) Here it again becomes quite evident that maintaining an educational system that is closely connected to the employment system, which in principle consists of in-company labour markets and is linked with the pay agreement system, could be classified as a strategy cluster in itself. It is partly a matter of integrating the medium training segment for as long as possible and hence of achieving comparative competitive advantages. This also applies to the strong rejection of European vocations, which can only be interpreted as a defence of national labour markets. The development in higher education is quite different, where the rapidly progressing Bologna process is leading to ever stronger European harmonisation.
7.2. Scenario 2

Scenario 2, ‘work process and design oriented vocational training’ meets with approval among the modernisers. This is only the case, however, in continuation of the further development of traditional vocational training complained about in relation to scenario 1. This position is defended by those who are closely linked to the company-internal part of vocational training. The idea of an open, dynamic professional outline is generally supported – especially in the sense of an increasing inner flexibility of professional outlines on the basis of basic vocational training that prepares for a number of different jobs. Statements about the increasing, or from the point of view of 2010, increased significance of the vocational school are viewed in a much more critical light, especially by those experts who stand in close relationship with the company-internal part of vocational training. (40). Many experts from the trade unions share this critical distance.

From our point of view, this is one of the central points currently debated: can the modernisation of job outlines and processes of vocational initial training (and further education) necessitate a different role for the vocational school and changing cooperation between the places of learning? And can vocational schools even take on a different role due to their increasing institutionalisation and their limited and inflexible personal and material resources? This controversy currently manifests itself in the revision of the examination procedure, the importance of which was always emphasised by those involved. In this context, the federal states look for an increase in the importance of marks achieved in vocational schools. (41)

(40) In this context, we refer to the independent position of the Trade Union for Education and Science: Trade Union for Education and Science, Perspectives for further development of the vocational training system in Germany. Position paper of the GEW. Decision of the GEW executive board on 25 March 2000, Frankfurt am Main 2000.

(41) The position of the federal states is formulated in: (1) Cultural Minister Conference / Minister of Economics Conference, Common corners on the topic of Further Development and Modernisation of Vocational Training dated 05 August 1999 and in (2) Labour and Social Ministries, Cultural Ministry/Economics Ministry Conference Position of the federal states on subsequent activities from the decision of the task force Training and Continuing Education in the Alliance for Work, training and competitiveness Structural Further Development of the Dual Vocational Training – common foundations and orientations of 22 October 1999, decision of 06 December 2000. The latter decision in particular lists the position of the federal states in a very different way, which is positioned to a model of Process-oriented qualifications. This type of educational goal-oriented relationship leads to demands that the educational order of the vocational school be considered more closely. This would apply both in connection with the increasing differentiation and flexibility (key word: basic qualifications or core vocations and non-compulsory components or partial qualifications) with regard to the exams as well. A new functional structured testing concept has been suggested, which also foresees looking at vocational accomplishments more intensely than before. In the process it would become evident that, where applicable, an amendment to the vocational training law would be required. To be gleaned from the decision of the ministries for economics and culture on the vocational training law: “The cultural and economics ministries and senators of the states have determined that the provision of company apprenticeships for the country’s young people is the responsibility of and in the best interests of the national economy. They therefore request that the corporations of the economy to bear the responsibility for their own training...”. This type or a similar type of formulation does not recur in the differentiated decision of December 2000: is this the result of placing increased, cooperatively distributed
Reservations mainly come from those experts who are closely linked with the company-internal part of vocational training, i.e. from the trade unionists in connections with an increasing regionalisation of vocational training. (Direction: (1) nationally uniform regulations, role of associations, proximity to pay agreement system, etc. (2) rejection of a changed structure of competences and responsibilities...)

The idea of regional competence centres as mentioned in scenario 2 are mainly supported by social and labour market politicians, especially in the new federal states, but also elsewhere (as an example see the model attempt North Rhine-Westphalia). (\^2)

For them, the importance lies in the proposal of multi-functional development centres, where training is the central component. The following is particularly noticeable in the new federal states due to their distinctive economic and social situation, but is also applicable to many regions in the old federal states where the system of vocational training has developed beyond its legal and ideological fixation as an essentially company- and contract of apprenticeship-based special system. From the point of view of the place of learning this has plural system and from the point of view of responsibility and financing it has become a mixed system that needs to be recognised and structured. This is associated with the convergence of vocational training and general education (which relies on reforms), institutional at first, as is evident from the example of the Brandenburg secondary school centres. (\^3)

The assumption in scenario 2 of an amendment of the law of vocational training in 2007 is particularly controversial, often triggering strong reactions from participants. An potential reason for this is that the different positions cannot merely be found along the dividing lines between modernisation, inclusion and lifelong learning but rather that they collide within the camp of the modernisers themselves.

In view of the revitalisation of ‘dual training’ and the speed with which agreements to sub-areas nowadays are becoming possible, the necessity of an amendment to the 1969 law is questioned mainly by representatives of employers and associations, but also by the federal administration. In many cases, the point of reference is progress on agreements achieved within the relevant work group of the Alliance for work. What is questioned is whether there are urgent reforms concerning modernisation flexibility within the system of vocational

responsibility for vocational training on the entire society, similar to the differentiated positioning and – in particular – the upward revaluation of the vocational school?

(\^2) In all, the question of regionalisation remains controversial, regarding aspects of improved coordination of the various players, how they express themselves in the set-up of Regional Apprenticeship Conferences as an initiative of the Alliance for Work or in the promotion of concepts of learning regions through the Federal Ministry for Education and Research, meeting up with structural questions of the vocational training system. (?) For a comprehensive presentation of the problems of regional vocational training policies, see also Günter Kutscha 2000, The Concept of the Learning Region as an innovative strategy of vocational training systems in a comparison of Germany and the Netherlands, Comparison, Duisburg.

training that would necessitate an amendment. Employers in particular oppose the amendment because it may open the door to changes of present structures within the sub-system vocational training. In contrast, experts from trade unions, which in this context mostly belong to the group of modernisers, insist on the need for amendment. Their criticism of the existing law is consistent with their position in 1969, the year when the law was passed. The focus of their criticism is the current judicial definition of one of the core areas of the system of vocational training, namely of the vocational training committee of the professional associations. Company professional associations have a central function within the system of vocational training as regulated in the law of vocational training. In practice, employers dominate because they are in the majority and because the finances of the committee depend on the decision of the general meeting of the members of the professional associations, i.e. the employers.

In the interest of the employees and dynamic development of the entire system, trade unions demand an impartial solution. For them, the progress made in the Alliance for Work, at federal level and elsewhere is virtual proof of the productivity and functional justice of an impartial solution. The trade unions thus see an amendment of vocational training law as a perfection and completion of already widely established corporatism, while employers see it more as a change of system. In this light, this is more an internal debate about effective paths of modernisation within the sub-system of vocational training and is more closely linked to continuing debates about the amendment of the law of vocational training than to considerations concerning a more comprehensive educational reform.

From a different viewpoint, the demand for an amendment as formulated by modernisers related to vocational schools tends to be supported from a position of lifelong learning. It is their aim (see above) to increase the importance of vocational schools in the general context of a dual education in order to enable integrated learning processes and to counterbalance company-internal specialisations in vocational learning. The pathway from an additional role to equal responsibility and position (creating not only duality of places of education – which have now multiplied - but also shared responsibility between economy and state) would weaken the special status of the sub-system of vocational training, moving it closer to the education system as a whole. This would only be possible if the status of vocational schools were also to be enhanced – this is the position of the educational trade union, which at this moment is still involved in an unsolved disagreement with the industrial unions.

It appears that the goals of those insisting on an amendment of the law of vocational training are not even compatible (yet) within the moderniser camp. Further considerations concerning the amendment are more socio-politically (inclusion) motivated: the aim here is somehow legally to embody the responsibility of the vocational training system in relation to problem groups. Closer inspection, however, shows that there are incompatibilities with the principle

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(44) See also the decision of the Trade Union Meeting of 2001 of the Trade Union for Education and Science, in which the various regulations for ruling in the view of the GEW (Trade Union for Education and Science) were presented and commented upon.
embodied in the private-sector system of vocational training of freedom and responsibility of decision for educating companies. A systematic strengthening of the socio-political functions of the vocational training system (and not merely functions that naturally result from market mechanisms plus the influence of the employee representative body plus the traditional socio-political responsibility of companies) poses urgent questions about its financing. We thus find ourselves involved in a debate about funds, share of the costs and/or state subsidies, which, during the years of scarcity of apprenticeships, played an important role and which have now disappeared from the current debate.

This complicated situation shows us that, at least at this moment, the path to the Alliance for work implied the decision not to put the amendment of the law of vocational training on the agenda. One would have expected this of a government such as this, due to its political composition. Because the Alliance for work is not systematically matched to legislative processes but rather orients itself towards agreements between employers and employees, parliamentary coalitions in the Bundestag have little effect on questions of a vocational training reform. This, if anything, strengthens the special status of vocational training in the education system as a whole.

7.3. Scenario 3

The majority of experts believe that the greatest distance is to scenario 3 ‘revaluation of formal education and lifelong learning.’

This distance is particularly obvious within the core group of the modernisers in the company-related part of the system of vocational training.

These experts, however, and also those few who have a more positive attitude towards scenario 3, have doubts that a further education law can be appropriately matched with scenario 3. This is partly due to the fact that the idea of a further education law was introduced into scenario 3 in the same way as this question has been discussed so far in Germany. Further education was always understood in close connection to the system of vocational training, as its extension and presupposition of flexibility. Presupposition of flexibility means that further education has to be the reaction to fast-changing demands which can no longer be met due to the reorganisation of specialised trades requiring an apprenticeship. If further education sufficiently develops and systematises, the effect will be one of ‘relief’ for initial vocational training in the sense of a possible further reduction in specialisation: this is a starting-point which already plays an important role within the reorganisation of trades requiring an apprenticeship.

This can be clearly seen from the actual development of company-internal further education (‘new type of further education’) as well as from existing ideas on the regulation of further education, informed by the initial vocational training of well-known models and approaches.
The positional differences thus repeat themselves with regard to the question of the regulation of further education, which are known from initial vocational training.

The way further vocational training has been discussed up to now will project forward a special path of vocational training into the period after the completion of a recognised vocational training course. That is why supporters and promoters, as well as critics, of such a further education model assign further education legislation, with its simplistic funds financing mentioned in scenario 3, to the judicial repertoire, as offered in scenario 2 with the amendment of vocational training legislation.

Those who do not believe that this is the most likely of the three scenarios offered (of those questioned, no-one considered this scenario at all realistic from the perspective of 2010), but do believe that it is desirable, primarily pursue the strategic option of lifelong learning (strategy cluster 3).

It is interesting that this group initiated a revival of two central social themes, which had fallen into disuse for a while: justice and educational potential. It seems to be the case, however, that they sharpen awareness for the now limited capability and efficiency of the German education system only if they combine with each other. It is interesting to note that a concept like ‘talent reserves’ has been revived in this context after being laid to rest ever since discussions on educational catastrophe included Georg Picht in the late 60s. It is mostly educational politicians who favour this context and who begin to investigate the education system in its entirety. A small number of labour market and social politicians from the new federal states also belong to this group, desperately looking for an approach that might bring to a halt the ‘extinction’ of an entire region. The extremely difficult situation in the new federal states seems to lend itself much more than the situation in the old federal states to thinking in new, integrated political contexts (e.g. ‘Potsdamer corner points’).

It is particularly interesting that this group of experts, when talking about lifelong learning, behaves in contrast to conventional discussions of further education and concentrates on entirely different issues. They can see that within the German tradition it was mainly the secondary and further education sector that was developed, including the special system of highly complex vocational education. In contrast, the nursery and primary school education sector was seriously neglected. This is also true in international comparisons. They therefore concentrate on a reorganisation of the early learning years.

They all agree that the point is not merely a chronological and social expansion of early education with the same understanding of education, but a significant opening of school and pre-school-related learning into the world (see also article in Der Spiegel, which suggests associations for the return of a de-schooling debate). Here, from didactic and socio-educational points of view, these debates touch upon those of the capability and efficiency of dual education, which can often give rise to misunderstandings.

This concentration on the significance of early education for justice and exhausting individual potential makes careful treatment of each individual differentiation in the secondary sector
seem comparatively negligible and the concentration on vocational training as an ‘object of reform’ misdirected. The significance is played down and is a particular focus for social politicians, who want to provide a second chance to those who failed in the non-reformed system of school education (elements of scenario 1). For these politicians, the problem with vocational training is mainly its specialisation.

This position, which is seeks a better foundation of individual capability in learning and practical decision-making, is linked to a socially oriented emphasis of an increased individual responsibility for education flanked by support systems, as formulated by the Committee of Experts for Education at the Hans-Böckler Foundation.

If you follow this perspective then it is not modernisation within the German special vocational training system that is the central challenge for the future, but rather its classification as a predominant reorientation of education in Germany. It therefore makes sense, as was suggested by the European scenario project, to take a look at the context scenarios on offer.
8. **Re-relating scenarios, context scenarios and strategies – conclusions as input for the European project**

8.1. **The relationship of scenarios and context-scenarios**

The scenarios for 2010 are to be structured through descriptors, i.e. via relevant environmental factors for the vocational training system, corresponding to the scenario system and as adapted in the European scenario project (\(^{(45)}\)). Thus the following descriptors should be taken into account in all of the scenarios:

(a) economic dimension: restructuring, growth, competition, privatisation, (demand for lower/mediate skills);

(b) social-labour dimension: flexibility/mobility, work training patterns, inequalities, organisation of labour;

(c) training (demand) dimension: general skills, in-company training, willingness to invest, ‘lifelong learning’.

In the German case study – in the context of the high-level institutionalisation of the German system of vocational training – we have now selected a two-step approach. We will first present three vocational training scenarios for discussion, structured according to the ‘descriptors’ from the narrower environment of vocational training. In a second step, we will attempt to tie this vocational training scenario to socio-economical context scenarios, which essentially work together with the descriptors described above. And what do we propose to gain by this approach? One thing above all: the various vocational training scenarios can be understood as the result of political action, and as the product of applied strategies to a certain extent. In contrast to this, a quick and narrow, very functional connection to descriptors in their various occurrences would suggest an understanding of vocational training as a reaction to various (economic, social, work-related) environmental considerations, thus mainly as derivative dimensions. In contrast to this, we would like to apply more independence to the vocational training scenarios, in order also to underscore the significance of political vocational training strategies for social development in general. The results indicated exactly this type of picture of reciprocal influences and effects, i.e. were more realistic.

In the context of the fairly relative self-weighting of the vocational training scenarios in this approach, which emphasises the political structuring of the strategies above all and thus

\(^{(45)}\) Which is similar to how the Federal Institute for Vocational Training proceeded in the *Scenario of the Vocational Training Systems up to 1995*. However an important difference of the European Project to their approach is that they constructed only two scenarios, one best- and one worst-case, whereas the European project explicitly tried to avoid a presupposed normative ranking of the different scenarios.
initially gives sufficient importance to the question of the strategies in general, an attempt was made in another step to relate the vocational training scenarios to four additional context scenarios. These four additional scenarios can be understood as four fields of a matrix, constructed between different developmental poles with the dimensions of ‘macro-economic context’ and ‘labour market and employment.’ They are inspired by the preliminary scenario matrices from phase one (cf. Chapter 3).

The matrix shows

(a) context scenario A is a combination of ‘individualisation of work and employment’ and ‘predominantly liberal market economics’, and thus portrays a definite neo-liberal model;

(b) context scenario B is a combination of ‘relative stability of work and employment, high level of institutionalisation’ with ‘predominantly liberal market economics!’ i.e. a model of modernisation highlighted by growth;

(c) context scenario C is a combination of ‘broad flexibility of work and employment’ and ‘modernised Rhinish capitalism’, and thus a model of the new term ‘flexicurity’;

(d) context scenario D is a combination of ‘relative stability of work and employment, high level of institutionalisation’ and ‘modernised Rhinish capitalism’, and thus a model of distinct state welfare corporatism.

As a result of this positioning and when the diagonals are compared, context scenarios B and C are closely related, while scenarios A and D are in a definite polarised relationship to each other. This finally results in a ‘likelihood-Z’, in which A and D build the two ends of the Z and likelihood and plausibility of the scenarios increase when moving from either end to the middle of it. Above, you will find a survey of our expert discussions as they have been clustered together using strategic considerations. The attempt to relate this to the context scenarios reveals, for the German situation, an expected overall development within the relationship of tension between context scenario B and context scenario C.

In view of the German tradition of social concertation and the relatively strong position of the trade unions, and considering the values that everyone connects with ‘work as a profession’, a strong development towards context scenario A is excluded. Neither is it to be expected that a mostly pure market liberal economy will assert itself, certainly not in connection with a continuing individualisation of work and employment. On the other hand, it is one of the undeniable meta-trends of competition-oriented social development, which will strengthen individual responsibility for education and employment (key word: employability) and generally permit more flexible arrangements. This would prove that context scenario D, which has not been qualified convincingly in our paper, is too fixed and not sufficiently adaptable. And, indeed, a combination of persistent type of profession and modernised ‘Rhinish capitalism’, i.e. a mega-corporatist constellation, would lead in effect – as offered in the context scenario D – to a strong form of polarisation of winners and losers.
In its consequences, scenario 1 would have strong affinity for context scenario B; but scenario 2 would also be close to this context scenario, depending on how professionalism is understood from the point of view of content, curriculum as well as institutionally. A further closure of the system of vocational training as a special system would presumably tend towards context scenario D. Surprisingly, scenario 3 seems to be most similar to context scenario C, but is in stark contrast to the settled and well-established and to–be-preserved German vocational training traditions.

Most interviewees associate the context scenarios, if they are talked about at all, with several assumptions within the economic, socio-work-related and training-demand-related dimension. An overview on the most plausible possible combinations of VET scenarios and context scenarios is given in figure 14.
Figure 14: German VET-Scenarios and Context Scenarios

- **CONTEXT A**: Scenarios for a high degree of institutionalisation
  - Further flexibilisation, individualisation of labour and work
  - Entrepreneur of one self becomes the new standard career pattern
  - Individualisation of social risks leads to societal atomisation
  - Neo-liberal economic policy
  - Context B: Scenarios for a relative stability of labour and work
  - Consensual, moderate flexibilisation of labour and employment
  - Work processes are mainly organised along the idea of flexible specialisation
  - Core-employment and flexible fringe employment groups
  - Increased pressure for mobility
  - Moderate polarisation of social risks

- **CONTEXT C**: Scenarios for a moderate polarisation of social risks
  - Level of employment in the fields of new services and new technologies leads to a plethora of employment and career patterns
  - Flexibilisation of working contracts on the individual level (part-time, tele-work etc.)
  - Development of innovative "new" crafts and trades independent from the domain of traditional crafts and trades
  - Internationalisation takes place on the individual and entrepreneurial level
  - Social risks are absorbed by an activating labour market policy (e.g. negative income tax)

- **CONTEXT D**: Scenarios for a high degree of institutionalisation
  - Neo-liberal economic policy
  -同步錐和顺序多重就业
  - Intrapreneurs
  - Euroscepticism among the population
  - SMEs and "start-ups" as important change agents
  - Traditional SMEs disappear increasing processes of concentration and internationalisation of big concerns
  - Moderate polarisation of social risks

- **Berufsbildungsszenario I** ("dual to plural")
  - Reevaluation of formal...
  - Berufsbildungsszenario II ("work-process orientation...")
In the context of the European project, these three dimensions were matched with so-called descriptors. These descriptors can be utilised in order to adapt the German context scenarios to the European context (cf. table 10). As in the case of the strategies and their robustness (see below) the qualitative information provided in this report is much more important for a clear picture of the German situation and the results of the interviews.

The majority of modernisers are located through the scenarios in the area of context scenarios B and C, with accompanying tensions and debates. The inclusion strategy proponents are located in a tension-laden relation to the context scenarios B and C. The lifelong learning proponents can more easily be assigned to context scenario C, even though they cannot always keep away from elements of context scenario A due to their emphasis on individual responsibility. This often triggers scepticism in the corporatist modernisers and the inclusion advocates, which has led, and still leads, to the different milieus being unable to meet each other productively and constructively. These various strategic alliances, their contingency or systematicity, and questions about their lasting effects could be the topic of discussion for this assignment.

Table 10: **Quantitative rating of descriptors for the German context scenarios**

<table>
<thead>
<tr>
<th>Descriptors</th>
<th>Context A</th>
<th>Context B</th>
<th>Context C</th>
<th>Context D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic dimension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>restructuring</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>growth</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>competition</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>privatisation</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(demand for lower/mediate skills)</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Flexibility/mobility</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>work training patterns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>inequalities</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>organisation of labour</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Training (demand) Dimension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>general skills</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>in-company training</td>
<td>4</td>
<td>x</td>
<td>x</td>
<td>X</td>
</tr>
<tr>
<td>willingness to invest</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>life long learning</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

**8.1.1. Robustness of strategies**

The following attempt to rank the strategies with regard to the three scenarios employs the same method: it is to be understood as a conclusion from the expert discussions of the second phase. We will ignore in this context the clustering that we carried out earlier in order to recognise the individual strategies and their varying significance for the different scenarios. The following overview thus shows the relative significance of the individual strategies for the different scenarios.
We will use four ranking levels:

(a) 1 = appropriate. This supposes this strategy’s correspondence with the appropriate scenario in such a way that the realisation of this scenario strongly depends on those strategies that are ranked in this way; i.e. in its specific combination. In this respect, the vertical columns are of importance;

(b) 2 = important;

(c) 3 = not so important. This rating does not mean that such a strategy could not contribute to the success of the scenario. It is, however, not heavily occupied;

(d) X = implemented. This indicates those strategies that have been taken from the European arsenal but have already been successfully implemented in Germany. The letter ‘x’ in addition to a number indicates that there have already been a large number of implementations.

We are not particularly happy with this assignment, because it presents the danger of being interpreted too one-dimensionally and too much as a mechanistic cause-effect relationship.

The question of the robustness of strategies stems from the European project. This problem mainly deals with the question of whether there are strategies in the arsenal that are useful for all scenarios, or at least for more than just one. Strategies are thus regarded as robust if they are evaluated as appropriate (1) or important (2) for two or three scenarios.

**Table 11: Robustness of strategies**

<table>
<thead>
<tr>
<th></th>
<th>Scenario I</th>
<th>Scenario II</th>
<th>Scenario III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Support for the private sector and for the employers and employees so that they become involved in vocational training</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2</td>
<td>Providing accurate and up-to-date information on the change of professional demands</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Increasing the ‘weight’ of learning in the lives of the individuals, the companies and the communities</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Supporting the development of the modern, flexible worker</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Developing information, guiding material and support structures for the individual</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>Addressing particular target groups</td>
<td>3 (X)</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Establishing the transparency of training structures</td>
<td>2 (X)</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Focusing on the development of basic skills</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Encouraging individuals to invest in their own education</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Finding a new path for the use of public funds</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Recognising and supporting non-standard skills</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Making optimal use of IT within vocational training</td>
<td>2 (X)</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Promoting a policy of agreement of work and life</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
8.2. Table on scenario-method as experienced in the project

Shortly before finalising this report the project members agreed on a meeting in Brussels to carry out a short evaluation of the scenario method as applied in this project in light of experience of national research activities. This can be found below.

Table 12: Scenario-Method as experienced within the framework of the German project activities

<table>
<thead>
<tr>
<th>Steps as suggested at the start of the project</th>
<th>Steps as actually taken in your project</th>
<th>Steps as you see them in the ideal situation based on your experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Defining the scope and the key questions.</td>
<td>Actual step: Most of the scope and key questions was predetermined through the feasibility study of MGK</td>
<td>Best step: In further studies more relative time and resources should be available to find a common frame for the scope and the key questions within the transnational team. Stronger use of ICT platforms might be useful</td>
</tr>
<tr>
<td></td>
<td>Information collected by: Short clarification:</td>
<td>Short clarification: would be an opportunity to achieve a balance between rather particular national interests and needs and interests and needs which can be drawn from the general 'European Perspective'</td>
</tr>
<tr>
<td>2. Identifying the major stakeholders.</td>
<td>Actual step: Grid by co-ordination unit</td>
<td>Best step: It might be good to introduce some kind of 'theoretical sampling' in further studies. Which possibly allows to cross-cluster interviewees/stakeholders by their reaction perception to scenarios. Might lead to contra-intuitive results and not-yet-known scenario-coalitions</td>
</tr>
<tr>
<td></td>
<td>Information collected by: see chapter 3.1 Data collection procedure Short clarification:</td>
<td>Information collected by: Short clarification: would allow for additions, which could be necessary in the course of the project --</td>
</tr>
<tr>
<td>3. Identifying basic trends.</td>
<td>Actual step: see 1 Information collected by: Short clarification:</td>
<td>Best step: see 1 Information collected by: Short clarification:</td>
</tr>
<tr>
<td>4. Identifying basic strategy elements.</td>
<td>Actual step: see 1 Information collected by: Short clarification:</td>
<td>Best step: see 1 Information collected by: Short clarification:</td>
</tr>
<tr>
<td>5. Identifying key uncertainties.</td>
<td>Actual step:</td>
<td>Best step:</td>
</tr>
<tr>
<td>Steps as suggested at the start of the project</td>
<td>Steps as actually taken in your project</td>
<td>Steps as you see them in the ideal situation based on your experiences</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>driving forces.</td>
<td>asking respondents on likelihood and importance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information collected by: standardised instrument</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short clarification: proposal of the co-ordination unit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>might be interesting to add question on desirability (especially to identify ‘driving forces’)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information collected by: standardised instrument, which proved to be a good way of finding common dimensions in the European setting. Could be added with rather qualitative research strategies already in the first phase, such as a couple of expert interviews</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Short clarification: would allow for more ‘grounded’ results to present after the first phase</td>
<td></td>
</tr>
<tr>
<td>Steps as suggested at the start of the project</td>
<td>Steps as actually taken in your project</td>
<td>Steps as you see them in the ideal situation based on your experiences</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **6. Classification of the main developments according to importance and uncertainty. Aim is to find the two major developments that are the most important as well as most uncertain.** | Actual step: Factor analysis  
Information collected by:  
Short clarification: | Best step: Classification/ Factor analysis might be easier when using more one-dimensional, pure and also more polarising trend-items in the standardised instrument (see 3.2.8 Methodological remarks and perspectives)  
The most ‘uncertain’ Trends would possibly better identified by looking deeper into the distribution of trend ratings.  
Short clarification: about the more certain trends there is usually consensus |
| **7. Constructing initial scenario themes and matrices.** | Actual step: see 6  
Information collected by:  
Short clarification: | Best step: see 6  
Information collected by:  
Short clarification: |
| **8. Developing scenarios.**  
General themes emerge from the simple scenarios and from checking them. Although the trends appear in all the scenarios, they can be given more or less weight or attention in different scenarios. At this stage not all scenarios need to be fleshed out. | Actual step: --  
Information collected by:  
Short clarification: | Best step: --  
Information collected by:  
Short clarification: |
| **9. Checking for consistency and plausibility.** | Actual step: small-scale expert seminar (10 experts). Scenarios were basically perceived as consistent and plausible  
Information collected by:  
Short clarification: | Best step:  
Information collected by:  
Short clarification: |
| **10. Are there trends compatible within the chosen time frame?** | Actual step: 10-years time frame  
Information collected by:  
Short clarification: | Best step:  
20 years would enhance the willingness of experts and interviewees to abstain from short-term restraints  
Information collected by:  
Short clarification:  
Strongly institutionalised system |
| **11. Do the scenarios combine outcomes of uncertainties that indeed go together?** | Actual step: ???  
Information collected by: | Best step:  
???  
Information collected by: |
<table>
<thead>
<tr>
<th>Steps as suggested at the start of the project</th>
<th>Steps as actually taken in your project</th>
<th>Steps as you see them in the ideal situation based on your experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short clarification:</td>
<td>Short clarification</td>
</tr>
<tr>
<td>12. Are the major stakeholders placed in positions they do not like and can change?</td>
<td>Actual step: The project design avoided to ask questions on desirability</td>
<td>Best step: Avoiding this question makes it different to get answers on this question, question of desirability should be touched</td>
</tr>
<tr>
<td></td>
<td>Information collected by:</td>
<td>Information collected by:</td>
</tr>
<tr>
<td></td>
<td>Short clarification:</td>
<td>Short clarification:</td>
</tr>
<tr>
<td></td>
<td>Information collected by:</td>
<td>Information collected by:</td>
</tr>
<tr>
<td></td>
<td>Short clarification:</td>
<td>Short clarification:</td>
</tr>
<tr>
<td>14. Next we retrace the previous steps and see if the scenarios and strategies address the real issues facing the national VET-system.</td>
<td>Actual step: We added an extensive processing of existing reform literature, which made the scenarios/strategies come closer to 'the real issues' the national system is facing, however this also caused difficulties with staying in the overall framework of the project</td>
<td>Best step: parallel scenario building in which national and transnational questions and issues alternate in the process of scenario-building web-based Metadata management systems could be a possibility of handling the flood of information</td>
</tr>
<tr>
<td></td>
<td>Information collected by:</td>
<td>Information collected by:</td>
</tr>
<tr>
<td></td>
<td>Short clarification:</td>
<td>Short clarification:</td>
</tr>
<tr>
<td>15. Are the scenarios relevant, to have impact, the scenarios should connect directly with the mental maps and concerns of the users.</td>
<td>Actual step: the scenarios as derived from the analysis connected not that good with the mental maps of the users. --- Short clarification: stakeholders, users in Germany are VET experts, also difficulties in making the distinction between supply and demand side of training: employers represent both</td>
<td>Best step: ---</td>
</tr>
<tr>
<td></td>
<td>Short clarification:</td>
<td>Short clarification:</td>
</tr>
<tr>
<td>16. Are the scenarios internally consistent and perceived as such?</td>
<td>Actual step: experts/interviewees strongly questioned the consistency of</td>
<td>Best step: ---</td>
</tr>
</tbody>
</table>

106
<table>
<thead>
<tr>
<th>Steps as suggested at the start of the project</th>
<th>Steps as actually taken in your project</th>
<th>Steps as you see them in the ideal situation based on your experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>the preliminary scenarios drawn from the first phase, but not of the VET scenarios</td>
<td>Short clarification:</td>
</tr>
<tr>
<td>17. Are the scenarios archetypal? They should describe generally different futures rather than variations on one theme.</td>
<td>Actual step: experts and interviewees agreed that they are.</td>
<td>Best step:</td>
</tr>
<tr>
<td>19. Test robustness of strategies in different scenarios.</td>
<td>Actual step: asking interviewees directly and indirectly, evaluation of interview transcripts and simple coding/scaling</td>
<td>Information collected by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short clarification:</td>
</tr>
<tr>
<td>20. Strategic conversation: To develop these scenarios and strategies a strategic conversation should have taken place. ‘It is the general conversational process by which people influence each other, the decision taking and the longer term pattern in institutional action and behaviour’. The national seminars were partly set up for this purpose.</td>
<td>Actual step: Interviews had a touch of strategic conversation and produced interesting results.</td>
<td>Best step:</td>
</tr>
<tr>
<td></td>
<td>Last seminar was cancelled because of small interest/participation</td>
<td>Short clarification:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Institutionalisation: ‘Ultimately the most effective way to ensure institutional effectiveness of the scenario process is for management to make the scenarios part of the ongoing formal decision making process’. The scenarios have to become part of the system for discussing strategic questions.</td>
<td>Actual step: Unfortunately not yet reached</td>
<td>Best step:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short clarification:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

General comments on your experiences with the method:
- enjoyed participating in this project.
- finally the project produced interesting paradox ‘side-insights’: joined strategic conversation is a difficult issue Germany, not least because of the fact that there is indeed already an institutionalised place of strategic conversation, namely the described ‘expert-system’. This, however, also comprises quite highly institutionalised internal boundaries of established strategic conversation milieus. Issues such as global megatrends and the demand for a stronger internationalisation also of VET-questions, might cause the overcoming of those boundaries in the long-term.
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