Enhancing Expertise

The Ministry of the Economy and Labour’s Qualification Offensives

Hamburg
### Cluster-related qualification activities – example projects

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**EU “Best Practice” award**

**SPHERE OF ACTIVITY**

- **CLUSTER**
  - Long-term “Next Generation” acquisition
  - Trainee programmes

**Cluster-related qualification activities**

- **Aviation**
  - “Engineering for Children: the Fascination of Flight”; FOLLOW ME BOX; DLR_School Lab; career orientation fairs
  - New career path: Technical Product Designer; exchange programme with France

- **Logistics**
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- **Maritime**
  - “The Fascination of Shipping”
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**HCAT Hamburg Centre of Aviation Training**

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**Mobility agency “Promoting Mobility”**

- Study of qualification needs
- HCAT Hamburg Centre of Aviation Training
- MTC Marine Training Center
Hamburg’s great strength is qualified personnel. Today, it is qualified personnel that forms the basis for successful business locations. Germany’s competitiveness is attained and enhanced by innovation. And innovation can only happen when knowledge and expertise are continually growing.

Technology is becoming more and more complex and international competition is becoming more and more intense. Companies are forced to develop new products and processes. At the same time, they have to integrate the knowledge and expertise acquired at other companies and at research facilities in their own corporate processes. This is, essentially, a challenge for companies. The Hamburg government supports the business world in this area by providing an optimal operating environment and with new institutions for applied research, such as the Northern Laser Centre (“Laser Zentrum Nord”) and the Centre for Applied Aviation Research (“Zentrum für Angewandte Luftfahrtforschung”).

The acquired know-how brings with it the need for people with the competence to put it into practice and develop it further. Demographic change and economic growth are also making investment in talent ever more important.

Since 2001, therefore, under the umbrella of the Ministry of the Economy and Labour, several cluster-specific qualification offensives have been launched. With their comprehensive qualification measures they have made a decisive contribution to making Hamburg the world’s third-largest centre of civil aviation, northern Europe’s logistics hub and media metropolis, the European Green Capital for 2011 and, according to various league tables, a city with outstanding prospects for the future, en route to becoming an internationally recognised centre of education.

Yours, Axel Gedaschko
Minister for the Economy and Labour
VIBRANT NETWORK WITH A HEART

The qualification offensives can be likened to a close-knit network, consisting of the companies and trade associations of the industry in question, along with state and private educational and training institutions as well as boards and federations. The Ministry of Economy and Labour (BWA) serves as the hub. Its Economic and Structural Policy Division is the central contact point for the qualification offensives. It brings together the various actors, moderates and coordinates projects – for which it also often provides initial launch funding – and makes resources available to create a training infrastructure in line with needs.

By involving all participants, and aided by a relationship of trust built up over a period of time, innovative means of attracting specialist personnel can be developed together. The measures adopted are always aligned with operational practice, make use of the best technological basis and reflect international standards. Small and medium enterprises in particular benefit from the network, which acquires its vitality from useful contacts and short, simple means of interaction.

The shortage of specialist personnel, already visible, combined with demographic developments, demands not just short and medium-term action; long-term thinking is also essential. In Hamburg, therefore, children are already being won for the field of engineering technology. Furthermore, the city is once again being true to its reputation as a gateway to the world and is responding to the increasing globalisation by placing special emphasis on intercultural aspects.

In the following pages, selected examples demonstrate the areas of activity pursued by the qualification offensives.
Long-term “next generation” acquisition

GETTING IN EARLY

Initiation

The best technology is of little use if the next generation of specialists is not at hand, ready and waiting to use it and to enhance it. And Hamburg has plenty of innovative technology. Aviation, shipping, logistics, IT, media, renewable energies – all these industries are present here; their competencies that are recognised worldwide and the prospects for the future are outstanding. And at the same time, these industries have the greatest need in terms of the next generation of specialist personnel.

But how do you arouse a passion for the key technological subjects of mathematics, science and engineering in children and young people? The qualification offensives have initiated several model projects which are receiving an enthusiastic response and teaching new things about this area.

The series of events “Engineering for Children: the Fascination of Flight” is breaking new ground. Boys and girls from eight to twelve years of age attend lectures at the University of Applied Sciences (HAW Hamburg) where they learn in an enjoyable way, for example, why an aeroplane flies or what a dentist’s mirror is doing in the fuselage of an aircraft. The events are regularly sold out. In the production facilities and laboratories of the participating companies, associations and organisations, the mini-students can put what they have learned into practice. And so that the fascination does not dwindle during puberty, the programme has been extended with a summer camp for young people aged between twelve and sixteen along with the FaszinationFliegenKlub (“Fascination of Flight Club”), organised by the Joint Initiative “Hamburg – the place for aviation”.

Other industries have also been inspired by the capacity for passion and excitement in young people. Since 2008, young people have been able to catch
hold of “The Fascination of Logistics” at on-site events in Hamburg. In 2009, the lecture series “The Fascination of Shipping” began at the Hamburg University of Technology (TUHH). 2010 will see “The Fascination of Games” begin at the University of Applied Sciences (HAW Hamburg).

Career orientation

The TALENTDAY, initially developed by BWA and the Chamber of Commerce for the “IT and media” field, is another case of imitation. At the event, more than 60 companies opened their doors to around 600 senior secondary pupils from Hamburg, giving them an idea of the wide variety of traineeships and career prospects in the media and IT sector in Hamburg.

There are also several BWA-sponsored programmes which are integrated into the school curriculum, motivating children and young people with access to the sciences and engineering and giving them a sense of orientation in the choice of a career path. Teachers of classes four to ten can borrow the FOLLOW ME BOXes, developed as part of the Qualification Offensive and containing models and teaching material relating to aviation, and take advantage of an attractive, experiment-based lesson structure – free of charge. At the HAW Hamburg Aerodynamics Laboratory, senior secondary pupils may conduct various experiments, and the DLR_School-Lab at TUHH offers pupils the chance to conduct scientific experiments with air currents.

No less attractive is the cross-sector Natural Science and Engineering Initiative (NaT gGmbH), which helps secondary colleges to put together teaching plans for the new advanced level in a way that is more in tune with real-world practice. The programme initiates and maintains cooperative projects with companies operating in a wide range of technical and electronic areas, involving the universities at the same time. Project Roberta is specifically targeted at girls; female engineers from TUHH visit seventh-class schoolgirls and build small robots together with them.

At career orientation fairs, the qualification offensives have their own stands and distribute brochures with information on job prospects, stimulating interest in the clusters. The internet, of course, is also used. One very successful example is the www.logistik-lernen-hamburg.de portal, jointly developed by BWA and the Chamber of Commerce. The site provides visitors with information on logistics careers in Hamburg and even allows them to test their skills with “Logistik Master”, a free PC game.
HAMBURG — EDUCATION CITY

Traineeships

In many fields, Hamburg has an excellent reputation as a centre for education and training. When it comes to traineeships and continuing education in aeronautical technology, the city leads Europe. This is not just attributable to the high number of trainee places available each year, but also to the first-class quality of the trainee programmes themselves — and of the training environment. In order to keep the training up to the minute and tailored to the needs of companies, the qualification offensives have launched several projects and even introduced new career paths, such as the Technical Product Designer, which fits between Engineer and Technical Draughtsman. BWA has also made targeted infrastructure investments.

The animation-school-hamburg is a good example. BWA supports both the education programme itself and the equipment needs of the “talent smiths”, once again strengthening Hamburg’s creative competency. The city is Germany’s largest animation centre and is regarded as an animation industry capital. With the wide range of qualifications on offer, the animation-school-hamburg not only trains award-winning cinematic animators, but also the 2D and 3D animation designers desperately needed in the advertising and computer game sectors. An exemplary joint product is the “logistics:challenge” educational software. The interactive, network-based simulation of the logistics market allows trainees to try out various market positions and corporate functions at their training companies and in the trade school – in a virtual environment. The project was developed by the Institute for Career and Economic Education at the University of Hamburg and financed by BWA. Various logistics companies and the Hamburger Spediteure (“Hamburg freight-forwarders”) association took part in the development.

In order to optimise the trainee programme at the Port of Hamburg, BWA participated financially in the development of a gantry simulator at “ma-co maritimes competenzzentrum e.V.” The simulator allows trainees to learn in a realistic environment without effecting the real operations of the gantries in the Port of Hamburg. The State Vocational School for Vehicle Engineering (G9) also received support for the financing of a heavy goods vehicle to be used for training and examination purposes.

Academic Programmes

With a total of 16 universities and tertiary institutions, Hamburg lives up to its reputation as a global metropolis in the realm of teaching and research, too.
The various fields covered continue to be an important strength. Both the number of places available and the programmes themselves continue to be expanded, representing both qualitative and quantitative growth.

The media city of Hamburg is thus Germany’s leading competency centre for information and communications technologies. One particularly booming area is the games industry, which is, however, desperately looking for specialists such as game designers, programmers and producers. In order to meet this need for the next generation of personnel, thereby securing the continual boom in the industry, and at the same time to promote research in innovative technologies and the development of new products, HAW Hamburg launched a new masters programme in “Sound, Vision, Games”, with financial assistance from BWA. BWA has also financed the acquisition of a “motion tracking system” to facilitate 3D animation.

At the same time, the need for specialists in the field of aircraft cabins also has to be met. The aviation-related programmes at HAW Hamburg and TUHH have therefore been expanded – with great success. The Qualification Offensive has also made sure that the adoption of the bachelors and masters system by the universities is more reflective of the requirements of companies in the aviation sector.

In order to create an optimal learning environment, BWA has participated financially in the equipping of laboratories, not only for courses in games and aviation, but also in logistics. The Packaging Technology Laboratory at HAW Hamburg has been expanded, so that RFID (Radio Frequency Identification) can also be integrated in the training programme. RFID makes it possible for goods and their packaging to be identified and located based on electromagnetic waves.

**Continuing Education**

Investment in continuing education is essential in order to keep up with the modern world and the incredible pace of technological development. Supplementary qualifications provide security for personnel, companies and whole industries. The qualification offensives in Hamburg are therefore continually creating new needs-based training programmes. This enables the high demand level for specialist personnel to be met and gives new prospects to the city’s talented personnel.

The in-service training programme leading to qualification as a State-Certified Aeronautical Technician, for example, is operating at full strength. The career path is positioned between aircraft mechanic and engineer. The two-year full-time programme at the Heinze Technical College is matched by a two-and-
Medium-term acquisition of specialist personnel

A half-year semester model, the only programme of its kind in Germany, at the State Vocational Training School for Manufacturing and Aircraft Engineering (G15). Six-month school semesters alternate with practical periods in the cooperating companies. The model is used by companies both to develop their own personnel – the selected staff remain as paid employees throughout the programme – and also to attract new personnel by offering internships to students without industry experience or to former military personnel, students who have chosen the programme themselves.

With the help of the Hamburg employment agency ("Arbeitsagentur"), numerous extension courses and retraining qualifications have been created to equip people from other industries, such as architects, for the aviation industry, thus further meeting the desperate need for personnel. The whole spectrum of programmes available can be viewed online by consulting the continuing education database, developed in-house, at www.luftfahrtstandort-hamburg.de.

Hamburg is also investing in creative personnel in the media sector. IT staff who qualified as IT Specialists and Operative IT Professionals in Hamburg benefit from a high placement rate. The two process-oriented qualification projects are supported by the European Social Fund (ESF) and BWA.

The prospects for the maritime industry are also very positive. BWA has therefore supported the development of the CSP Certified Ship Planner continuing education module. This makes it possible for practitioners from the commercial engineering or administration fields to gain a qualification in an exciting and important role. Ship planners optimise the loading planning and handling of container ships for shipping companies and terminals, making them an important point of contact in the industry.

MTC and HCAT: two milestones!

Hamburg is the world’s third-largest location for both civil aviation and shipping. This position has been strengthened by two new training facilities, outstanding at an international level. The MTC Marine Training Center is one of the world’s largest training and continuing education institutions for captains, sailors and marine engineers. The heart of the facility is a state-of-the-art ship navigation and engine simulator, capable of representing various ocean areas and ports, which supports the practical training. The HCAT Hamburg Centre of Aviation Training is characterised by the way it integrates classroom, operational and academic training, and by its range of aviation-specific qualification programmes in terms of traineeships, in-service retraining and academic study. The model is to date unique in Europe, and it is a milestone in the Qualification Offensive. The HCAT is a bricks-and-mortar symbol of successful networking in Hamburg.
ATTRACTING APPLICANTS

Making full use of capacity, achieving the best possible performance and experiencing the resultant growth: without a complete team of staff, none of this is possible. But it is not always easy to attract potential staff, especially for small and medium enterprises.

Experience has shown, though, that if these companies join forces, though, they can attract a lot of attention to themselves and their vacancies. For a number of years now, the qualification offensives have been making joint stands available at trade fairs and job fairs, enabling these companies to provide information on career opportunities in Hamburg and to conduct targeted searches for personnel. Joint presentations at fairs are the most important recruitment measure when it comes to attracting specialist personnel from other regions to Hamburg in the short term – as well as to keep those who have qualified in the city here over the long-term.

The contact and networking fairs, jointly organised by the Employment Agency (“Arbeitsagentur”) and the Chamber of Commerce, are very effective, bringing engineers and technicians from all over Germany together with companies from Hamburg. 2006, for example, saw some 1000 engineers presented with information on around 650 aviation vacancies in Hamburg. The following year, around 600 engineers attended a similar contact fair for the maritime industry.

The Logistics Day, held on the third Thursday in April each year, gets several thousand young men and women moving in and around Hamburg. The highlight, and the country’s biggest Logistics Day event in recent years, was the Job and Career Exchange in Shed 52 at the Port of Hamburg. Companies and institutions related to the logistics industry from the Hamburg Metropolitan Region conducted a varied programme which presented the whole range of career possibilities in logistics. The event was organised by the Logistics Initiative and received significant support from BWA.

Job exchanges abroad, for example in Sweden and Italy, have also become a valuable recruitment tool. At each event to date, between 20 and 30 highly qualified specialist personnel have been acquired for Hamburg companies.

In order to increase recognition value, attention is given to ensuring that the same image is presented at all events. Regardless of the industry, all informational material – flyers, brochures, posters – bear the typical red ship's bow as the brand image for Hamburg.
Internationalisation

HAMBURG — GATEWAY TO THE WORLD

“A little education and the whole world is your family,” said the American author Mark Twain (1835-1910). And indeed, the nations of the world, but in particular of Europe, are growing ever closer through education. Intercultural issues are a deciding factor in qualifications today.

Hamburg’s aviation industry, in particular, is forging family bonds well beyond the city and national borders. It has already initiated numerous joint projects, for example the European Aerospace Cluster Partnership (EACP). This partnership of 24 European aerospace organisations, launched in Hamburg in 2009, serves as a platform for mutual exchange and for the implementation of international projects. The primary fields of activity include internationalisation, financing and qualification.

Since 2004 there have been regular six-monthly internships for graduates from BTS (brevet technique scientifique) from France in Hamburg companies. The cultural and linguistic orientation is aided by the efforts of the mobility agency “Mobilitätsag­entur bei Arbeit und Leben e.V.” – with obvious success. Many interns remain in Hamburg, which is especially beneficial for small and medium enterprises. This has encouraged the internationalisation of training. The aviation clusters from the Hamburg, Toulouse and Bordeaux regions decided to initiate an exchange programme for trainees. Initially, however, a relationship of trust was created for training companies and schools by way of mutual workshops, where the content of the internships was defined. The internships are recognised within the respective national traineeship systems. There are now several other international technology-focussed continuing education modules available, including some at universities.

Also worthy of mention is the Promoting Mobility (“Mobilität fördern”) project, supported by the European Social Fund and BWA, which strengthens the involvement of the Qualification Offensive in the field of logistics. Training is a time for travel: this motto is used to motivate in particular young people in commercial and industrial logistics training programmes to acquire intercultural experience and make new discoveries.
Contacts and Resources

Contacts for the qualification offensives of the Ministry of the Economy and Labour (BWA), Economic and Structural Policy Division:

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(birgit.appelles@bwa.hamburg.de)
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(antche.ruge@bwa.hamburg.de)

www.bwa.hamburg.de

Websites for clusters referred to in this brochure:

www.luftfahrtstandort-hamburg.de
www.hamburg-logistik.net
www.hamburg-media.net
www.erneuerbare-energien-hamburg.de

Websites for institutions and projects referred to:

> Short and medium-term personnel acquisition:

www.hcat.de
www.g15.de
www.mtc-simulation.de
www.ma-co.de
www.animation-school-hamburg.de
www.it-medien-hamburg.de
www.logistics-challenge.com
www.kfz-schule.de
www.tag-der-logistik.de
http://hamburg.kursportal.info

Internationalisation:

www.eacp-aero.eu
www.mobilitaetsagentur-hamburg.de

Cross-sector:

www.haw-hamburg.de
www.tuhh.de
www.arbeitsagentur.de
www.hk24.de
www.hwk-hamburg.de

Creating and securing jobs — BWA support programmes

Hamburg supports the creation of new jobs and the securing of existing jobs. Companies based in the city, or moving to the city, may apply for support for both general and specific qualification programmes for their staff. The basic requirement is that the position is being newly created and will be filled by a person who was previously unemployed or threatened by unemployment, or who is relocating to Hamburg specifically to take on this permanent position. Support is also available for Hamburg companies that are forced to make personnel redundant for operational reasons but would be able to keep these staff if continuing education were available. BWA funds up to 70 per cent of training costs for small and medium enterprises and up to 50 per cent for large companies. A maximum 3,000 euros is available per person. Companies can apply for support before the commencement of training, by contacting Herr Storojew at BWA.
Telephone: +49 (0)40/428 4116 56, Email: Alexey.Storojew@bwa.hamburg.de.