Result 3.3

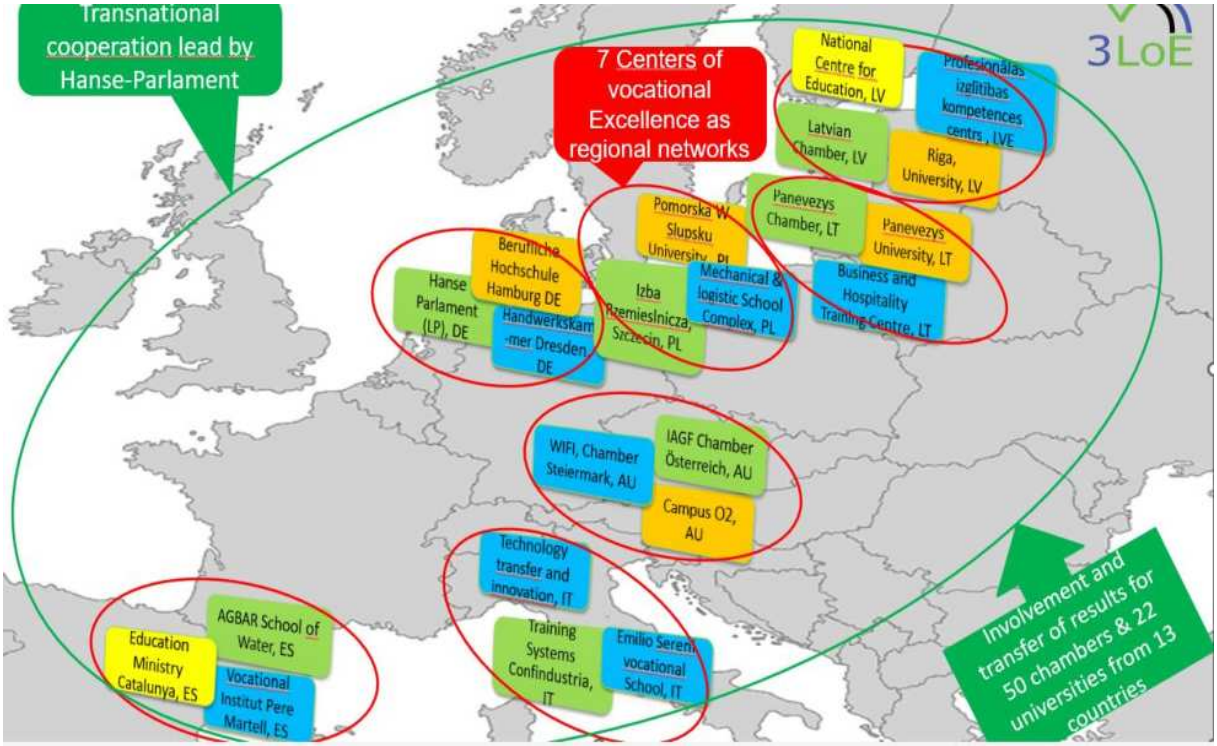
Curricula, teaching materials and examination regulations for specific dual vocational training

PART A

Preparation and transfer of the German dual vocational training systems

Co-funded by the Erasmus+ Programme of the European Union

Partner



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Project Summary and Introduction

About the 3LOE project

Around 99% of all EU businesses are SMEs, creating up to 70% of all jobs. In general, SMEs have good growth prospects for the future and are particularly well equipped to solve environmental problems and to enhance the green economy. However, in most of the project countries, SMEs are confronted with a shortage of skilled workers and young entrepreneurs. This shortage of skilled workers is even more alarming taking into account that due to aging of current entrepreneurs, a large and growing number of companies will have to be handed over to the next generation. Furthermore, young specialists and entrepreneurs often lack the qualifications and skills needed in order to respond to contemporary developments in the fields of energy, climate and environmental protection. The following problems have been identified in SMEs working in the fields of green economy, energy and environmental protection:

- Blatant and growing shortage of skilled workers.
- Large qualification deficits, especially in the Green Economy.
- Loss of attractiveness and low qualification of school-based VET.
- Low rates of further training and insufficient orientation of offers to SME needs.
- Ageing of entrepreneurs and increasing shortage of young people (demographic change).
- Failure of business transfers and low rates of business start-ups.
- Low innovation rates and insufficient productivity.
- Not enough cooperation between universities and SMEs and a lack of teaching geared to SME needs.
- Comparably low internationalization of SMEs and vocational training providers.
- Lack of national level support for SMEs".

To meet these challenges, work-based learning and new paths in vocational training must be provided through cooperation between educational institutions, economic chambers and SMEs. University graduates are often well-qualified in theory, but lack practical knowledge, skills and abilities that are crucial for SMEs. For this reason, VET reforms must also involve higher education, and should implement dual bachelor's degree programs that combine a bachelor's degree with vocational training and on-sight work in companies.

In the 3LOE project, an innovative and complex project structure with 22 project partners from 7 countries as well as 60 associated partners from 13 countries was designed. In each country, centers of vocational excellence (COVEs) in Green Economy will be established, managed and their permanent continuation ensured. A transnational cooperation of the centers will be developed, extended to 60 education stakeholders from 13 countries and operated permanently in an institutionalized form. The centers will offer a wide range of dual education measures in vocational training, further education and higher education, that are being developed, tested and evaluated in the project. These educational measures on EQF levels 3-7 focus on Green Economy, Digitalization and Entrepreneurship. Furthermore, vocational and educational consulting and innovation support for SMEs will be developed and implemented. In total, seven Train-the-Trainer programs will be developed and implemented permanently by the project partners. All results will be transferred to the 60 associated partners together with implementation advice.

The objectives and aimed outcomes of the 3LOE project can be summarized as following:

1. Foundation of a three-level Center in each project country

1.1 Building the "Green Economy" skills alliance for qualifications in SMEs with educational and economic actors from the 7 project countries; development of information and cooperation tools.

1.2 Expansion of the skills alliance to the 60 associated partners from 13 countries, comprising chambers of commerce, SME associations, as well as universities of applied sciences/colleges.

1.3 Development, testing and evaluation of a curriculum and teaching materials for Train the Trainer courses for personnel and center management (vocational schoolteachers, trainers in SMEs and lecturers in further and higher education institutions).

1.4 Evaluation of the construction and operation of the seven centers of Excellence and of the transnational cooperation.

1.5 Development of business and financing plans and ensuring the long-term continuation of the seven centres and transnational cooperation.

1.6 Development, consulting and introduction of political strategy program.

2. Implementation and realization vocational training

2.1 Development and implementation of a tool for vocational and qualification counselling as well as a training for consultants and teachers to use the tool.

2.2 Implementation of the dual system, so that work-based learning is put into practice in the project countries.

Preparation and transfer of curricula and examination regulations for dual vocational training for different professions and implementations in Poland, Lithuania, Latvia and Spain.

Development, test and implementation Trainings for teachers to conduct dual vocational training as well as Training of trainers in SMEs.

2.3 Development political concept for the training and integration of young people with learning difficulties for young people with learning difficulties (EQF level 3).

Development, test and implementation of a dual vocational training "Specialist for Building Insulation".

2.4 Development, testing and evaluation of education programme, teaching materials and examination regulations for the provision of sector-specific qualifications already during the initial vocational training for stronger learners. Implementation in the dual system, so that work-based learning is put into practice in the project countries.

2.5 Development and implementation five-year technician training „Ecologic Solutions in Logistics".

3. Implementation and realization of further vocational training

3.1 Development and implementation of concepts and instruments for the management of continuing vocational training.

3.2 Development, test and implementation of a Train-the-Trainer program for teachers to conduct further training.

3.3 Development and implementation of a concept "SME-fair digitalization" as well as development, test and implementation of two train the trainer programs "Basic and advanced digital skills".

3.4 Transfer and implementation of four further trainings Energy Saving and Renewable Energies.

3.5 Preparation, transfer and implementation of six further trainings in the Green Economy.

3.6 Development, testing and evaluation of different training programs and teaching material for owners, managers and qualified workers of SMEs (EQF level 5 and 6). The trainings are specifically tailored to SME needs and different qualification levels and combine the transfer of technical, professional and management know-how.

- Training Enterprise and Entrepreneurship in Green Economy

- Training Energy Service Manager

- Trainings vocational Master Carpenter and Electric

- Training Construction Technician

- Training Service Technician

- Training Sustainability in foodservice industry

3.7 Development of regulations for new continuing education occupational profiles with a focus on the green economy.

3.8 Development of an integration programme for the unemployed (EQF level 4) in order to be able to place the unemployed in permanent jobs through further training seminars and a further training qualification.

4. Implementation and realization of higher education

4.1 Preparation and transfer of curricula, evaluation and examination regulations for two existing dual Bachelor degree programmes "Management of Renewable Building Energy Technology" and "Business Administration for SMEs".

4.2 Development and beginning of implementation of new dual Bachelor degree programs

- Business Administration & Sustainable Management of SMEs

- Entrepreneurship and Innovation in Green Economy

- Logistics - Green Supply Chains

- Service technician

- Tutorial "Sustainable management Climate neutrality for companies"

4.3 Development, test and implementation of four study modules (EQF level 6) on SME management in the Green Economy sector, which will be carried out in the dual study system and integrated into existing Bachelor degree programmes.

4.4 Development and implementation of concept for innovation promotion Solutions for manageable R&D tasks of SMEs and conducting manageable R&D projects for SMEs-

4.5 Development, testing and implementation of Training program for university lecturers and SME advisors.

5. Dissemination, transfer and use of the project results

5.1 Development of a concept and summary evaluation of the dissemination results of all partners

5.2Transfer of all educational measures to 60 educational institutions in 13 countries and needs-oriented implementation consultations as well as realization of a bundle of measures for further dissemination of the project results.

5.3 Further dissemination activities such as presentations online, at third-party events, press releases and conferences.

5.4 Book with all results of the project and distribution via book trade.

For each of the three levels of educational measures there will be:

- Target-group-specific educational programs.
- Curricula, teaching materials, etc. developed in a leading role by the educational institutions of the respective level, whereby the educational institutions of the other levels (in particular universities) participate in an advisory and supportive manner.
- Representatives of the participant target groups involved in the development work.

All educational measures will be tested with the respective target groups under different national conditions in the countries, evaluated and completed on the basis of the evaluation results with application notes.

About the transfer of the German dual vocational training systems

As part of the 3LOE project, dual vocational training was to be implemented in all seven partner countries. The basis for this was the German dual system, which was adapted to the respective national conditions and implemented.

The German dual system was analyzed and described in detail. Strategies were developed for the organization of vocational education and training in the federal states as well as recommendations for transfer and implementation in countries where school-based vocational education and training has been predominant to date. Comprehensive presentations were also developed to enable the partners to independently present, communicate and explain the dual system in their countries. The results of this work are summarized as Result 3.3 Curricula, teaching materials and examination regulations for specific dual vocational training, Part A Preparation and transfer of the German dual vocational training systems.

A train-the-trainer seminar for management and teaching staff at vocational schools was developed, trialed, evaluated and implemented to ensure that qualified staff are available in the implementing countries.[1]

In accordance with the focus of the 3LOE project in the Green Economy and the needs of the project partners, framework curricula for the school part and training regulations for the company part of vocational training as well as examination regulations for the following professions were prepared and transferred:

- Electronics technician for industrial engineering

- Vehicle mechatronics engineer

- Plumber

- Sewage engineering technician

- Environmental technology

These extensive documents were transferred electronically to all COVEs in German and in English translation, made available in Goggle drive and published on the project website for permanent use. Based on the German curricula, the international working groups developed country-specific curricula for dual vocational training for various occupations.

The Polish partner Izba Rzemieslnicza Malej i Sredniej Przedsiebiorczosci wanted to realize a dual vocational training program "Fitter of fixtures and fittings in building industry" in accordance with national conditions and regional needs. As such a profession does not exist in Germany, the German vocational training programs "painter and varnisher" and "tiler and panel layer" were transferred. On this basis, the Polish partner developed and implemented a dual vocational training program "Fitter of fixtures and fittings in building industry" with comprehensive advice from Partner 1 Hanse-Parlament.

The Lithuanian partner Verslo ir svetingumo profesinės karjeros centras wanted to realize a two-year dual vocational training program "Cook" in accordance with national conditions and regional needs. As there is no such training program in Germany, the German vocational training programs "Cook" and "Ordinance in the hospitality services industry" were transferred. On this basis, the Lithuanian partner has developed and implemented a two-year dual vocational training program "Cook" with comprehensive advice from Partner 1 Hanse-Parlament.

As part of the further project implementation, dual vocational training programs were developed. implemented and evaluated for the following professions in the following countries:

- Poland: Electrician
- Poland: Fitter of fixtures and fittings in building industry
- Lithuania: Cook
- Latvia: Motor vehicle mechanic/Car mechanic
- Spain: Electromecanico

The implementation reports as well as an evaluation concept and evaluation reports are summarized as Result 3.3 Curricula, teaching materials and examination regulations for specific dual vocational training, Part B Implementation and Evaluation.

[1] See Result 3.2 Training programs for teachers to conduct dual vocational training

The entire Result 3.3 Curricula, teaching materials and examination regulations for specific dual vocational training consists of three parts:

- Part A Preparation and transfer of the German dual vocational training systems
- Part B Implementation and Evaluation

The German Curricula for dual vocational training in five professions were published on the project website.

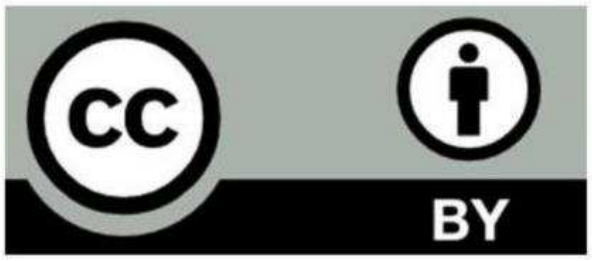
Part A is reproduced below.

PART A

Preparation and transfer of the German dual vocational training systems

Languages

English



1. Introduction

As part of the project " Three-level Centers of Professional Excellence: Qualification, Entrepreneurship and Innovation in the Green Economy" (3LoE)", dual vocational training is being introduced in the participating countries with predominantly school-based vocational training. Various measures have been taken to initiate and support this process. Information developed for this purpose is presented below:

- detailed description and analysis of the German dual vocational training system
- key issues, objectives and strategies of vocational training policy in the BSR
- recommendations for the transfer and implementation of dual vocational training
- presentations on the dual training system in Germany

The descriptions of the German dual system and education policy are based on numerous studies and projects and are listed below. For the presentation of the partners in their respective regions and countries, a presentation is attached that describes the German dual system in detail and includes the following key content areas.

- Skilled labor requirements and vocational training
- The German system of dual vocational education and training
- Advantages and disadvantages of dual vocational education
- Development of curricula & examination regulations
- Recommendations for the implementation of dual systems
- Train the trainer seminar for management and teachers of vocational schools
- Training of trainers in companies
- Importance of continuing education and qualification needs
- Alternative forms of implementation of continuing education
- Example: KAIN method
- Development of curricula and examination regulations for continuing education
- Train the trainer for teachers for the implementation of further trainings
- Implementations & checklists for further education
- Dual higher education
- Summary in 10 strategies and a model for the future design!

2. The dual system of vocational training in Germany[2]

Vocational training plays a prominent role in the German educational system. Almost 60 % of each year's pupils choose professional education. Up to 70 % of them decide for a training in the dual system, while the remaining part of the pupils complete a full-time school education in a vocational school. The system is called the dual system because the training takes place at two learning locations: in one company and in the vocational school. In Germany, training is currently possible in 349 recognized qualified occupations for a period of 2 to 3.5 years.

The central law for the vocational training in Germany is the Vocational Training Act (Berufsbildungsgesetz (BBiG)). Other important laws are the Crafts Code (Handwerksordnung (HwO)), the Ordinance on Trainer Aptitude (Ausbildereignungsverordnung), the Young Persons Employment Act (Jugendbeschäftigungsgesetz), the Industrial Constitution Act (Betriebsverfassungsgesetz), the Law for the Advancement of Further Training and the Distance Learning Protection Act (Weiterbildungs- und Fernschulgesetz).

The legal basis for the enactment of educational regulations are §25 of BBiG or §25 of HwO. There it states that the Federal Ministry of Economics and Technology in consultation with the Federal Ministry of Education and Research officially recognize qualified jobs and can issue educational regulations for this purpose. The educational regulations are prepared at the Federal Institute for Vocational Education and Training (BIBB) by intensive involvement of representatives of the employers and employees.

For the job-related teaching at vocational schools the Permanent Conference of the Ministers of Education and Cultural Affairs of the Federal States (KMK) issues framework plans which are aligned with the educational regulations of the federation. The curricula for the general teaching at the vocational school are developed principally by separate states because culture and education in Germany are subject to the sovereignty of the federal states.

The legal basis for the educational relationship between the enterprise and the apprentice is established by the training contract which must be concluded in writing before the beginning of the training. The following is regulated in the training contract, incl.:

- type, structure and especially the goal of the training
- beginning and duration of the training
- training measures
- duration of the regular daily time of training
- duration of the probation period
- payment method and amount of trainee allowance
- duration of the leave
- preconditions for termination

[2] Hogeforster, J. und Döding, L.: The educational systems in the Baltic Sea region with special consideration of the dual system in Germany, in: Job Market Innovations – testing and implementation of new methods of the promotion the employment in the niching, perishing and little popular occupations, Hamburg.

The training contract must be submitted to the competent authority - in Germany these are the relevant chambers - and included in the "list of training relationships" if the company's suitability for training is proven.

2.1 Division of responsibilities

The responsibilities in the dual system in Germany are divided as follows.

1) Framework of the federal law

All those involved in dual vocational training (federal government, federal states and industry) act within the legal framework laid down by the Vocational Training Act (BBiG). In addition, further labour law provisions in various fields of law are also mandatory for initial and continuing vocational education and training. For example, the statutory provisions and legal principles applicable to employment contracts also apply to this training contract unless special regulations are laid down in the BBiG.

Levels	Responsibilities
Federal level	• Federal Ministry of Education and Research • Line ministries • Federal Institute for Vocational Education and Training
Country level	• Ministries of the federal states • Conference of the Ministers of Education and Cultural Affairs of the Federal states (Kultusministerkonferenz)
Regional level	• Competent authorities (chambers)
Learning location level	• Training companies • Vocational schools

Source: Bundesministerium für Bildung und Forschung (BMBF), Referat für Öffentlichkeitsarbeit (ed.), *Berufsbildung sichtbar gemacht. Grundelemente des dualen Systems*, Bonn 2003, http://www.bmbf.de/pub/berufsausbildung_sichtbar_gemacht.pdf (August 2019); own graphic and translation from German to English

2) Federal Government

The Federal Government is responsible for the content of the qualified professions it recognizes, provided that the training does not take place at schools. The mandatory recognition of qualified jobs throughout the Federal Government implements the threshold values developed jointly with industry and the federal states and at the same time ensures that training for the recognized qualified occupation can only be provided in accordance with the Federal Government's training regulations.

3) Federal states

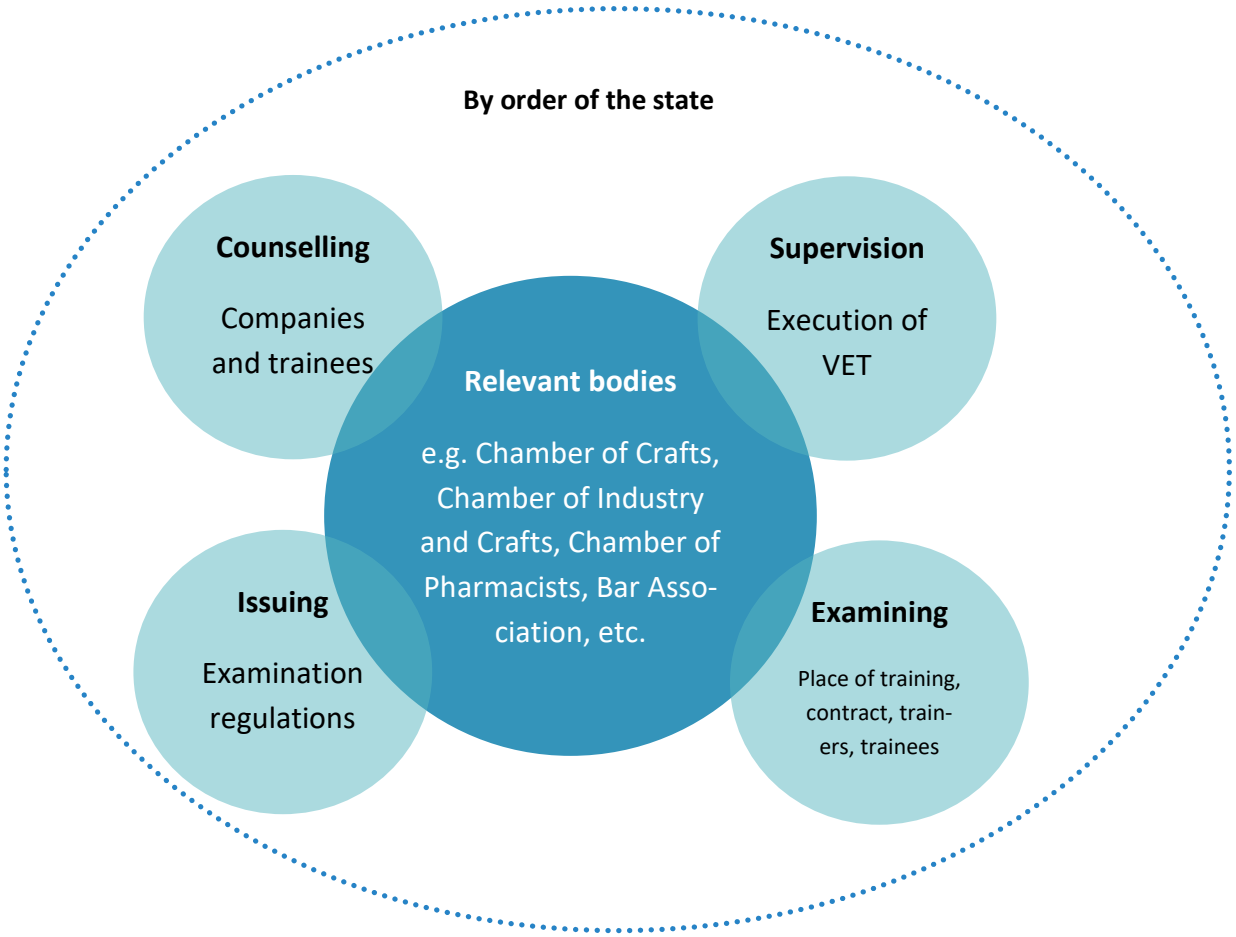
The federal states are fully responsible for the school system. In dual training, this means that, according to the agreement of the individual federal states with each other and with other parties involved in dual training - with regard to the relevant qualified profession - each federal state issues a curriculum for vocational training. In addition, states carry out legal supervision of chambers.

4) Industry (employer and unions)

Industry proposals for the development or revision of training regulations are only taken up by the Federal Government if they have been drawn up by consensus between employers and trade unions. Irrespective of the federal government, the collective bargaining partners have agreed further regulations for vocational training on the basis of their collective bargaining autonomy, in particular the level of training allowances. Some employment contracts also contain further agreements, e.g. on the temporary continued employment of trainees after their training.

5) Chambers

as self-governing economic bodies - within the framework of dual training, public tasks were specified. This includes counselling and support under separate training contracts. Training consultants from the chambers examine the suitability of companies and trainers for training and also advise companies and trainees. They accept, check and register training contracts.



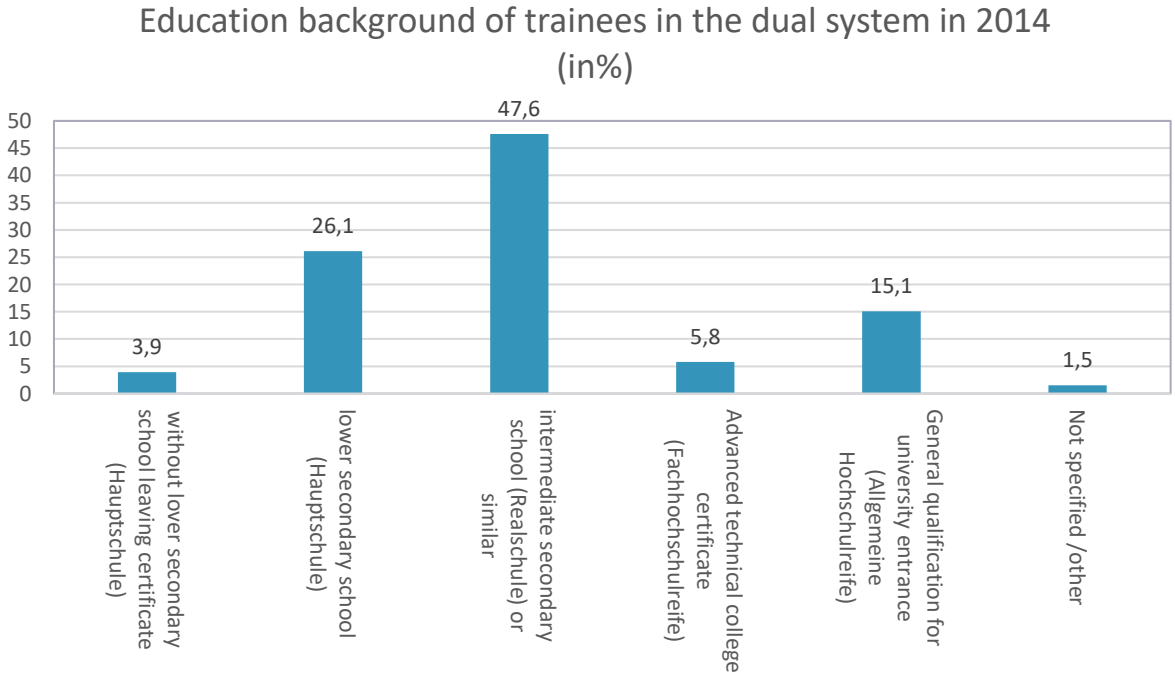
Source: Bundesministerium für Bildung und Forschung (BMBF), Referat für Öffentlichkeitsarbeit (ed.), *Berufsbildung sichtbar gemacht. Grundelemente des dualen Systems*, Bonn 2003, http://www.bmbf.de/pub/berufsausbildung_sichtbar_gemacht.pdf (August 2019); own graphic and translation from German to English

The chambers organize the entire examination process by defining the conditions and appointing examination commissions to conduct the examinations. In addition, the chambers issue examination and diploma certificates. The examination boards consist of representatives of employers, employees and vocational schools. On important questions of vocational education and training, the Chamber hears the Vocational Training Commission to be set up, which consists in equal parts of representatives of companies, employees and also of vocational schools in an advisory capacity.

2.2 School education background of trainees

Compulsory schooling in Germany usually begins at the age of 6 and lasts 9-10 years (depending on the federal state). After four years of primary school, the pupils decide on the secondary school within the general three-stage school system:

- gymnasium, which demanding curriculum is oriented at the acquisition of the general entitlement to study at universities:
- intermediate secondary school (Realschule), which curriculum leads to obtaining the middle school certificate which certifies broad general educational and vocational preparation qualifications, and
- lower secondary school (Hauptschule) which is customized for students with practical skills or interests and leads to the secondary school leaving certificate (e.g. introduces to the world of work).



Source: „Integrierte Ausbildungsberichterstattung" auf Basis der Daten der statistischen Ämter des Bundes und der Länder sowie der Bundesagentur für Arbeit, Datenstand: 10.12.2015; https://www.bibb.de/dokumente/pdf/a2_tab_a6_3-1_2016.pdf (accessed August 2019)

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Different paths often meet up each other in the professional education. Unlike full-time vocational schools, which require an intermediate secondary school leaving certificate. In the dual system, there are no admission requirements for admission to training; basically, it remains open for everybody. In practice 47,6% of the training beginners possess an intermediate secondary school leaving certificate, 26,1 % have lower secondary school leaving certificate and 15,1 % have general entitlement to study at universities while 3,9 % have no school graduation certificates. In addition, 5,8 % of trainees completed the advanced technical college.

The education in the dual system is organized content-wise, so that it can be mastered by young people with at lower secondary school leaving certificates. To compensate possible level differences on the basis of different educational background the Vocational Training Act or the Crafts Code envisages the reduction and also the extension of the period of training. Thereby it shall counteract the excessive or the insufficient demands in respect of the trainees.

When comparing the data of the educational background of trainees over the last decade, the share of trainees has considerably grown who have intermediate secondary school leaving certificate from 36,6% to 47,6%. In comparison, the share of trainees coming from lower secondary school has reduced from 32% to 26,6%. One explanation for this could be that the demands placed on trainees by companies have risen because the tasks in various occupations have become more complex over time.

Training allowance based on collective wage agreements[3]

Collectively agreed training allowances rose by an average of 3.7% nationwide in 2018. The increase in training allowances was thus stronger than in 2017 (2.6%). Nationwide, training allowances based on collective agreements averaged €908 gross per month in 2018.

There are still considerable differences between western and eastern Germany. An average amount of € 913 was achieved in western Germany and € 859 in eastern Germany. In the East, as in the previous year, 94% of the West German remuneration was reached. This is the conclusion reached by the Federal Institute for Vocational Education and Training (BIBB) in its analysis of collective bargaining training allowances for the year 2018.

In 2018, there were considerable differences between the training occupations in terms of the level of remuneration. The collectively agreed training allowances for the skilled trades of bricklayer were particularly high at € 1,159 per month on average for the whole of Germany. On average, high collectively agreed allowances were also paid for the occupations of mechatronics technician (€1,088), industrial clerk (€1,047) and insurance and finance clerk (€1,035).

The 2018 pay scale averages were comparatively low, for example, in the professions of painter and varnisher (€ 718), baker (€ 678), florist (€ 617), hairdresser (€ 584) and chimney sweep (€ 518).

[3] Bundesinstitut für Berufsbildung (BIBB) in der Auswertung der tariflichen Ausbildungsvergütungen für das Jahr 2018 https://www.bibb.de/de/pressemitteilung_89997.php (accessed August 2019)

The average remuneration was calculated for 181 occupations in western Germany and 153 occupations in eastern Germany. On this basis, average values for the whole of Germany were also calculated. The occupations included accounted for 89% of all training relationships. Since 1976, BIBB has been evaluating training allowances based on collective agreements annually as of the 1 October cut-off date.

The BIBB evaluation also showed that in a number of training occupations in which a particularly large number of training places have remained vacant in recent years, remuneration was raised relatively sharply in 2018. For example, the increase in the occupations of "baker" (6.4% nationwide) and "specialist sales assistant in the food trade" (around 6% nationwide) was well above the overall average. In eastern Germany, growth was even stronger in the "cook" and "restaurant specialist" occupations: Here, training allowances rose by 10.6% last year (West: +3.4%).

There were also significant differences between the training sectors in 2018: Above-average training allowances were achieved in the public sector (uniformly: 999 €) and in industry and commerce (total: 975 €, West: 983 €, East: 914 €). On the other hand, remuneration was below the overall average in the liberal professions (total: €832, West: €833, East: €809), craft trades (total: €769, West: €775, East: €706) and agriculture (total: €767, West: €791, East: €652).

A look at the long-term development shows: at the start of the BIBB evaluations in 1976, the collectively agreed training allowances in West Germany averaged €202 per month. By 2018 they had risen to € 913 and thus by 352% in nominal terms. At the same time, consumer prices rose by 142% during this period. Taking this into account, training allowances in West Germany rose by 87% in real terms between 1976 and 2018.

In the case of eastern Germany, the first evaluation of training allowances under collective agreements was carried out for 1992; the average amount calculated was € 321 per month. By 2018, allowances had risen to an average of €859 and thus by 168% in nominal terms. The increase in consumer prices over this period was 62%. Taking this into account, the collectively agreed training allowances in eastern Germany increased by 65% in real terms between 1992 and 2018.

By way of comparison: In relation to this period, the real increase in allowances in western Germany - with a price increase of 49% - was only 30%.

2.3 Training places in the dual vocational training system

Training place - Enterprise

As a rule, the trainees spend 3-4 days a week in a training company, where they are trained in practice on the basis of the training plan in accordance with the provisions of the training regulations drawn up for the respective occupation. The training regulations regulate e.g. the duration of training, describe the job and determine the requirements to examinations.

The characteristic feature of education is the acquisition of the required professional experience connected with the transfer of knowledge and skills. It guarantees that the training is performed under the same conditions, under which the studied profession will be exercised later. Only at the enterprise the trainee learns, on one hand, how to cope with the changing requirements of the professional practice and, on the other hand, he discovers the various social relations existing in the world of work. Additionally, promoted are independence and the sense of responsibility, because the trainee can demonstrate the obtained knowledge and

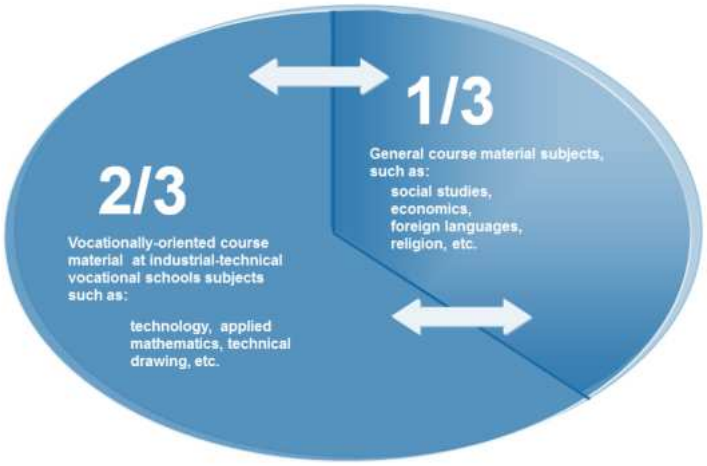
skills through specific working tasks and in the real working conditions of the working, experiencing the success of his efforts.

During the training the trainee receives remuneration, which increases each year and amounts at the average to one-third of the starting salary of a qualified worker. In 2009/2010 the average monthly educational remuneration (gross) in the first year amounted to 532,97 €, in the second year it was 590,39 € and in the third educational year it amounted to 648,22 €.

Training place – Vocational school

The practical education is supplemented with the theoretical course at vocational schools where students study about 12 hours a week. The teaching takes place on specific days during the week or in blocks.

In vocational schools one-third of the lessons consist of the cross-occupational learning and two-thirds consist of the work-related subjects according to the framework curriculum, which is prepared for separate professions by the Conference of the Ministers of Education and Cultural Affairs for the work-related branch and by lands individually for the cross-occupational learning section. The cross-occupational branch includes, for example, contents of such subjects as Social Studies, Economics, German, Foreign Language, Religion and Sports. It is closely connected to the work-related contents but addresses it in a different manner.



Source: Bundesministerium für Bildung und Forschung (BMBF), Referat für Öffentlichkeitsarbeit (ed.), *Berufsbildung sichtbar gemacht. Grundelemente des dualen Systems*, Bonn 2003, http://www.bmbf.de/pub/berufsausbildung_sichtbar_gemacht.pdf (August 2019); graphic by Reinhard Damm, Hamburg Institute for Vocational Education (HIBB).

Inter-company training place

It is not always possible for small and medium-sized enterprises to offer full vocational training in a recognized occupation in their own company. In order to facilitate or enable vocational training in such companies, inter-company training centers are available. Moreover, not all companies have all the new technologies. Inter-company training centers therefore offer courses on new technologies as well as other educational events that supplement vocational training in small and medium-sized enterprises. These training measures, which supplement the application within the three-year training period in the craft trades, generally last four to six weeks, and 26 weeks in the construction industry. The number, content, quantity, duration

etc. of these supplementary training activities are determined in each case by separate chambers according to the regional conditions with legally binding effect for the respective chamber region.

The inter-company training work is part of the in-company vocational training (of the in-company training center). The inter-company training centers are usually financed by the chambers of commerce, industry and crafts or, alternatively, by the employers' associations.

2.4 Teaching staff in the dual educational system

At vocational schools there are teachers for theoretical teaching (vocational schoolteachers) and teachers for practice (specialist teachers). Vocational schoolteachers need to have an university degree or an equivalent degree and didactic training. Subject teachers do not need a university degree, they usually have a corresponding professional background as master craftsman or specialist (industry) or assistant (craft). Teacher training is compulsory and takes place in the form of seminars at state institutions for teacher training.

The requirements set for the company trainers are regulated by the Vocational Training Act and in the Ordinance on Trainer Aptitude. According to it trainers must have passed the final examination under the specialty corresponding to the qualified job and possess working pedagogic knowledge. The obligatory trainer aptitude examination was temporarily suspended in

August 2003 in order to stimulate the companies to offer more training places; on August 1, 2009 it was introduced again. For company trainers there are no legal requirements for further training.

2.5 Financing of the dual system[4]

Three parties contribute towards the financing of vocational education and training in Germany:

- the companies,
- the public sector and
- the trainees.

In the training year 2012/13, costs to *companies* of providing company-based training were around Euro 7.7 billion. These costs exclusively relate to the dual training system. In the budget year 2013, total spending by all *public bodies* (Federal Government, federal states, Bundesagentur für Arbeit (BA) [Federal Employment Agency] was approximately Euro 9.7 billion. Public funding is used to finance the dual system, but also full-time vocational schools, the transitional system, and the structural development. No information is thus far available

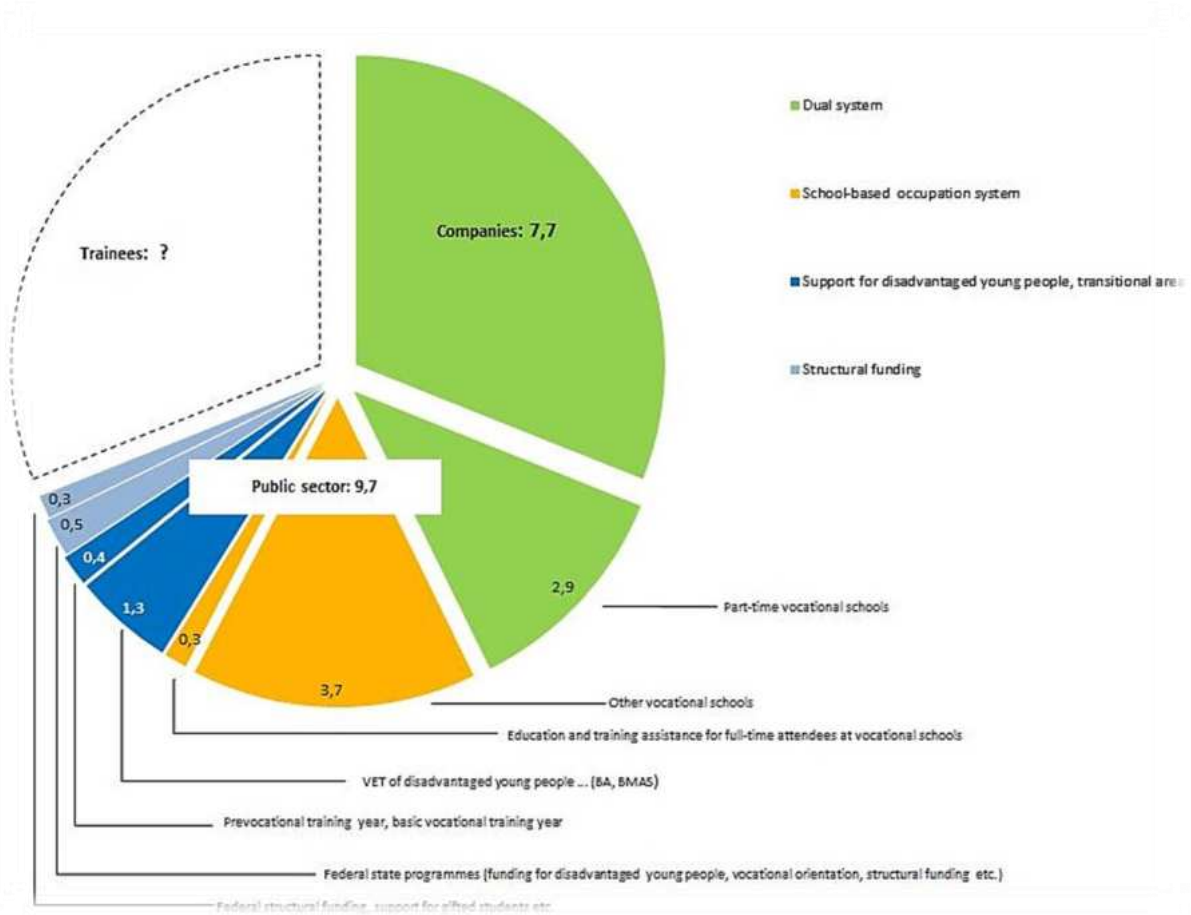
[4] Normann Müller, Felix Wenzelmann, Anika Jansen, **Financing of vocational education and training in Germany,** https://www.bibb.de/en/41380.php (accessed August 2019)

regarding the amount to which the *trainees* themselves participate in the financing of their training.

The figure below gives an overview of the sources and uses of financing.

Costs for companies are estimated via a BIBB survey conducted on a regular basis. The most recent survey relates to the 2012/13 training year, and results were extrapolated using the trainee structure as of 31 December 2012. The figure presents net costs, i.e. the gross costs incurred by companies minus the value of the productive contributions of the trainees.

The presented figures pertaining to public spending relate to the 2013 budget year. Public spending is focused on federal state-funded vocational schools. The official statistics, however-er, record spending only for vocational schools overall rather than separately for the individual types of school. The largest single share of spending is on part-time vocational schools in the dual system (around Euro 2.9 billion in 2013). Spending on individual types of school in the school-based occupation system, such as full-time vocational schools or specialised upper secondary schools, is lower although these schools together actually account for approximately Euro 3.7 billion. Transitional provision such as the prevocational training year and the basic vocational training year make up about Euro 0.4 billion.



In the school-based occupation system, the living costs of those attending vocational school on a full-time basis are also funded pursuant to the Federal Education and Training Assistance Act (BAföG, approximately Euro 0.3 billion) alongside the financing of vocational schools. In the transitional sector, VET spending by the BA and the Bundesministerium für Arbeit und

Soziales (BMAS) [Federal Ministry of Labour and Social Affairs] together totals around Euro 1.3 billion and constitutes a further major segment. These costs relate to vocational orientation and preparation as well as to vocational education and training itself. A large part of BA funding is used to support trainees who are particularly disadvantaged, specifically trainees in publicly financed company-based training. The latter could also be said to be part of the dual system because it represents a substitute for company-based training and thus supplements the dual system. The same applies with regard to the vocational education and training assistance which trainees within the dual system receive in order to secure their living costs (approximately Euro 0.4 billion). Spending on the vocational education and training of disabled persons is not included in the figure.

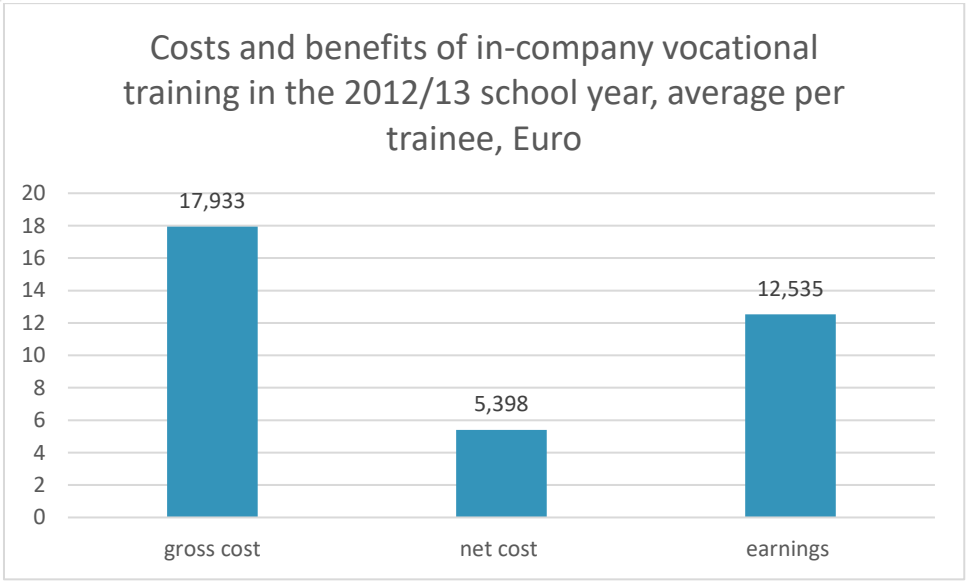
For companies, the cost-benefit ratio plays an important role in deciding whether or not to train young people. If the costs to be expected are higher than the total benefits to be expected, the company should decide against providing in-company vocational training from a purely economic perspective. At present, about 20% of enterprises train young people in the dual system, and the number of enterprises providing in-company vocational training has declined in recent years.

Also, in financing of the dual education, companies play a significant role. Every five years since the beginning of the 1980s, the Federal Institute for Vocational Education and Training (BIBB) has surveyed training companies on their costs and benefits of training. The last available survey is available for the 2012/2013 training year. The first results of the 6th survey for the 2017/18 training year are expected to be published at the end of 2019.

In the 2012/13 training year, the gross costs, i.e. the total costs that the company spends on training, amount on average to € 17,933 per trainee. At € 11,018 (62%), the personnel costs of the trainees (training allowances, statutory, collectively agreed and voluntary social benefits) make up the largest part of this figure. The personnel costs of the training personnel account for €4,125 (23%), the plant and material costs (e.g. acquisition costs for the tools and equipment of the trainees, costs for training workshops or in-company instruction, costs for practice material) for €925 (5%) and the other costs (e.g. chamber fees, costs for teaching and learning materials and external courses, costs for in-company training administration) for €1,866 (10%).

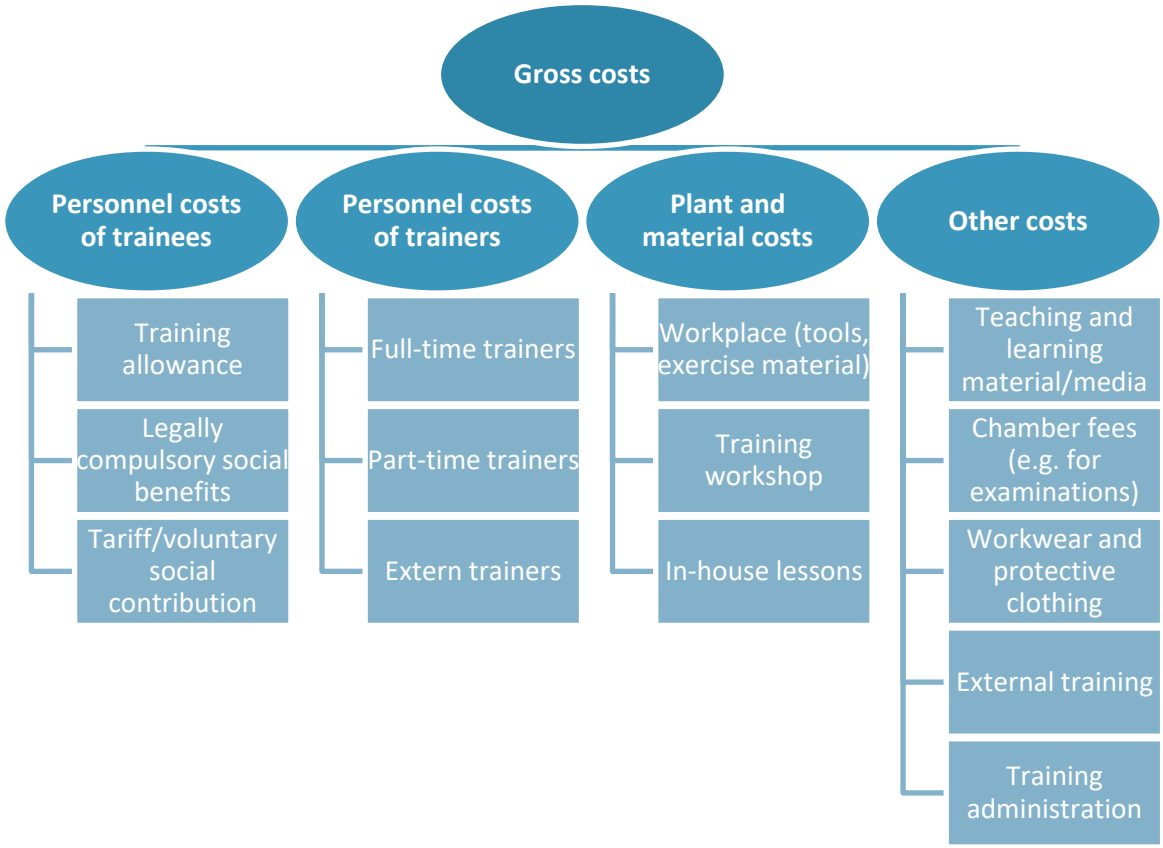
Two thirds of the gross costs are offset by the productive output of the trainees

The personnel costs of the trainees, i.e. the remuneration from statutory, collectively agreed and voluntary social benefits, correspond to 62% total gross educational expenditure. In addition to personnel costs, companies also invest in material costs (e.g. the workplace), teaching materials, any external courses and registration, and examination fees. The gross expenditures of the enterprises can be represented as follows.



Source: Anika Jansen, Harald Pfeifer, Gudrun Schönfeld, Felix Wenzelmann: Ausbildung in Deutschland weiterhin investitionsorientiert – Ergebnisse der BIBB-Kosten-Nutzen-Erhebung 2012/2013, Forschungs- und Arbeitsergebnisse aus dem Bundesinstitut für Berufsbildung, Report 1/2015, https://www.bibb.de/de/25852.php (accessed August 2019)

Trainees in three-year occupations generate the highest yields



Reasons for companies to train

In total about 20 % of all companies in Germany provide vocational training at the moment (BIBB, 2018). However, the number if enterprises providing in-company vocational training has declined in recent years. In the west German federal states, the number of training

enterprises fell by just under 3,500 to 368,000 (0.9%), while the total number of enterprises rose by more than 16,000 (1.0%). The training company ratio in the West fell by 0.4 percentage points to 21.6%. In the eastern federal states, the number of enterprises providing in-company vocational training fell by only 66 (0.1 %), which is significantly less than in previous years. The total number of enterprises increased only slightly to 435,000. The training company ratio in the eastern states fell by 0.1 percentage points to 13.6%. This means that about one in seven enterprises in eastern Germany trained young people.

The training rate (share of training enterprises in the total number of enterprises) increases with the size of the enterprise. The breakdown of trainees according to the class of company size shows that small and medium-sized enterprises account for the lion's share of training places.

Trainees according to company size classes 2015 (thousands)[5]	
Micro enterprises (1-9 employees)	268.365
Small enterprises (10 - 49 employees)	417.428
Medium-sized companies (50 - 249 employees)	434.947
Total Small - and Medium sized enterprises	1.120.740
Large enterprises (250 and more employees)	452.816

If it is assumed that companies act economically, the investing companies in particular must expect a benefit from the training that goes beyond the trainees' contribution to work during the training period. An additional benefit can arise above all if companies take on their trainees as skilled workers after they have completed their training. Companies that provide in-company vocational training no longer have to look for skilled workers on the labor market if they are hired, and additional further training and development measures are also required. in order to integrate externally recruited specialists.

By taking on trainees and apprentices a company can therefore use search and reduce the costs of adapting skilled workers.

In addition, it makes itself independent the labor market and can be used to Prevent downtime costs.

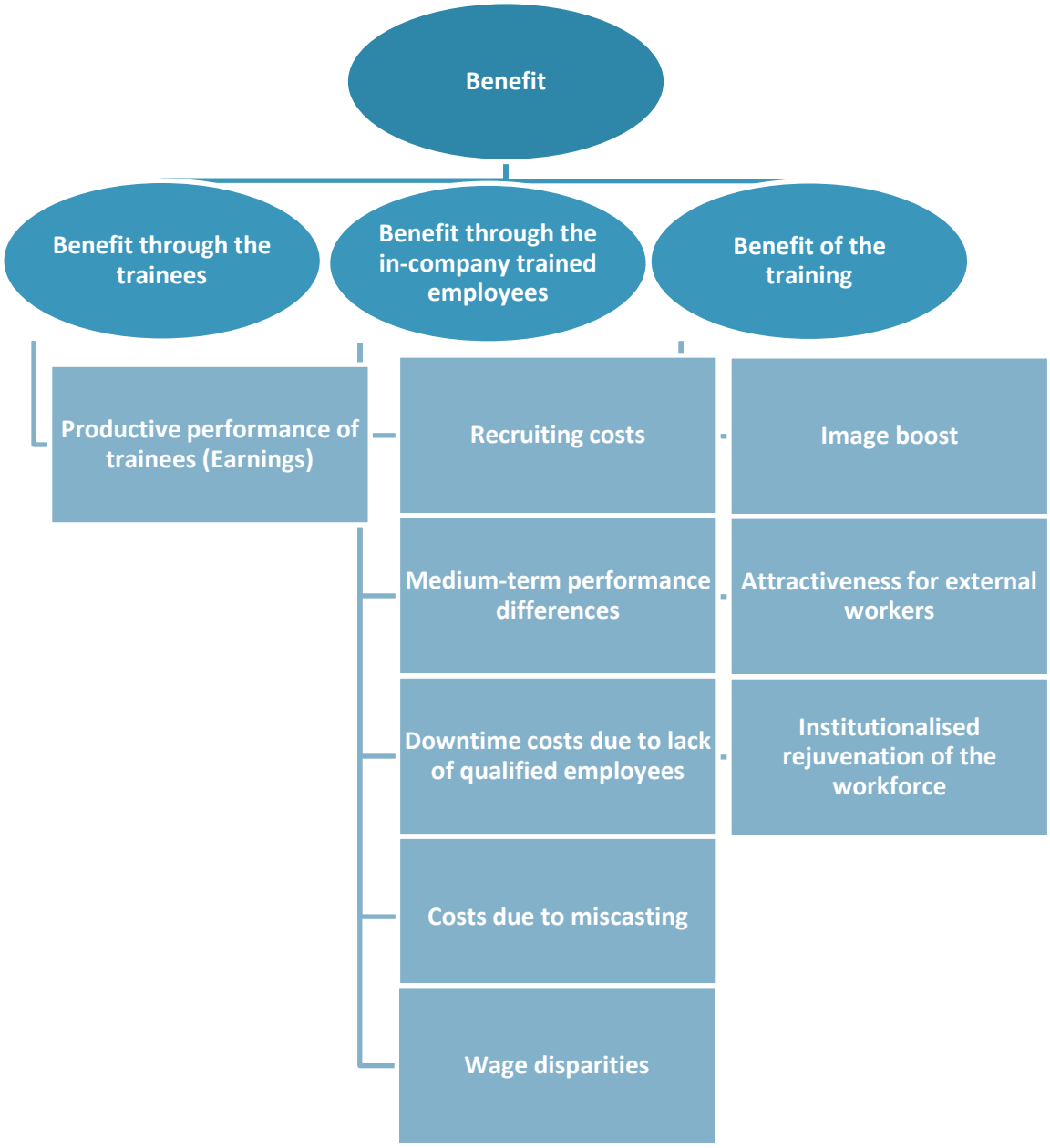
The benefit for companies of providing training consists of a large number of different elements which can only be partially evaluated in monetary terms. In 2007, the Federal Institute for Vocational Education and Training conducted a search and asked companies about the reasons for in-company training and the benefits. The statement that the company trains young skilled workers with specific company requirements was by far the most popular answer with a share of 84%. Large parts of the sample also agreed with the following statements,

[5] Bundesinstitut für Berufsbildung, Betriebliche Ausbildungsbeteiligung, https://www.bibb.de/datenreport/de/2017/63532.php#module65002 (accessed August 2019)

which indicates that companies are very interested in hiring their trainees after they have completed their training and in offering high-quality training:

- Enterprise trains to be able to select "the best" trainees (70%),
- the company provides training in order to avoid hiring the wrong person from outside when hiring employees (60%).

By comparison, reducing familiarization costs (34%), saving the cost of recruiting outside personnel (27%) and using company-trained employees to familiarize new employees (22%) are of less importance.



Besides, the results of the survey show that enterprises generally benefit from providing in-company vocational training for youths. Although enterprises bear numerous costs as a result

of providing training, these costs can be compensated for by retaining trainees upon completion of their training, thus eliminating the costs of externally recruiting and familiarizing new skilled workers. The costs are also offset by other less easily quantified factors such as image gains. At any rate, one third of the enterprises generate positive net gains by putting their trainees to productive use. The majority of firms surveyed are satisfied with the balance between costs and benefits, only 11% are dissatisfied. The majority also view positively their ability to meet their training needs by providing dual vocational training. More than half of the enterprises surveyed said they were satisfied with the dual vocational training system, while only some 14% were not.

Chart 6

Importance of reasons for providing in-company vocational training (in %)[12]

Source: BIBB 2007 Cost-Benefit Survey

2.6 Strong points of the dual vocational training system

The practice-oriented training of skilled workers in the dual system has led Germany to economic success and contributed to its international standing. The strengths of the system have already been discussed in the previous chapters and can be summarized as follows:

- In Germany, vocational training is firmly anchored in society and has a high priority. It prepares young people for a broad spectrum of occupations. The vocational qualifications acquired in this system are still valued on the labor market and the system has remained flexible enough to eliminate unsatisfactory educational programs and to counter the emergence of new economic and vocational fields with the development of new educational programs.
- The dual system in Germany is particularly well developed and combines learning in the company with learning at school in order to prepare trainees for a successful transition to the world of work. As a result, youth unemployment is very low by international standards. The pedagogy of the school-based part of the dual system is strongly oriented towards problem solving and combines theory and practice in an innovative way.

- There are fewer and fewer qualified specialists at the labor market. The one, who provides vocational training to own specialists, becomes independent from the labor market, remains competitive and retains appropriate personnel at the enterprise for a long time.
- A particularly important feature of the dual system is the fact that young people are exposed at a very early stage to the social competences that are crucial for professional success. Learning to work in differently composed teams, resolving conflicts with superiors or colleagues, dealing with customers or taking an initiative and solving problems in several steps - these are the competences that can hardly be learned only in class.
- The training also contributes to qualification within the company itself, as the training companies are always at the cutting edge of technology.
- A high level of employee identification with the company leads to fewer personnel changes and reduces the costs associated with fluctuation.
- The training period in the dual system enables the employer to obtain relatively inexpensive information about the quality and productivity of its young skilled workers, and this enables it to hire or leave trainees in a targeted manner after training without having to take the risk of hiring the wrong person later. The average net costs of training young people are offset by the costs of finding a trained external expert, which are not incurred. In addition, during the learning period, the company has the opportunity to compensate for disadvantages in the knowledge of future specialists through targeted, temporary induction and to transfer the training, which is advantageous for the company.
- The nationwide recognition and comparability of double degree certificates is an advantage for trainees, as they can use their training in other companies despite a high proportion of company-specific knowledge.
- In addition, the dual training system offers the opportunity to acquire a tertiary educational qualification after completing vocational training. This makes it possible for graduates without a school-leaving certificate to obtain a high school entrance certificate at a vocational school.
- One of the main advantages of the dual system is the high active participation of employers and other social partners. The system is also characterized by a complex network of checks and balances at federal, state, local and company level. This ensures that more general educational and economic objectives of the VET system are not suppressed by short-term needs of employers. Another positive influence in the dual system is the clear division of tasks between the Federal Government, the Länder and the private sector, which is enshrined in law and has been carefully developed over the years.
- The VET system is generally well funded, with private and public funding supporting a wide range of transition programs for young people in need of additional assistance before starting training, in addition to the dual system and full-time VET schools. Despite the economic recession, the vocational training system in Germany has continued to receive strong financial support and employers have maintained the supply of

training places in order to respond to the rise in youth unemployment and, in part, to avoid the threat of future staff shortages due to demographic change.

- Within the dual system, the chambers have a strong position. This relieves the state, supports the responsibility of the economy, enables practice-oriented and company-related solutions and generally strengthens economic self-management.
- At the federal level, there is a renowned research institution, the BIBB (Federal Institute for Vocational Education and Training), as well as a nationwide network of smaller research centers that investigate various aspects of the vocational education and training system. This means that Germany is investing far more in formative research to promote continuous innovation and improvement than other federal states. This is another indicator of the priority of vocational education and training in Germany and makes a major contribution to the success of the German vocational education and training system.

2.7 Weaknesses of the German vocational training system

Despite the many strengths of the German vocational education and training system, there are also some challenges that should be taken into account in the exchange of experience. The following points should be mentioned, among others:

- The quality of cooperation between vocational schools and employers in vocational training can be improved. In the survey of training companies, cooperation was considered to be very important, but the companies stated that in practice cooperation is too low and is often limited to the exchange of information.
- Due to the rapidly changing requirements in the working world, educational profiles must be updated promptly. It is also important to establish new professions that are continuously trained to meet needs.
- In view of the fact that young people in Germany are expected to make a career decision at an early age, it is essential that everyone has access to high-quality information and advice. The quality of career guidance in Germany varies greatly.
- The assessment of pupils in the dual system after they have completed their vocational training is first carried out on the basis of the final vocational examination conducted by the chambers and the determination of whether they have completed their vocational training (teaching diploma, certificate of qualification, etc.). The study documents at vocational schools are not officially taken into account in the final examination for vocational training. This should not lead to pupils neglecting training at vocational schools. This risk is low because teachers of vocational schools are still members of the examination board.
- The economic vulnerability of VET provision can be a problem. Nevertheless, Germany has always succeeded in making sufficient training places available - even in economically difficult times with a very high number of school leavers in the 1980s.

3. Formulation of strategies for vocational education and training[6]

3.1 Key themes of the future educational policy in the Baltic Sea region

Opportunities for the future Baltic Sea Region

The Baltic Sea region is considered to be the most innovative and economically strong region in Europe, which has not yet exhausted its potential. At the same time, however, revolutionary developments are emerging that can severely restrict the economic dynamism of the Baltic Sea region and require increased commitment, especially in education policy. Accordingly, education is one of the five ambitious goals of the EU 2020 strategy.

Changes in labor markets

Such an evolution of educational policy is the key to the design of a fulfilling life and the social integration of each young person. Such improvements are also prominent in the interest of the economy which faces a completely different labor market situation.

Quantitative and qualitative constraints

In the next 20 years, the number of employed persons in all the Baltic Sea region states with the exception of Sweden will decrease by 5 - 18 per cent (Eurostat). The quantitative problems cause a substantial intensification of qualitative constraints. The requirements of companies towards trainees are high and still increasing. Personal and social skills are equally important to the factual knowledge. In most Baltic Sea states an increasing number of graduates lack the required competences.

Increased competition

There is a growing competition for skilled young people among SMEs, large enterprises, universities/colleges and government agencies. Moreover, small and medium-sized enterprises, which provide about 70 percent of jobs, threaten that they become losers and are pushed towards lower levels (Eurostat). Securing trainees with good qualifications and high level of innovation is a question of survival for SMEs in the Baltic Sea Region.

Local employment potential and immigration

Increased immigration to the Baltic Sea region is required; attractive educational offers are a crucial factor here. The society must open up and meet the multicultural challenges. Above all, the domestic potential should be exploited in a better way. Educational policy must ensure that the proportion of young people leaving school without qualifications as well as non-trainable adolescents is reduced significantly. No young person should be excluded, everyone deserves a second chance.

Holistic education

[6] Objectives and Strategies for education policies in the Baltic Sea Region, Baltic Sea Academy, Volume 2, Hamburg

The overvaluation of purely intellectual ideals of education has to be contrasted with the eminent character of education which appeals to all sensed and encourages the acquisition of all intellectual, artistic and manual skills equally. School education always seems to lead to more uniformity. Much more individualized instruction with personal learning objectives and success is urgently needed.

Promoting weaker learners and strong learners

Such holistic education with a promotion of individual talents is needed urgently for both weaker and stronger learners. An elite education is not sufficiently pronounced in many countries and it should no longer be a taboo. Systematic promotion of the strongest without the exclusion of the weakest is the decisive factor for the integration for all.

Early childhood education

Early childhood education should be greatly expanded on the basis of the example of a few Baltic States. This includes sufficient number of places in kindergartens and a mandatory one-year preschool with the best and best-paid teachers.

Priority for quality improvements

The mere creation of new structures cannot bring any lasting improvement if they are not preceded by far-reaching cultural reforms with improvements in quality. Evolution of cultures almost inevitably leads to the growth of new structures.

School structures perform a secondary role. Also, a structured educational system can bring success in the case of high-level permeability. Long learning together is not a prerequisite for good school education, but it facilitates teaching personal and social competences and promotes sustainable integration. The success in most Baltic Sea region countries suggests that learning together should be implemented as long as practicable.

Increasing attractiveness and quality in vocational education

The attractiveness of vocational training has decreased in all Baltic Sea region states and, in some countries, it reached a proportion of 10-15 per cent of graduates going through vocational training, which is an alarmingly low level. The proportion of practice in vocational education must be increased significantly, especially in countries with educational systems. Wherever possible, training should take place in the dual system.

Admission requirements and differentiation

The introduction of uniform Baltic Sea region entrance requirements of vocational training which is determined job-specifically is desirable. Specific ways of vocational education need to be introduced with complete transparency for children with learning difficulties but also for stronger learners.

Openness and transparency of the educational system

Vocational training is too separated from other branches of education and quickly leads to dead ends. There is an urgent need for full transparency in VET and between VET, general education and higher education, with smooth transitions and recognition. This also includes the Baltic right to study with a field-low ship or a technical qualification, following the example of some BSR states.

Open up for employees outside the profession

Small and medium-sized enterprises, in particular the craft sector, must open up more to workers outside the profession and attract them to permanent employment. Tailor-made training phases, precise further training, the opening up of education systems and the improvement of permeability support this process.

Dual degree courses of study

In most cases, young people decide against vocational training and prefer to study. However, most courses are largely theoretical and not sufficiently focused on the practical issues of SMEs, which cannot obtain a sufficient number of entrepreneurs and skilled workers despite a large number of students. Dual courses of study which combine vocational training or activity with studies have to be established on a broad basis.

International exchange

Stays abroad during training and professional activities promote increasingly important international knowledge and experience, and at the same time personal and social skills. The Baltic-wide un-bureaucratic recognition of vocational training and further training qualifications is a crucial prerequisite.

Educational and regional economic policy

Moreover, the reduced transport and communication costs increase the mobility of production factors. Companies migrate to locations with higher potential of professionals and workers, to locations with attractive educational opportunities and diverse labor markets. The local competition for (highly) skilled workers is more intense. A uniform educational policy in the Baltic Sea region has to be anchored in the EU Baltic Sea strategy and ensure that this competition takes place not only within the Baltic Sea Region; to the contrary, through excellent education it strengthens the competitiveness of the whole Baltic Sea region towards other regions and expands the existing projections.

Highest priority for the educational policy

The considerable opportunities of the Baltic Sea region can only be exploited at the highest level of innovation and excellent qualifications. Educational policy is also to a large extent connected with locational, regional and spatial planning policy. Education promotes innovations and competitiveness and includes the main support task for small and medium-sized enterprises. Educational policy must therefore be superior to all other policies and needs to enjoy

highest priority also in the EU Baltic Sea Strategy. In accordance with the EU strategy "Europe 2020" politics, economy and society of the Baltic Sea region must address their outstanding position of educational policy and recognize that the investment in human capital is the safest and the most profitable investment.

3.2 Opportunities and challenges

Small and medium-sized enterprises are the backbone of the economy and provide stabilization of social development. They make 99 per cent of all businesses in the Baltic Sea region and provide about 70 per cent of all jobs, are indispensable for the training, and secure the lion's share of government revenue (Eurostat). Through a powerful medium-sized business the Baltic Sea region receives outstanding opportunities for economic empowerment and mastery of international competition. Thus, this region of the future has the best chances to develop into an innovative, economically strong region of international standing.

The small and medium-sized enterprises (SMEs) have a chance in the national and international competition only with the greatest opportunities of innovation and quality at the highest level. Both require outstanding qualifications. There are already significant deficits, which will increase considerably in the future, thus limiting growth and innovation decisively. Improving the skills in general education, quality and attractiveness of professional training and further development in the vocational education and training systems are, thus, outstanding issues and important conveying tasks for the craft business and SMEs in the Baltic Sea Region.

Every human being is a unique being and has the right to a unique training and life. The straight and fast training process is not necessarily the best for everyone. Detours promote local knowledge and enable a broad spectrum of lifelong learning. Education must appeal to all the senses, and where this does not happen, no real learning can take place. In a highly standardized, one-sided education system without individual learning goals and pedagogy, a growing proportion of young people fail because they try to deal with the nature of learning and do not meet common standards. Throughout their educational careers, they collect only failures and are then quickly excluded as failures. In some countries bordering the Baltic Sea, around 20 per cent of school leavers are regarded as insufficient and are unable to complete vocational training. Without vocational training, they often have no lifelong opportunities and are dependent on state subsidies from the cradle to the grave. In addition, each person has at least one strength. If this is recognized and supported, this person will make a valuable contribution to society.

Everyone deserves a second chance. Other ways, which may seem like detours at first, but are purposeful, can deliver good educational outcomes. This can be seen, for example, in craft training where young people are supported on a broad basis. This is only possible because in craftsmanship, more than elsewhere, the whole person is challenged, the head as well as the hand, humor as well as imagination, practice as well as theory, wisdom as well as common sense. The overestimation of the purely intellectual ideal of education must be contrasted with the general, eminent character of such craftsmanship. The uniform and harmonious development of all mental and physical abilities therefore takes on the form of a self-image.

Holistic education with individual talents also creates an urgent need for stronger learning. An elite education is not sufficiently pronounced in many countries and it should no longer be a

taboo. Systematic promotion of the strongest without the exclusion of the weakest is the decisive factor for the integration of all. Education must address all age groups. Lifelong learning must become the rule. The education policy must focus on the very young children (under 6 years) and the elderly (above 50 years).

This requires an educational system in which many paths are opened, which allows detours and offers the greatest permeability from preschool to university, which is necessary with diverse, equal and versatile possibilities for change and integration. Such a system, which enables the shaping of individual educational careers, must pursue individual education with comprehensive training, thus enabling the promotion of both strong and weak learners.

Such a development of educational policy is the key to shaping a fulfilled life and to the social integration of every young person. The improvements are also important in the interests of the economy, which is undergoing a complete change in the labor market situation. The qualification needs of companies are high and continue to grow, while the educational level of school leavers tends to fall. In addition to a sound command of basic cultural knowledge and expertise, personal and social skills are becoming increasingly important. There are already major deficits in all areas. E-education is becoming the biggest bottleneck for further economic development and at the same time the most important growth area. Accordingly, education is one of the outstanding goals of the EU strategy "Europe 2020".

The qualitative problems are strengthened by a substantial intensification of quantitative constraints. For demographic reasons, in the future the number of retiring persons on grounds of age will be considerably higher than the number of younger people who come to work.

With the exception of Sweden, the population of working age will decrease in all the Baltic Sea region countries by the year 2030. At the same time the demand for labor is increasing, and there is a fierce competition for qualified trainees. As a result, there is a great threat of a shortage of skilled workers especially for the SMEs which may be pushed towards lower levels of qualification.

The small and medium-sized enterprises in the Baltic Sea region in principle have the very best opportunities for growth. To exploit the opportunity, however, they require a sufficient number of qualified personnel, which is already hard to obtain due to the beginning shortage of skills. These shortages are particularly serious because the trend is the growing importance of knowledge-intensive industries and services associated with a growing need for skilled workers. In the area the knowledge economy in the Baltic Region there are good initial structures and a considerable development potential. "Knowledge" is the crucial future resource.

In order to overcome the serious bottlenecks and to use the distinctive opportunities better the use of the domestic labor force potential in the Baltic Sea region countries is needed. For example, on the basis of the acquisition rates of women in Sweden, participation of women can be increased considerably in different Baltic States. The creation of family-friendly workplaces is a vital prerequisite. Great potential exists also in the labor force participation of older people. Rigid age limits will differ from the ones included in flexible working arrangement. The limitation that people have to retire with a certain age will lose its strictness and flexible transitions will be made over the limit of seventy years of age. The retirement age will be in the long run prolonged and will approach the limit of 70 years. Perhaps the greatest potential

exists in the area of social and learning disabilities that were previously excluded, temporarily or permanently, and which can be integrated by means of targeted qualifications.

As important as this measure may be, they will not be sufficient. We will also need a targeted immigration policy to attract skilled professionals from States outside of the Baltic Sea Region. As the labor market situation in most European States is similar, among the nations the increasing competitive factor is emerging, which can only be decisive in the case of correspondingly high attractiveness. Relevant conditions affect in particular outstanding learning opportunities and diverse labor markets. The societies in the Baltic Sea states must open up for multicultural challenges.

Education is the key factor for overcoming the quality deficiencies, for the activation of the local potential and for recruiting qualified migrants. Qualification determines the competitiveness of individuals, enterprises and regions. Securing trainees with good qualifications and high level of innovation is a question of survival for SMEs in the Baltic Sea region and the most important support task, which also makes the improvement of educational policy the most important future task. In this case the design needs to be implemented in such a way that a Baltic-wide educational policy strengthens particular countries and the whole region at the same time.

3.3 Objectives and strategies in the vocational educational policy in BSR

Within the framework of school education, it is still necessary to provide students with comprehensive information concerning the possibilities of vocational training, particular professions, requirements and future opportunities. Close contact with companies and institutions of economic self-management, presentations of companies, masters and trainers facilitate the information and identification process. Repeated internships and experience in entrepreneurial skills should be mandatory for all students.

The guidance requires significant intensification. This should be addressed not only in formal entry requirements and conditions such as school degree and grades. More important is the development of job-specific competency profiles, which are then compared with the carefully determined individual skills of each young person. Also, a careful consultation and preparation for vocational training must achieve a significant reduction of too high ratios of exchanges and dropouts in professional training.

Different levels of performance and eligibility criteria should be set for the whole Baltic Sea region as a basis for individual competence assessment and analysis of potential and then approved to be transparent. These criteria help trainers and trainees, and the companies to get employees who are ready for the performance of the task and develop a sense of achievement in the case of young people who can be thus motivated for further work. The high number of dropouts and the risk of dead-end jobs will be significantly reduced. Vocational training must adequately take into account individual skills and capabilities and require extensive differentiation.

Through the introduction of different levels, young people from different educational backgrounds, with different competences and learning progress can have an opportunity to obtain education which matches their specific skills:

- Level 1: The specific vocational training for weaker learners for a period of 2 years, which enables practical learning, is concluded with an independent, recognized qualification.
- Level 2: Intermediate vocational training with the teaching of theory and practice for a period of 3 years and a recognized qualification as a skilled worker or journeyman.
- Level 3: Vocational further training courses for the study of skills with a duration of 3 - 3.5 years, which impart additional qualifications or training to be preferred in initial training and are concluded with recognized qualifications beyond the current vocational or journeyman's examination.

Such a differentiated vocational training system requires a high degree of permeability. Every graduate at a lower level must have an unlimited opportunity to reach a higher level in accordance with his or her learning progress and actual performance, taking into account parts of the training already completed. And vice versa, there should be an exchange of courses of a higher level for courses of a lower level, taking into account the training periods already covered.

In an open and transparent system gradual learning according to individual skills and potential is realized in every respect. Depending on the learning achievements and developments, each individual can achieve in principle the completion of education and training, although in different ways.

Also, in vocational training every young person deserves a second chance. This requires specific actions of preparation and promotion which need to be developed and implemented in close co-operation with enterprises, inter-company training workshops and vocational schools.

Vocational training should preferably ensue in the dual system which combines practical training in the enterprises with accompanying theoretical courses in vocational schools and ends with a recognized vocational education degree. For school-based vocational training, practical learning activities under field conditions and corporate learning times should include at least 50% of the total training time.

The mediation of theory should be possible alongside the practical training. In the case of larger theoretical issues which require related presentation, longer teaching blocks can be chosen to provide theoretical training to a certain extent.

The teaching of the theory (vocational schools) and practice (companies) requires close coordination and integration. Vocational schools also in this case have to prove that they have a very high degree of responsibility and flexibility and the content as well as the presentation forms (block or day classes, block lengths, project work, etc.) should be designed in a way specific for a given profession and in cooperation with enterprises. Vocational schools should be worn with a public funding from the economic self-government, at least the chambers have to be heavily involved in the management of professional schools. In doing so, intensive contacts to enterprises will be made resulting in cost-reduction and concurrent increase of

quality. If a sponsorship of vocational schools by economic self-administration is not feasible, enterprises or their representatives of the economic self-governance have at least to be involved in an instrumental way in the design and implementation of the tasks of vocational schools.

Vocational education must qualify for the future requirements of employment. The superiority of the dual system is based – among others – on the fact that large parts of the education take place in the enterprises. Thus, there is a permanent orientation towards the actual and future economic challenges. Accordingly, school-based vocational training requires intensive contacts with enterprises. The teachers in vocational schools must cooperate intensively with the enterprises and should do internships in enterprises on a regular basis as well as realize intensive further education.

An internship abroad already during the studies needs to be further supported. In addition to the general broadening of international experience, gathered intercultural competence is strengthened, contacts are made, and work methods and practices are learned abroad. Parts of the training acquired abroad, and the periods of learning must be fully recognized for the vocational training in their home country.

The vocational qualifications of all the three levels must be proven in national examinations. On this basis, the system of professional training and the examinations will be transferred in the entire Baltic Sea area, just as a sovereign function of the chambers as responsible institution for vocational education. The acquired qualifications require mutual recognition in the Baltic States.

For this purpose, the development of the European Qualifications Framework (EQF) and a European system of credit points is conducted. These approaches are based on transparency and mutual trust. The focus is the qualifications of skills of stronger learners and learning outcomes. In the implementation it is particularly important to provide non-bureaucratic systems, which would document acquired skills and competencies by certificates of the international recognition and equality, encourage continuous learning, facilitate education and activities abroad and to motivate as well as facilitate the enterprises which are liable for their personnel decisions, provide information and transparency. The chambers in the Baltic Sea region can - on the basis of a stable trust - perform the implementation of unbureaucratic systems and a full introduction of a pioneering role and so reach innovation projections.

Not only the formal learning and knowledge, but also informal learning and skills of stronger learners acquired during training are crucial for a high level of qualification. They should therefore be documented in certificates, as well as assessments of enterprises and self-assessments. The Euro-Pass constitutes an orientation basis, which encompasses personal skills, competencies and recognized qualifications; it can be completed on the basis of the demand and should receive intensive support from the partners from the Baltic Sea Region.

The measures outlined above can also serve to enhance and increased attractiveness of the vocational education. In order to achieve these objectives complete outstanding permeability between vocational and higher education with recognition of competencies acquired earlier is needed. A Vocational degree including professional activity of 2 - 3 years should entitle to higher university education in all the Baltic States.

Furthermore, all measures of quality improvement and assurance taken in the professional training and comprehensive information and image campaigns need to be conducted. In this context, it is also necessary to highlight and clarify the immense nature of general education and vocational training, which demonstrates that particularly within vocational education a new elite of responsibility will be created and an elite promotion of achievement of all sorts of educational attainments and professional activities needs to be implemented.

Young people and their parents must be aware that facing the large and increasing proportion of university graduates professionals and managers who have completed vocational training as the most limited factor and therefore in comparison to many academic degrees they have the best future prospects. However, vocational training may not lead to dead ends, but must be justified in an open and totally transparent system of continuous further education and university qualifications.

Further vocational training does not require government regulation and should be primarily the responsibility of the industry and its local self-administration. Employers and employees need to recognize much greater extent of the high and growing importance of training and heavily invest in it. In this context, new models of burden sharing should be developed, in which for example the enterprises bear the cost of the training, and the employees can have their leisure time.

However, in general further vocational training requires intensive professional development and in particular some improvements. This includes various approaches, for example:

- Systematic development of certified training modules that can be combined and lead to accredited training qualifications.
- Creation of training professions and professional development of horizontal career paths.
- Establishment of equality of educational pathways and degrees of vocational, general and university education.
- Full permeability and enhanced links between vocational education, further training and general education, and in particular university education. Vocational training needs to be taken into account in relevant disciplines of study.
- Promotion of international exchange, implementation of professional activities and training abroad, while making the greatest possible transparency of the acquired skills.
- International recognition or equivalence of further education qualifications in the context of non-bureaucratic systems.

According to the regulation in Germany, the chambers in all Baltic Sea countries should maintain the authority of sovereign functions. The chambers should be able to issue official examination regulations with recognized degrees of further education programs (so called Chamber examination). Solely the chambers should be responsible for the examinations in further education programs.

The Qualification for Master Craftsmen has proved to be very successful. This qualification secures the theoretical and practical knowledge and skills of junior employees and managers. The Qualification for Master Craftsmen is essential for small and medium sized enterprises; it must be intensified and coherently provided in the entire Baltic Sea area. The Qualification for

Master Craftsmen must entitle to start academic studies. The obtained qualification during the Master Craftsmen must be taken into account comprehensively for the study courses. It seems to be appropriate that achievements in the Qualification for Master Craftsmen will also be evaluated in Credit Points, which can then be taken into account for the study program. This creation of permeability will sustainably increase the attractiveness of vocational education in general and that of the Qualification for Master Craftsmen in particular. Any opening of the education systems with various educational carriers will satisfy individual affinities and abilities. Furthermore, it provides an opportunity to enterprises to meet the increased demand for skilled labor. It corresponds to the dire necessity that employees from outside the profession can work in craft-based industries and small- and medium sized enterprises.

Bachelor courses should be much more practice-oriented and offered as a dual system. So studying at the university would be linked to vocational training or practical work in enterprises. Vocational training is completed with a separate degree and in a certain scope would lead also to credit points which are required for passing the Bachelor examination. Dual study programs could be combined with the Qualification for Master Craftsmen. The achieved credit points must be taken into account completely for the Bachelor exam.

Within the framework of dual courses of studies, each student should be obliged to complete a part of their studies or vocational training abroad. Hereby, the focus should be laid on vocational training or employment in a foreign enterprise, since this

at the same time allows making contacts between enterprises.

Colleges and universities need to cooperate in teaching and research much more closely with small and medium-sized enterprises. Dual degree programs can contribute significantly in the future to meet the high and growing demand of young entrepreneurs, managers and of professionals who have both practical and sound theoretical training. This training partnership between enterprises as well as colleges and universities is also an ideal starting point to knowledge sharing, technology transfer and implementation of practice-related research and development work.

Further decrease in transport and communication costs increases the mobility of production factors. Enterprises migrate to locations with high potential of professionals and workers, to locations with attractive educational opportunities and diverse labor market.

The local competition for (highly) skilled workers and capital is as a result more intense.

Education programs are a key competitive factor. Education policy, therefore, enhances to a large extent the overall location, regional and spatial planning policy.

Education promotes innovation and competitiveness and includes the main support task for small and medium enterprises. Education policy must be organized and have the highest priority over other types of policies. Understood in this way Baltic-wide concerted education policy must

- increase the competitiveness of the entire Baltic Sea Region.
- promote and develop human capital and the existing advantages and strengths.

- specifically develop individual sub-regions, and optimally support the competition between locations within the Baltic Sea region in order to support the best educational opportunities and qualified professionals.
- together with the overall attractiveness and competitiveness of the Baltic Sea region compared with other regions, increase migration of workers and enterprises.
- be enshrined in the EU Baltic Sea strategy and have priority.

Politics, economy and society of the Baltic Sea region must address their outstanding position of education policy and it is necessary to recognize that the investment in human capital is the safest and brings the best profits.

4. Recommendations for the transfer and implementation of dual vocational training in countries with school-based vocational education

4.1 Introduction

Vocational education and training is no longer as attractive as it used to be. Particularly in countries where vocational education is predominantly school based, many young people perceive it as a dead end, and participation rates have reached alarmingly low levels. Consequently, most students only undertake short in-company internships – if at all – so that the amount of work-based learning is usually very limited. This results in high unemployment rates: in fact, insufficient vocational qualifications lead to permanent unemployment, with rates in some countries as high as 20% for people with only primary and low secondary education.

At the same time, companies complain about the inadequate qualifications of students. School-based professional training cannot fully take the conditions of the labor market into account and fails to adequately address the qualification requirements of companies. Students learn too little about everyday working life and school lessons are ill-equipped to impart the necessary personal and social skills, which are becoming increasingly important.

As a result of demographic change, the number of school leavers is declining significantly in all Baltic Sea countries except Sweden. By 2030, the number of 15- to 44-year-olds in the work force will decrease by up to 25%. Most countries are already experiencing a shortage of skilled workers, with increasingly severe effects on their future economic development. At the same time, they are confronted with alarmingly high youth unemployment, not least due to a lack of or insufficient vocational qualifications.

In the competition for new talent, SMEs are in danger of losing out. Due to a lack of qualified staff, SMEs are already much less innovative today than they could and should be. A shortage of young entrepreneurs, managers and skilled workers is the main factor limiting the growth of SMEs. Raising the level of qualifications while at the same time eliminating the shortage of skilled workers is of utmost importance for the promotion of SME innovation, competitiveness and growth.

Against this background, it is crucial to reconcile:

a) the integration of young people and the reduction of youth unemployment with

b) the provision of qualified staff for SMEs and a significant reduction in the shortage of skilled workers.

In the German system of dual vocational training, which leads to comparably low unemployment, companies share responsibility for growing their pipeline of skilled workers. As such, this system is much better at combining vocational training with the companies' own needs

and those of the labor market and can therefore make a major contribution to long-term success. However, the German system should not be misconstrued as a "one-size-fits-all" model that simply needs to be transferred. Any attempt at transferring and implementing it requires thorough preparation and needs to be adapted to the respective regional/national conditions. However, the basic principles of the dual model should be retained as much as possible – any "work-based learning" whose only vocational component consists of in-company internships (whether long or short) is by no means sufficient.

Within the framework of the project "Thee-level Centres of Professional Excellence: Qualification, Entrepreneurship and Innovation in the Green Economy (3LOE)", work-based learning is to be realized in initial vocational education and training, continuing vocational education and training and higher education (EQF Level 3 - 7) through the implementation of dual education systems. As a basis for this comprehensive work, the following

- Recommendations for transfer and implementation of dual VET are summarized below.
- Attached are presentations on "The essence and benefits of dual systems" and on "The VET system in Germany", which serve information and guidance purposes for the introduction of dual systems.

4.2 How to inform companies and qualify them for dual systems

In order to implement dual systems, it is particularly important to involve companies in the vocational education process. As a first step, it is important to provide them with comprehensive and in-depth information about the nature of dual systems (presentations on these topics are attached to this document).

Companies need to become aware of the responsibilities and the tremendous benefits that the dual system will bring for them. In school-based vocational education, the state bears all training costs; in dual systems, by contrast, companies cover most of the costs themselves. Companies thus tend to focus on this additional financial burden without being unaware of the potential benefits, which only materialize with a delay of several years. For this reason, many companies only want to participate in dual training schemes if they receive remuneration from the state for the training they provide. However, companies are inherently responsible for educating the next generation of skilled workers and for investing in their training, and governments should not absolve them of this responsibility. Therefore, governments should, under no circumstances, reimburse the training expenses of companies. If such public funding is necessary to increase the willingness of companies to participate and to create sufficient in-company training capacities, the business sector should be put in charge of designing and administering a pay-as-you-go system. At most, governments should reward companies for the training services they provide by giving them preferential treatment when awarding public contracts.

One particular obstacle in countries with predominantly school-based vocational training is that companies have little experience and qualified training personnel at their disposal. To eliminate this bottleneck, "training of in-company trainers" should be conducted in as many companies as possible before dual systems are introduced – and on a continuous basis thereafter – in order to prepare them optimally for their implementation. As part of the present project, two such training courses – which companies can also use independently of vocational training activities to improve their communication, cooperation and workflows – have been developed, tested, evaluated and implemented in various countries.

Self-regulatory bodies, professional associations and vocational schools play a key role in preparing and recruiting companies for dual vocational training and its implementation.

4.3 How to involve self-regulatory bodies and professional associations and qualify them for dual systems

Small and medium-sized enterprises are hampered by low management and information processing capacities. They thus need tailor-made services, without undue delays and from a single source. This makes networks especially important for them. Unlike large corporations, they cannot afford to have in-house staff functions that handle a wide range of corporate management tasks. In the SME sector, such staff functions and support tasks therefore have to be outsourced. Self-regulatory bodies and professional associations thus act as central service providers, offering SMEs tailor-made, reliable assistance and funding from a single source, which translates into services of clear monetary value.

Self-regulatory bodies and professional associations have to provide companies with comprehensive information, encourage them to participate in dual vocational training and provide them with advice and guidance during the implementation process. In addition, they need to represent companies' interests vis-à-vis the relevant political, administrative and educational bodies and participate in the development and continuous revision of curricula and training regulations.

After all, their tasks also include informing and advising young people about vocational training opportunities, maintaining placement exchanges, placing young people in apprenticeships and acting as mediators in cases of conflict between companies and trainees. Consequently, the self-regulatory bodies and professional associations need to be prepared to perform these diverse tasks, and they must be involved at an early stage before dual vocational training is introduced. To this end, specific Train the Trainer programs have been developed, tested, evaluated and implemented as part of the 3LOE project, which are available free of charge.

As self-regulatory bodies, Germany's chambers of commerce and industry are of special importance: they are responsible for vocational education and perform statutory functions in this field. When implementing dual vocational training, the self-regulatory bodies should, wherever possible, be structured as public-law corporations that, in addition to organizing and shaping vocational education opportunities, also perform statutory functions on behalf

of the government. As a minimum requirement, they should be in charge of conducting the intermediate and final examinations in vocational education.

4.4 How to prepare and qualify vocational schools for dual systems

Due to demographic changes, the number of young people is declining steadily. At the same time, vocational education has lost much of its appeal, with the result that the proportion of young people in vocational training has dropped to alarmingly low levels, while the share of young people with matriculation exams and university enrolment rates are constantly rising. As a result, the number of people in vocational training has dropped sharply, with the effect that more and more human resources, facilities and technical capabilities are being freed up in vocational education. Vocational school-teachers' fear of losing their jobs is a major inhibiting factor when it comes to the necessary reforms.

Given the status quo situation, the departure of some teachers from vocational schools and the conversion of existing facilities and technical capacities is inevitable. Under status quo conditions, the introduction of dual systems in countries with school-based vocational training would lead to a significant increase in the number of teachers being laid off. While 80 to 100% of the training time in school-based vocational education is spent in school, this share drops to 25 to 30% in dual systems. However, the large-scale release of these capacities should be seen as an opportunity, given that they are urgently needed for new tasks in vocational education.

Close, constructive cooperation on an equal footing between the companies providing training and the vocational schools is of crucial importance in order to ensure direct communication, a high level of flexibility and rapid adjustments. Dual systems require close cooperation between the vocational schools and the companies providing training. Vocational school-teachers have to win over companies for in-company training, advise them continuously on how to implement it and coordinate the theoretical education provided at their schools with the practical training inside the companies.

Where possible, theory should be taught in parallel with practical training. If more comprehensive theoretical topics require continuous teaching, the latter can be sched-uled in longer blocks that, to a certain extent, function as basic theoretical training. Vocational schools have to display a high degree of flexibility and personal responsibility in order to tailor the content and formats of their courses (teaching in blocks or day classes, block lengths, project work, etc.) to the specific requirements of each profession, always in close coordination with the companies themselves.

Dual systems of vocational education and training inevitably require close and seamless co-operation between the two places of learning – companies on the one hand and vocational schools on the other. In the framework of this cooperation, vocational schoolteachers also have to undergo regular training and longer work placements with companies in order to gain in-depth knowledge of their needs and to strengthen the partnership.

Yet another new and important mandatory task for vocational schools is the provision of vocational guidance for young people, which requires considerable strengthening and re-alignment. Young people often find it very difficult to choose an occupation or a course of study. They are hardly aware of their own abilities, have very limited information at their disposal, are not familiar with many occupations and know very little about the requirements, expected skills, etc. associated with various professions and the special conditions prevailing in SMEs. Young people often do not have access to sufficient information, and the opportunities for career and academic guidance available to them tend to be inadequate, given that they neither sufficiently consider their own individual abilities, nor the requirements of the labor market and the skills and qualifications needed for the various professions.

It is therefore very important to develop job-specific skills profiles, which can then be compared with the carefully identified individual skills of each young person. The often far too high transfer and drop-out rates can be significantly reduced through careful counselling and preparation for vocational training.

Comprehensive counselling and assistance in choosing an occupation should become one of the core tasks of vocational schools. In the framework of dual vocational training, the schools can harness their differentiated knowledge of the various occupations and the close contacts with companies that they inevitably need to build up to arrange work placements for their students.

Within the 3LOE project, a tool for vocational and qualification counselling is being developed, tested and evaluated, which is available free of charge to vocational schools and business organizations for vocational and educational counselling. A train the trainer programme will also be developed and implemented to train teachers and counsellors in the use of this tool.

Vocational schools should develop and implement specific integration measures for young people who are unable to obtain an apprenticeship even after benefiting from intensive counselling, support and the placement assistance of their teachers, following the success of the so-called Hamburg model, for instance. In this model, young people who require special assistance participate in a year-long professional qualification scheme, which makes their choice of occupation more secure, reduces dropout rates and significantly enhances their level of integration and their chances on the labor market.

With the exception of Scandinavia, all other Baltic Sea countries fall significantly short of the EU target of an annual further education rate of 15%. Further education rates are particularly low in Estonia, Latvia, Lithuania and Poland, due to a lack of staff, facilities and technical training capacities. As a second step in the introduction of dual vocational training, vocational schools, acting in cooperation with self-regulatory bodies and professional associations, need to offer a comprehensive program of further education for companies and their employees, which also needs to be properly designed and planned.

Through the introduction of dual vocational training, vocational schools should aim to transform themselves into centres of vocational excellence, based on a reliable regulatory framework that gives them a high degree of individual responsibility and planning security. These centres should be operated jointly by or in close cooperation between vocational schools, universities and self-regulatory bodies and, by performing all tasks relating to vocational training and the promotion of innovation, they can also act as growth engines for regional development:

Stage 1: The implementation and sustainable delivery of dual vocational training.

Stage: The implementation of vocational further education within dual systems, including master craftsman and technician training.

Stage 3: The implementation of dual bachelor's programs and innovation promotion programs.

In view of these important, far-reaching new tasks of vocational schools, the introduction of dual vocational education should under no circumstances lead to a reduction in their staff levels, facilities and technical capacities or to a reduction in public funding. On the contrary, public funding needs to be increased in order to modernize the vocational schools, bring them up to the latest technical standards, provide ongoing training for teachers and enable them to perform these wide-ranging new tasks. Teachers also need to undergo comprehensive further education in order to be able to perform these demanding tasks. And when it comes to filling new teaching positions, the aim should be to recruit the best teachers who should also receive competitive and performance-based salaries.

Prior to the introduction of dual vocational training, the management and teaching staff of vocational schools need to be fully informed and prepared. To this end, two "Train the Trainer" programs for vocational schools have been developed, tested, evaluated and implemented as part of this project, namely for

a) dual vocational education and career guidance,

b) conduct dual vocational training and

c) further vocational education, technician and master craftsman training,

which can be used free of charge.

4.5 How to transfer, implement and design dual systems

To facilitate the transfer of dual systems, the occupation-specific curricula, training regulations, teaching materials, examination rules, etc. should be translated into the national language, wherever possible, but should at the very least be available in English. Under no circumstances should the implementation be forcibly imposed. Instead, cultural factors and differences should be taken into account and promoted, with allowances for specific local conditions. The transfer recipients themselves should align and adapt the system to local needs,

aided by in-depth consultations with teachers who have extensive experience with dual vocational training in the respective field. At the same time, the dual systems and models of other countries should also be considered in order to make full use of best practices. Ultimately, the transfer recipients – the vocational schools acting in consultation with the companies providing training – must decide for themselves what they want to implement and in what form, while adhering to the basic principles of dual vocational training.

In each case, teachers with extensive experience in dual vocational training should monitor and evaluate the implementation process. Continuous improvement can be achieved if there is a constant feedback loop that integrates the evaluation results into the ongoing implementation process. As part of the present project, such evaluation concepts have been developed and successfully implemented, and these are available free of charge.

In order to create additional training places, it is also possible to organize joint pro-grammes in which two or more companies collaborate to train young people. If not, enough training places are available, the in-company training component of the pro-gramme should take place in an inter-company training workshop. Nevertheless, the participants should not be treated as students, but should receive a regular training contract like all other trainees, with the associated social benefits and (reduced) training allowances, which need to be publicly funded. At the same time, it is important to continue informing, qualifying and recruiting companies for participation in dual vocational training so that these young people are eventually able to transfer from the training workshop to a company placement. Workshops, company meetings, exchanges of experience and other forms of personal information offer excellent opportunities for companies not yet involved to learn from companies that are already providing training – there are no better multipliers than entrepreneurial success and learning from practical examples.

Programs for implementing dual vocational training should learn from mistakes made in other regions and be designed in such a way that they also eliminate existing problems.

In some countries where school-based vocational training is the norm (e.g., Lithuania), the training periods are extremely short and need to be extended in order to ensure comprehensive learning and in-depth practical experience.

Another problem – which also occurs in the German dual system – is that young people with learning difficulties are unable to obtain apprenticeship places or fail in their vocational training, particularly in the school-based theory lessons. The dropout rates are far too high and need to be significantly reduced. Vocational education and training must take sufficient account of individual skills and opportunities and requires a high degree of differentiation. By introducing different levels, young people with different educational backgrounds are given the opportunity to receive training that matches their abilities:

a) Level 1: Specific vocational training courses for people with learning difficulties with a duration of two years, which focus on practical learning and conclude with a recognized, independent qualification below the level of the skilled worker or journeyman examinations.

b) Level 2: Intermediate vocational training programs comprised of both practical and theoretical instruction with a duration of three years, which conclude with a recognized qualification as a skilled worker or journeyman.

c) Level 3: Advanced vocational education programs for fast learners with a duration of three years that either provide additional qualifications or integrate further education into the initial vocational training course and conclude with recognized qualifications above the level of the skilled worker or journeyman examinations.

Such a differentiated system of vocational training needs to ensure a high level of transferability. Students who complete a lower level of training must have the unrestricted right to attain the next higher level in accordance with their progress and performance while taking into account the training components that they have already completed. Conversely, it must also be possible to switch from higher-level training courses to lower-level ones while already completed training units into account. Open systems that offer full transferability enable step-by-step learning in accordance with individual abilities and skills. In principle, vocational training and further education qualifications are within anyone's reach, though there are different ways of attaining them, in accordance with learners' individual learning outcomes and personal development.

Annex

- Presentation "The vocational training system The Federal Republic of Germanys"
- Presentation "The essence and benefits of the dual system"

Presentation

The vocational training system

The Federal Republic of Germany

Language

English

The vocational training system

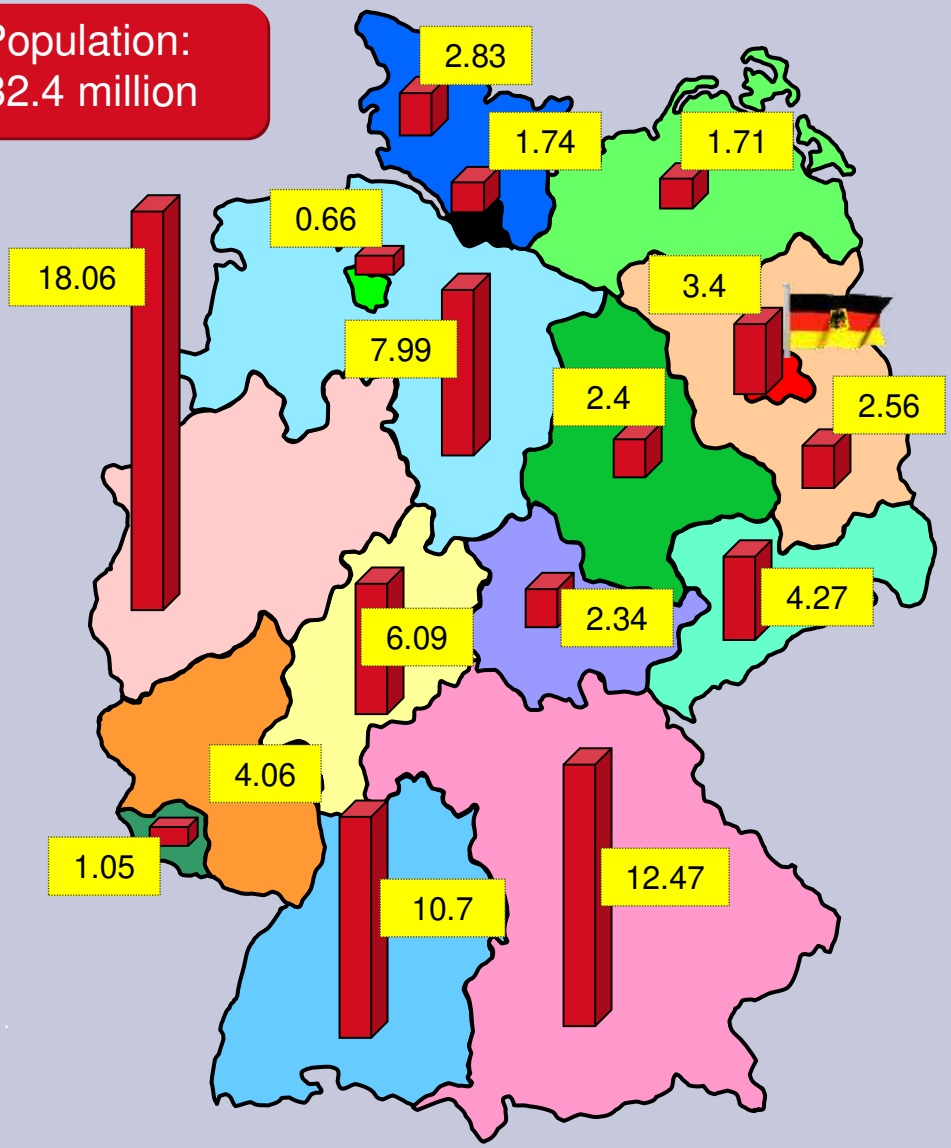
The Federal Republic of Germany

Presentation of the Hamburg Institute for Vocational Training

1. Education - Science - Culture
2. Parliament - government - Administration
3. Hamburg Institute for Corporate education.
4. Vocational schools Schulverfassung
5. Basic structure of the education system
6. The Dual System
7. Tests in the Dual System
8. The vocational Vollzeitsystem
9. Paths to the labor market
10. The working time of teachers

The federal states of the Federal Republic of Germany

Population:
82.4 million



1. Schleswig-Holstein
2. Hamburg
3. Mecklenburg-western Pomerania
4. Lower Saxony
5. Bremen
6. Brandenburg
7. Berlin
8. Saxony-anhalt
9. North rhine-westphalia
10. Hesse
11. Thuringia
12. Saxony
13. Rhineland Palatinate.
14. Saarland
15. Baden-württemberg
16. Bavaria

The responsibility of those countries in the Federal Republic of Germany

The ministers and senators of the 16 countries
are responsible for:

- Education
- Science
- Culture

Standing Conference of the Ministers of the countries in the Federal Republic of Germany

President

Plenary

Conference of the Landerminister

Secretariat of the KMK

School Board

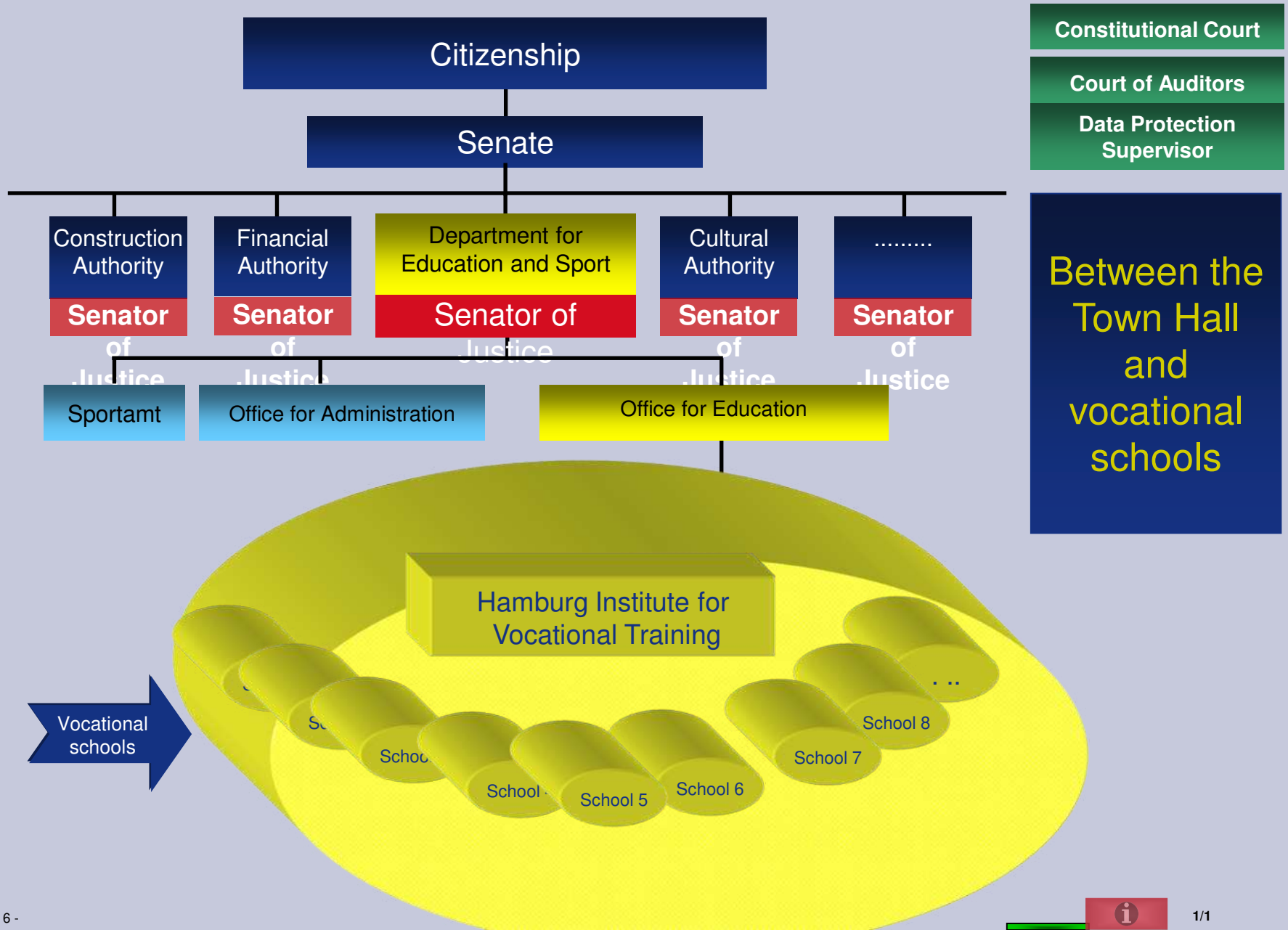
Committee on continuing and Training

Higher Education Committee

Committee on Culture

Standing Committees:
- International affairs - "Sport"
- Administration -
etc.

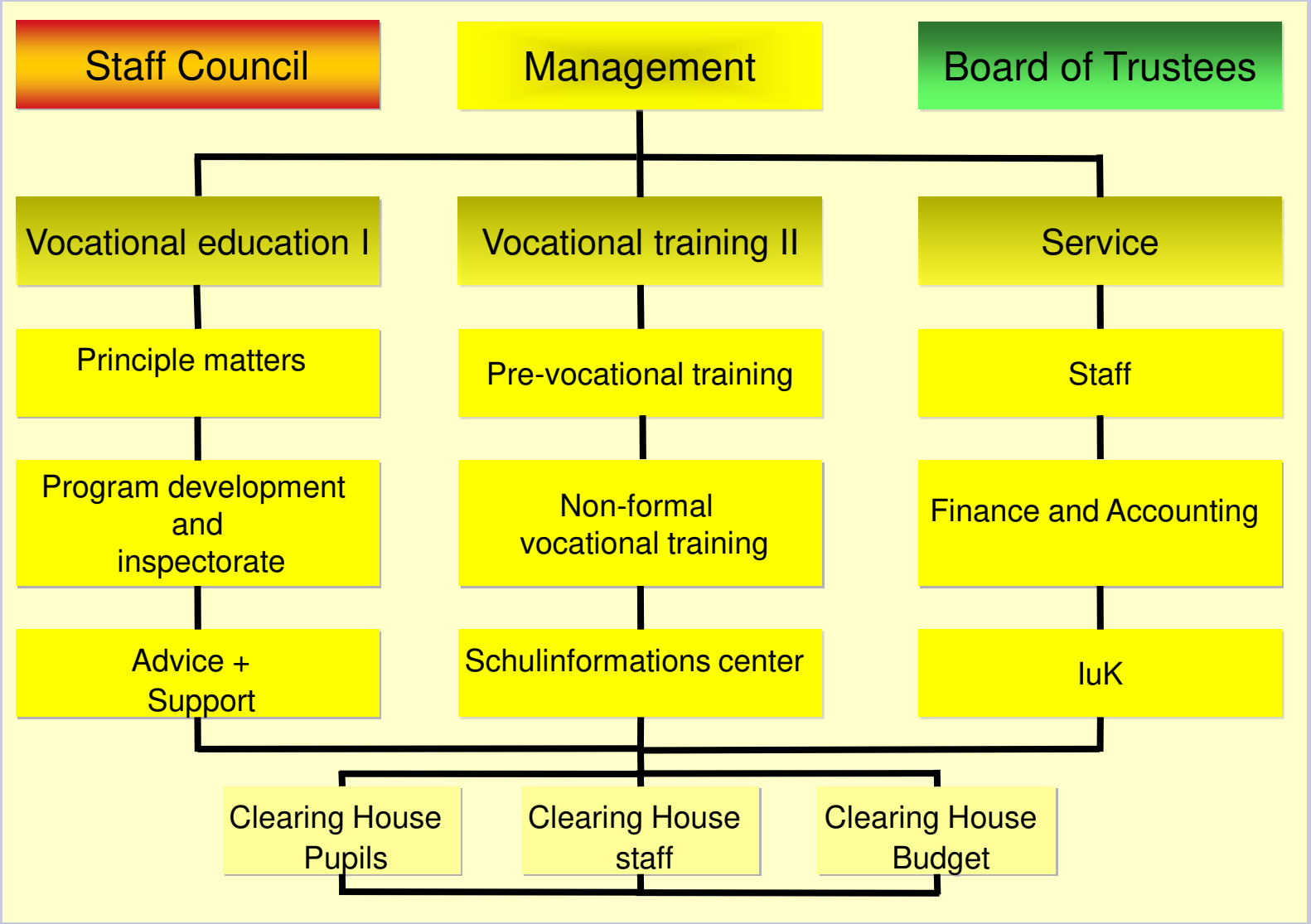
Free and Hanseatic City of Hamburg



Essential functions:

- Advice and support for vocational schools
- Control of the vocational schools
- Perception of the laws, regulations and attending anesthesiologist
- Decision on the proposals to the President of the competent authority for the order of line-staff for the schools
- Supervision of the school management
- Completion of the annual goal and service agreement with the competent authority
- Advice for pupils, parents and teachers
- Preparation of the business plan as well as the distribution of the single-budget to the vocational schools

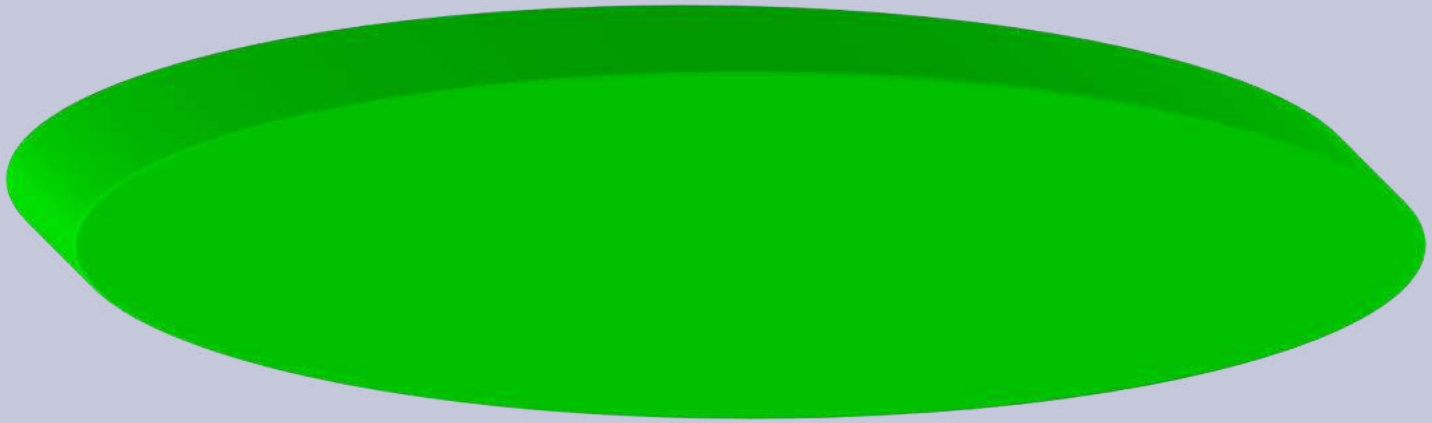
Structure - Organization chart



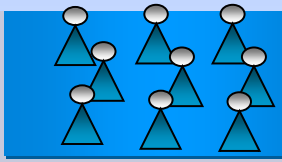
Hamburg Institute for Vocational Training (HIBB)

Management

Board of Trustees

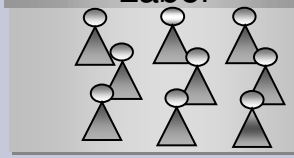


Head teachers from vocational schools



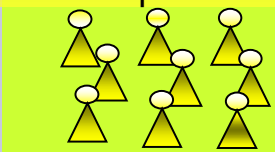
BWA

Department of Economy and Labor



BBS

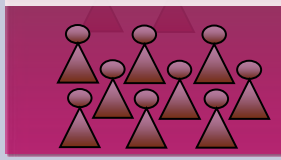
Department for Education and Sport



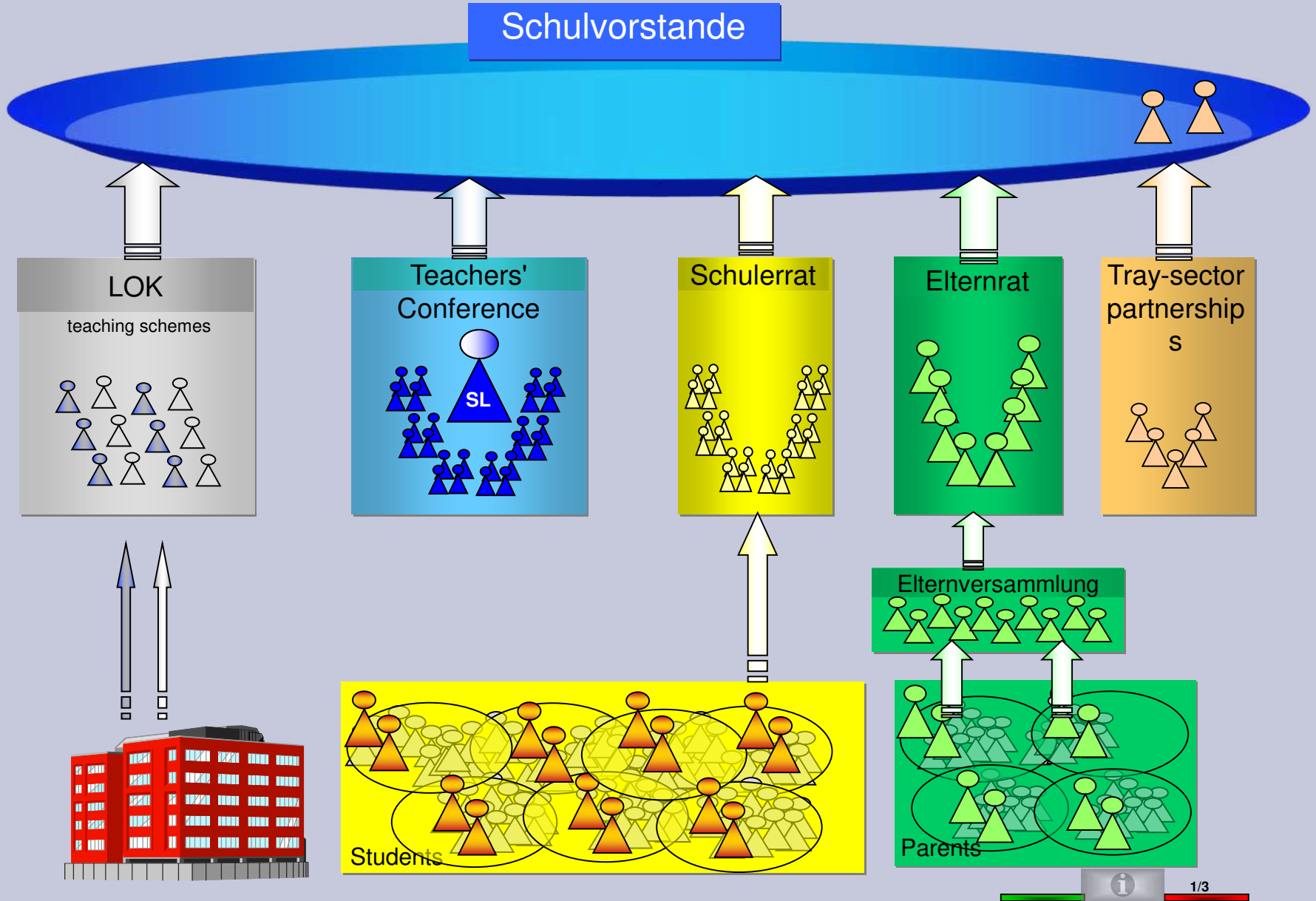
Representatives after BBiG

(Business Associations)

Representatives of the trade unions (advisory)



At vocational schools Schulverfassung



At vocational schools Schulvorstande

12. Basic goals and economic-to-day affairs of the school

- Goals, priorities and organizational forms of educational work in the context of quality management,
- The goal and performance Agreement,
- The principles for the use of staff and other resources in the context of its intended use as well as on the principles of the procurement and management of the learning aids,
- The business plan,
- The annual report.

2. Elements of the design of the school

- The rules of the house,
- The naming of the school,
- Principles for the operation of the school groups in the school.
- The implementation of Geldsammlungen among pupils and students as well as parents,
- The form of the consultation of the parents and pupils before the final decision-making on the certificates,
- The principles for implementing außerunterrichtlicher events, and the involvement in this matter of external,
- Principles for social measures.

Objectives and Tasks

Representatives from the establishments

1. In the further development of the training content and

participate in the quality

2. Operating and school knowledge each other

make available

3. The content of training between the

company and vote School

4. Participate in the development of educational

plans

5. The respective Schulvorstande in strategic issues, in particular for the orientation and organization of the training and
advice of major investment projects

+

Teachers from the Education

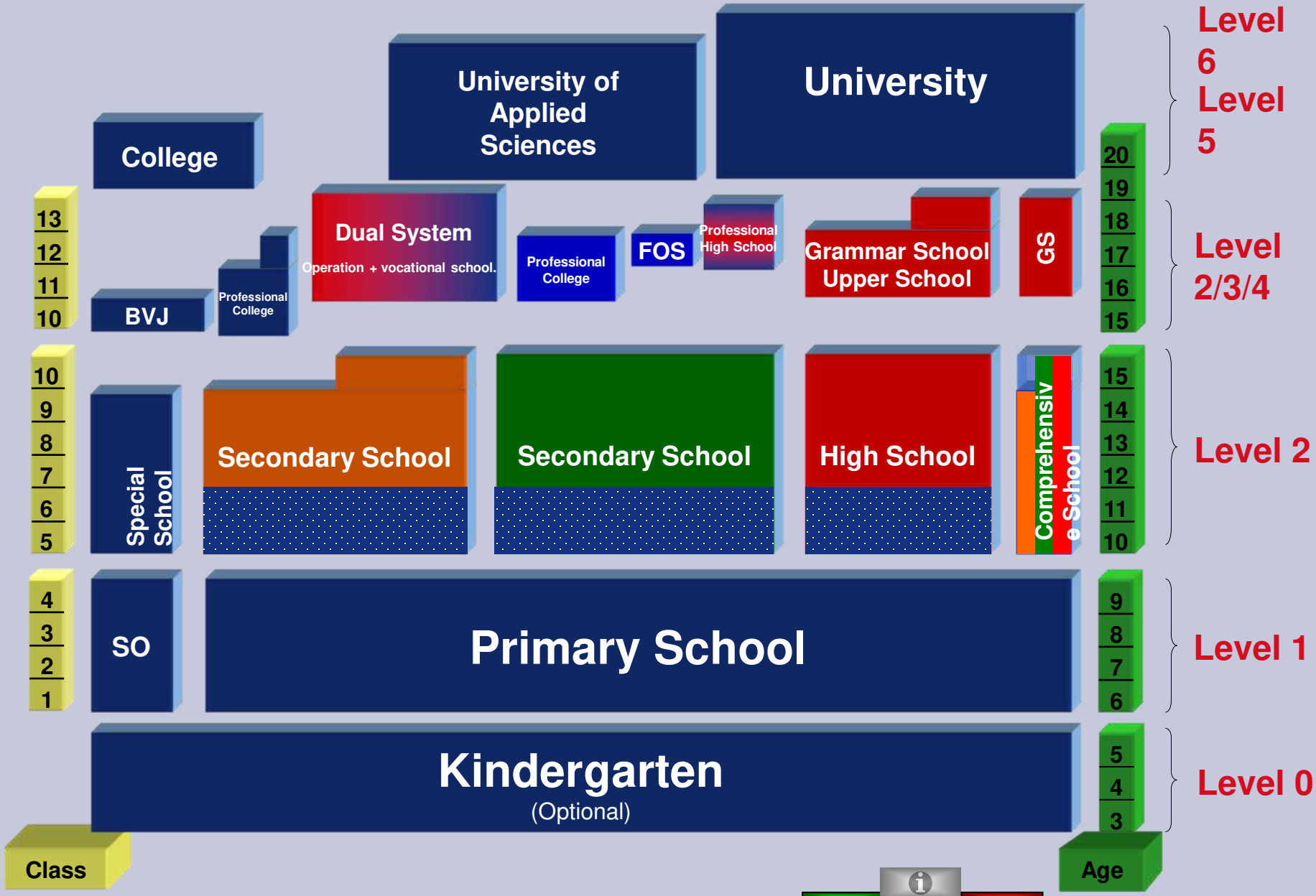
6. **Co-operation of establishments and school agree**

7. **Additional Qualifications and promotional
offers for individual pupils develop**

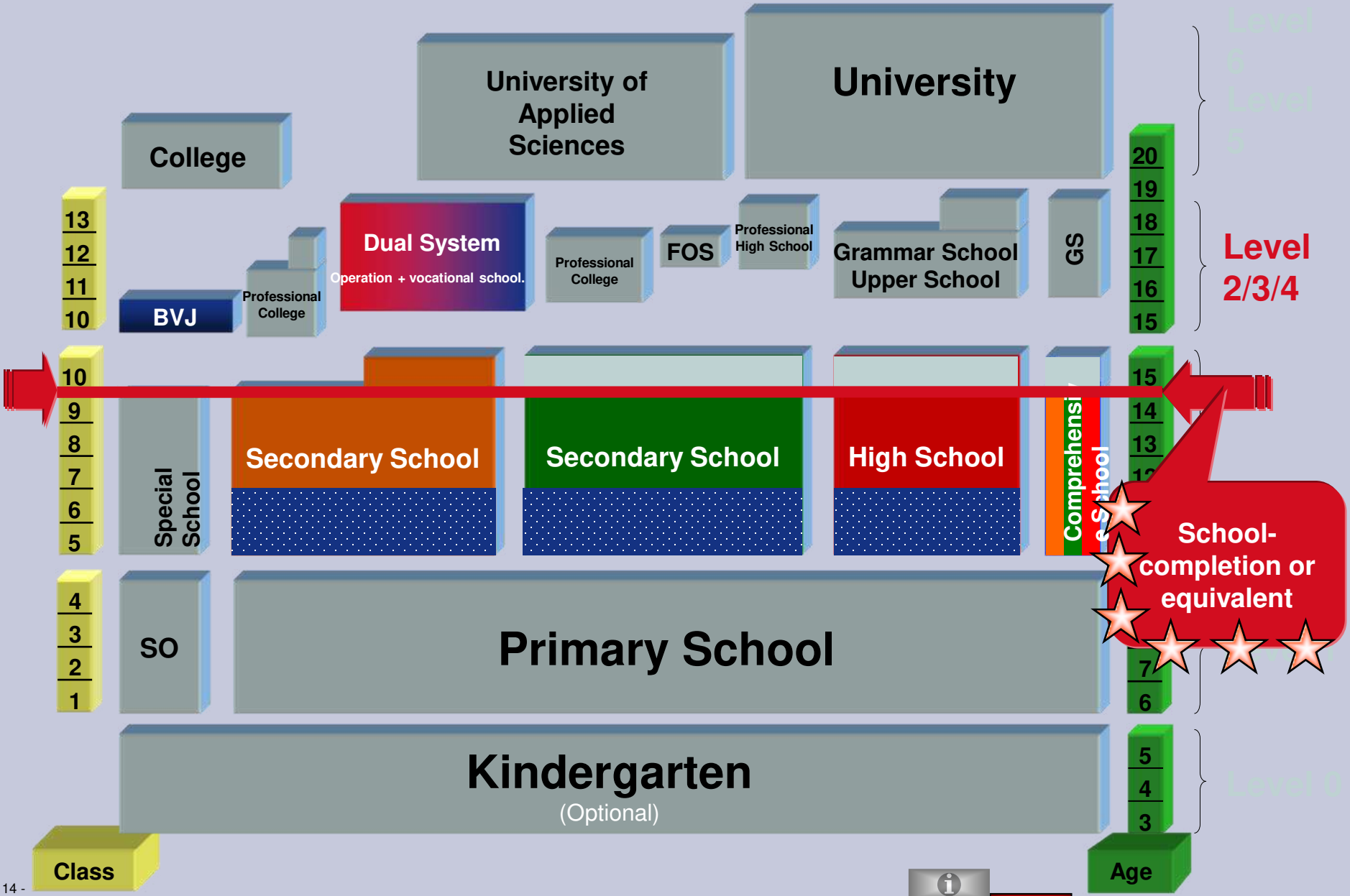
8. **Further details of the organization of the profession-school lessons, taking into account the requirements and the requirements of the overall system of vocational school agree**

= **The co-operation between enterprises and schools promote and
develop the quality of vocational training by means of agreements**

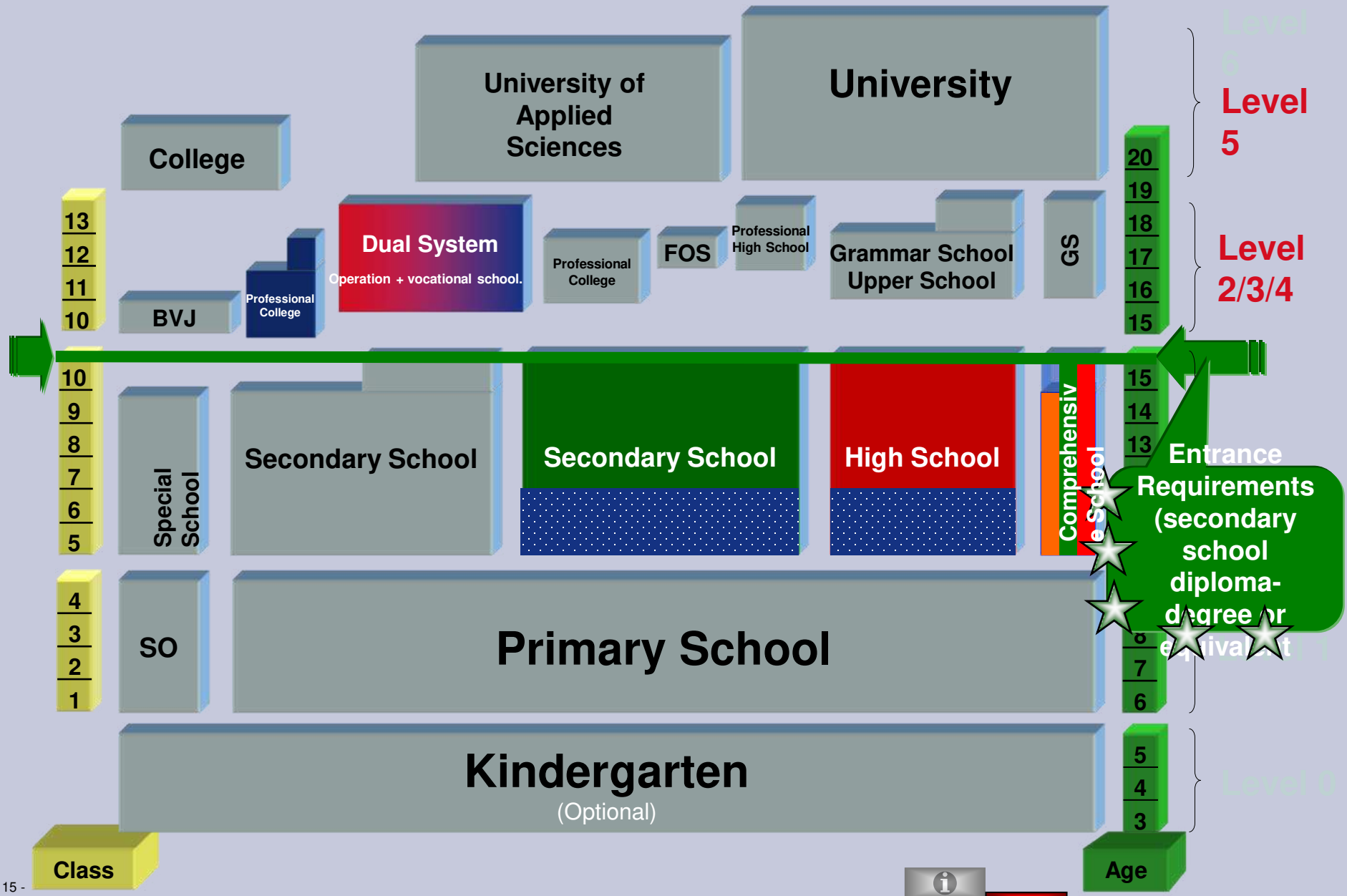
Basic structure of the education system in Germany



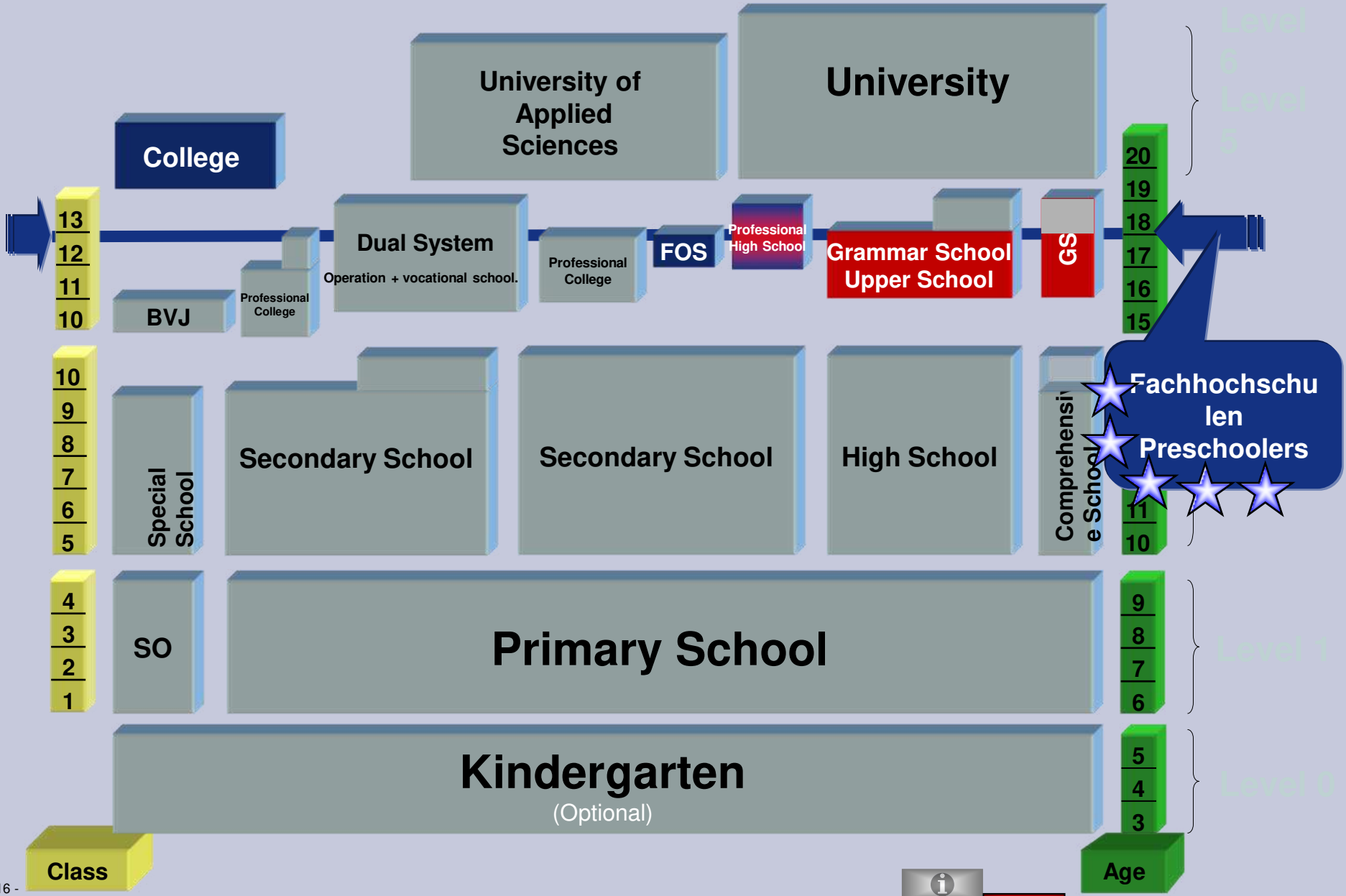
Receipt of the Hauptschulabschlusses - Min. 9 Years School



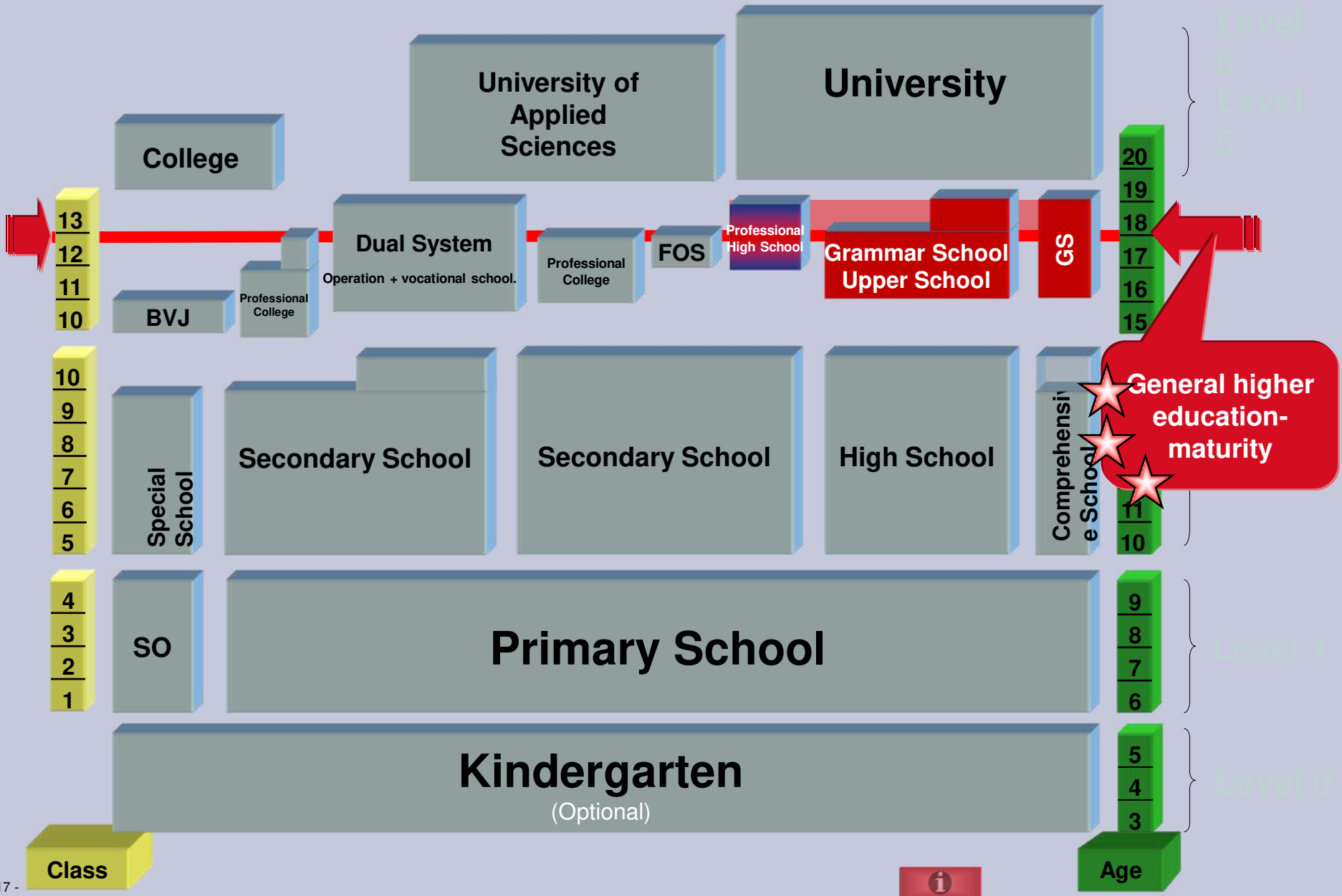
Receipt of the medium-sized attainment - Min. 10 Years School



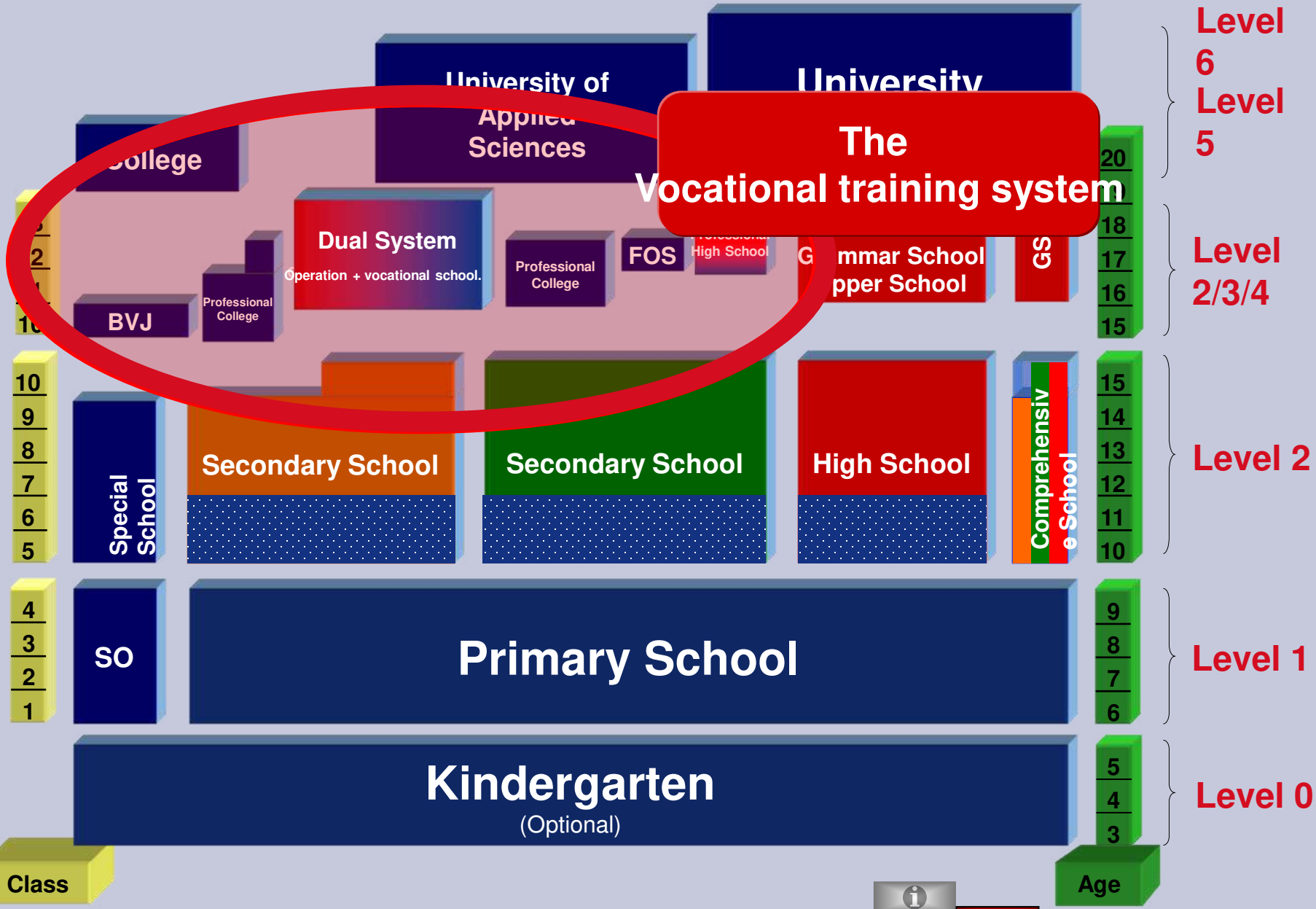
Receipt of the advanced technical college entrance qualification - Min. 12 Schooling



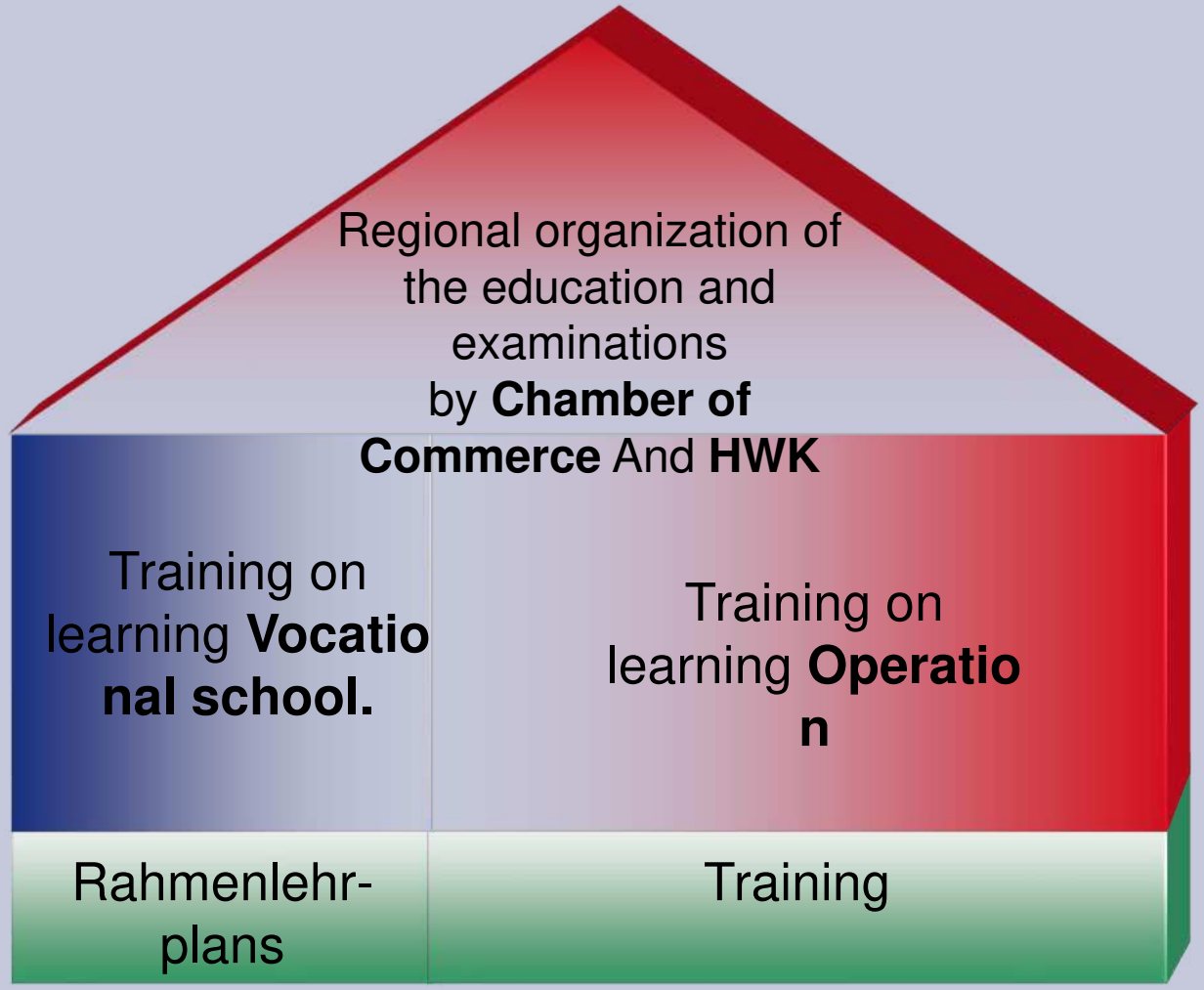
Receipt of the higher education entrance qualification (Abitur) - Min. 12 Schooling



Basic structure of the education system in Germany



Dual System: Overview - Organization



Tasks of the chambers in the Dual System

Advise

Establishments and Trainees

Monitor

Implementation of the training

Chamber of Commerce and Industry (IHK)

Chamber of Crafts and Trades (HWK)

Adopt

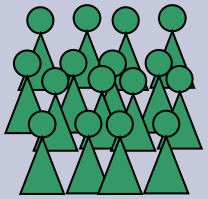
Examination Regulations

Check

Training, apprenticeship, trainers, trainees

On behalf of the State

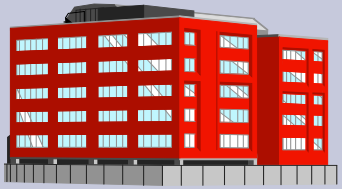
Dual System - Agreement Structure



Training Contract
Between

Exclude
Fine

Operated



Chambers
Registration + monitoring
Contractual compliance with

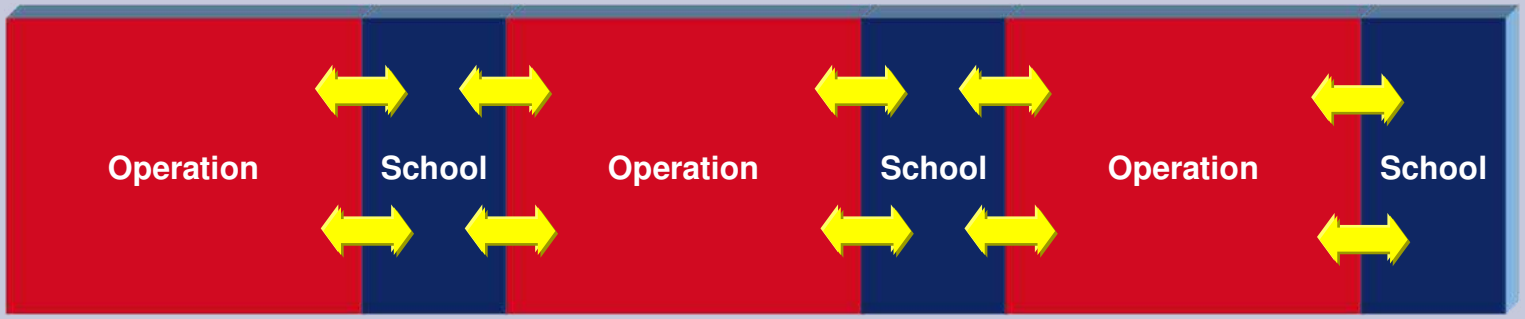
Dual System - Organization

Learning and Time percentages

Day Teaching
- An Example

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	So. .

Block Teaching
- Example -



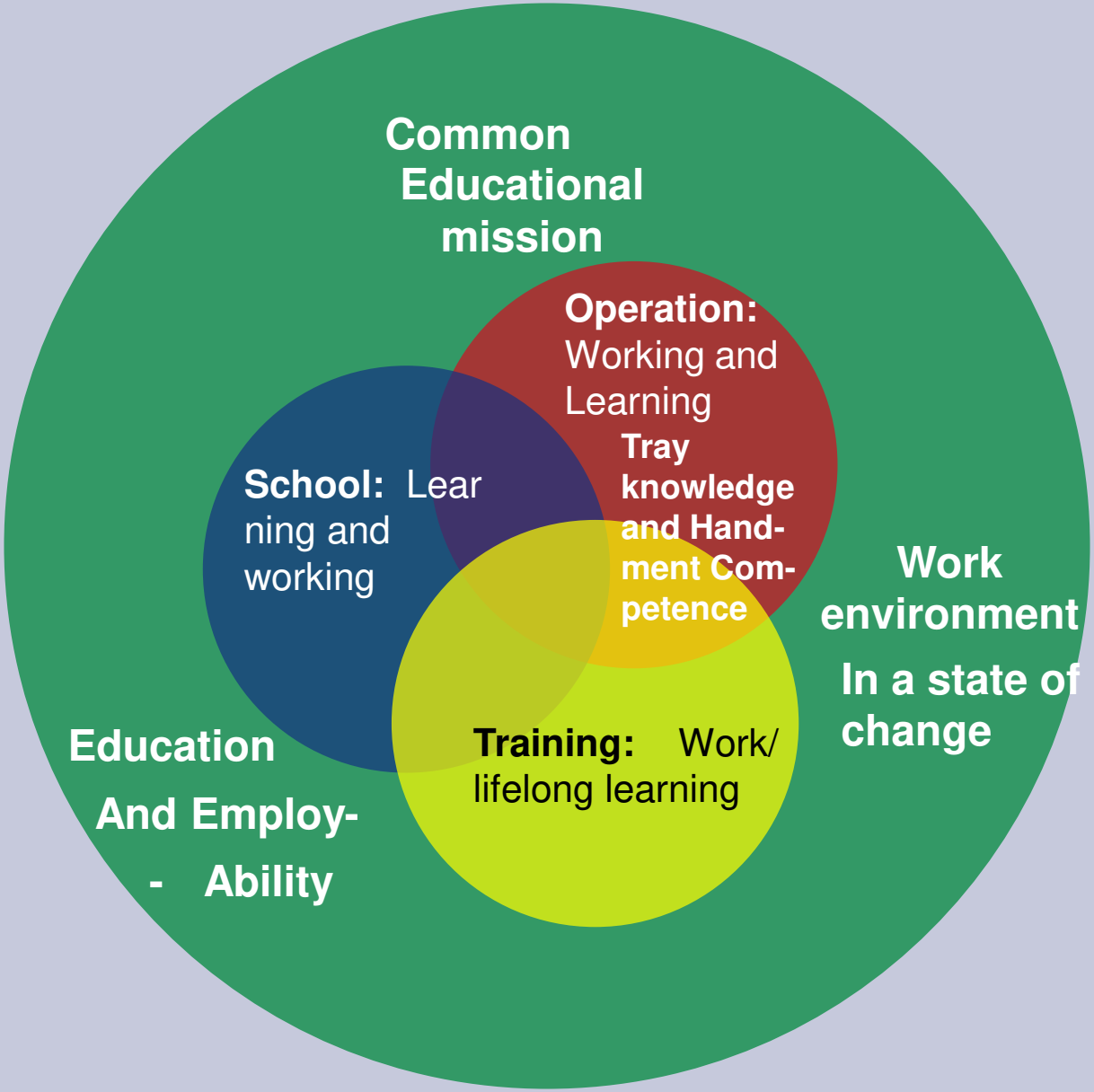
August	September	October	November	December	January	Feb ...

Percentage s

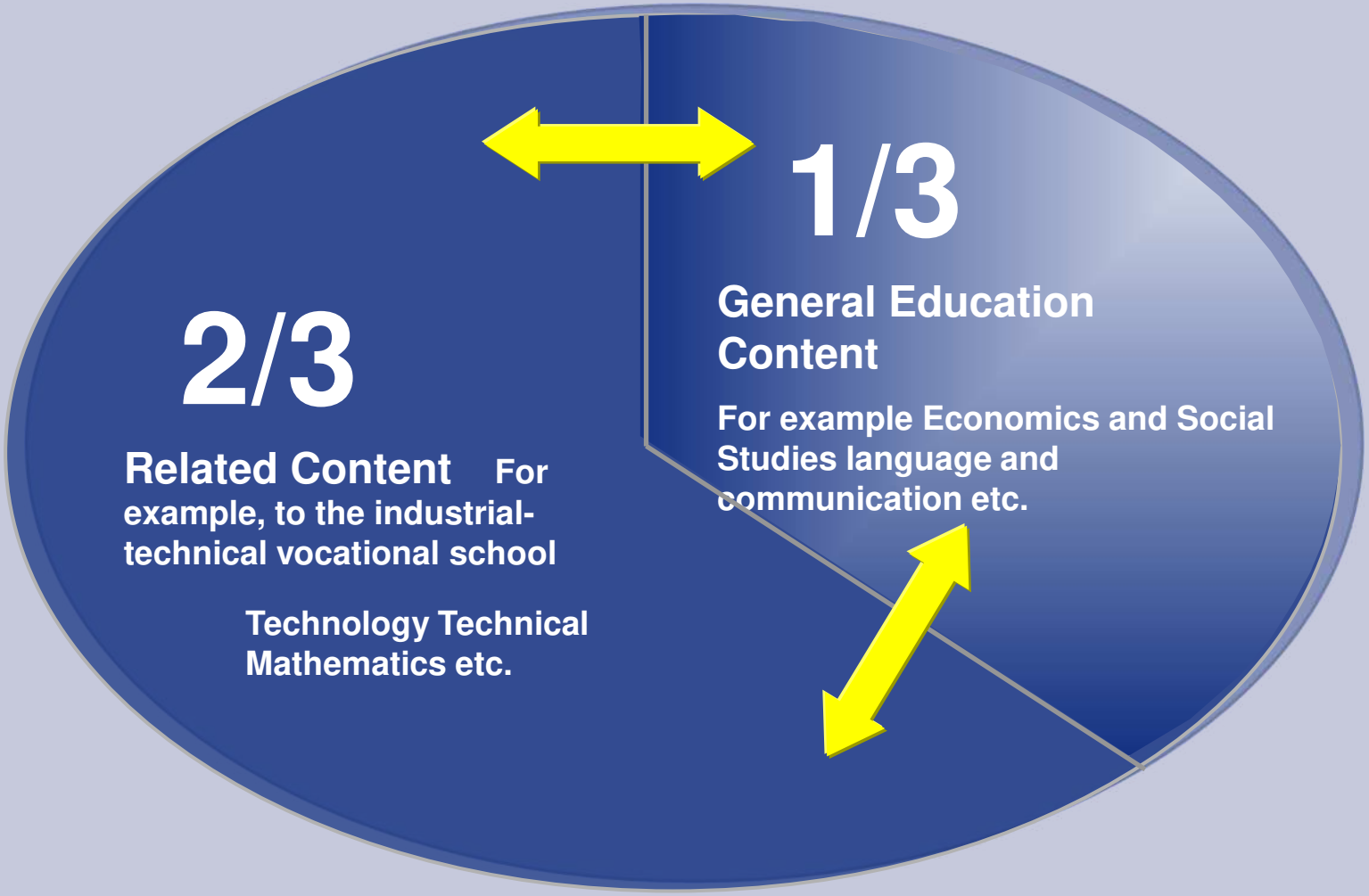
~ 70 TO 80 %

~ 20 TO 30 %

Basic elements of the Dual System



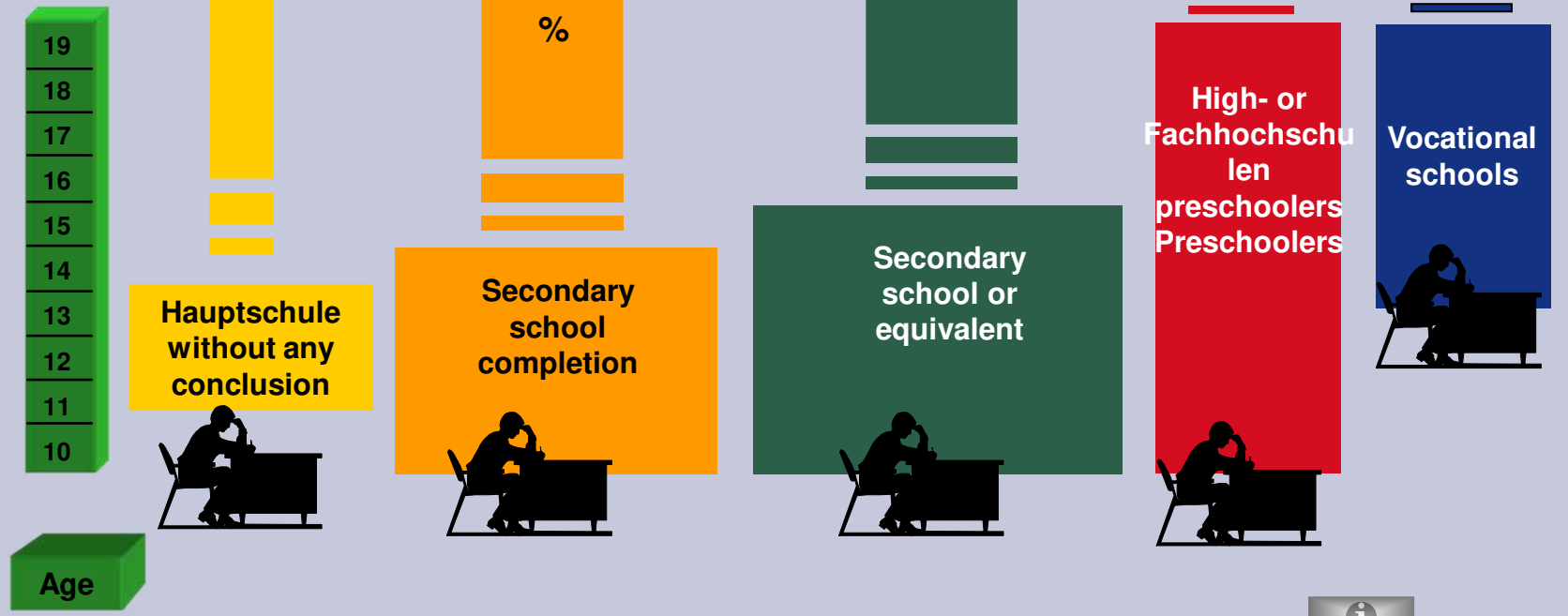
Content of the vocational school.



School education of trainees in 2004

Dual System

Operation + vocational school.



The ten most occupied occupations

1	Automotive Mechatronics Fitter occupational	21,955	6.6 %
2	Industrial mechanics (all disciplines)	14,072	4.2 %
3	Kaufmann in the retail sector	13,483	4.0 %
4	Koch	13,118	3.9 %
5	Mechanic sanitary, heating and air-conditioning technology	10,526	3.1 %
6	Electronics Technician	10,170	3.0 %
7	Carpenter	9,359	2.8 %
8	Painters and decorators	9,280	2.8 %
9	Wholesale and Foreign Trade	8,995	2.7 %
10	It specialists	8,015	2.4 %
	Total:	118,973	35.6 %

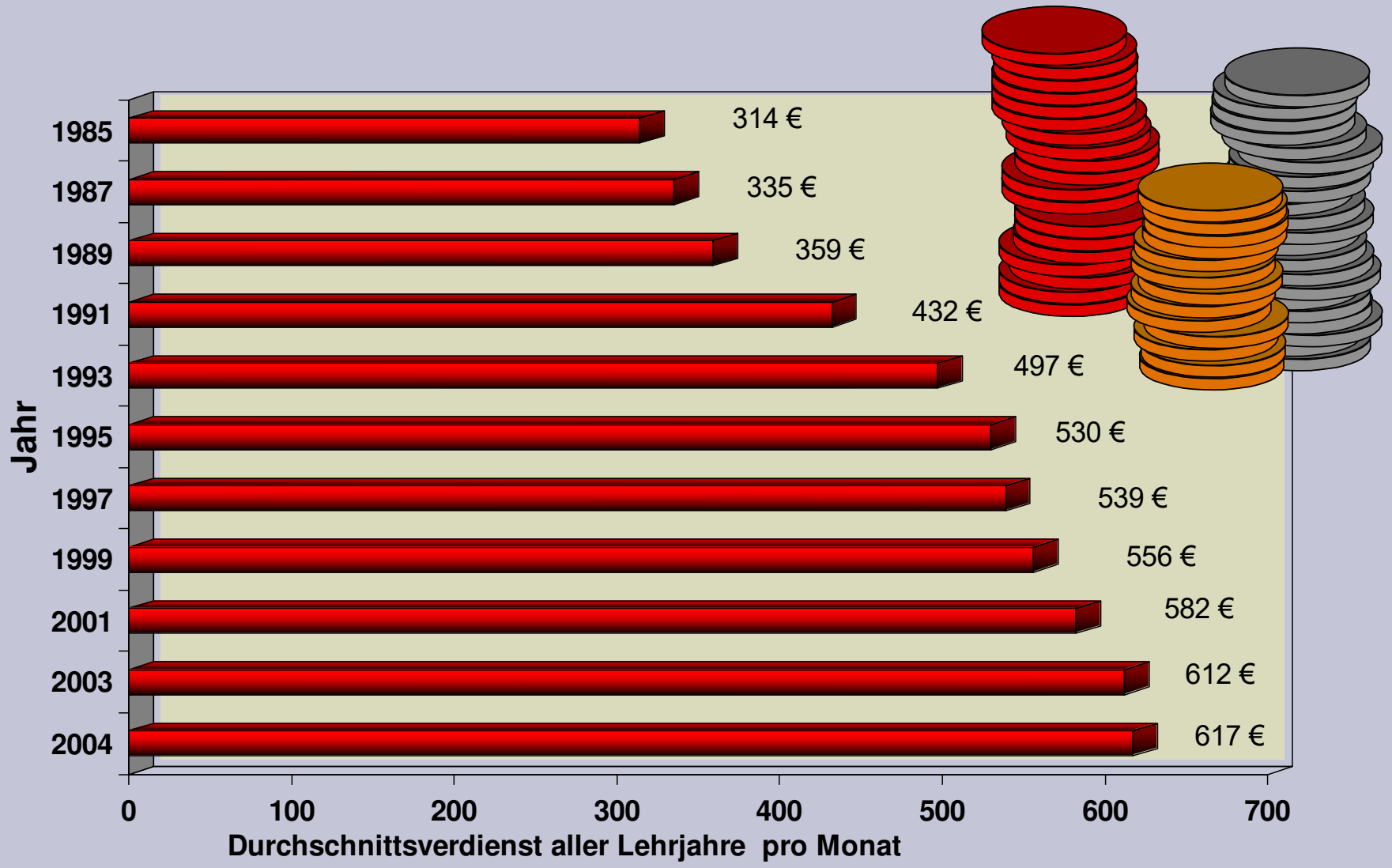
Male apprentices ♂

The ten most occupied occupations

1	Office Clerk	16,905	7.1 %
2	Businesswoman in the retail trade	16,363	6.9 %
3	Hairdresser	14,939	6.3 %
4	Receptionist	14,378	6.1 %
5	Qualified dental	12,214	5.1 %
6	Industrial clerk	11,509	4.8 %
7	In the been dismissed than employed Fachverkäuferin	11,146	4.7 %
8	The Seller	10,931	4.6 %
9	Office Communications Clerk	10,615	4.5 %
10	Hotelfachfrau	9,365	3.9 %
	Total:	143,601	53.3 %

Female apprentices ♀

What trainees (West) earn:



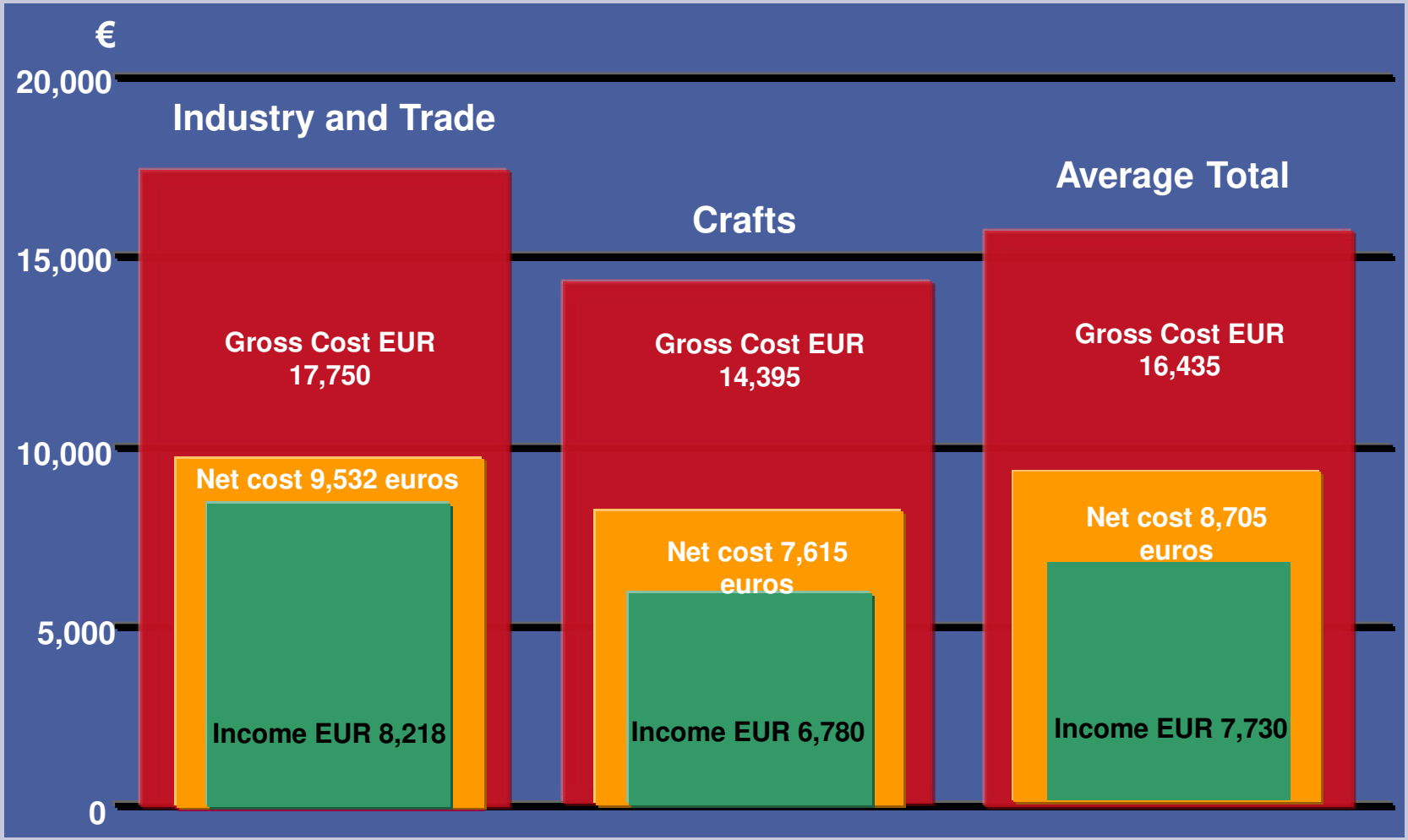
High and low training allowances 2003

Maurer (alte Bundesländer)	€ 833
Maurer (neue B	
Drucker	
Drucker	
Gerüstbauer	
Gerüstbauer	
Versicherungsk	
Versicherungsk	
Bäcker	
Bäcker	
Florist	
Florist	€ 3
Friseur	
Friseur	€ 257

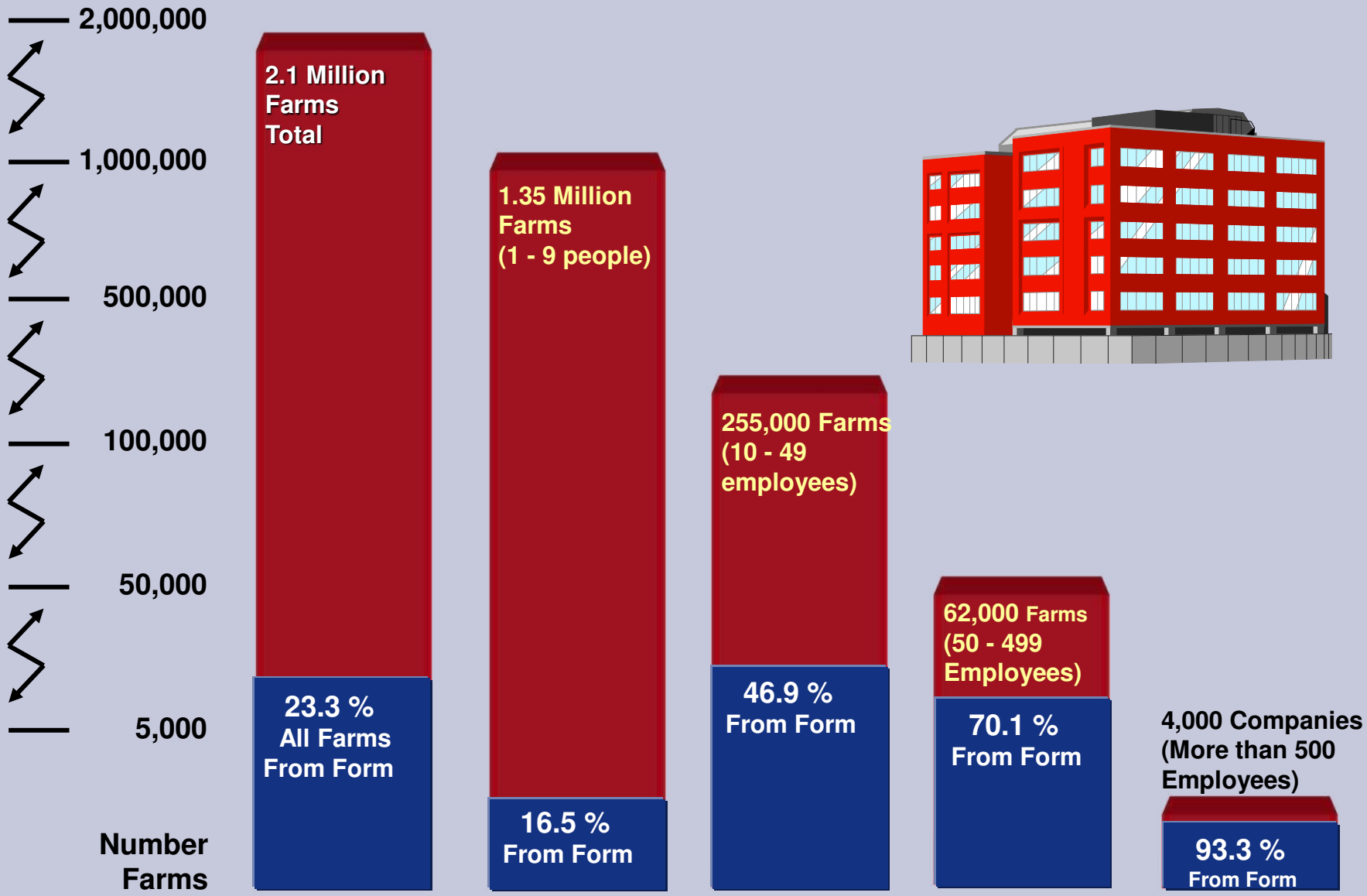
Mittelwert Ø	€ 612
Mittelwert Ø	€ 517

Angaben pro Monat

Costs and benefits of in-company training in 2003

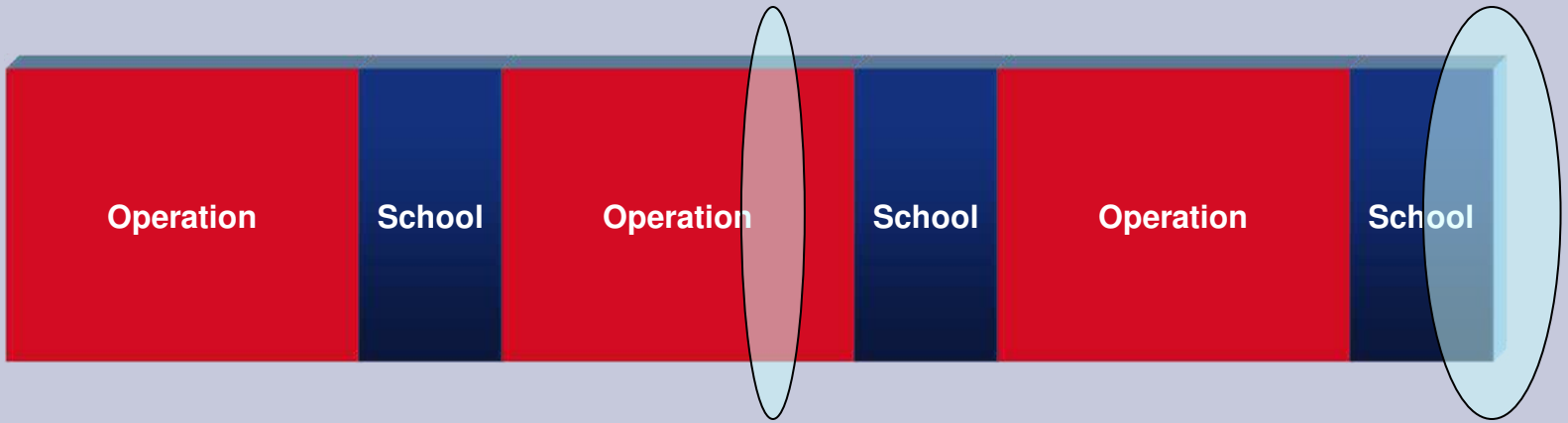


Participation in training according to farm size



Dual System - Tests to be carried out within the framework of the training

Duration of training **3 - 3.5** Years
(E.g. Industrial mechanics)



Uniform mid-term review

Uniform Final Exam

40 %

60 %

Implementation and organization of the examinations by the IIndustrial and HAndelsKAmmern or chambers of commerce

Midterm and Final Exam

Content and implementation of the tests shall be carried out in the **Training and examination regulations** For the Each regulated profession.

Mid-term review
40 %

Final Exam
60 %

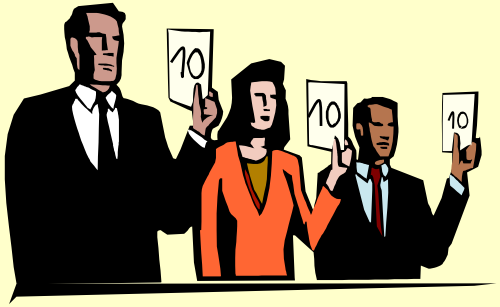
Objective: Determination of the Training

Objective: To ensure the Career Skills and Knowledge

Written examination

- **Written examination**
- **Oral examination**
- **Fertigkeitsprufung**

Implementation of the statutory audit



The Audit Committee consists of at least Three members:

- **A representative The employer**
- **A representative The workers**
- **A teacher of a Vocational school**

The acceptance of the conclusion-tests are carried out according to BBiG by **Specialised and competent** Attended audit committees.

Results of the audit:

- **Witness of the IHK (Chamber of Industry and Commerce)** Or **HWK** With Overall, as well as of the results of the individual examination results
- **The vocational school diploma** With The individual observing specialized services integrated as a result

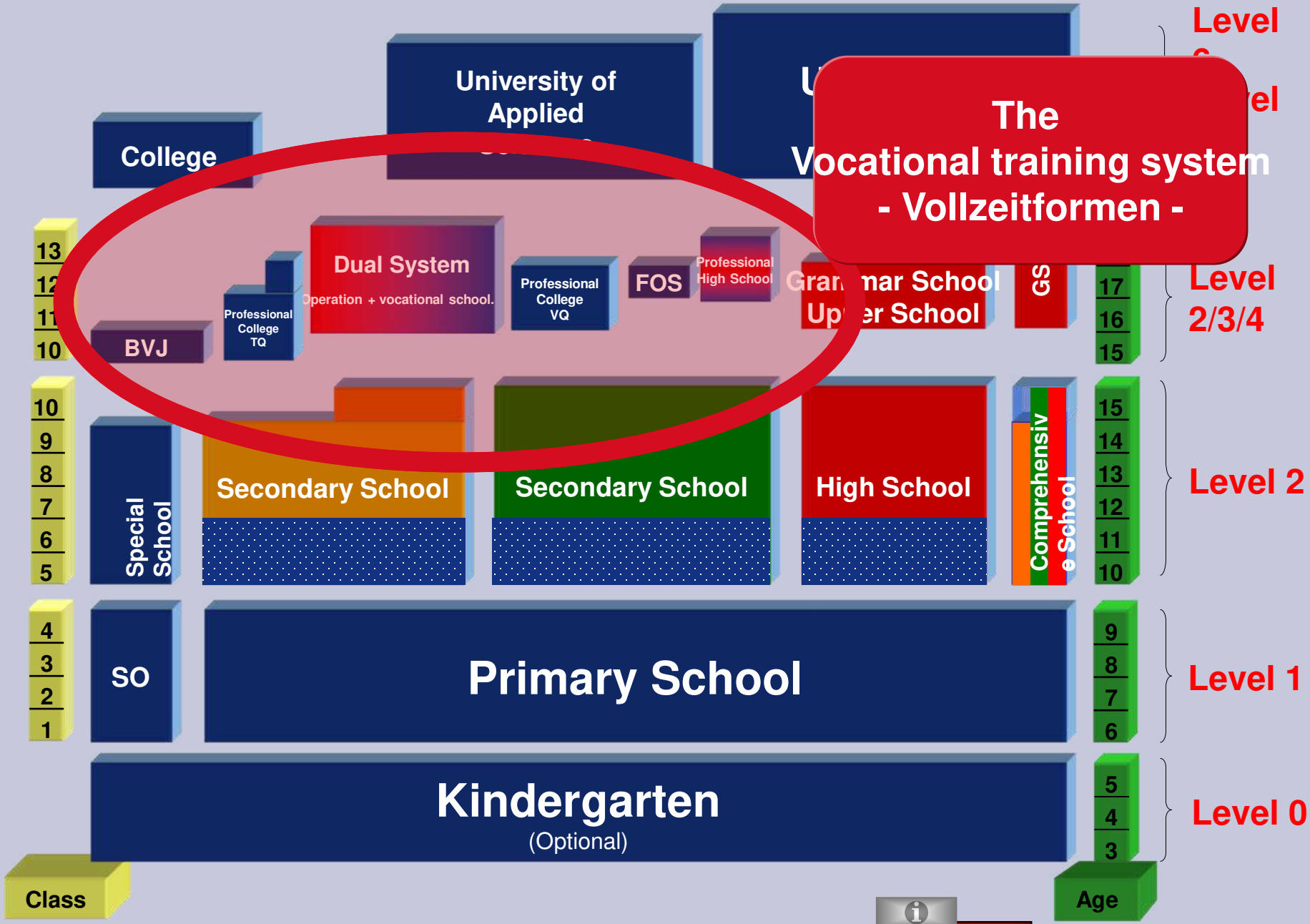
Elements of the statutory audit

The example of ITFive thousand apprenticeship positions were professions and it Specialists

Examination components and weighting (part A)	
1. The area	2. The area
Company project work and Project Document	Presentation and technical discussion
35 - 70 Hours	Max. 30 Minutes
50 %	50 %

Examination components and weighting (Part B)		
1. The area	2. The area	3. The area
Holistic Task I (Written test)	Holistic Task II (Written test)	Economics and Social Studies
90 Minutes	90 Minutes	60 Minutes
40 %	40 %	20 %

Basic structure of the education system in Germany



State vocational training schools (BFS) in Hamburg 2007 - TEILQUALIFIZIEREND (TQ)

High school completion
Or
Equivalent

- metal and automation technology
- media technology and design
- electronics and information technology
- BFS health
- Food and Nutrition
- Socio-educational services
- Business and Administration

Professional Teilquali-occupational qualifications And Medium-sized education Conclusion

(Equivalent The Entrance Requirements (secondary school diploma-completion)

Entrance Requirements (secondary school diploma-Conclusion Or Equivalent)

- Higher Business School
- Trade + Industry

Vocational education and advanced technical college entrance qualification (theory)

Vocational education

0 — 1 — 2 Years

Helmuth Köhler – Martin Vögtle V 1.7 - 2007

State vocational training schools (BFS) in Hamburg - TEILQUALIFIZIEREND (TQ)

Professional partial qualification - Gcses

Central Test

2 Years

1 Year

Passed

Sample Half of

Learning I
(1200 Hours)

- Project and product Management
- Print and AV Media Production
- Multimedia productions Online/Offline
- Event planning And Implementation

Learning II
(1200 Hours)

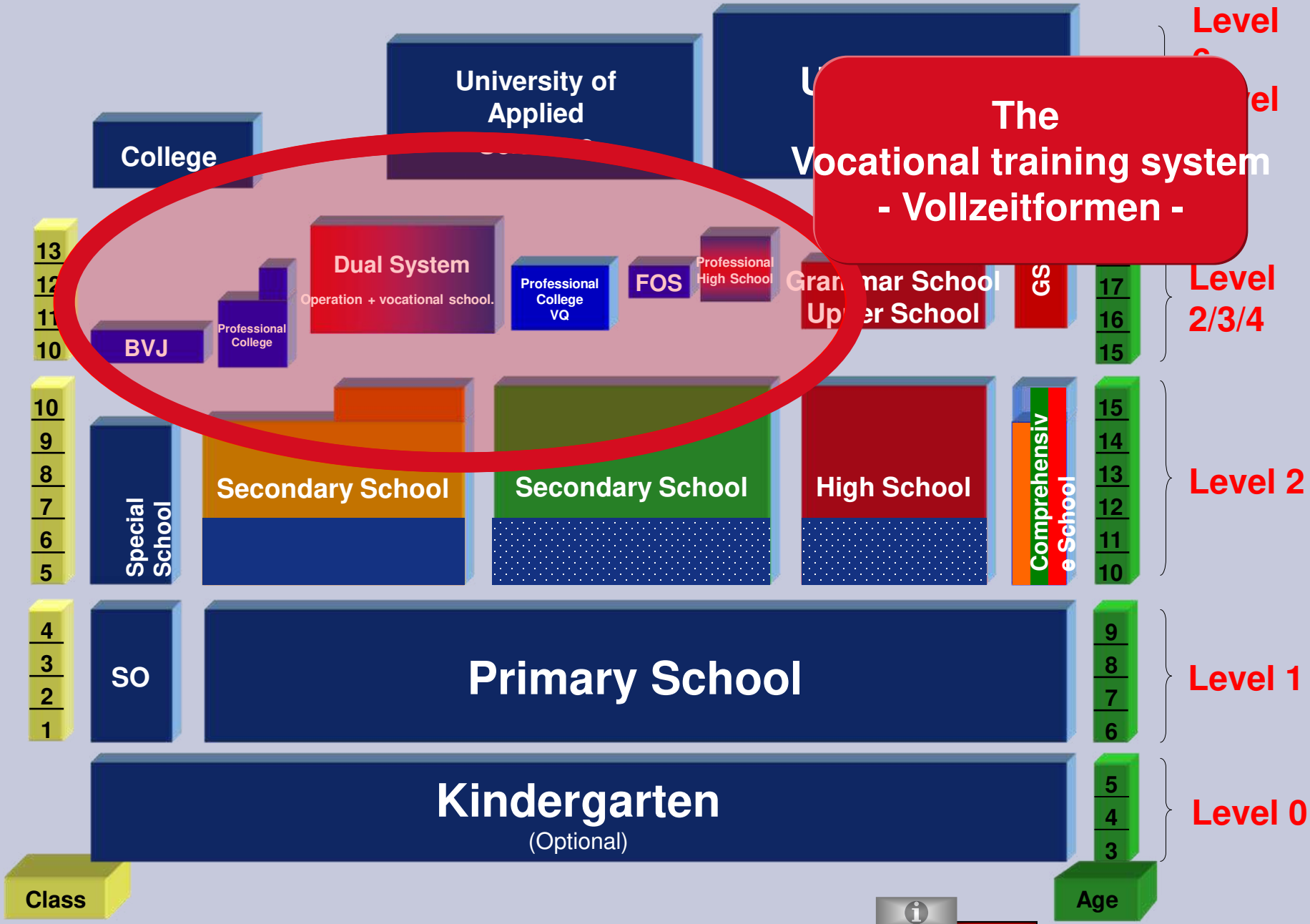
- Language and Communication
- Grammar Skills
- Mathematics
- Economy & Society
- Sport

Internship
(Total 6 Weeks)

Not Passed

Hauptschul-Abschluss
Min. 3.3 Dia.
In English, mathematics and English

Basic structure of the education system in Germany



State vocational schools in Hamburg 2004 - VOLLQUALIFIZIEREND (VQ)

High school-completion
Or Equal-conver
Conclusion

BFS Home Economics

BFS watchmakers

BFS house and household tasks

Entrance Requirements (secondary school diploma-Conclusion

Swiss Federal Statistic C | Swiss Federal Statistic Office (SFSO) Soz

Swiss Federal Statis C | Swiss Federal Statis Office (SFSO) Scr

Swiss Federal Statisti C | Swiss Federal Statisti Office (SFSO) cor

Swiss Federal Statis C | Swiss Federal Stati Office (SFSO) co

BFS Tai | Swiss Federal Statis Office (SFSO) Lei

Profes sion Or School

High Scho ol

Swiss Federal Statistical Office (SFSO) commercial Assi.

0 1 2 Years

From the main school to the labor market

Labor market

University of Applied Sciences

University of Applied Sciences

University

College

FOS

WG/TG

Dual System
Operation + vocational school.

Vocational school TQ

Measures of the State + AA

Berufsvorberei-Tungsschule

10. Class optional

Secondary School

13
12
11
10

10
9
8

Class

20
19
18
17
16
15

15
14
13

Age

From the Realschule to the labor market

Labor market

University of Applied Sciences

University

College

FOS

WG/TG

13
12
11
10

Dual System
Operation + vocational school.

Vocational school VQ

Measures of the State + AA

21
20
19
18
17
16

10
9
8

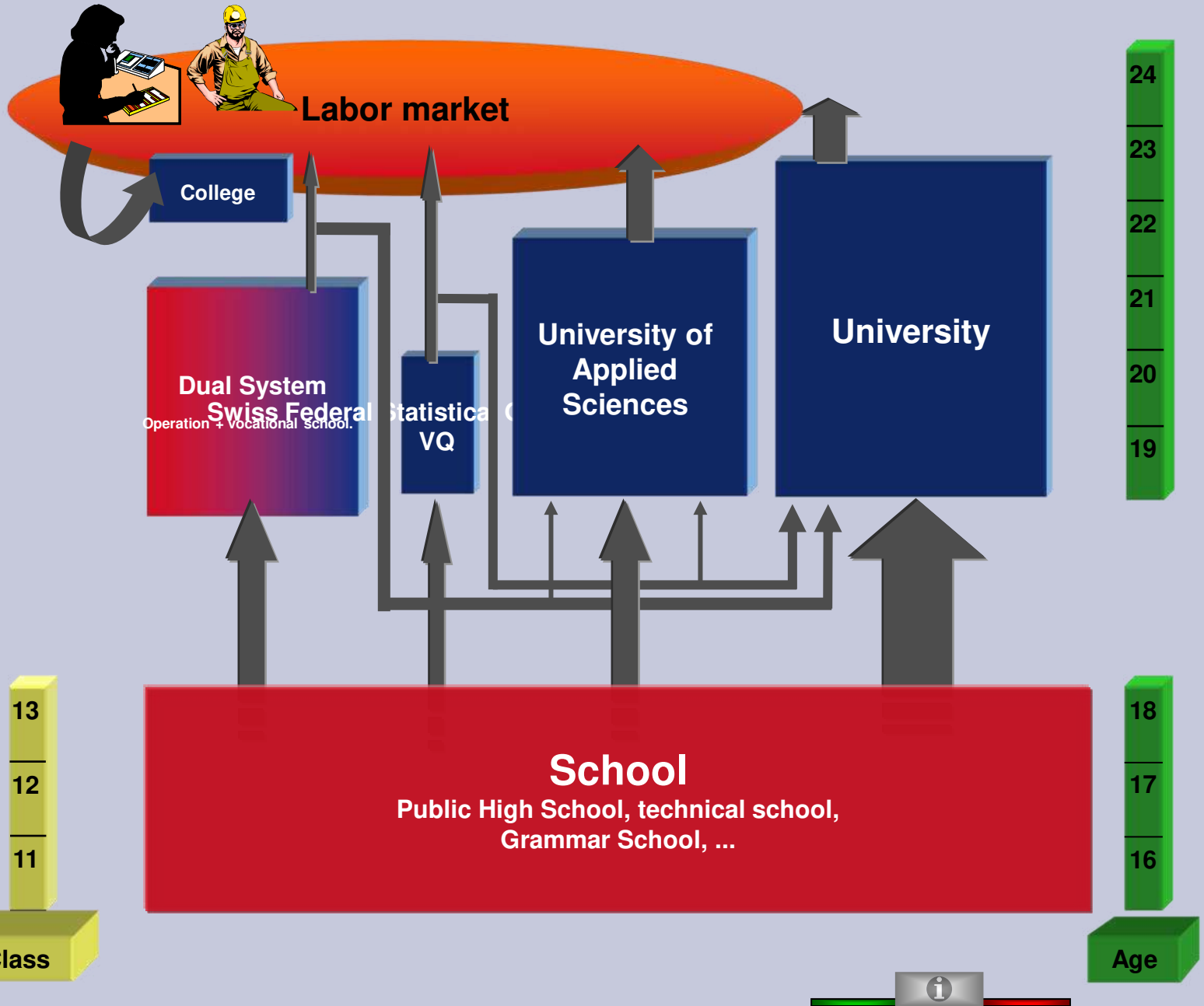
Secondary School

15
14
13

Class

Age

From high school to the labor market



Monopolies , according in Hamburg

Until 7.31.2003

The working hours of the teachers is alone in Lessons Per Week Calculated.

24 Lessons Weekly

Valid for teachers in secondary schools and vocational schools (ISCED level 3 + 4)

Since 8.1.2003

The working hours of the teachers is only still in Hours per Year Calculated.

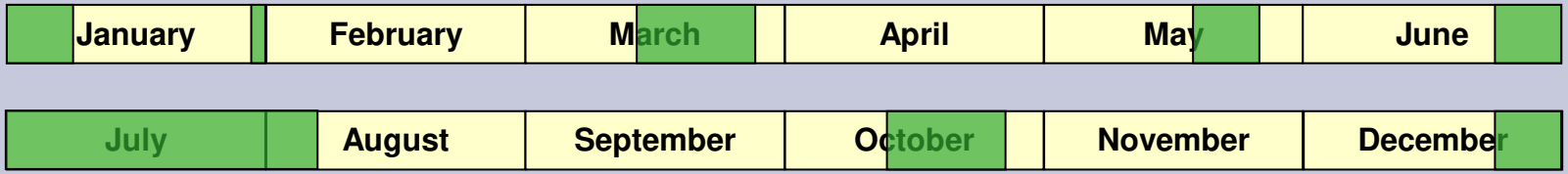
40 Hours Weekly = 1770 Hours A year

The working hours of the teachers of the working time of officials in the public service.

Monopolies , according in Hamburg

Class Times

Holidays



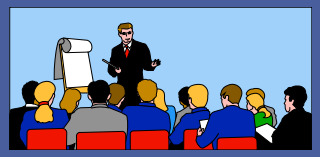
WThe whole work of the teachers would only
During the 38 Weeks So
A teacher had to 46.57 Hours Work per week.

1770:38	≈	46.57

In 6 Weeks annual leave And activities in the Holidays arise
40 Hours Per Week!

The responsibilities of the teachers include:

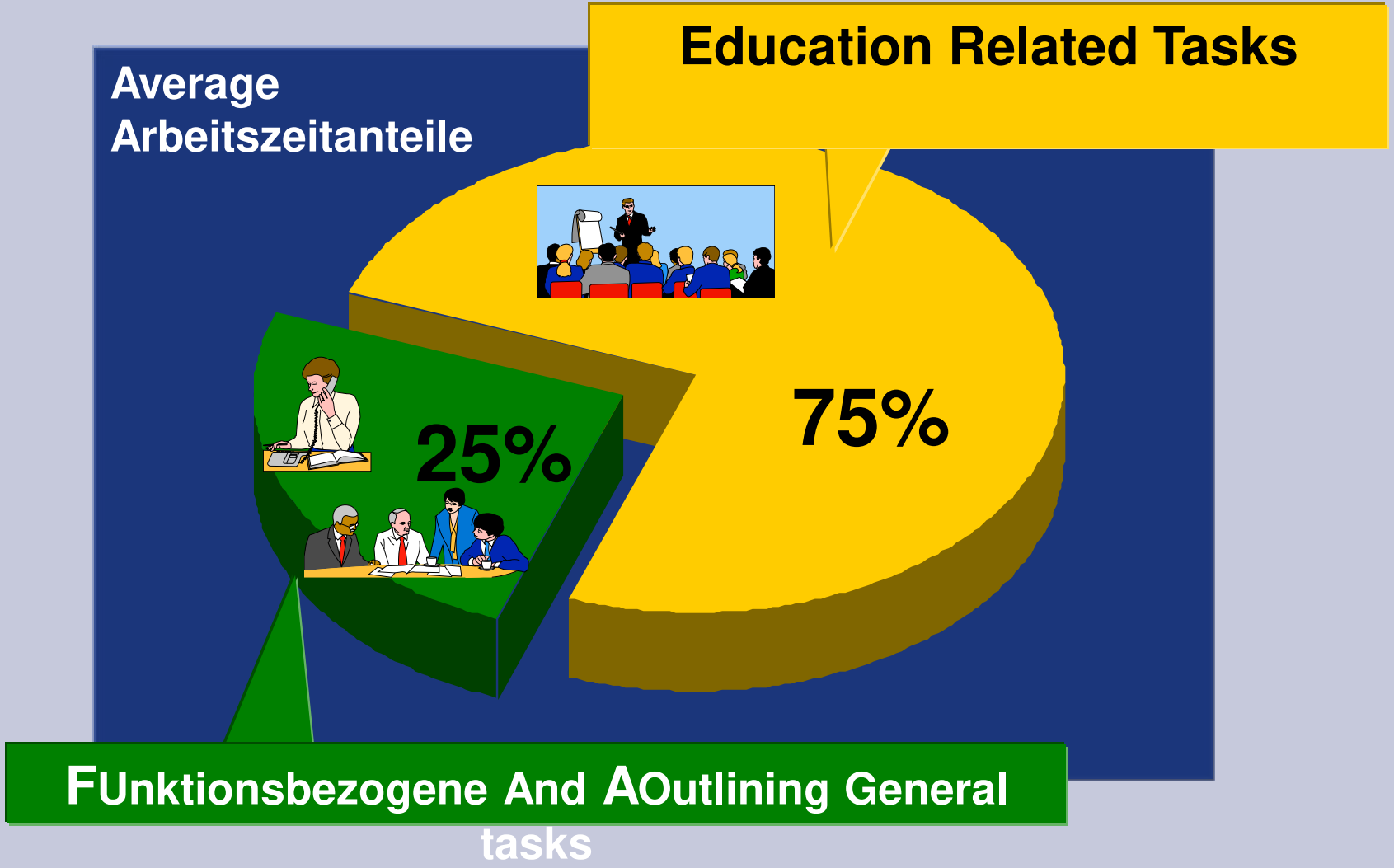
- Education Related Tasks



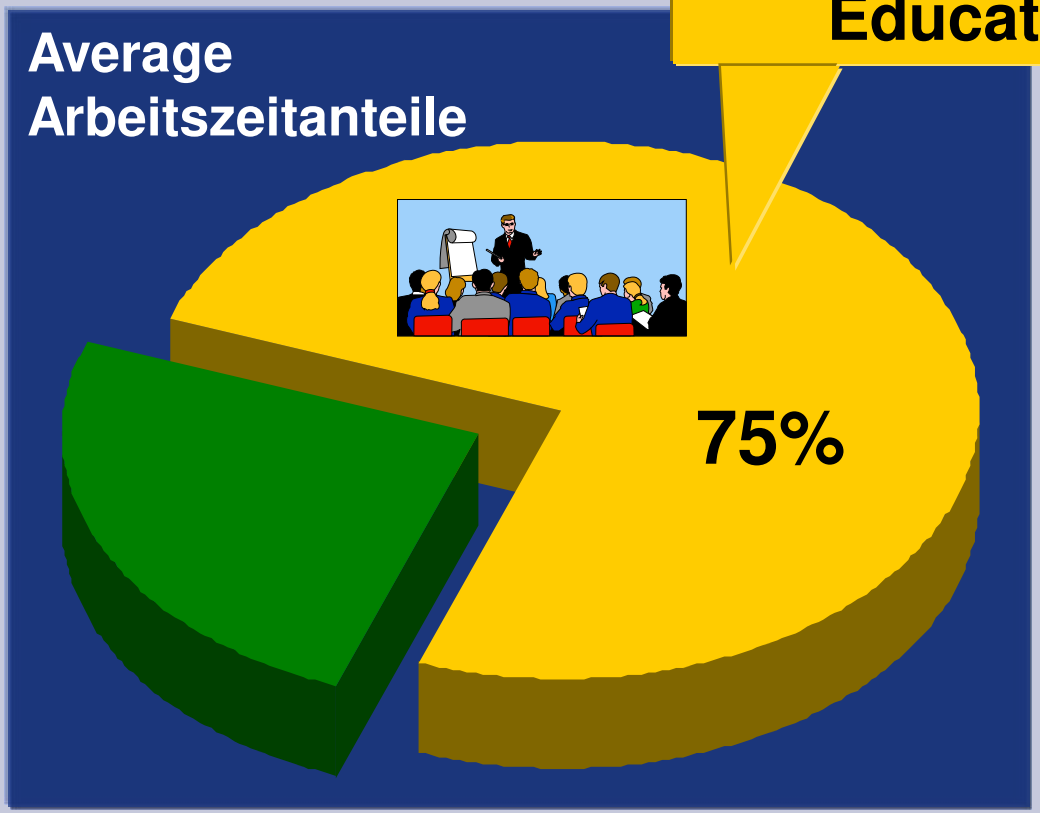
- Functional Tasks

- General Tasks

Monopolies , according in Hamburg



Monopolies , according in Hamburg



Education related tasks:

- Netto-Unterrichtszeit (45)
- Pre- and post-
- Corrections
- Collegial Cooperation
- Pupils, teachers and Interacting with Other

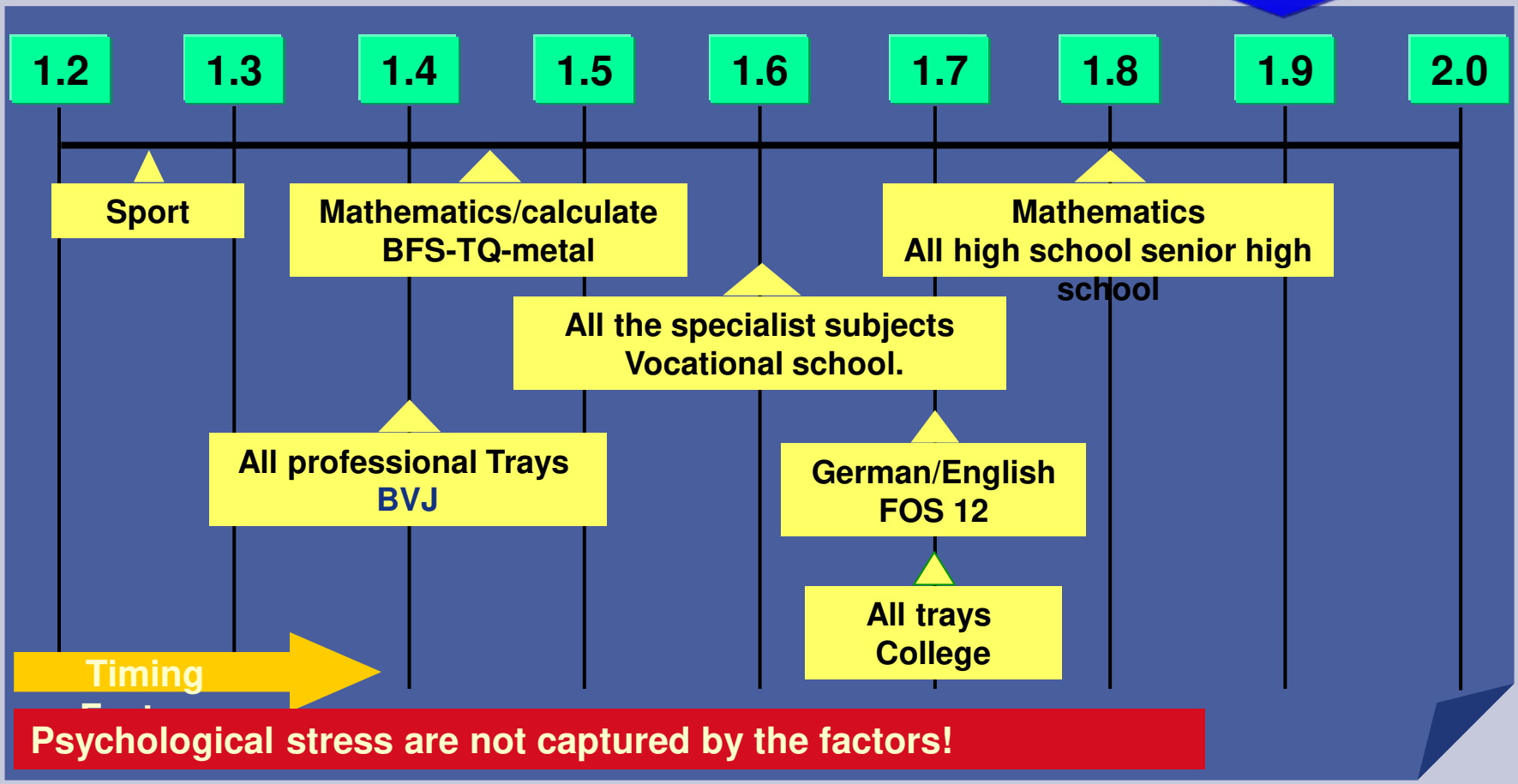
Education related tasks are weighted according to tray and schooling or education.

Example

Monopolies , according in Hamburg

Trays have different timing factors.
The factors are dependent on education- and subject-specific requirements.

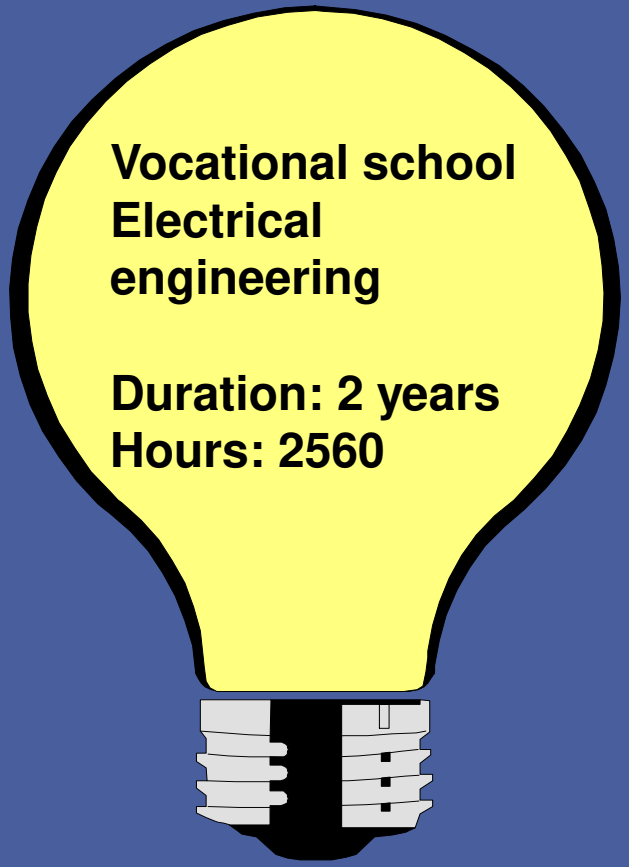
Examples of subjects and time factors



Psychological stress are not captured by the factors!

Syllabus) has had its effect with time factors

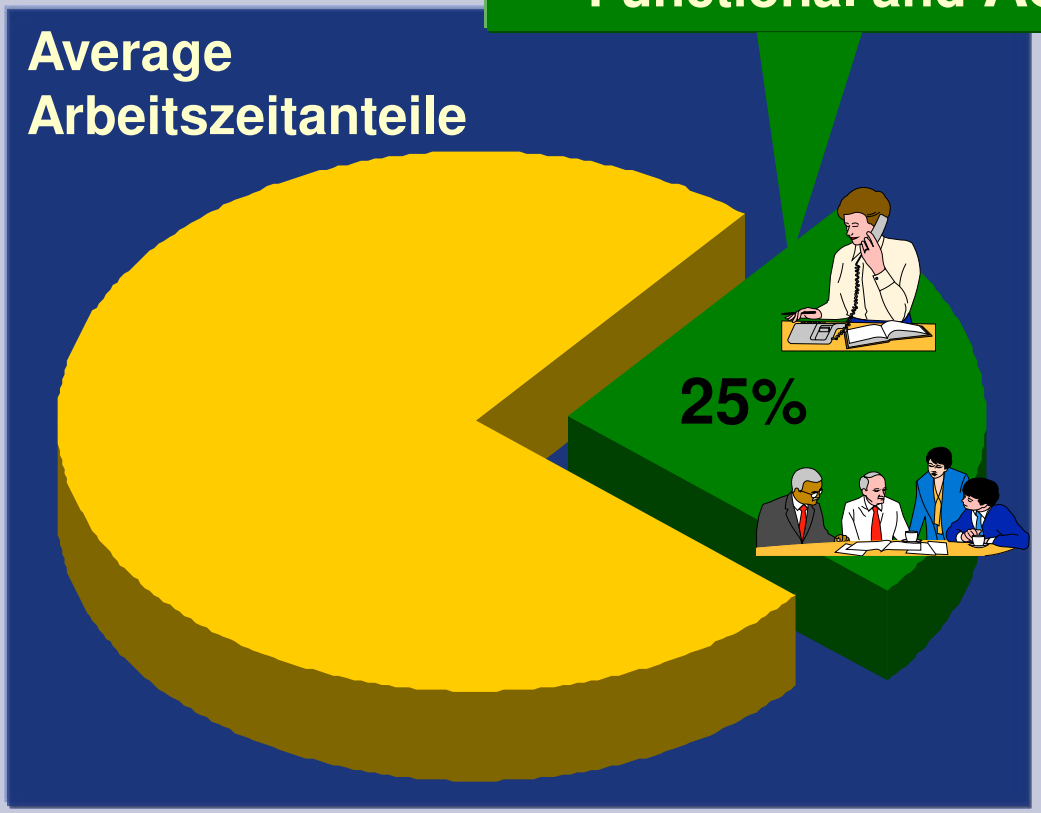
Example: Teilqualifizierende Vocational School



Tray	Factor
Learning I	
- Technology	1.6
- Circuitry and Functional Analysis	1.6
- Subject-specific natural sciences	1.5
Learning II	
- Achievable	1.45
Learning III	
- Language and Communication	1.6
- Grammar Skills	1.6
- Economy and Society	1.5
- Mathematics/Calculations	1.45
- Sport	1.25

Monopolies , according in Hamburg

Functional and AOutlining general tasks:



General Tasks

Participation in:

- Teachers and Specialist conferences.
- Not obligatory to take part to all Events
- Talks in the framework The Lernfeldarbeit and Cooperation
- Training within and Outside of the holidays
- Supervisors
- Week all inclusive for Vertretungsunterricht

Functional Tasks

- School management
- Class Teacher
- Evaluation
- Representatives
- Cooperation
- ¦.

Monopolies , according in Hamburg

Anzahl	Faktor	Zeit-stunden	Aufgaben/ Funktionen
Unterricht			
2,0	1,60	3,2	Technologie BS
4,0	1,25	6,0	Technik TG
4,0	1,70	6,8	Technik FS
2,0	1,50	3,0	Fachbez. Naturw. BFS
7,0	1,60	11,2	Technologie BFS
4,0	1,60	6,4	Fachenglisch BS
23,0		**36,6**	**Summe**
Funktionen			
1,0	2,00	2,0	Klassenlehrer
1,0	0,50	0,5	Vertrauensausschuss
1,0	1,00	1,0	Fachvertreter
1,0	1,00	1,0	Sammlung
		4,5	**Summe**
Allgemeine Aufgaben			
3,0	1,00	3,0	unteilbare allgemeine Aufgaben
2,0	1,00	2,0	teilbare allgemeine Aufgaben
		5,0	**Summe**
		46,6	**Wochenarbeitszeit gesamt**

Jahresarbeitszeitberechnung
Full-time teacher

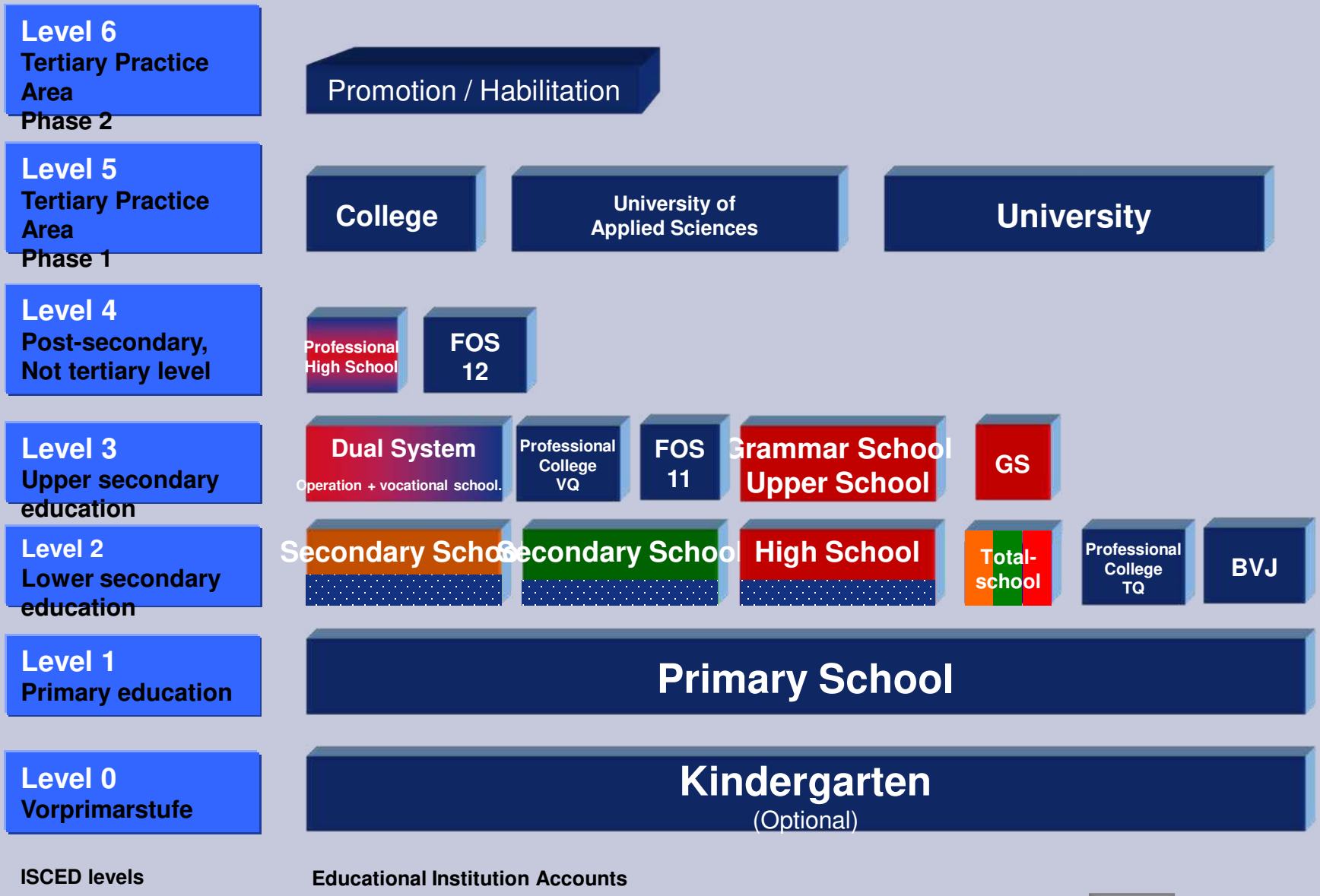
UNterrichtsbezogene Tasks

Functional Tasks

General Tasks

= 1770,8 Hours in Year

According to ISCED levels in Germany (International Standard Classification of Education)



Emergence of a profession

New products and services are developed,
New production conditions ...

Employers

An inherent feature need trained professionals

Objective: Profit

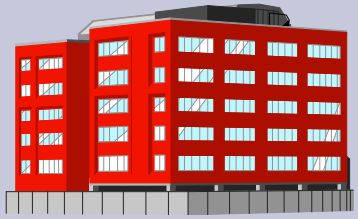
Workers

Inherent need And Inter-company Ausbildunginhalte

Goal: sustainable income

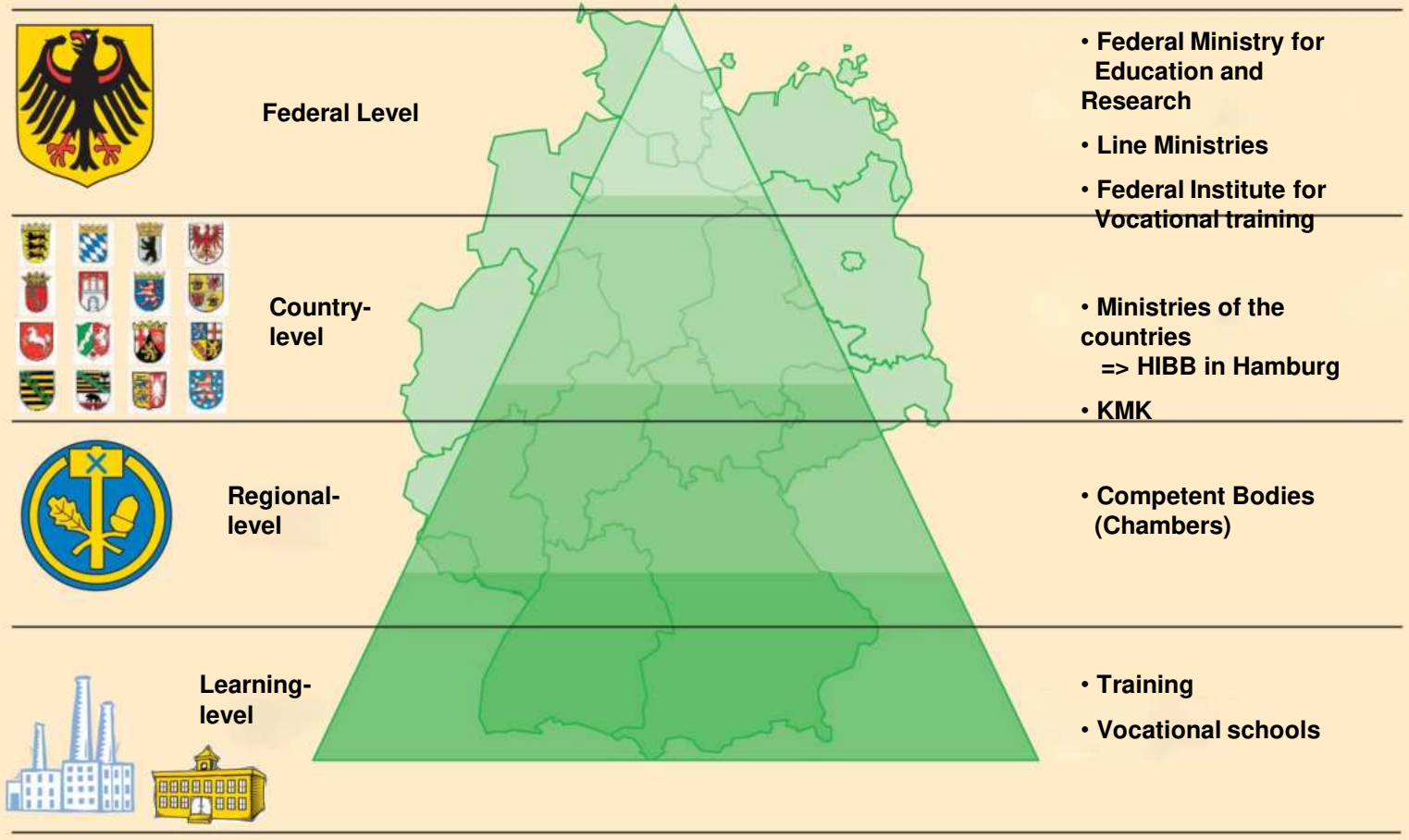
State

Organized Framework



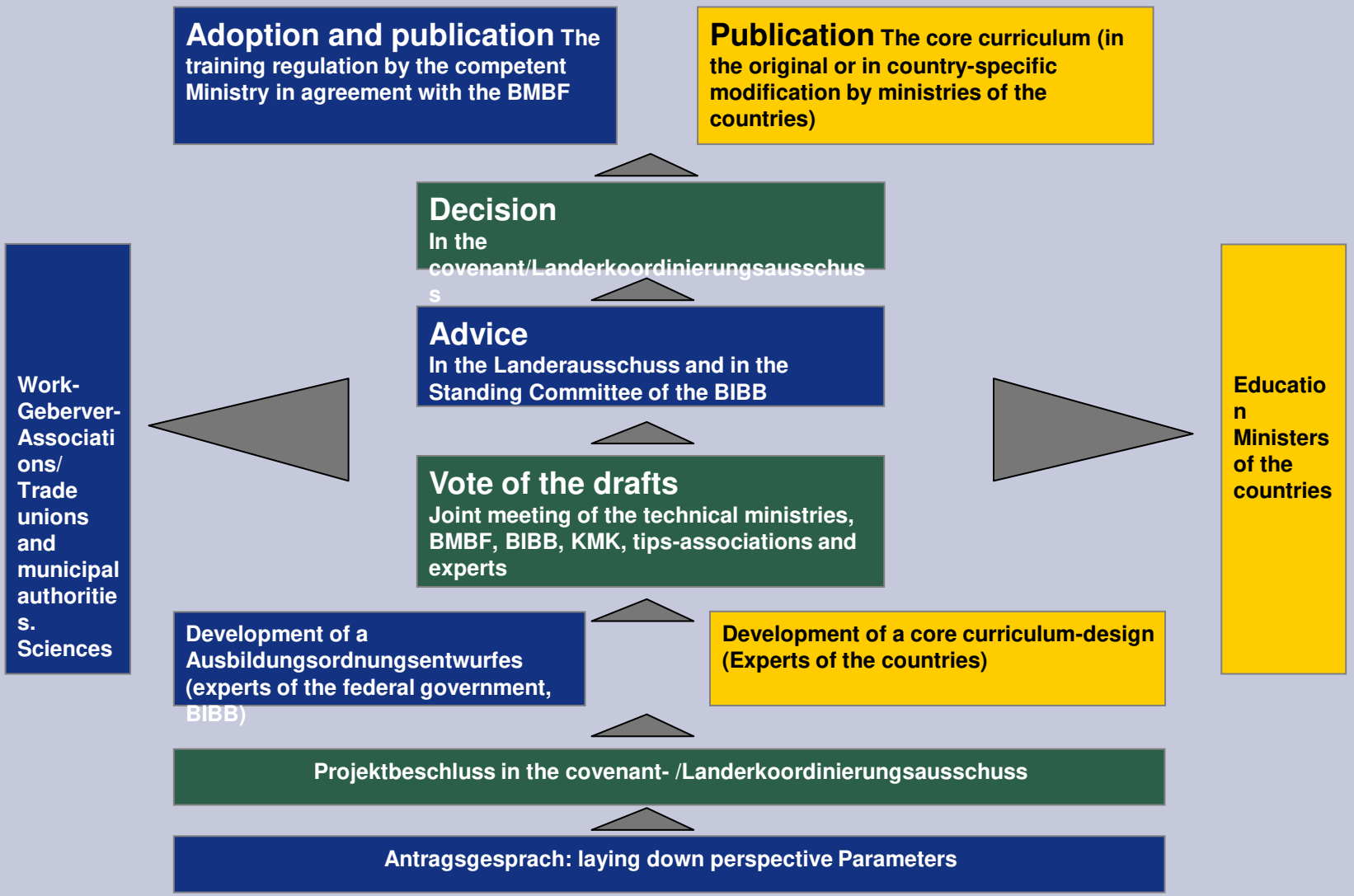
New training occupations

Responsibilities in the Dual System



Emergence of a profession

Coordination of training and Rahmenlehrplanen



Coordination of training and Rahmenlehrplanen

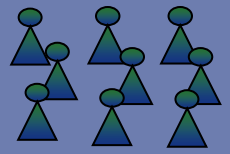
Request

Bundesministerium
für Arbeit und Soziales

Coordination of training and Rahmenlehrplanen

The restructuring will be decided via Start

Experts from Federal Ministries



+

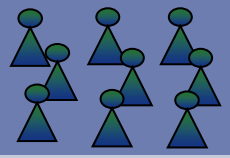
Experts From Education Ministries The countries

Projektbeschluss in the covenant- /Landerkoordinierungsausschuss

Coordination of training and Rahmenlehrplanen

Preparation of Draft in separate bodies:

Experts from Federal Ministries



Development of a Ausbildungsordnungsentwurfes

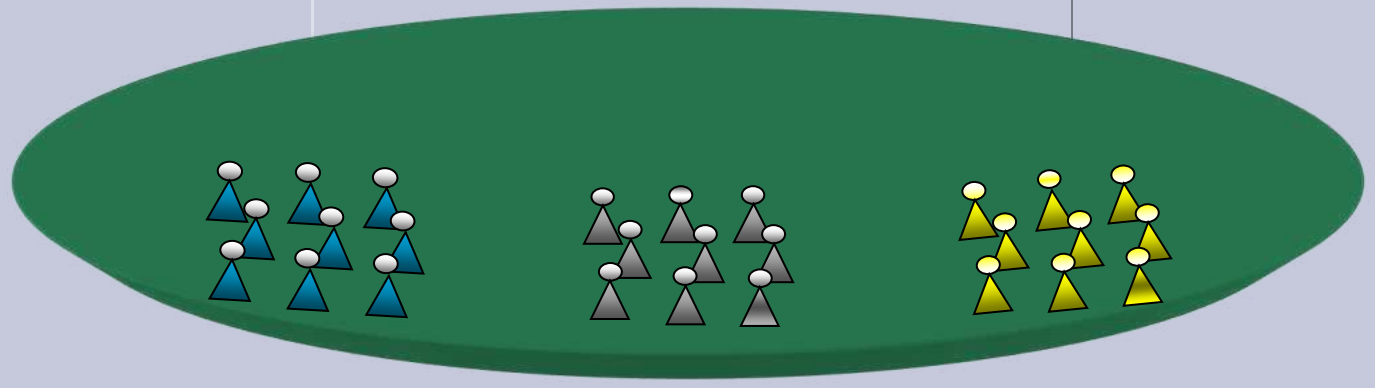
+

Experts From Education Ministries the countries

Development of a Rahmenlehrplanentwurfes

Coordination of training and Rahmenlehrplanen

Vote in a joint meeting of the drafts in the consensus:



Line ministries, BMBF, BIBB, KMK, Associations and experts

Bundesministerium

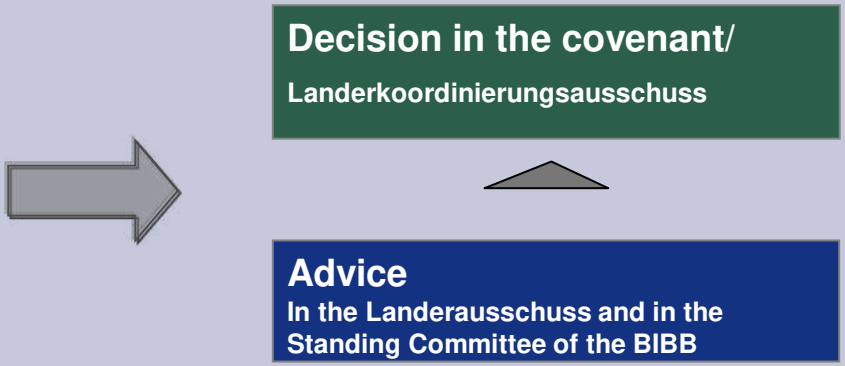
Bundesministerium für Wirtschaft

Bundesministerium für Arbeit und Soziales

Bundesinstitut für Berufsbildung BIBB

- Forschen
- Beraten
- Zukunft gestalten

Coordination of training and Rahmenlehrplanen



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Thank you for your attention!

Thank you for your attention!

Free and Hanseatic City of Hamburg

Department for Education and Sport
Hamburg Institute for Vocational Training

Helmuth Kohler

Hamburg Institute for
Vocational Training

And inspectorate Bildungsgangentwicklung

Hamburger Str. 131
D-22083 Hamburg

Tel (040) 4 28 63 - 22 24
Fax (040) 4 28 63 - 40 33

Helmuth.koehler@hibb.hamburg.de

Presentation

The essence and benefits of dual vocational training

Language

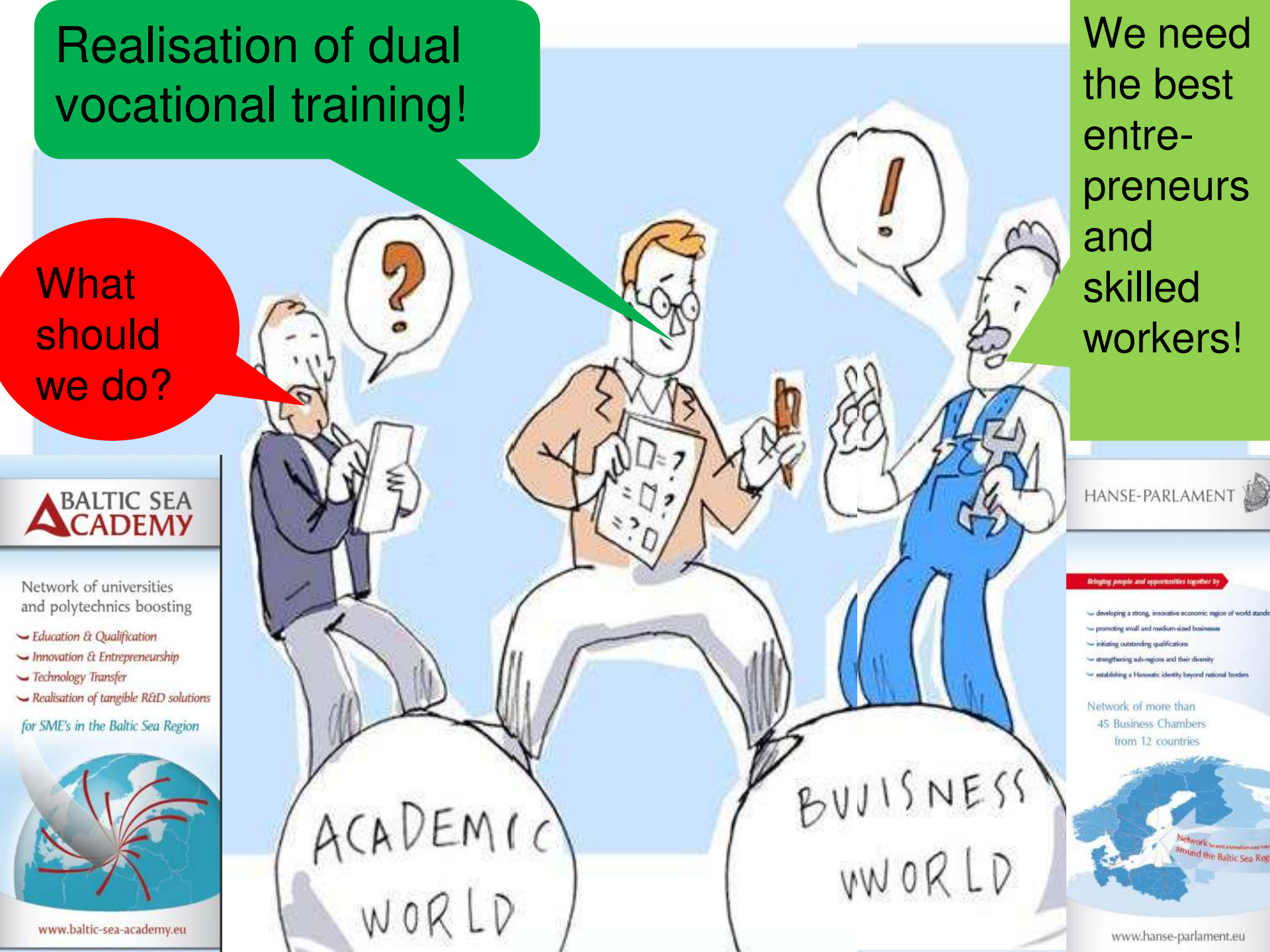
English

The essence and benefits of dual vocational training

Realisation of dual vocational training!

What should we do?

We need the best entre-preneurs and skilled workers!



BALTIC SEA ACADEMY

Network of universities and polytechnics boosting

- Education & Qualification
- Innovation & Entrepreneurship
- Technology Transfer
- Realisation of tangible R&D solutions

for SME's in the Baltic Sea Region

www.baltic-sea-academy.eu

HANSE-PARLAMENT

Bringing people and opportunities together by

- developing a strong, innovative economic region of world standi
- promoting small and medium-sized businesses
- initiating outstanding qualifications
- strengthening sub-regions and their diversity
- establishing a Hanseatic identity beyond national borders

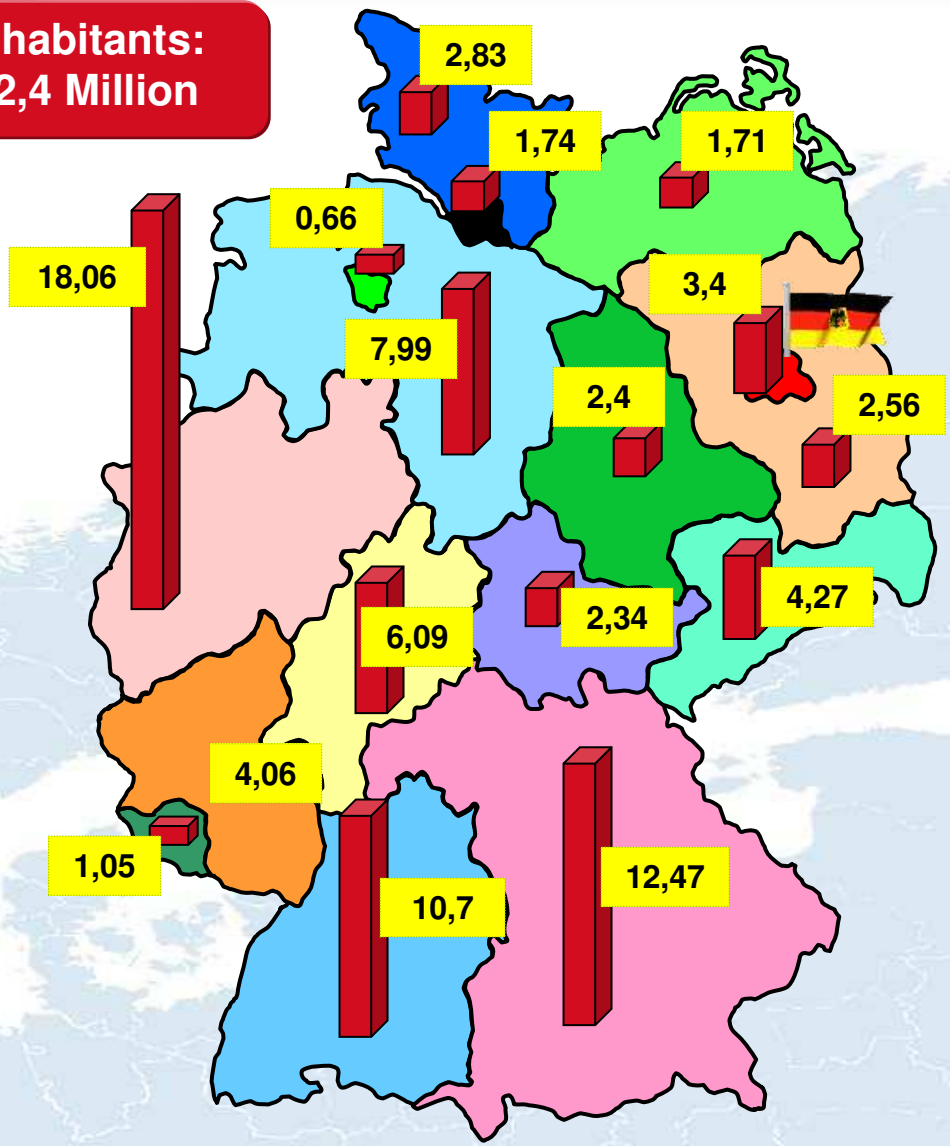
Network of more than 45 Business Chambers from 12 countries

www.hanse-parlament.eu


UNI
COMPANY
The German system of dual vocational training

Federal States of the Federal Republic of Germany

Inhabitants: 82,4 Million



1. Schleswig-Holstein
2. Hamburg
3. Mecklenburg-Vorpommern
4. Niedersachsen
5. Bremen
6. Brandenburg
7. Berlin
8. Sachsen-Anhalt
9. Nordrhein-Westfalen
10. Hessen
11. Thüringen
12. Sachsen
13. Rheinland Pfalz
14. Saarland
15. Baden-Württemberg
16. Bayern

(Stand 11|2006)

Responsibilities of the federal states of the Federal Republic of Germany

The ministers and senators of the 16 federal states are responsible for the following policy areas:

- **Education**
- **Science**
- **Culture**

Basic Structures of the German Educational System

University

University of Applied Sciences

Technical College

Dual System
Company + Vocational School

Technical Vocational School

FOS

Higher Vocational School

Upper Secondary School

GS

BVJ

Technical Vocational School

Special ed. school

Gymnasium

Gesamtschule

Integrated District School
9 years „Hauptschul-Abschluss“
10 years „Mittlere Reife“
13 years „Abitur“

SO

Primary School

Kindergarten / nursery
(optional)

Level 6
Level 5
Level 2/3/4
Level 2
Level 1
Level 0

Grade: 13 12 11 10 | 10 9 8 7 6 5 | 4 3 2 1

Age: 20 19 18 17 16 15 | 15 14 13 12 11 10 | 9 8 7 6 | 5 4 3

Obtaining the “Hauptschulabschluss” – min. 9 years of school attendance

Level 6

Level 5

University of Applied Sciences

University

Technical College

20
19
18
17
16
15

13
12
11
10

Dual System
Company + Vocational School

Technical Vocational School

FOS

Higher Vocational School

Upper Secondary School

GS

BVJ

Technical Vocational School

Level 2/3/4

10
9
8
7
6
5

Special ed. school

Hauptschule

Realschule

Gymnasium

Gesamtschul

15
14
13
12
11
10
9
8
7
6

Secondary school leaving certificate (Hauptschul-abschluss) or equivalent degree

4
3
2
1

SO

Primary School

Kindergarten/nursery
(optional)

5
4
3

Level 0

Grade

Age

Obtaining the „Mittlere Reife“– min. 10 years of school attendance

Level 6

Level 5

Level 2/3/4

Level 1

Level 0

University

University of Applied Sciences

Technical College

Upper Secondary School

GS

Higher Vocational School

FOS

Technical Vocational School

Dual System
Company + Vocational School

Technical Vocational School

BVJ

Gymnasium

Realschule

Hauptschule

Special ed. school

Gesamtschule

Middle school qualification (Realschul-abschluss) or equivalent degree

SO

Primary School

Kindergarten/nursery
(optional)

Grade

Age

13 12 11 10

10 9 8 7 6 5

4 3 2 1

20 19 18 17 16 15

15 14

8 7 6

5 4 3

Obtaining the „Hochschulreife (Abitur)“ - min. 12 years of school attendance

Level 6

Level 5

University of Applied Scienes

University

Technical College

20 19 18 17 16 15

13 12 11 10

BVJ

Technical Vocational School

Dual System
Company + Vocational School

Technical Vocational School

FOS

Higher Vocational School

Upper Secondary School

GS

10 9 8 7 6 5

Special ed. school

Hauptschule

Realschule

Gymnasium

Gesamtschule

General higher education entrance qualification (Allgemeine Hochschul-reife)

4 3 2 1

SO

Primary School

9 8 7 6

Level 1

Kindergarten/nursery
(optional)

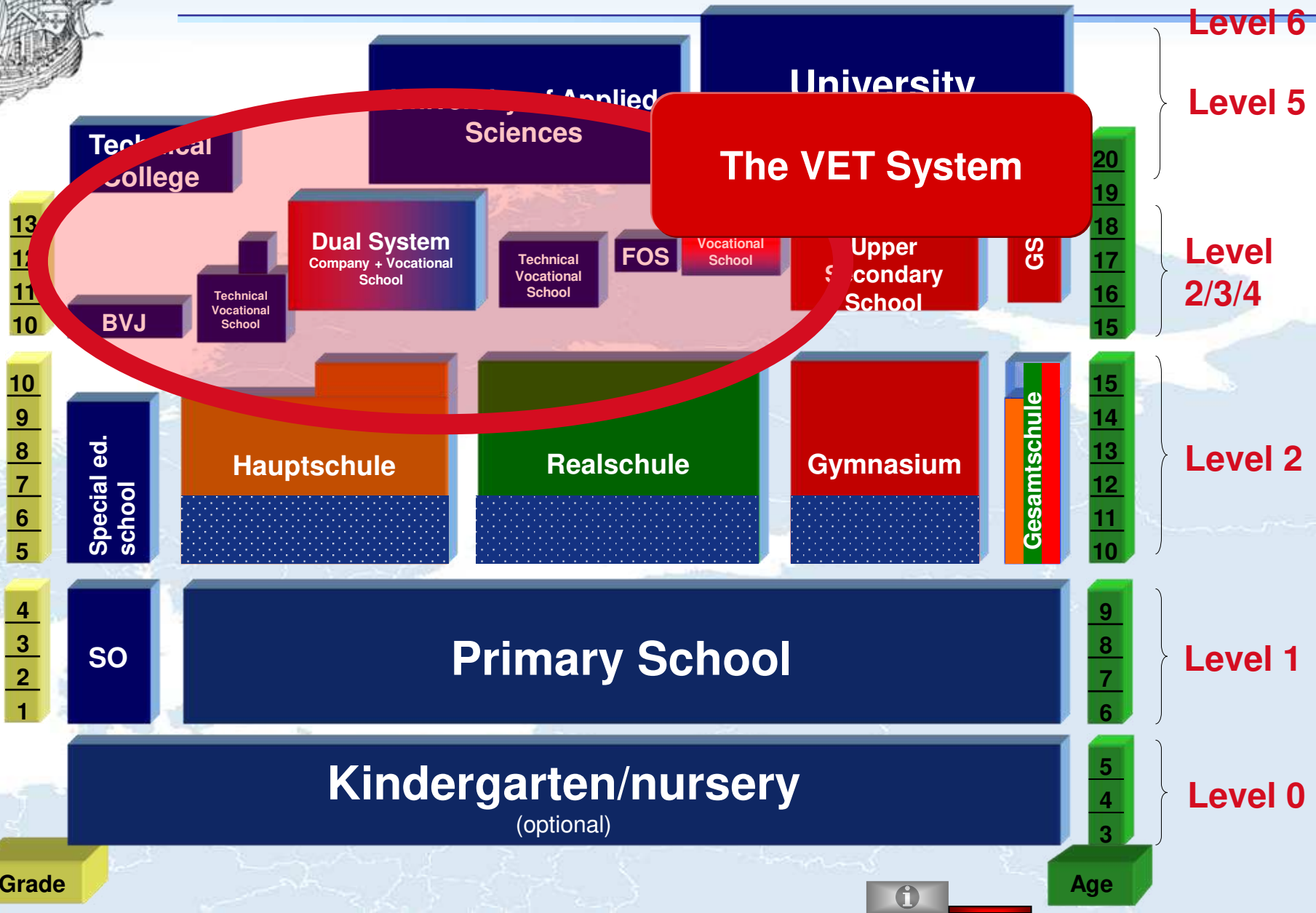
5 4 3

Level 0

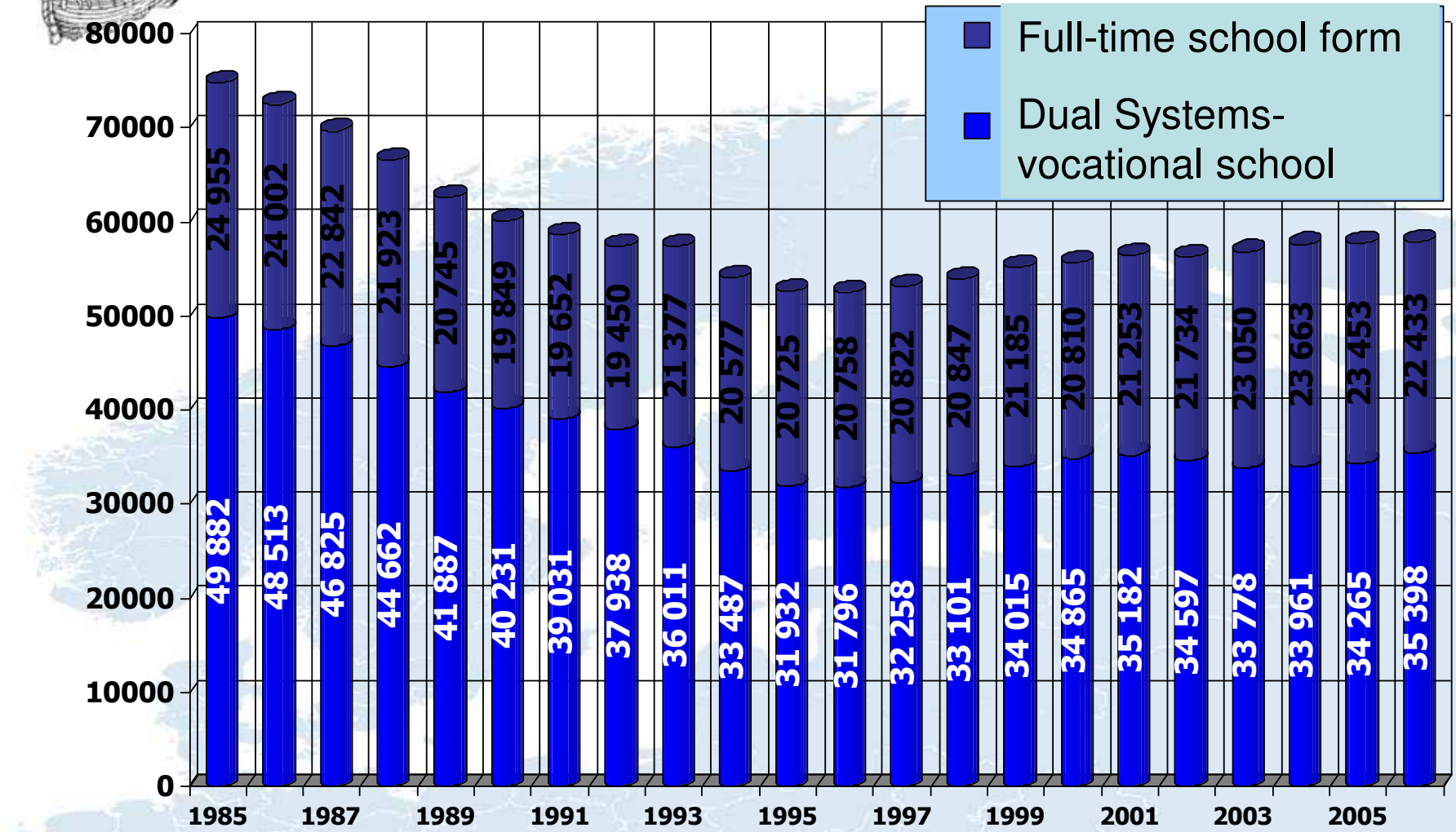
Grade

Age

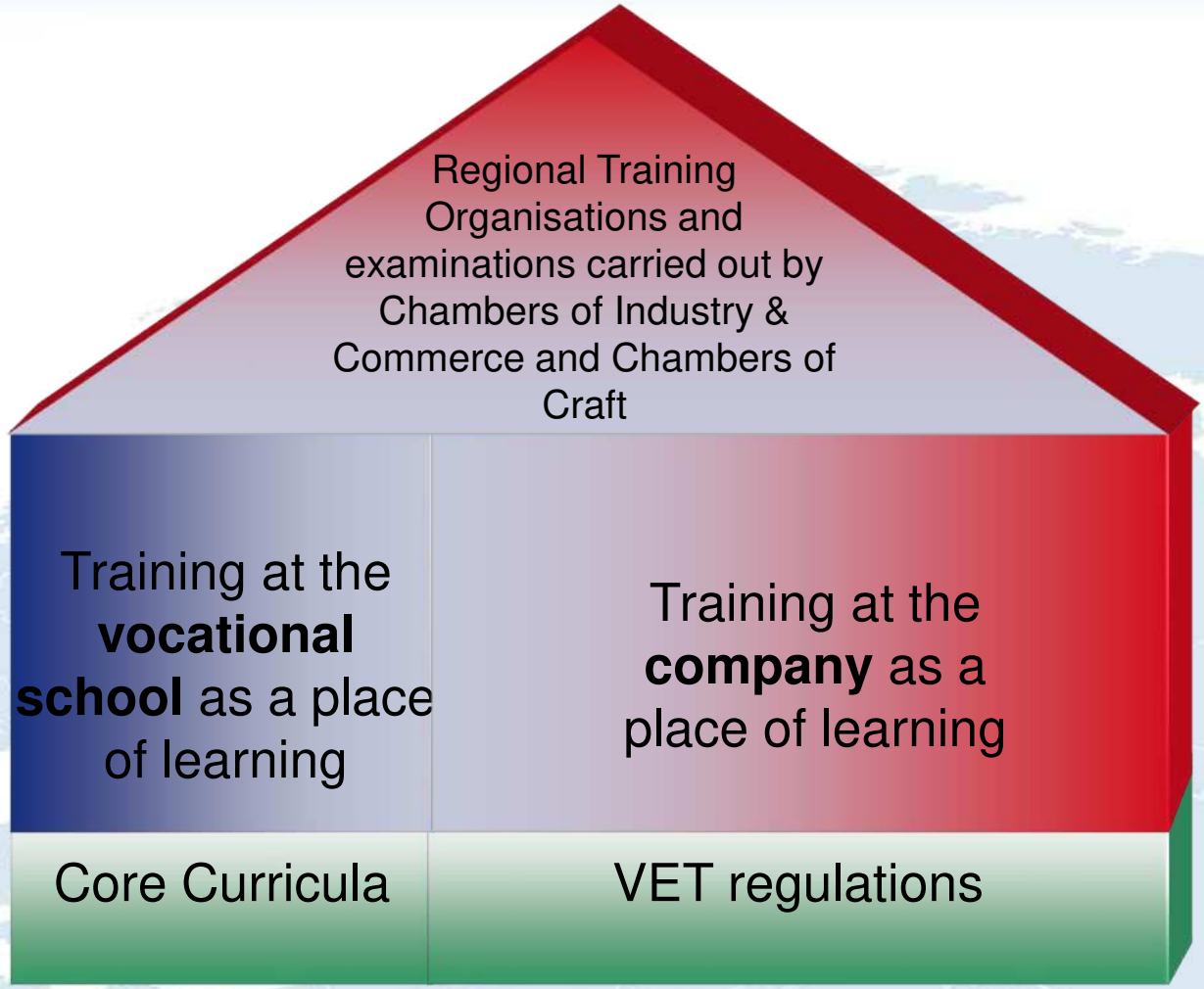
Basic Structures of the German Educational System



Number of students in vocational schools in Hamburg



Dual System: Overview – Organisational Structures



Tasks of the Chambers in the Dual System

Consulting

Companies and Trainees

Monitoring

Execution of the vocational training

Chambers of Industry & Commerce (IHK)

Chambers of Craft (HWK)

Enacting

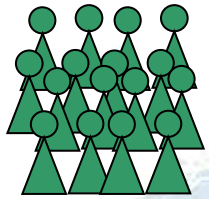
Examination Regulations

Examining

Training facility, Training contract, Instructors, Trainees

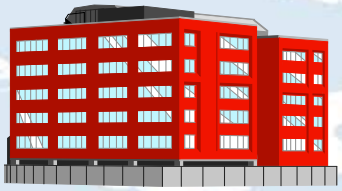
On behalf of the state

Dual System – Structure of the Contract



Training Contract
between

Trainees ⟷ **Companies**



Chambers
Registration + Monitoring of Contractual Compliance

Dual System – Organisation

Places of Learning and Timeshares

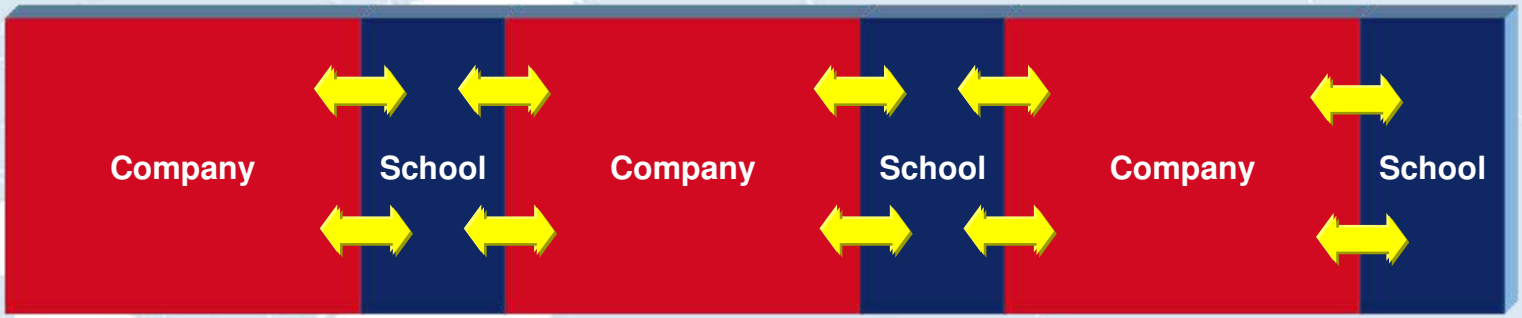
Daily lessons

- Example -

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

Block lessons

- Example -



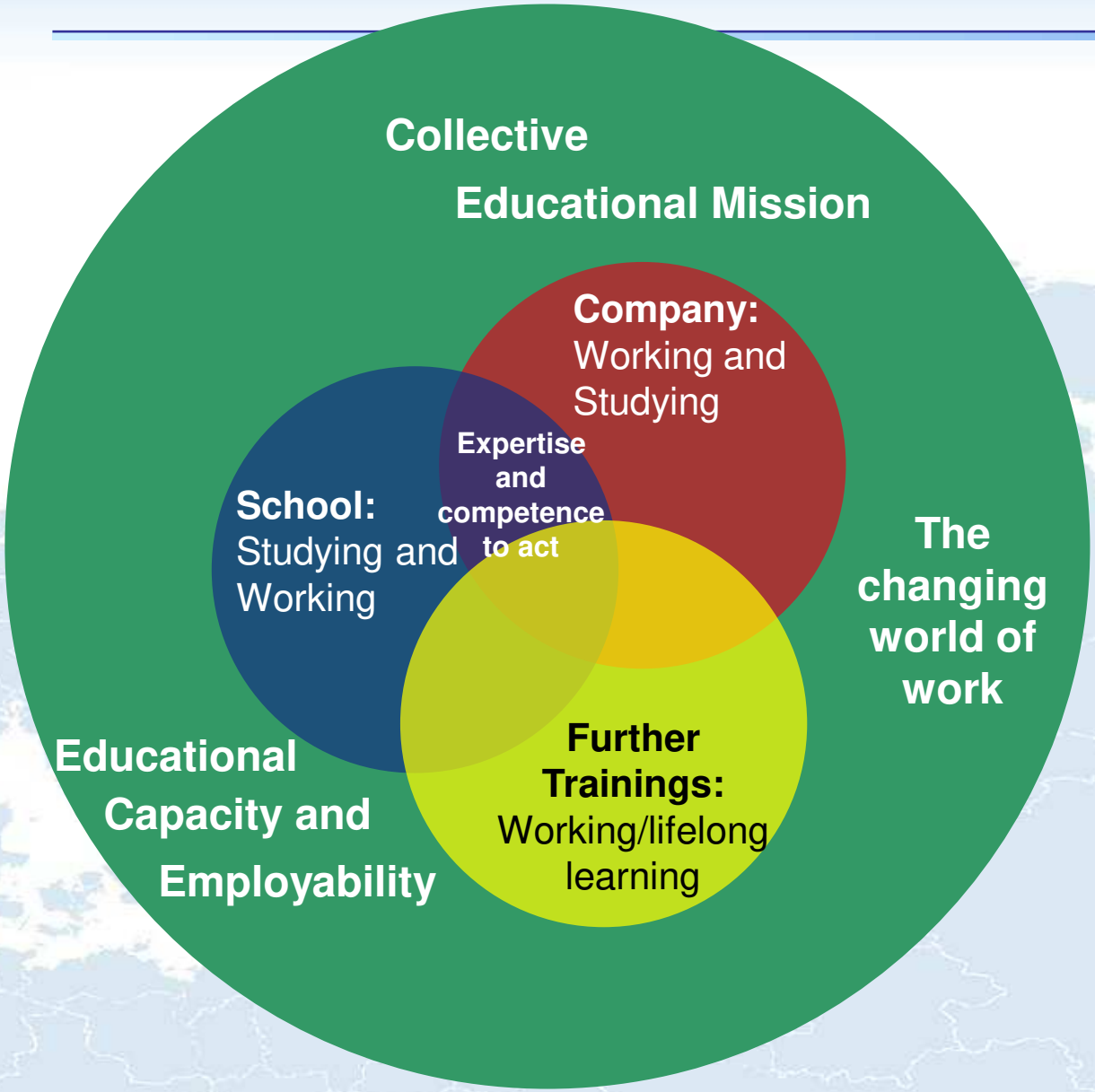
August	September	October	November	December	January	Feb…

Timeshares

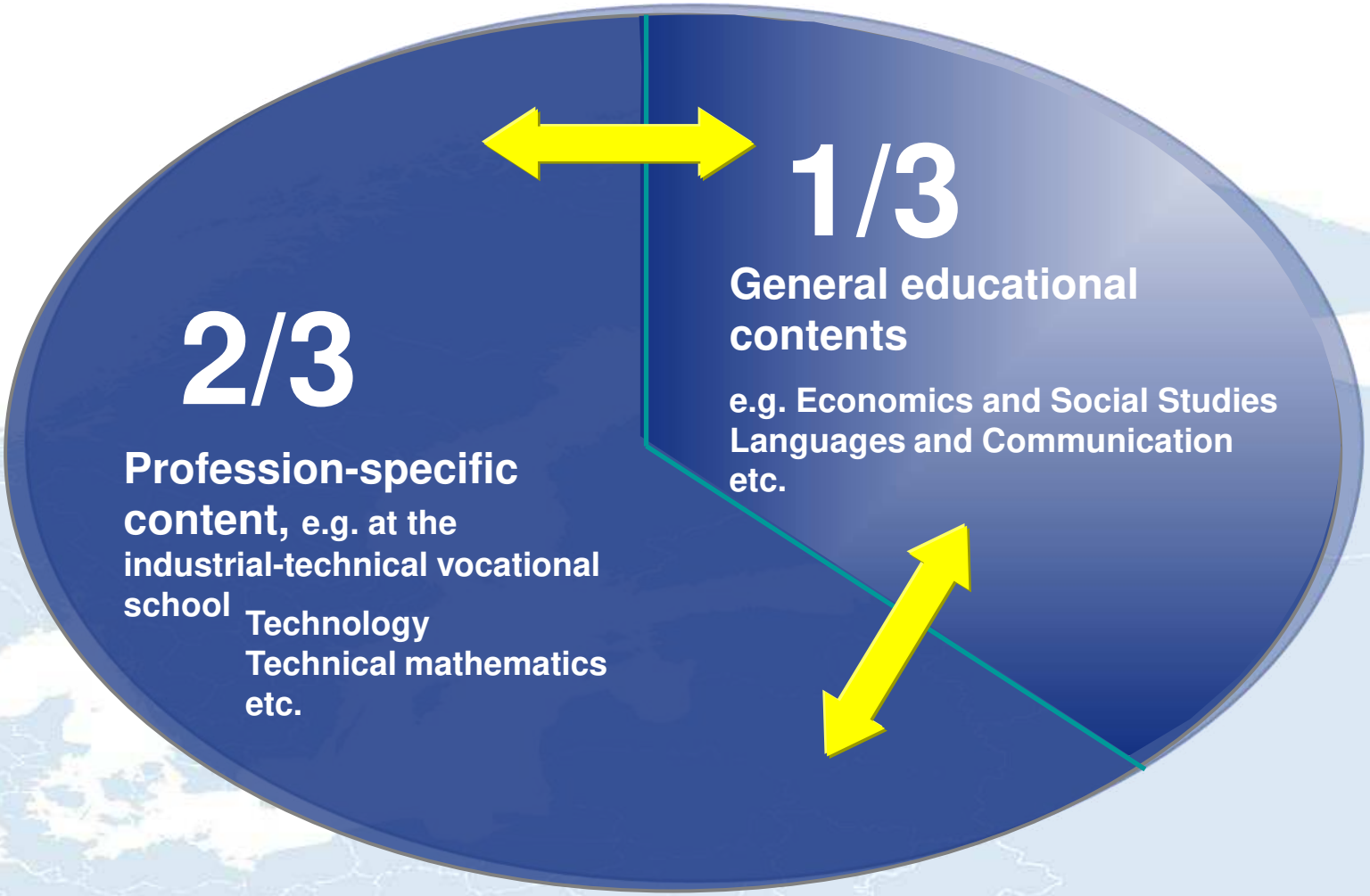
~ 70 to 80 %

~ 20 to 30 %

Basic Elements of the Dual System



Teaching content of the vocational schools



Previous School Education of the Trainees

Dual System
Company + Vocational School

Alter

2,5 %

Hauptschule without degree

28,8 %

Hauptschule with degree

37,5%

Realschule or equivalent degree

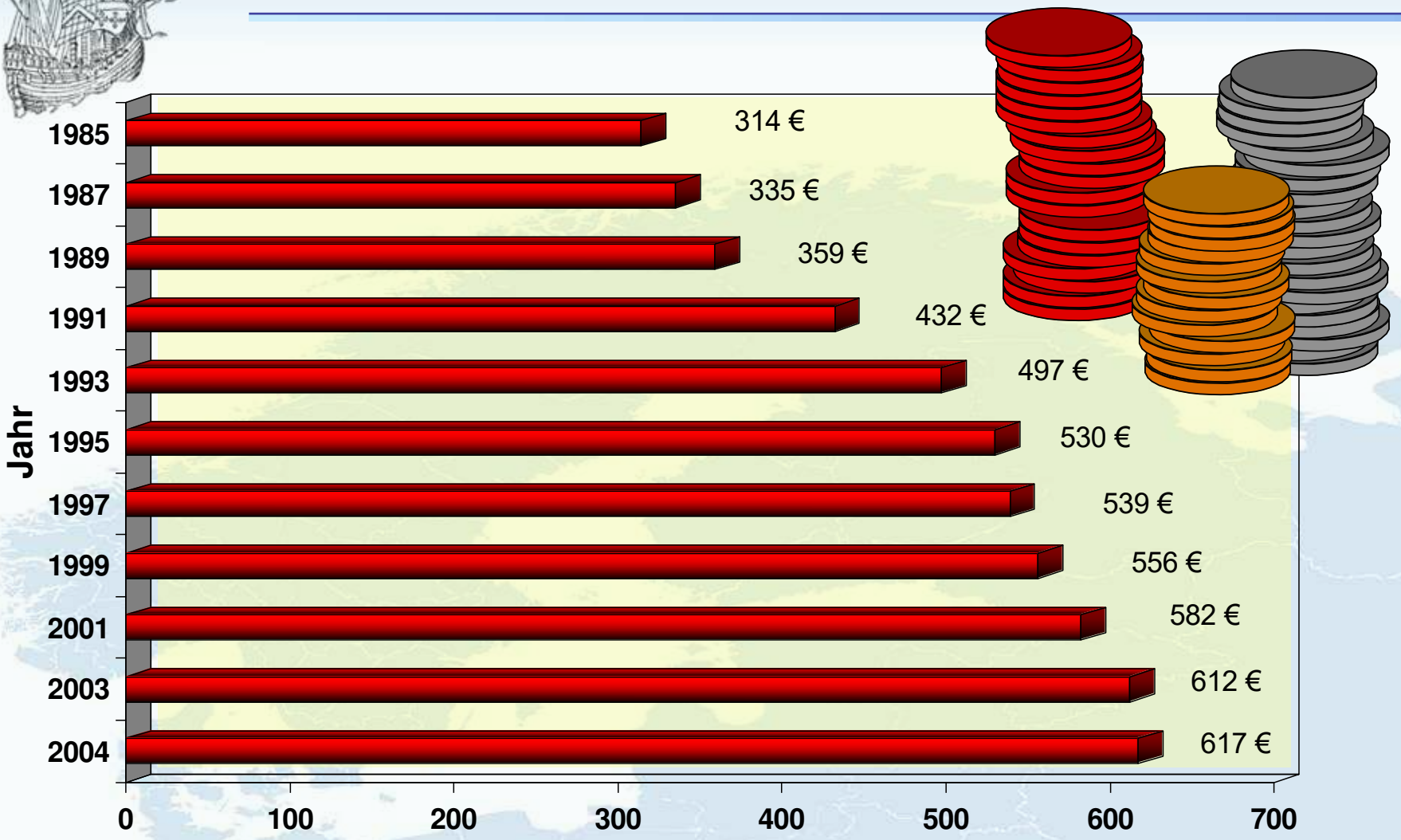
15,3%

Hoch-schulreife or Fachhoch-schulreife

13,6%

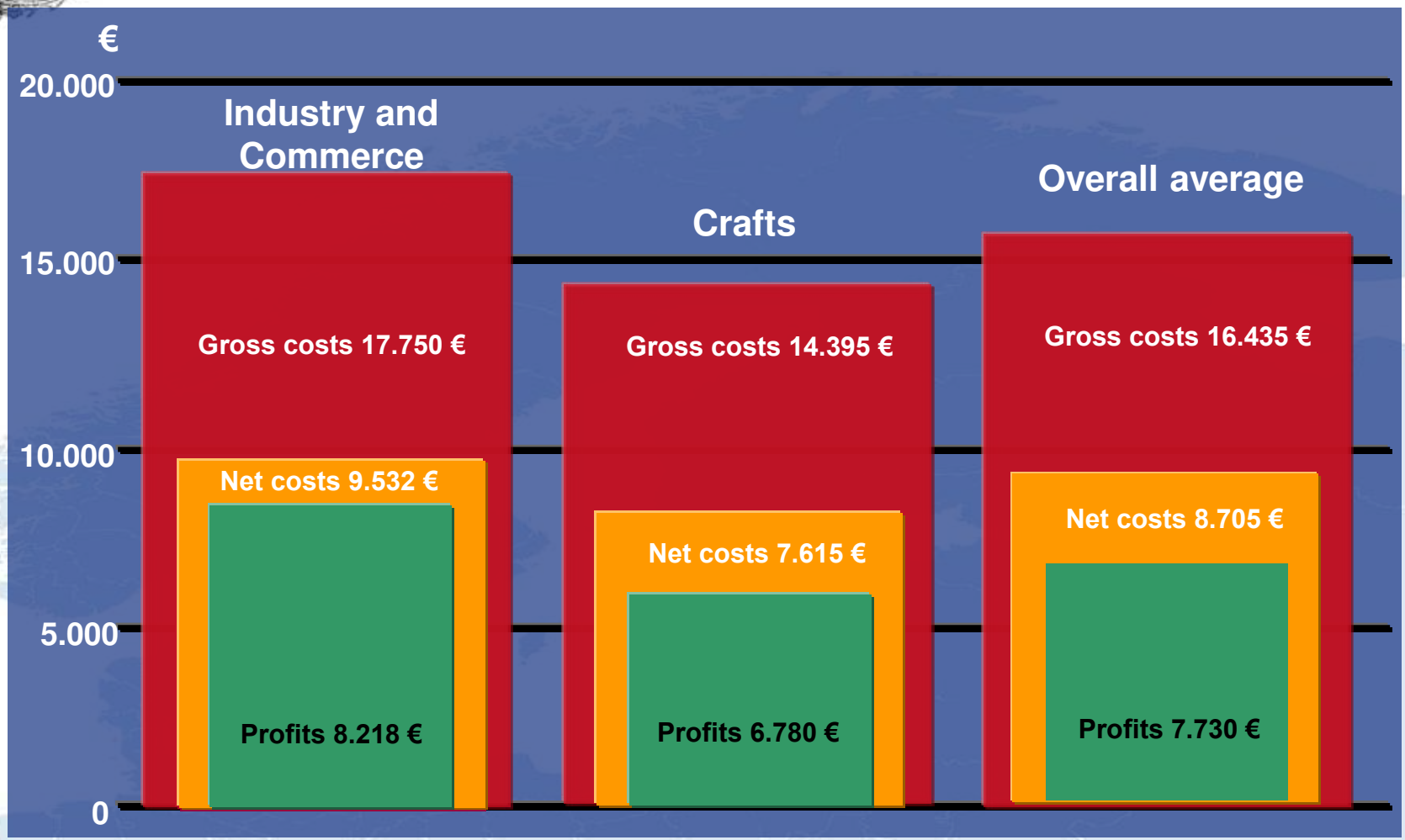
Vocational schools

What trainees earn:

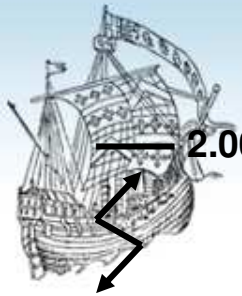


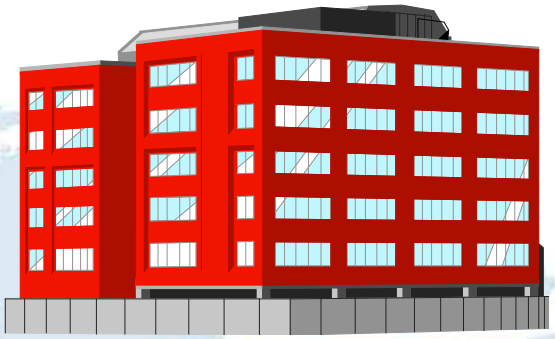
Average earnings of all apprenticeship years per month

Costs and Benefits of in-company/dual VET



Participation in training by company size





2.000.000

1.000.000

500.000

100.000

50.000

5.000

Number of enterprices

2,1 Million companies in total

23,3 % of all companies provide training

1,35 Million companies (1 - 9 employees)

16,5 % provide training

255.000 companies (10 - 49 employees)

46,9 % provide training

62.000 companies (50 - 499 employees)

70,1 % provide training

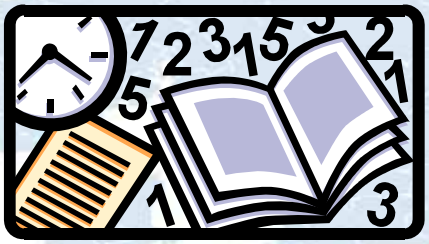
4.000 employees (more than 500 employees)

93,3 % provide training

Exams in the context of VET

Duration of VET **3 – 3,5** years
(e.g. industrial mechanic)

company | school | company | school | company | school



National Standardised Intermediate Examination

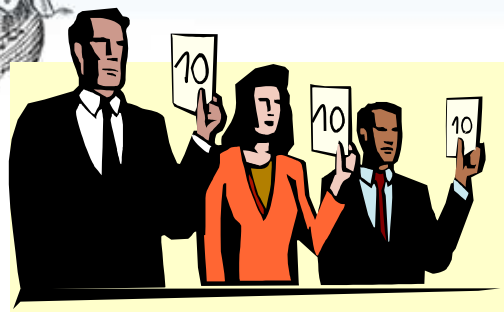
National Standardised Final Examination

40 %

60 %

Chambers of Industry and Commerce or Chambers of Crafts organise and carry out the examinations

Conducting the Final Examination



In accordance with BBiG, the acceptance of the final examinations is carried out by profession-related and competently staffed examination committees.

The Examination Committee consists of at least three members:

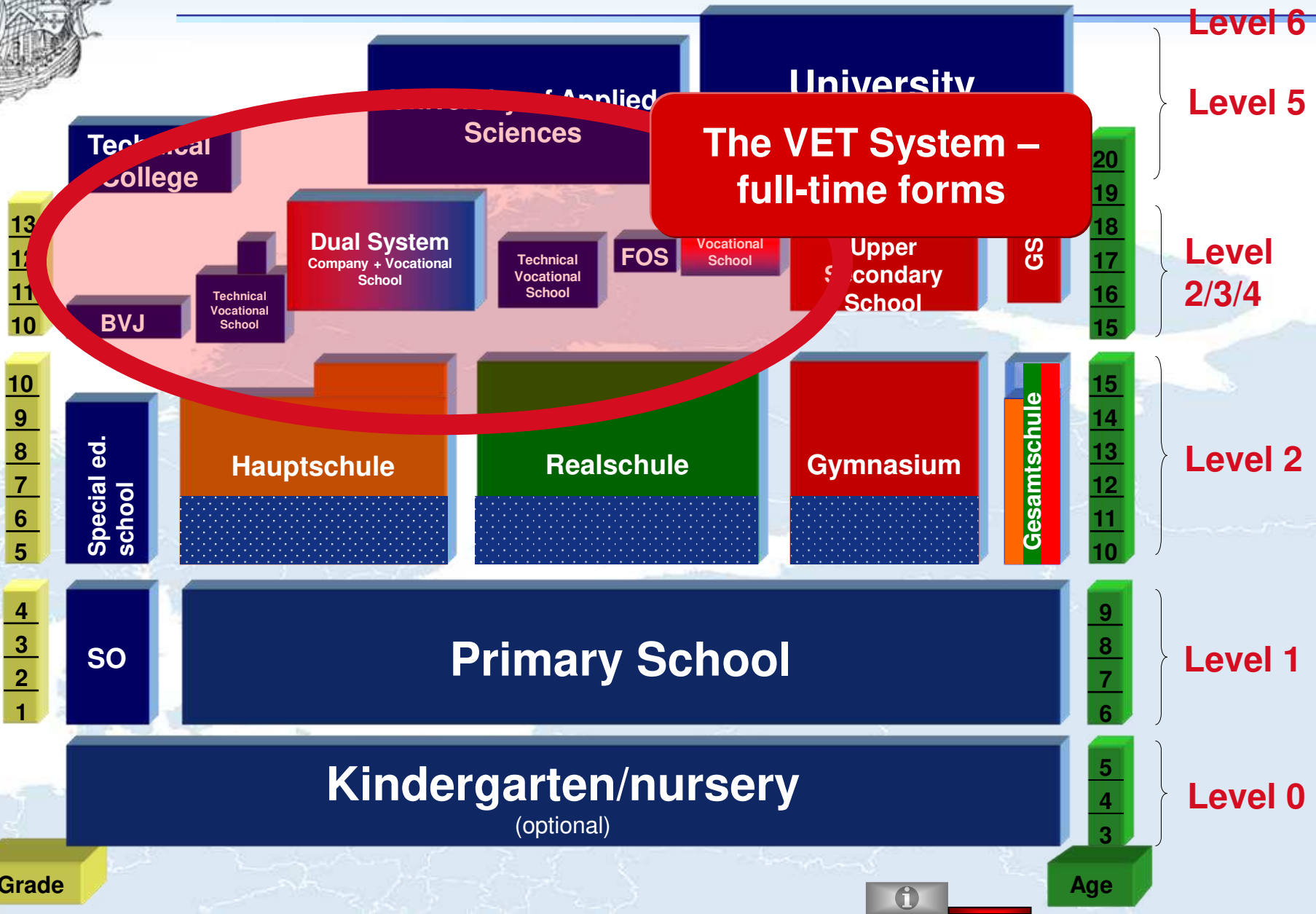
- **A representative of the employers**
- **A representative of the employees**
- **A teacher of a vocational school**

Result of the Final Examinations:

- Certificate of the competent **chamber** including the overall result as well as the results of the individual examination performance

- **Final certificate of the vocational school** with the grades of the individual subjects

Basic Structures of the German Educational System



State Vocational Schools in Hamburg 2004 - Fully qualifying

Hauptschul-abschluss or equivalent degree

- BFS Home Economics
- BFS Watchmaker
- BFS Home- and Family Care

Realschul-abschluss or equivalent degree

- BFS BTA
- BFS CTA
- BFS PTA
- BFS TZ
- BFS TAI
- BFS Socio-Edu. Assistant
- BFS Screen Design
- BFS Business Media Assistant
- BFS Business Assistant
- BFS Leisure Industry

Abitur

- BFS business assistant

0 — 1 — 2 Jahre

Employment or school


UNI
COMPANY
TOOLKIT
Advantages and Disadvantages of Dual VET

Advantages

- Dual vocational education and training optimally links ongoing requirements of the labour market with vocational training
- Companies take responsibility for the training of their junior staff
- Countries with dual vocational education and training have the lowest unemployment rate
- Vocational qualification entitles to subject-related studies
- Very extensive further education and advanced training with own recognized degree, e.g. master craftsman
- Master's degree entitles the holder to study at a university of their choice

Advantage: Engagement of the Economy

Dual VET

Training in companies

70 – 75 % of the training period

State vocational school
Co-control by Chamber

Training in companies

Training courses in new technologies
4 – 12 Weeks
Construction: 1 Year

In training centres of the chambers/ associations, which also conduct further training courses

Chambers in Germany

- Very strong position of the economy in vocational education and training
- Companies are represented by chambers responsible for vocational training
- Business largely organises vocational training itself
- Mandatory membership for all professions of chambers
  DE: HWKs & IHKs
  Optimal: 1 chamber for SMEs & 1 chamber for large companies
- Chambers organised regionally: Only 1 chamber for 1 region
- Democratically built: Every 3 - 5 years voluntary elections
- Chambers: Public corporation in economic self-government
- Completely independent - state only legal control
- Very important: Transfer of state tasks to chambers
- Chamber Parliament may enact its own laws valid for the Chamber region for these delegated tasks

Chambers in Germany

Three major tasks of the chambers

1. Sovereign tasks (delegated by the state) e.g.

- Responsibility for vocational training
- Registration Company
- Experts – essence

More cost-effective, more enterprise-oriented, self-designed

2. Representation of interests for companies and their employees

- Representation by the state: obligation to participate and to be heard
- Social groups: industry, trade unions, etc.
- Publicity
- Politics: parties, elections, etc.

Representation of interests for SMEs extremely important!

3. Services for companies and employees

Non-cash benefits

Disadvantages

2 Main disadvantages that are not system related

1. Cumbersome & protracted with changes, e.g. creation of new professions
   Associations and trade unions must develop and agree, only then the state decides
   Duration 6 years
   No problem of the dual system
   Learning of Lithuania

2. No entry requirements and too little differentiation
   No problem of the dual system
   Creation of 3 training courses with complete permeability & learning according to individual possibilities
   See e.g. building insulation specialist in Lithuania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Thank you!
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