

Co-operation and Local Partnership Between Cities and Universities

Experiences of European Union Capital Cities

The Union of the Capitals of the European Union

City of Helsinki Urban Facts

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Preface

Knowledge and skills have always been of crucial importance to urban development. In an increasingly global world cities have to do their share to safeguard the cognitive and educational competitiveness of their regions. The capitals of Europe have various ways of collaborating with their local universities. This publication compiles such practices of co-operation between cities and universities in the capitals of the European Union.

In 2001, Helsinki chaired the UCUE, i.e. the Union of the Capitals of the Union of Europe. The annual meeting was held in Helsinki on 28 September. It is customary in the UCUE for the chair city to choose a discussion theme for the annual meeting. Helsinki had chosen the theme of co-operation between cities and universities. Helsinki has long traditions in this field, and in recent years, this co-operation has been intensified. By choosing this theme we wanted to activate an all-European debate and learn from the experience of other capitals. This publication has come about as a result of the contributions given by the capitals' representatives at the annual meeting. I am confident it will serve one of the purposes that the UCUE has had since its foundation in 1961: to exchange experiences and knowledge between cities.

As the chairperson of the UCUE in 2001, I would like to thank all cities for their contributions to our theme and for helping us promote co-operation between cities and universities within the European Union.

Helsinki, March 2002

Eva-Riitta Siitonen

Summary

This publication presents various practices of co-operation between universities and the city in the capitals of the European Union. It is a collection of the reports made by the capitals for the general assembly of UCUE, the Union of Capitals of the Union of Europe.

The UCUE was founded in 1961 to keep up and develop contacts between the capitals of the European Union and their inhabitants and to promote the exchange of information and experiences. All the capitals of the 15 EU countries belong to the organisation. Representatives of the capitals of EU applicant countries may participate in the general assembly as observers.

On 28 September, Helsinki hosted the 2001 annual general assembly. Each member city assumes chairmanship for one year in turns. In 2001, it was Helsinki's turn, and the general assembly was chaired by its Lord Mayor Mrs. Eva-Riitta Siitonen. The chairperson chooses a theme to be discussed at the general assembly. The theme of the Helsinki assembly was "co-operation between capitals and universities".

The basis for the discussions in Helsinki was provided by the reports made by the capitals.¹ Participants presented good practices and successful solutions in their respective cities. Among the 15 EU capitals, 10 presented fairly extensive descriptions of university co-operation, i.e. Berlin, Brussels, Copenhagen, Helsinki, Lisbon, London, Madrid, Paris, Stockholm and Vienna.

Typology of city-university co-operation

We may use the following typology to describe existing co-operation between European capitals and the universities located in them. The classification gives an overall picture of this co-operation. In their reports, cities presented many other good practices, too. Our classification should not be taken too literally. One problem is that capital cities have very different roles with regard to the higher education sector. Some cities have no responsibilities at all in this field while, at the other extreme, there is the federal state of Berlin which is responsible for budgeting the universities. However, all capitals can be examined in terms of their functional urban region and, also, we may allow ourselves certain intellectual liberties from administrative frameworks when we compare the best practices.

1. Contact persons in cities were: Volker Löwe, Berlin; Francis Deleau, Brussels; Nicolai Leth, Copenhagen; Cristina Rocha, Lisbon; Stephen Diamond, London; Fernando Carrión Morales, Madrid; Danièle Portaud, Paris; Cecilia Fraenkel, Stockholm; Wendelin Wanka, Vienna

Cities which emphasise culture and civilisation

In their reports Vienna, Paris and Berlin emphasise the importance of knowledge and science for the well-being of the city. Vienna and Paris emphasise their long historical traditions and the importance of these traditions for the development of the cities. Vienna and Paris highlight their rich supply of cultural amenities and the fact that intellectual capital is a major source of vitality and initiative for all in a city region.

The City of Berlin presents co-operation projects with universities and with the private sector. All these big metropolises have mobilised major financial resources for co-operation with universities.

In London, the Greater London Authority, i.e. the new metropolitan area administrative organisation, is not involved in higher education. In its report, London emphasises strategic co-operation in the area of city planning and development between the mayor's administration and the higher education sector.

Cities which emphasise economic development and the development of processes and methods

Helsinki, Copenhagen and Stockholm present a technology-oriented co-operation model where one of the main goals is to create new business enterprise. In addition, they mention wider educational and well-being aspects.

Lisbon and Madrid present models for organising co-operation and best practices in different fields of research and services.

These cities seem to emphasise the aspect of direct benefit when putting in resources to co-operation with universities. Brussels presents co-operation with the local university in some targeted fields. The cultural tuning of this co-operation is interesting.

Cities with a limited strategy for co-operation with universities

There are cities that have a limited strategy for co-operation with universities. In some cities, co-operation with the universities falls totally outside the city's responsibilities.

Some common themes

In addition to the broad classification sketched above there are a number of themes which were mentioned in two or more of the reports.

The challenge of affordable housing and housing policy is also related to universities. Dwellings for students and staff are needed everywhere. This theme was mentioned by Copenhagen, Helsinki, London and Paris.

Transport systems and, especially, public transport are crucial for the higher education sector, too. This theme was mentioned by Berlin and London.

Programmes for the exchange of staff or students between universities and enterprises or between universities and cities are examples of good practices for exchanging and accumulating knowledge. This theme was mentioned by Berlin, Lisbon, Madrid, Paris and Stockholm

The strategic challenge is how to organise strategy-driven and goal-oriented co-operation between cities and universities at local level. Some solutions are provided by Berlin, London, Madrid, Paris and Vienna.

Berlin has performance-related contracts with universities. The Mayor of London meets regularly with the London Higher Education Consortium (LHEC) to enter a broader dialogue on common issues. Madrid has a system of Framework Agreements and Collaboration Agreements. Paris has signed an agreement with the state to develop the University of the Third Millennium. Vienna has several means of discussion on knowledge transfer between sciences, business and administration. The lectures, meetings and workshops of these cities emphasised a mobilisation of the local intellectual capital.

Capitals and universities as a driving force in Europe

The experiences of capitals show how universities and cities may, not only, benefit from each other but even create well-being for their whole nations. Being leading cities in their nations, the capitals of Europe together form the driving force behind the development of the European Union.

To be a driving force means taking responsibilities, accepting challenges and, also, making difficult decisions. Cities have to provide safety and service to citizens and enterprises. Cities have to develop new innovations and opportunities for economic growth. All this has to be done in view of a balanced social and environmental development. In all these fields of action cities can use the research and innovations made in local universities and in universities of other capital cities, too.

1 Berlin

In Berlin, Germany's capital city, there are numerous institutions of higher education:

- Die Freie Universität Berlin (FU) – Free University
- Die Humboldt-Universität zu Berlin (HU) – Humboldt University
- Die Technische Universität Berlin (TU) – Technical University
- Hochschule der Künste Berlin (HDK) – (Arts)
- Hochschule für Musik „Hanns Eisler“ – (Music)
- Alice-Salomon-Fachhochschule – (Social Work and Social Education)
- Europäische Wirtschaftshochschule (EAP) – (Business)
- Evangelische Fachhochschule für Sozialarbeit und Sozialpädagogik Berlin – (Social Work and Social Education)
- Fachhochschule des Bundes für öffentliche Verwaltung – (Public Administration)
- Fachhochschule für Technik und Wirtschaft (FHTW) – (Technology and Business)
- Fachhochschule für Verwaltung und Rechtspflege Berlin – (Administration and Judicature)
- Fachhochschule für Wirtschaft – (Business)
- Hochschule für Schauspielkunst „Ernst Busch“ – (Dramatic Arts)
- Katholische Fachhochschule für Sozialwesen – (Social Work and Social Education)
- Kunsthochschule Berlin-Weißensee – (Arts)
- Technische Fachhochschule Berlin – (Applied Sciences)

Berlin's institutions of higher education are an essential component of economic policy regarding the economic development of the city.

This academic landscape, which is unparalleled in Germany, combined with a large and highly or very highly qualified labor force has become a significant factor motivating companies to settle in Berlin. In international competition, the value of education and science to corporations as an economic location factor has risen each year. Berlin must therefore develop itself into a “European knowledge center” and create an adequate base of human capital by providing training to the people living in Berlin.

The policy of the federal state of Berlin on institutions of higher education is guided by this goal, despite severe budget constraints. The Senate and the House of Representatives have therefore approved the contracts between the state of Berlin and Berlin's universities and colleges, which establish legally binding state subsidies from 2003 to 2005. With these contracts, which have been entered into since 1997, the institutions of higher education are given security in terms of planning. This enables them to make calculations based on the considerable budget cuts planned and to carry out sensible structural and hiring policies on this reduced basis.

The privilege that Berlin's institutions of higher education enjoy in comparison to other policy areas is linked to the obligation to actually make available the 85,000

slots for students that are legally mandated and are related to personnel resources. Further, the universities and colleges commit themselves to improving teaching, learning, economic efficiency, and transparency through goal agreements. Moreover, they are obligated to render an account.

As of 2002, a performance-related system of allocation of state funds will contribute to improving economic efficiency. In this connection, a portion of the total financing provided will be earmarked for distribution based on achievements in teaching, research, and mentoring of the next generation of scholars, as well as on successes in achieving an equality of opportunity for female academics.

The university contracts thereby put into practice important recommendations made by the **BerlinStudie** (Berlin Study). The Berlin Study is a strategy plan for Berlin's future that was commissioned by the EU Commission and the federal state of Berlin. It suggests specific measures for four fields of action (exchange relationships, competitiveness and labor, social cohesion, and a balanced metropolitan area), such as the introduction of new systems of incentives and increasing the autonomy of the institutions of higher education. The Berlin Study was prepared by a team of scientists and scholars from various research institutes and universities in Berlin. The universities were thereby directly involved in working out the recommendations. The Berlin Study was published as a book in January 2001 and is now to be examined and publicly discussed as to the practicability of an implementation of its recommendations. The universities are taking an active part in this discussion and implementation process by holding discussions and educational events.

The contracts with the universities and colleges for 2003 to 2005 respond in particular to the Berlin Study's call for strengthening the *Fachhochschulen* (universities of applied science). In order to achieve this goal, the budgets of the universities, including their clinics, are being reduced by DM 5 million annually, which will be allocated to the *Fachhochschulen* according to a competitive procedure based on quality. This will result in DM75 million having been re-assigned in 15 years, which corresponds to approximately 7,500 slots for students. Berlin's *Fachhochschulen* will then be able to provide around 40% of the slots for new students.

Up to now, Berlin and its academic institutions have cooperated in taking the following steps in order to utilize and strengthen the available potential of the institutions of higher education:

- Linking and profiling of the available potential, particularly through interdisciplinary research groups
- Increasing cooperation with the various non-university research institutes
- Supporting knowledge and technology transfers in business and society, as well as promoting the founding of new businesses
- Establishing spheres of competence in key technologies such as biomedicine, information and communications technologies, microsystems technology, transportation technologies, and nanotechnology
- Establishing university facilities at science and business parks
- Establishing structures and supplementary advising and training services at the universities that serve to convey qualifications in demand, such as Career Services.

Co-operation between the Senate and the universities is taking on great importance in the area of **economic, technology, and innovation policies**.

The potential of the institutions of higher education within the framework of the strategy to strengthen Berlin as a location for technology and innovation is being utilized by the Senate Department for Economics and Technology, the goal of which is to increase Berlin's economic strength.

Particular fields of emphasis in this endeavor are the areas in which regional strengths in science and business overlap with future growth markets. With respect to their development into centers of competence recognized worldwide, bio and medical technologies, media, information, and communications technologies, and transportation technology offer the greatest opportunities for Berlin right now. Opportunities for the future of any economic and academic location are fundamentally dependent on the pace and dynamism of the innovation process. A linking of research institutes that is as comprehensive as possible, from industry and users to financiers and market strategists, is therefore indispensable.

Institutions of higher education and scientific institutes have made Berlin a very attractive "capital of talent" that also enjoys international appeal. The Senate Department of Economics and Technology utilizes this potential by supporting cooperative efforts, with technology transfers and the promotion of networks between science and business, and employs this potential as its most important argument in marketing Berlin as an economic location. The economic development of the city will be decisively shaped by these factors.

The Senate's economic and technology policies view the increase of direct knowledge and technology transfers from the universities to business as a primary goal. Knowledge tied to particular people can only be transmitted through personal contact and is increasingly becoming a strategic factor. The supply side of technology transfers should therefore be intensified in that academics themselves should approach companies more often and offer their services as consultants with respect to needs determination as well in working out possible solutions. The **TSB Technologie-stiftung Innovationsagentur Berlin GmbH** (Technology Foundation Innovation Agency) will assume responsibility for quality assurance in this new transfer model.

The "**Forschungsmarkt Berlin**" (Research Market Berlin) also serves to promote the transfer of knowledge. This is an association of institutions of higher education and non-university institutes in Berlin and its environs. Through presentations at four to six trade fair events, it contributes to knowledge gained through research being put into practice faster and more effectively.

The economic utilization of the results of scientific research is an issue of central importance to economic policy. The **Patentagentur** (Patent Agency) was founded on the initiative of the Berlin Senate by the state-owned investment bank and institutions of higher learning; its goal is to not only provide patent protection for research ready for patenting, but to also assist such research in being exploited commercially.

Personnel transfer, however, continues to be an effective element of the transmission of expertise from the academic realm to small and medium-sized enterprises in particular. Within the framework of the **personnel transfer program "Innovation-**

assistant” (Innovation Assistant), these enterprises are given the opportunity to develop new, technologically sophisticated products with the project-related involvement of qualified graduates of institutions of higher education.

Berlin’s competence in technology benefits, however, not only from the personnel resource consisting of highly qualified young people coming from universities and colleges, who have made Berlin a “capital of talent,” but also from new businesses being founded by people at institutions of higher education.

The media and communications sector is a showpiece with international appeal and charisma. Together, Berlin’s universities and colleges offer 35 courses of study related to media and communications, including new, innovative programs in e-business, which are being offered in Germany for the first time and were established in a public-private partnership.

Many of the new businesses being founded in the technology sector are “**spin-offs**” from Berlin’s academic landscape. The media and communications sectors are particularly well represented in this area; about half of the more than 80 new businesses founded by people at the Technische Universität (Technical University) are media and communications sector enterprises.

Medical and biotechnology are an additional focal point of Berlin’s technology policy. These technologies possess an excellent potential for development in the Berlin-Brandenburg region. This was confirmed in a recently published study by the Boston Consulting Group, “Positionierung deutscher Biotechnologie – Cluster im internationalen Vergleich” (Positioning of German Biotechnology – Clustering in an International Comparison). According to this study, the density of both university and non-university research institutes in spatial proximity to new businesses being founded in the region is unparalleled in Germany. The region has seven technology centers, which include the Berlin-Buch Campus, Focus Mediport, and, in Brandenburg, the Biotechnologiezentrum (Biotechnology Center) Hennigsdorf. A total of 200 teams are now working at the universities and research institutes.

Technology-oriented developments in medical technology also include those based on laser applications. In Berlin, a group of innovative companies with international appeal has formed around the Laser- und Medizin-Technologie (Laser and Medical Technology) GmbH Berlin (LMTB). The proximity to Berlin’s institutions of higher education and the university clinics has proven to be particularly advantageous. In the year under review, this advantage was confirmed when the FU Berlin’s Institut für Medizinische/Technische Physik und Lasermedizin (Medical/Technological Physics and Laser Medicine) won the innovation competition sponsored by the Federal Ministry of Education and Research to promote medical technology.

With the establishment of the “**Kompetenzentrum Wasser Berlin**” (Competence Center for Water) at the Technologiestiftung Innovationszentrum Berlin, research and cooperation projects are being developed with the participation of the Vivendi Group, which is the international leader in the water sector, the Berliner Wasser Betriebe, the Technical University, and other scientific institutes, as well as more than 30 small and medium-sized enterprises in Berlin working in the water sector. These projects will be suited to helping regional small and medium-sized enterprises develop an international orientation.

A significant economic and innovation factor for the city of Berlin is transportation technology. In this respect, one element of the transportation technology alliance is the **Strategiekreis Verkehr und Mobilität** (Strategy Group on Transportation and Mobility) in Berlin-Brandenburg. It provides a platform for cooperation for all the relevant parties in business, science, and politics working in the area of transportation. Top representatives from large transportation technology companies in the region, operators (DB, S-Bahn, BVG, Lufthansa), universities and research institutes, and the state governments of Berlin and Brandenburg are members of the strategy group. It is headed by the governing mayor of Berlin and the state premier of Brandenburg. Its goal is to discuss transportation and transportation technology concepts and programs for the region with regard to the future and to develop and decide on implementation strategies.

The policy of linking the universities, science, and business finds particular expression at the **Wirtschaftsstandort Adlershof (WISTA)** (Science and Industry Park Berlin-Adlershof). The Humboldt University has an important location here. Great innovative potential for increasing Berlin's economic strength is being created here in cooperation with research institutes and high technology companies.

The urban development planning division of the Senate Department for Urban Development works with two universities in Berlin (Technical University, Faculty 7: Architecture, Environment, and Society, and the Humboldt University, Institute of the Social Sciences) in the **area of urban development**. The primary emphasis of the cooperation, which is good, although not very institutionalized, is consulting.

One example is the cooperative project "**Stadtforum – Zukunftswerkstatt der Stadtentwicklung**" (City Forum – Urban Development's Workshop for the Future). Since April 1991, when the advisory body of the Senate Department for Urban Development was established, the "city forum" has become an important factor in citizen-oriented urban planning, which has public appeal, for the capital city. Fundamental questions and the necessary course-setting for Berlin's future are central issues in public discussions. The range of topics was expanded in 1996: the issue of urban societal policy has been added to the classic planning issues. Topics addressed in the 84 meetings of the "city forum" from 1991 to 1995 were: the Potsdamer Platz competition; the parliament and government buildings; Berlin and Brandenburg; the future of work, 1990-2001; city finances; the city center project; city of science; the social city; globalization; sustainability; and population development.

The objective is to discuss and to sharpen the focus on issues pertaining to the future of urban development, prior to political decisions being made, to such an extent that the administration's ability to act is strengthened. The "city forum" plays an important role in the city's public discourse as an informal planning instrument. The meetings are prepared by a steering committee with respect to content. After each meeting, the steering committee drafts recommendations. Scholars from the universities are involved in the work of the "city forum" as subject specialists and as members of the steering committee, as is the dean of Faculty 7 at the Technical University.

A second cooperation project is "**Monitoring Soziale Stadt**" (Monitoring the Social City). A "city monitoring system" was developed in cooperation with the Humboldt University Institute of the Social Sciences as an early warning system for

social spaces. It is updated every two years. It investigates the question of whether there have been changes in trends in the social structural development of the various parts of Berlin. Its objectives are the early recognition of positive and negative developments and the timely introduction of political countermeasures.

A set of 13 indicators (population shifts of different groups, length of residence, percentage of senior citizens and foreigners, unemployment, etc.) was developed, which explain socially selective shifts to a high degree and which possess high validity with respect to the description of social and social structural situations in the various parts of the city.

As a result, it is possible to identify neighborhoods with similar problems and areas with a high concentration of problems. The periodic monitoring helps to identify positive and negative changes over the course of time.

The indicator system is scrutinized and enhanced on the basis of current developments in close cooperation between the Humboldt University and the Senate Department for Urban Development. The Humboldt University performs the analysis and reports on the results. The outcome of the “social city” monitoring is the basis for the determination of the 15 neighborhood management areas that have been established so far.

In the **sphere of art and culture**, the opportunities that could arise from the connection between the competence of the institutions of higher education in the field of cultural studies and the cultural life of the capital city have yet to be developed. In a capital city it is not only necessary but possible to involve institutions of higher education in the sphere of art and culture and in the events that take place here. In this respect, a link must be established to events such as the “Lange Nacht der Wissenschaften” (Long Night of the Sciences).

Co-operation between the institutions of higher education and cultural facilities in the region can also be further developed. This is demonstrated in particular by the successful participation of the university libraries in Berlin-Brandenburg’s cooperative library association and by the proposals for utilizing the training possibilities of the universities and colleges for the work done by theaters in Berlin.

The existing cooperation with the institutions of higher education in the city clearly demonstrates the recognition of Berlin’s importance as an academic location for the city’s economic interests. It must therefore remain Berlin’s goal to utilize this cooperation to make the capital city a European center of knowledge.

2 Brussels

The City of Brussels' Education Authority is in charge of a higher education institution, i.e. Haute Ecole Francisco Ferrer, where several higher education curricula are taught. Moreover, a university, Université Libre de Bruxelles (U.L.B.), is also located on the territory of the capital city.

Université Libre de Bruxelles has many synergies with the City of Brussels (academic collaborations, conférences, etc), but even more with Haute École Francisco Ferrer: bridging courses, joint research and events, joint development of academic structures, etc.

Moreover, international relationships are being developed with other capital cities, other countries, whether European or not, for instance within the framework of Erasmus exchange programmes.

Partnerships between the City of Brussels and its Haute École are naturally maximised due to the close organisational links with its management on both the administrative and the pedagogical levels.

As such, they are a perfect illustration of the dynamic role European capitals are expected to play.

Partnerships and collaborations between the City of Brussels and Haute École Francisco Ferrer are part and parcel of the missions of the Haute École: undergraduate courses and continuing education, applied research and community assistance. The very presence of Haute École Francisco Ferrer in Brussels, with some two thousand five hundred students and five hundred members of staff, has an impact on the economy of the region (housing, trade, catering, ...) and on its cultural life.

We shall now pinpoint a few examples of fruitful collaborations in the social and cultural fields.

Activities in the social field

Within the framework of its teaching missions, Haute École Francisco Ferrer enables people to keep their professional knowledge and skills up to date by organising **refresher and continuing education programmes**. It thus contributes to improving the quality of the human resource supply and to fighting unemployment among those who are under-skilled or have skills that are no longer up to current labour market requirements.

Here are some of the activities organised by Haute École Francisco Ferrer in 1999–2000:

- training course for local council staff
- training course for judges and prosecutors
- course for flooring maintenance technicians
- refresher and upgrading course in paramedical techniques

Haute École Francisco Ferrer has also organised, in collaboration with Université Libre de Bruxelles, a study session on **urban management**, which has led to the development of a new project with the Brussels Capital Region entitled Strategies for a global redevelopment of a metropolitan area

In the field of **communication**, Haute École Francisco Ferrer launches two new streams in its BA Translation curricula – English-Arabic and Spanish-Arabic – as from September 2001. Students enrolling for these new courses will be given the opportunity to follow Year 3 and 4 courses in Tanger, thereby benefiting from high-level tuition in an Arabic-speaking country.

Within the framework of its community assistance mission, Haute École Francisco Ferrer participates in the integration of marginalized populations through special courses such as **literacy classes, citizenship and health education**. It also participates in policies geared towards public health and information technology awareness.

Here are a few examples of Haute École Francisco Ferrer's services to the community:

- The Teacher Training Department has coached refugee children in welcome centres in Brussels (“Them Among Us” Project)
- The Department for Paramedical studies organises blood collection campaigns, breakaways for severely ill children, Christmas and New Year Eve parties for children in hospital and care for their families, etc.
- The Institution organises human right awareness events (Café-Philo, exhibitions, meetings)
- It has also initiated a project for acquainting parents to a safe use of the internet both at home and at school (CoPains Project), which is aimed at both primary and secondary schools.

Activities in the cultural field

Haute École Francisco Ferrer has set up a **Language and Culture Centre** aimed at developing and promoting continuing education, applied research and service to the community in the cultural and linguistic fields.

Furthermore, it has developed synergies with the City Authorities to **develop cultural projects** in the city:

- Participation in Brussels 2000, European City of Culture.
- Organisation of an international competition for young stylists (Défi Mode), which has drawn some thirty talents from eleven countries. This event will be anchored in time and space: it will indeed be hosted by other cities every other year, which means that its impact will by far exceed the cultural dimension.
- Partnership with Brussels theatres and museums as well as with the Brussels International Festival of Fantasy Thriller & Science-Fiction Films.
- Collaboration with the *Commission des monuments et sites* (Heritage Commission) within the framework of a project linked to the environment.
- Development of a research centre specialised in cultural competence.

The applied research carried out at Haute École Francisco Ferrer has of course an impact on the city's development and its policies. Research into intercultural management, for instance, led to the opening of a postgraduate curriculum in **cultural management** in September 2000.

Capital of Europe but also capital of culture, art and history, Brussels has an intense cultural life. In order to elicit projects and foster their development and better management, Haute École Francisco Ferrer has set up a postgraduate curriculum in cultural and artistic management in collaboration with Académie Royale des Beaux-Arts and Université libre de Bruxelles. Geared towards practical issues and the economic realities of every project, this curriculum teaches the basic and specialised notions of management of cultural and artistic projects.

Conclusion

The number of examples quoted and their diversity show how dynamic existing synergies are and how much potential they have, particularly in the field of applied research, which must be able to be a driving force behind a town's innovation capacity and urban policies.

3 Copenhagen – Local Co-operation Between Capital Cities and Universities as a driving Force in Europe

The City of Copenhagen believes that the interplay between, on the one hand, the development of knowledge taking place at the local universities, and, on the other hand, the status of the city and its opportunities as the capital constitutes a significant factor for the development of the City of Copenhagen as such.

Therefor the City of Copenhagen has worked intensively to upgrade the co-operation between the city, the local universities and the business community.

The efforts have focussed on three objectives:

- Creating new science parks
- Supporting the “Øresund University”
- Establishing housing for students

Science parks or tecnology centres

The City of Copenhagen has since the early 1990s worked intensively to upgrade its position as “Medicon Valley” in the Øresund Region. The Øresund Region is the centre of medicon/human life research in Scandinavia and 60 percent of the exports from Sweden and Denmark originate from this region. In order to maintain this position the City of Copenhagen together with the Danish government has created “Symbion Science Park” which represents a meeting place of business, enterprise and university research and right now two new science parks in Copenhagen for Biotech and IT companies are being planned.

The main objective for the co-operation is to create a basis in innovative project ideas like new high-tech products, new production techniques, inventions with a future, new services or knowledge-based business concepts. Companies are usually based at the science park during the initial years of company development.

The Øresund University

The City of Copenhagen has an overall vision for its industrial policy: “To position Copenhagen as a growth centre for dynamic and active commercial development”. The Øresnd region and the local universities play a major role in this vision. The region mainly consists of Skåne (Scania) in Sweden and Zealand (Sjælland) in Denmark. The region, with its 3.2 million inhabitants, is a transnational region within the EU. A number of committees have been established to facilitate co-operation over the

Swedish-Danish border. The building of the Øresund bridge symbolises this new regional co-operative network. There are a great number of universities in the Øresund region, most of which are members of “The Øresund University”.

The City of Copenhagen has supported the Øresund University since it was established in 1997. The University consists of a consortium of eleven universities and university colleges on both sides of the Sound (Øresund) in the Swedish province of Skåne (Scania) and the Danish province of Zealand (Sjælland). This consortium of universities is based on the geographical proximity and a long common history and culture. Aiming at becoming a significant science region, the consortium increases quality and efficiency among the participating institutions by opening all courses, libraries and other facilities to all students, teachers and researchers. All those involved in the Øresund University are to have easy access to “the other side” of the region. The education and research of both countries thus complement each other in making Øresund a scientific and educational stronghold.

Although Øresund University works in two countries with two different languages, it is common policy not to translate any documents from Swedish to Danish or vice versa. The University wants to stress the importance of Danes and Swedes being able to understand each other’s respective languages without turning to English as a lingua franca.

Housing for students

The City of Copenhagen believes that the city’s capacity to provide facilities such as proper housing to young students and researchers is vital to ensure a lively, dynamic research environment in the city. Therefor Copenhagen together with the Danish government and the University of Copenhagen agreed on building 1,000 new dwellings for young students in the area of “Ørestad” outside Copenhagen close to a new department of the University of Copenhagen. Thereby the City of Copenhagen wants to contribute to the integration of facilities for students in the urban planning of the city.



4 Helsinki

Background

Ten years ago Finland was plunged into major financial straits. The recession hit Finland harder than any other OECD country since the Second World War. The disintegration of the Soviet Union was disastrous for Finnish exports, and Finland was faced with the prospect of adjusting to the Inner Market. Finland's remote geographical location was regarded as a serious threat, and there were fears that business would escape to other countries. The unemployment rate in Helsinki was getting on for 20 per cent.

The crisis forced the local politicians and City administration to assume greater responsibility for improving the economy, creating jobs and solving social problems. Now, ten years later, the Helsinki region and Finland as a whole can gain in the globalisation game. The favourable trend is due above all to the Government's sustained policy on science and technology. Another contributing factor has been the new type of partnership entered into by the cities, universities and business in the region, for which the deep recession had prepared us. The fact that education, even at the university level, is free for the students also played a part in boosting this particular cluster.

A few years ago the Lord Mayor of Helsinki, Mrs. Eva-Riitta Siitonen invited representatives of the key stakeholders to an unofficial brainstorming session which was named the Helsinki Club. In addition to the leaders of Helsinki's neighbouring cities its members included scientists, philosophers, representatives of the church, business people, youth and the media. According to the vision formulated by the Club, the Helsinki region will develop into a centre of business and logistics based on high technology and – expertise in the Baltic Sea region.

The vision was concretised into an action plan for which the different sectors took full responsibility. It was a whole-hearted commitment. It was also surprising how well this vision finally came true.

One major partnership project in Helsinki was the European City of Culture in 2000. Being a City of Culture supported the development of Helsinki and enhanced its economic recovery. Interaction between science, economy and culture would accentuate the success of the region. Culture has a central role to play in attracting people, companies and investments to the area. Moreover, cultural tourism is an upward trend. To sum up, cultural policy has gained a firm foothold as a part of economic policy and, in addition, culture has an increasing significance as a social resource for cities and, for example, helps to prevent social exclusion. The Cultural Year was well received. In the Helsinki Metropolitan Area and the rest of Finland, too, people have felt that the project and its purposes have been important and worthy of their support. Perhaps the most interesting finding is that physical distance does not exclude interest in the Cultural Year, even among those who never took part in any of its events. The Year of Culture 2000 project strengthened the cultural awareness which is

a major factor behind the innovative processes like the exchange of expertise between the city and universities.

The aforementioned actions formed part of the internationalisation strategy approved by the city council in 1994. The city council's new policy identified five strategic areas towards which special measures would be directed:

- developing Helsinki as a centre of science, research, and new knowledge-based industries,
- making Helsinki's transport and telecommunications links even better,
- increasing Helsinki's cultural profile,
- developing a high-quality urban environment,
- promoting Helsinki internationally and creating international networks.

According to the strategy, the city's success depends on science, education and knowledge-based industries. The City of Helsinki has assumed the task of strengthening the region's expertise potential by acting as a catalyst for the collaboration between the universities and the business community.

The internationalisation strategy was renewed in 1999 when *Helsinki Today – Policy Priorities for an International City* was approved by the City Board. This document describes Helsinki's international operating environment, the target for the city's international position, and the six main areas and priorities in international activities. Two of these areas emphasise the cooperation with universities:

- Developing the local economy – a future-oriented, dynamic Helsinki
- Expertise – Helsinki, the city of life-long learning

Helsinki has eight universities, of which the Helsinki University of Technology is located in the neighbouring municipality of Espoo. The total number of university students is 57,000. The universities are the

- University of Helsinki
- Helsinki School of Economics and Business Administration
- Swedish School of Economics and Business Administration
- Sibelius Academy
- University of Arts and Design Helsinki
- Theatre Academy of Finland
- Academy of Fine Arts
- Helsinki University of Technology.

In addition to the science arts universities, there are eight polytechnics providing a wide range of educational alternatives.

Centre of Excellence programme – examples of co-operation to strengthen business

The national Centre of Expertise (CoE) Programme supports regional strengths, specialisation between regions and co-operation between various Centres of Expertise. The programme has provided Finland with a strong and functional network of Centres of Expertise to meet the challenges of the 21st century knowledge-based society. The CoEs also provide increasingly attractive opportunities for international enterprises and investors.

The Helsinki Region Centre of Expertise Programme establishes effective channels of innovation for selected fields of expertise, whereby enterprises can take advantage of the leading expertise, research findings and technology of the region's universities, institutes of higher education and research facilities to give rise to new, internationally competitive commercial operations. The aim is to ensure that the Helsinki Metropolitan Area retains its foothold amidst international competition and confirms its status as the country's principal engine of economic growth. The Helsinki Region Centre of Expertise Programme is implemented by Culminatum Ltd, a company owned by the City of Helsinki and other local authorities, the Regional Council of Uusimaa and institutes of higher education, universities and research institutes of the Helsinki Metropolitan Area and by the region's business community. This extensive and diverse ownership base is an important element of the co-operation network and also assists in laying the foundations for implementing the programme of the Centre of Expertise.

The aim of the Centre of Expertise Programme is to develop selected fields of expertise into both nationally and internationally powerful new sectors for the Helsinki Metropolitan Area over the second programme period from 1999 to 2006.

Subcentres of Expertise in the Helsinki Region are the

- Centre of Expertise for Adaptive Microsystems, implemented by Otaniemi Science Park
- Centre of Expertise for Gene Technology and Molecular Biology, implemented by Helsinki Science Park
- Centre of Expertise for the Cultural Industry, involving several participants, based in the Old Cable Factory in Helsinki.
- Centre of Expertise for the Software Products Business, implemented by Inno-polit Ltd
- Centre of Expertise for New Media, implemented by the Training Centre of the Helsinki University of Art and Design and its partners.

In the Helsinki region the Centre of Expertise programme is an umbrella for the local science parks, business incubators and public stakeholders.

Centre of Expertise for Adaptive Microsystems

The focus of this programme implemented by Otaniemi Science Park lies in commercialising new research findings and setting up new enterprises. In other words, this operation serves as a commercialisation centre for new fields of technology. As a result of Finnish innovations in materials technology, a boom in new microsystems technology (MST) is expected over the next few years. The Centre of Expertise will serve as a catalyst in this important process.

The Centre of Expertise operates in two directions. It conducts a global search for markets and for users of new product applications and it encourages the establishment of user networks. The Centre also serves as a point of contact and an information management bank for potential users of new technology, enabling needs-oriented development projects to be launched in networked enterprises.

Centre of Expertise for Gene Technology and Molecular Biology

Implemented by Helsinki Science Park, the Centre of Expertise for Gene Technology and Molecular Biology launches and develops initiatives enabling biotechnology enterprises to bring their new products and commercialised methods more easily on to the international market. The enterprises which apply special expertise are generally involved in medical, diagnostics, foodstuffs and environmental clusters.

Centre of Expertise for the Cultural Industry

The Centre of Expertise for the Cultural Industry is characteristically heterogeneous and involves several participants. During the programme period an internationally competitive cultural industry will develop and become established in Finland, with commercial models which respond to existing markets and meet the demands of creative work. The programme is applying commercial, artistic and technical skills and expertise of the highest international standard and is using these to develop the multi-disciplinary expertise necessary for market-oriented cultural production. The Centre of Expertise is based in the Old Cable Factory in Helsinki.

Centre of Expertise for the Software Products Business

The Centre of Expertise for the Software Products Business Programme is being implemented by Innopoli Ltd. Its expertise is based on the universities and research institutes of the Helsinki region and especially on the software and data communications expertise of the Helsinki University of Technology. The principal target group applying this expertise and the work of the Centre of Expertise commercially consists of more than 300 enterprises manufacturing software products in Finland and the project teams engaged in commercially serviceable research at the universities and re-

search institutes of the Helsinki region. A support infrastructure has been set up for these in order to globalise new products and enterprise operations. Otaverkko Ltd and the Mediapoli project are also strongly involved in the programme, creating a broader testing environment for new innovative products than is available under laboratory conditions.

Centre of Expertise for New Media

The increasing complexity of the new media sector market and its high propensity to rapid change, the growing international impact on the domestic market and changes in patterns of consumption are forcing us to seek an increasingly broad and multi-disciplinary basis for production and operations. The New Media Centre of Expertise supports enterprise operations and the operating environment in the sector by collating, processing and distributing experience and information gathered at all stages of the new media added value chain. The Centre of Expertise develops co-operation between experts and enterprises in the sector by launching operating models and implementing enterprise-oriented research and development projects and by providing services for enterprises in the sector. This project is being implemented by the Training Centre of the Helsinki University of Art and Design and its partners.

Co-operation between the City of Helsinki and the University of Helsinki – an example of strategic networking

The City Board made a decision to set up a high level committee between the City of Helsinki and the University of Helsinki in 1987. The aim was to develop and co-ordinate operations between both parties and to lobby the highest education and research in Helsinki.

The chancellor of the University of Helsinki, Risto Ihamuotila has emphasised that the three main themes in the first ten years of co-operation were

- The development of Helsinki as a centre of knowledge by involving the business sector in science parks and Biomedicum and the making of the Helsinki science zone (a chain of city districts which each host a university: Otaniemi – City Centre Campus – Kumpula – Arabia – Latokartano)
- The European City Of Culture Year 2000
- The visibility of the university in the city landscape.

Some concrete examples of the work of committee also include

- Helsinki Institute. A foundation based centre for continuing education started in 1990. This institute was later (2000) joined to the Helsinki University Palmenia Centre for Research and Continuing Education

- New professorship of social policy and new resources for educating experts in social work in 1990 to ease the labour shortage in this area
- Joint research conferences and exchange of expertise. Researchers from the university have helped in planning the city's research programme
- Propositions for state and other stakeholders for new actions towards building more housing for students and university staff. One pilot project is a wooden house area for university staff in the Viikki Science Park area
- Propositions for planning and zoning of university areas
- Propositions of different real estate projects for special institutes
- Proposition for developing the centre of knowledge in 1993, which later bore fruit with the establishment of Culminatium Ltd.
- Proposition for developing urban studies (detailed description in next chapter).

The committee between the city and university can be seen as a key strategic network which has in an administratively easy and effective way combined the strategic intentions of both partners. This committee and the Helsinki Club organised by the Lord Mayor (mentioned earlier in this paper) are examples of an open and transparent culture of discussion among the key leaders in the Helsinki region. The exchange of innovative ideas can lead to concrete projects even over short periods of time once the common vision is shared.

The development of urban studies

One of the most important co-operation projects between the City of Helsinki and University of Helsinki is the newly organised programme for urban studies which consists of six new professorships. As a background some facts of the research activities of the City of Helsinki should be mentioned.

The research programme for the City of Helsinki is drawn up every three years. The purpose of the programme is to allocate the City's research resources efficiently and productively. The City of Helsinki Urban Facts is responsible for compiling the research programme in co-operation with other departments. Urban Facts has a unit for urban research linked to the unit for urban statistics and information services. Academic researchers of various disciplines are joined under one roof to study how Helsinki and the Helsinki Region develop in terms of their economy, social cohesion, living conditions, sustainable development, and arts and culture.

The Helsinki Year of Culture 2000 spawned a decision made by the University of Helsinki, the City and the Ministry of Education and Culture to promote the status of urban research. Altogether, six professorships in Urban Studies were established in the University, financed by the aforementioned bodies on a tripartite principle. The five-year professorships are hosted by the Departments of Geography, Sociology, Social Policy, History, Ecology and Systematics, and Economics and Management. The City of Helsinki has also intensified its cooperation with the Helsinki University of Technology, Helsinki School of Economics and Business Administration and the University of Art and Design Helsinki.

To co-ordinate urban studies, an advisory committee has been set up, involving representatives not only from the University of Helsinki, the City and the Ministry but also from other universities, administrative and planning organisations and research centres in the region. The total resources accumulated through such a network are comparable to those of at least one medium-sized institute of education and research. For the City, and indeed for the whole region, this is a unique opportunity to influence the selection of research topics, to participate in the evolving projects and, naturally, to benefit from the results.

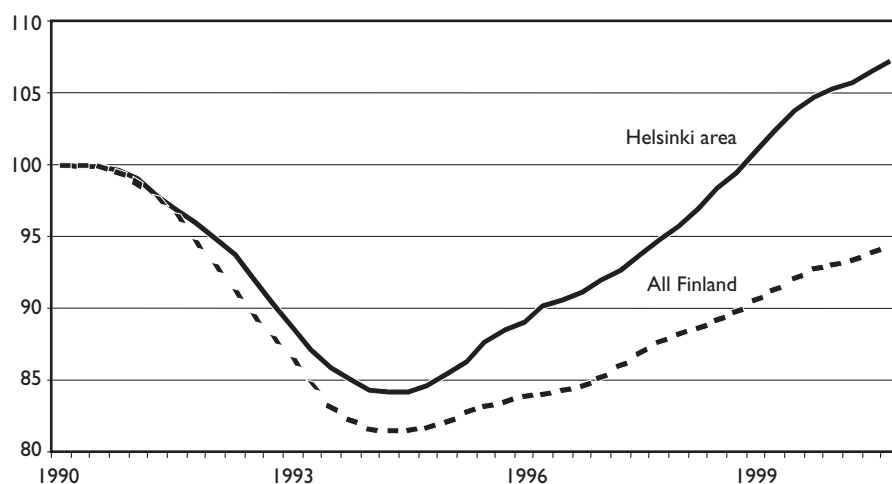
Growth in the information sector

Over the past few years, the Helsinki economic zone has grown rapidly and in a way that differs from the rest of the country. The increase in production and number of jobs has been quicker here than elsewhere in Finland. From 1996 to 2000, the number of employed went up by almost one-fifth (18 %) while the corresponding figure for the rest of the country was 11 %.

Unquestionably, knowledge-intensive industries, and especially the telecommunications sector, have been the main forces behind Helsinki's rapid economic growth in the last few years. This is primarily not a result of the city's industrial and internationalisation policy: the dynamics of the telecom industry and the success of Nokia have above all rested on other favourable factors. However, the actions taken by the City of Helsinki, universities and state together have partly developed the possibilities for new businesses and economic growth.

From 1996 to 2000, a major contribution to improved employment and growth of the economy in the entire region was made by those involved in strengthening the information base and improving the flow of information, enhancing the standard of expertise, and redefining the distribution of duties within the economy. Within these

Figure 1. Employed workforce in the Helsinki area and in Finland 1990–2000.
Index base 1990 = 100



fields of activity, the increase in the number of jobs was no less than 44% in education, 40 % in b-to-b services, 24 % in telecommunications, and 20% in electronics. Over a period of four years, these fields created almost 44,000 new jobs.

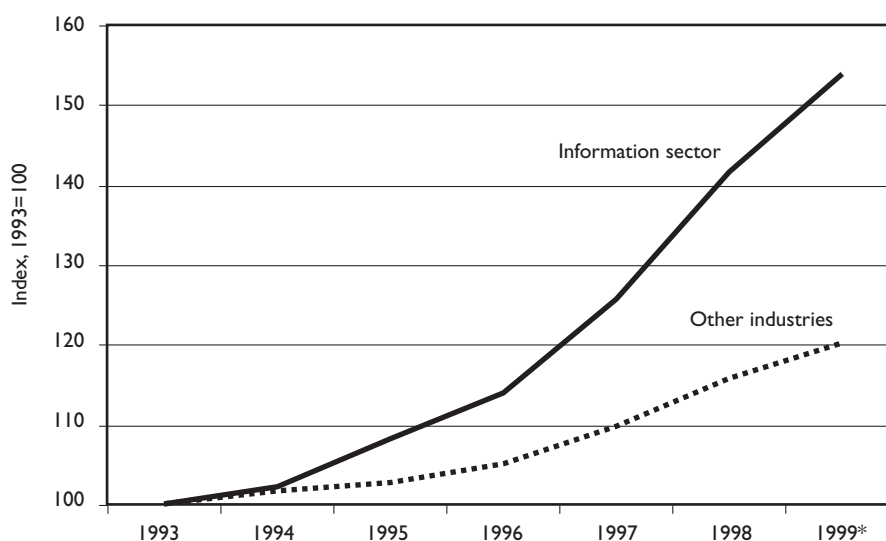
Economic growth in the Helsinki area has been exceptionally fast in the information sector. For example, service sectors such as telecommunications and data processing generated a total of 14,400 new jobs, of which 11,000 (76 %) were created in the metropolitan area, while the increase in the number of jobs here was 82 %.

In the Helsinki area information technology is one fast-growing corporate cluster, which is significant by international standards and supported by local universities and research establishments. The core of this cluster consists of Nokia, the leading Finnish and Scandinavian teleoperations and computer companies, as well as subsidiaries of major overseas corporations involved in the same line of business. Built around these large corporations is an extensive and dynamic network of small and medium-sized companies.

Without exception, all European cities with several strong corporate clusters host a number of major universities, institutes of higher learning and research centres. They play an important role in creating competitive corporate clusters. Strong cities occupy a central position in the Western European communications network and the large markets in mainland Europe. At the same time, these cities have a viable financial and b-to-b services sector to provide services for the local corporate clusters.

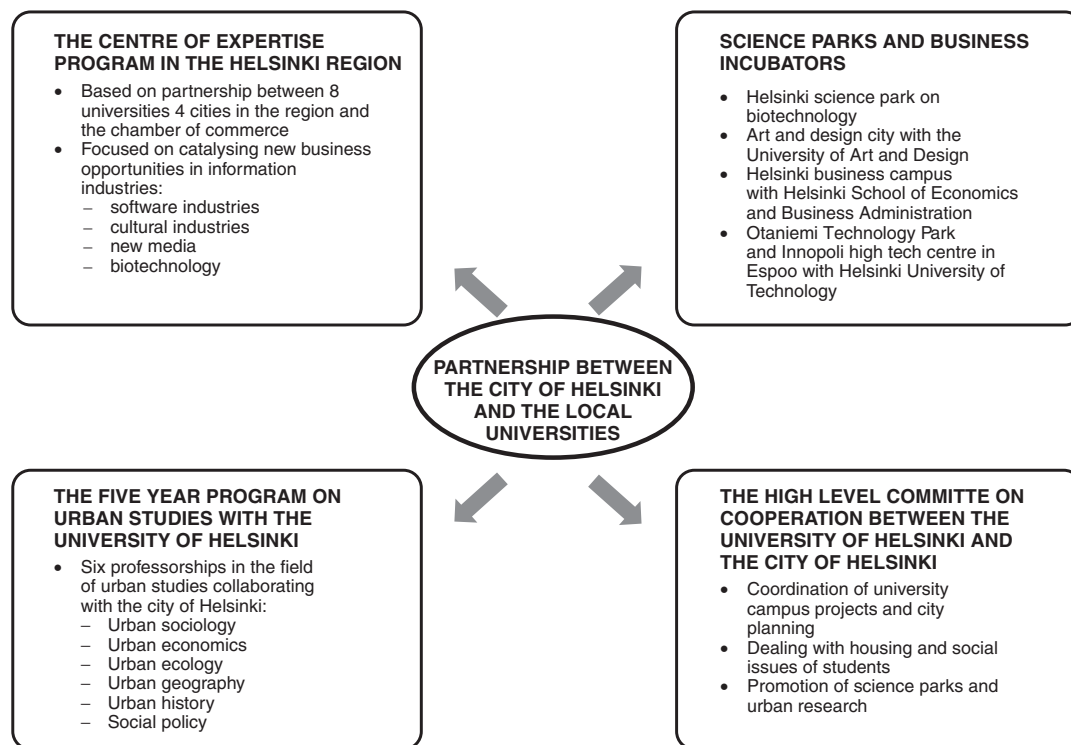
The basic prerequisites for innovations and development are that there are good universities, colleges and research institutes and that central and local government together with corporations invest in education, research and development. One of the ways of developing the Helsinki area as an environment conducive to innovation is to establish business and science parks and other local research and business centres.

Figure 2. Jobs in the information sector and other industries in the Helsinki Region 1993–1998 and projection 1999* (Index, 1993=100).



Conclusions

The results of the co-operation between the City of Helsinki and universities in the Helsinki area can partly be seen in the development of businesses in the Helsinki region. This co-operation is a good starting point for future challenges. One challenge is to increase the co-operation around the metropolitan area of Helsinki (comprising the adjacent municipalities of Helsinki, Espoo, Kauniainen and Vantaa), and also around the Helsinki region, with eight more municipalities. In regard to the relationship between cities and universities a more detailed common vision of the meaning of higher education in developing the competitiveness of the region could be elaborated. One opening in this direction is an urban development programme which aims to strengthen both the knowledge base and social inclusion in the Helsinki metropolitan region.



5 Lissabon

Nowadays, the scientific and even the economic advantages of setting up partnerships with the universities are widely known and are becoming increasingly important to society. Within this scope, the City Hall of Lisbon has resorted to various higher institutes of education from different fields of expertise, so as to, in the fulfilment of their specific competencies and envisaging the pursuit of the interests of its population, study and intervene in a pragmatic way in the city.

Partnerships

In the first part of this report, we will address some of the most relevant partnerships established up till now.

Observatory for Housing

In 1990, the City Hall signed a protocol with the *Centro de Investigacao e de Estudos / Centro de Estudos Territoriais do Instituto Superior de Ciências do Trabalho e da Empresa*, (The Research and Survey Centre / Centre for Territorial Studies of the Higher Institute for Labour and Business Sciences) regarding the setting up of an Observatory for Housing. Established as a framework for research, information and critical analysis of the problems regarding housing in the District of Lisbon, the Observatory has been assigned the following functions:

- To carry out studies regarding the various aspects related to housing problems;
- To carry out periodical evaluations of the trends in the housing sector;
- To issue information and opinions within the scope of the policies and methodologies applied by the City Hall;
- To present publications containing the surveys and analysis carried out;
- To organise colloquiums, meetings and other similar events, within a space open to the participation and discussion of problems of housing in the district of Lisbon.

The observatory has carried out various studies comprising studies on the offer of housing, the management models and the satisfaction of the families that live in municipal districts. The observatory is currently carrying out a study on risk and marginal behaviour among children/young people (over 10), in 5 social districts: Bairro da Boavista, Armador, Alfinetes, Casal dos Machados and Horta Nova. The general aims of this project is to.

- know the factors of exclusion of these children/young people, in relation to their families, school and professional structures, as well as the facts and behaviours that make up the socially marginal character of their day to day practices, whether individually or in groups;
- identify factors that may favour their social inclusion.

Socio-cultural characterisation of the population who lives in municipal districts

More recently, in 1997, the City Hall of Lisbon signed a protocol with the *Centro de Estudos do Património Cultural do Universidade Moderna* (Centre for the Study of the Cultural Heritage of the Modern University), within the bounds of a set of measures aimed at increasing the cultural participation of the families who live in derelict districts, so as to favour their socio-cultural integration in society.

The objectives of this partnership are to provide, through a field research methodology, the sociocultural characterisation of the population who live in municipal districts and who have shown a need for integration policies.

The Observatory for Security

In 1998, the City Hall established another partnership with the *Universidade Católica Portuguesa* (Portuguese Catholic University), envisaging the setting up of an Observatory for Security. A framework for research, information and critical analysis of the data related to urban safety in the district of Lisbon.

The observatory carries out the periodical studies that are necessary to describe the evolution of security related problems and how the people who live in Lisbon perceive these problems. The studies include;

- mapping analysis and the statistical shape of occurrences;
- risk and fear charts;
- opinion panels;
- analysis of the contents of the news published through the mass media
- opinion polls.

The observatory provides on a regular basis, at least every semester, a report covering the situation, the evolution and the expectations of the population as concerns security in its various forms, such as domestic, personal, assets, and on the answers which can be provided by municipal means and by the security forces. The Observatory completes its reports with interpretative studies of sociological nature, for a better understanding of these problems and for presenting proposals for action.

As an example, this year, the observatory has proposed to carry out a Study on the Situation of Victims and Security in the City of Lisbon in the year 2000 and, complementarily, to analyse these issues from the perspective of two groups which have specific features requiring specific collection means: young people between 13 and 17 and tradesmen.

Within this context, the results of the victim survey for the year 2000 – probing of the tradesmen was presented. After carrying out 1,119 surveys in the stores of various city districts, prorated according to the number of stores in each area, it was possible to establish areas and stores with higher indexes of offences during certain periods of the day, the average amount of the damage suffered and the profile of the offenders.

The observatory will present its results to the Municipal Security Council and to the Union of Tradesmen's Associations, together with whom, and in articulation with the Police, it will seek to find mechanism for strengthening security for the tradesmen and/or to take better advantage of the existing mechanisms.

Survey of the “Dispersed Municipal Patrimony”

In 1999, the City Hall and the *Universidade Lusofona de Humanidades e Tecnologias* (Lusofona University of Humanities and Technology) drew up a protocol for the carrying out of a survey on the “Dispersed Municipal Patrimony”. This research project that falls upon a basic universe of 1,750 municipal homes, dispersed all over the city, covers not only the physical and functional characterisation of the homes, but also the sociographic characterisation of its occupancy.

Sculpture Contest

Also in 1999, the City Hall and the *Faculdade de Belas Artes da Universidade de Lisboa* (Faculty of Fine Arts of the Lisbon University) drew up a partnership for the promotion of a Sculpture Contest with the participation of students in their final year of this Faculty. The aims of the contest was to select and set up a sculpture in a square of a new set of housing blocks built within the scope of the Special Re-lodging Program for the Santos and Rego districts. All competing works were exhibited at the *Cordoaria Nacional* (former National Cordage Plant), under the theme: “Sculpture in the Square”.

In 2000 a new partnership was signed regarding a 2nd edition of this contest, this time for setting up a sculpture in a district appointed for a Special Re-lodging Program for the F-Zone in the Benfica district.

Due to its morphology, the architecture project foreseen for this site comprises a space particularly fit for the materialisation of such a proposal. The project concerns a public space located at one of the entrances of Lisbon, characterised by social equipment and exterior set-up, by being a place where various routes confluence and by peri-urban movement.

The winning sculpture made by Pedro Besugo, sought to create elements that would integrate the population in an involving, re-qualified and pleasant urban milie. Its execution is foreseen, albeit the costs for co-ordinating the contest and for constructing the proposal, which expense will be born by the City Hall, should not exceed the amount of 6,000,000 Es (appr. 29,928 euro).

This protocol with the Faculty of Fine Arts may also be extended to other areas of intervention of the City Hall's Department for Housing Construction.

Social intervention

The City Hall of Lisbon has further signed a protocol with the *Instituto Superior de Servico Social de Lisboa* (the Lisbon Higher Institute for Social Services) with the aim of setting up a regular and permanent co-operation between these two parties. The partnership is specially destined for teaching, research, and social intervention and for developing social intervention programs. Within this scope several activities are foreseen:

- regular exchange of documents and information concerning projects and activity programs;
- drawing up agreements regarding the carrying out of vocational training actions, research projects and social intervention training periods;
- co-operation in other fields of common interest, namely in the fields of advice, supervision and project assessment.

Joint activities

Besides the above-mentioned partnerships other types of joint activities between the City Hall and the Universities must also be mentioned and which do not result from specific protocols signed by the parties. Many of these actions are of a non-regular character, materialised in support to hosting conferences, colloquium and other events. There are still others that have a permanent nature. As an example one should mention the Curricular Training Periods which the City Hall provides every year to students in the final year of their university studies;

Annual Curricular Training Periods Plan

In 2000, 74 students in the final year of their higher studies underwent these training periods, (25 in total), mainly in the fields of the various degrees provided by the Lisbon Faculty of Architecture (24 trainees), of the degree in Public Management and Administration provided by the *Instituto Superior de Ciências Sociais e Políticas* (Higher Institute for Social and Political Sciences) (10 trainees) and of the degree in Environmental Engineering provided by the Lusofona University (9 trainees).

The training periods lasted 6 months and took place in various phases throughout the year. At the end of the period, the 30 Municipal Services who received the trainees confirmed in writing the materialisation of the training periods, granting each student 'the corresponding Training Certificate as well as a subsidy in the amount of 150,000 Es (748 euro), as proposed and approved at a City Council meeting.

Also in 2000 (November and December), the Lisbon City Hall's Vocational Training Department communicated the Curricular Training Period Plan for 2001 to the various schools and opened up for the period during which the students in their final year could hand in their applications. During this period, which closed in January 2001, 78 applications for training periods were handed in, 33 of which correspond to university degrees.

6 Co-operation between the Higher Education sector and the Greater London Authority

London's position as a major centre of international renown for higher education (HE)¹, research, and professional development, and is one of the underpinnings of its world city status. Across all disciplines, it is rightly celebrated for investigation, debate and problem-solving. Although it does not directly fall within the powers of the Mayor, the Higher Education sector plays a crucial role in developing London's role as a "City of Knowledge" and in underpinning many of the Mayor's policies. In turn, these policies have a major influence upon the ongoing success of the HE sector. There are very good reasons, therefore, why the GLA and the HE sector should enter into a structured dialogue around a number of areas. This paper sets out some key facts regarding the scale and importance of the sector in London, the areas of policy linking the sector and the GLA and the embryonic arrangements for co-operation between the two.

Higher Education in London – key facts

- Together London's Higher Education Institutions educate over 300,000 students
 - 4% of the city's population; 38% of students are postgraduate
- Over a quarter of students are aged over 25 years and one-third are studying part-time; almost one in five are from overseas
- London has the highest concentration of Higher Education Institutions in the UK with 28 Universities and 12 Higher Education Colleges
- The capital's 28 universities are home to 3,700 researchers and 120 departments are rated as world class
- London's higher education sector accounts for some 4% of London's GDP and has a turnover of some £2.6 billion
- The research income of London's universities is larger than that of any other UK region
- Leading hospitals and medical institutes are at the cutting edge of medical research, generating £200 million in research contracts each year, representing 50% of UK funding and significant co-investment from abroad
- London's teaching hospitals train 40% of the UK's doctors and 25% of its undergraduate medical students.

1. Higher Education refers to post 18 education in Universities and other institutions such as colleges of art and design.

London's HE institutions range from large, internationally-known, all purpose universities to small specialist colleges which offer advanced training and research, such as in the creative and performing arts. Together they provide about a quarter of student places in England and undertake about one third of all publicly-funded research.

Many of London's students are studying part-time and applying their new knowledge to their working lives. In many leading-edge sectors, such as the cultural industries, and the financial and medical professions, students benefit from being taught by experienced visiting practitioners from London's leading companies and centres of medical excellence.

London remains an important magnet for students and visiting researchers from overseas. They bring significant revenue and help London to extend its business relationships with the rest of the world. And given London's highly diverse ethnic mix, academic and business visitors are likely to find supporting language and cultural groups within the capital.

A new regional focus for London's HE sector

The universities and colleges in London have responded to the new London-wide structures, including the Greater London Authority (see below), by forming the **London Higher Education Consortium (LHEC)** in which the institutions join together to address issues of common concern and represent their collective interests. Through the expertise of its members, LHEC is able to ensure that the potential contribution by the university sector is properly understood as strategies, policies and programmes unfold. The Consortium has produced a major report, "London: City of Universities"², that gives examples of individual and collective engagement with London's new political and institutional leadership.

The Greater London Authority, new governance for London

Following elections in May 2000, the Greater London Authority (GLA) is a new and unique form of strategic city-wide government for London. It is made up of a directly elected Mayor of London – Ken Livingstone – and a separately elected Assembly – the London Assembly. The Mayor prepares plans on issues from transport to the environment, and from culture to land use, directs the GLA and sets budgets for the GLA, Transport for London, the London Development Agency, the Metropolitan Police and London's fire services. As Mayor, Ken Livingstone chairs Transport for London. The Assembly scrutinises the Mayor's activities, questioning the Mayor about his or her decisions. The Assembly is also able to investigate other issues of importance to Londoners, publish its findings and recommendations, and make proposals to the Mayor.

2. Available from autumn 2001 on www.london-innovation.org.uk

The GLA has taken over control of a number of existing government programmes in London on police, fire, transport and economic development and regeneration, amounting to some £3.7 billion in 2001/02.

A summary of the Mayor's responsibilities

Transport – the Mayor is responsible for drawing up a city-wide transport strategy that is delivered through Transport for London, whose board members he appoints. This is a “total mobility” authority responsible for London’s bus, light rail, river and taxi services as well as the strategic road network. It will eventually be responsible for the Underground although not for main line rail services.

Policing – the Mayor can appoint 12 members from the London Assembly to the 23 member Metropolitan Police Authority (MPA), which is responsible for overseeing policing in the capital. The Mayor also sets the budget of the MPA and must be consulted by the Home Secretary when appointing the Metropolitan Police Commissioner.

Fire and emergency planning – the Mayor appoints the members of the London Fire and Emergency Planning Authority (LFEPA) and sets its budget. LFEPA is responsible for overseeing the provisions of effective fire services and assists the boroughs with emergency planning.

Economic development – the Mayor appoints the board of the London Development Agency (LDA) which in turn is responsible for the economic development and regeneration of London. The LDA is required to prepare an economic development strategy consistent with the Mayor’s guidance and his other strategies.

Planning – the Mayor of London is responsible for strategic planning in London. He produces a “Spatial Development Strategy” (a statutory planning instrument with which local Borough plans must conform) and must be consulted on planning applications of strategic interest (which he can direct Boroughs to refuse).

Culture – The Mayor has appointed a “Cultural Strategy Group for London” that will produce a wide-ranging cultural strategy for the capital. The Mayor is able to provide leadership on a range of cultural initiatives (e.g. major events) and co-ordinates a range of specific programmes and initiatives.

Environment – the Mayor is required to produce strategies for London’s air quality, biodiversity, waste management and ambient noise. He must also produce a four-yearly report on the state of London’s environment. The Mayor has also chosen to develop an energy strategy for London.

Health – the GLA has a duty to promote the health of Londoners although services are provided through the National Health Service. The Mayor has established links with the Regional Office of the NHS and has established an independent London Health Commission to drive forward health improvement in priority areas and to advise on the health impacts of strategy proposals.

The Partnership between the Mayor and the Higher Education sector

Although Higher Education does not fall explicitly within the Mayor's responsibilities, he recognises the necessity of having a good working relationship with the city's universities:

'I am committed to campaigning on behalf of all parts of the higher education sector in London to maintain London's position as the Knowledge Capital of the UK. My priorities of improving London's transport system and increasing the supply of affordable housing will have a direct impact on access to higher education. I want people from all backgrounds to be able to work and study in London's higher education institutions.'

The Mayor's strategies and policies will have an influence on the HE sector and, in turn, its size and influence means that it can contribute to the achievement of wider policy objectives. For these reasons, amongst others, the Mayor has agreed to meet regularly with the LHEC in order to enter a broader dialogue across the range of issues affecting them. Officers have been assigned with the brief of maintaining this relationship and ensuring that Universities are involved in the future governing of London to as wide an extent as feasible.

Initial areas of discussion include:

Contribution to London's economy HE is a crucial contributor to London's economy, building the knowledge base essential to its economy, and is also a significant activity in its own right. The range and excellence of universities, colleges, and research institutes are an invaluable resource for London's communities and businesses, sustaining London's competitiveness and world city status. They have a vital role to play not only in widening access to higher education and contributing to community development, but also in working to ensure that knowledge and skills are effectively applied.

The sector has a particularly important role in fostering innovation and encouraging the transfer of knowledge from academic institutions to London's businesses - both large and small. London's universities are developing a strong regional and local focus, working to widen access to learning for individuals and communities, working in partnership with local employers to improve the relevance of the training provided, developing industry-based programmes and fostering stronger links with business. There are major opportunities to provide training and learning through 'e-learning' which will have significant implications for the ways and opportunities for students, academics and businesses to exchange and develop ideas.

Many of London's successes in attracting leading edge companies in sectors such as pharmaceutical and biotechnology are due to the draw of highly qualified graduates of London's research institutions. Together, they provide a critical mass which generates continued interest and private funding. Over one third of the UK's publicly funded research is carried out in London, with many institutions enjoying world status as centres of academic and research excellence, able to collaborate globally, and acting as gateways to better understanding and development of ideas in all facets of life.

London is a world centre in Medicine and Healthcare with a strong dimension in evaluation and research. Internationally renowned for providing first class training in medical sciences, London forms a successful cluster comprising 5 prestigious medical schools and several specialist institutes in dentistry, tropical medicine, veterinary sciences and cancer research.

Equally, the excellence of London's training centres for the arts and culture, design, technology and creativity, are a vital part of supporting and growing key sectors of the economy and in maintaining and restoring the vibrancy of London – both within the central area as well as its suburbs.

There is great potential for boosting links between research activity and economic development, for example through widening access to venture capital, increasing the levels of business management skills and providing start-up space for new enterprises. The London Development Agency is working closely with partners in the Higher Education sector to develop these initiatives (see below).

Affordable housing. London is an extremely expensive city to live in, with housing costs, in particular, being amongst the highest in the world. The Universities are growing increasingly concerned about their ability to attract the best candidates for both research and teaching posts due to the problems of people not being able to afford to 'live' in London. If this problem is not addressed then their status as being some of the best institutions in the Country will come under threat.

This is also a problem faced by the vast number of students that move to London to study. Very little accommodation is available directly from the universities themselves and so the majority of students are forced to find accommodation in the private sector, paying market rates. This means that many students suffer financial hardship and many will either see an adverse effect upon their studies or drop out of study completely.

The Mayor has already completed a review of the housing situation in London and is seeking, through his planning powers, for all new developments to contain a degree of affordable housing. The housing needs of students are being built into these processes. There is also scope for innovative solutions such as a dedicated student "village" that would have dedicated facilities and would also be able to accommodate staff.

Transport. London's transport system is coming under increasing stress as a result of both an increase in passenger numbers and the legacy of years of under-investment. Some areas of the city are poorly served by transport, many existing facilities are running over capacity and many are failing on a regular basis. Higher Education suffers along with other sectors from the poor performance of the public transport system. High fares and poor service also have an affect upon widening access to higher education. London's reputation as a city with transport difficulties could also have an affect upon the ability of HE institutions to attract students.

The Mayor's transport strategy sets out to revitalise the system, building new tube lines, reducing private car use in the city centre and encouraging the greater use of buses. More specifically, the Mayor has introduced a student travelcard that will provide significant cost-savings for its holders. Travel card use has recently been extended to cover the summer vacation period and the potential to extend it to part-time students is being assessed.

Access to HE. Both the Mayor and HE sector are keen to ensure that as wide a group as possible has access to higher education – regardless of where they come from or their social background. The HE institutions in London have a good record in extending participation to non-traditional groups and including a wide range of people in both full-time and part-time education. The Universities are particularly keen to promote to employers the richness of experience brought by older students and part-time students.

The Mayor is committed to ensuring that all London's residents are able to share in its prosperity. Education and skills are a major factor in combating social exclusion and deprivation and Higher Education has a key role to play here. The Mayor, through the London Development Agency, and the HE sector are working together to continuously assess how London's universities are contributing towards social inclusion, especially increasing participation from black and ethnic minorities.

There are a number of areas in the learning and skills arena where there are enormous opportunities for London to capitalise upon its position as a global city. These opportunities must be exploited to the maximum benefit of all London's residents and communities to ensure that developments in the world economy are used as a means of tackling exclusion and disadvantage and not reinforcing it.

Culture and international links; The education of international students is a vital part of ensuring that London's economy is open to new ideas. London's Universities already have good links with counterparts across the world and form an important part of the capital's international links. The Universities and their students bring a wide diversity of people from all over the world into London and they should feel that their cultures and beliefs are respected and celebrated equally in what is the most cosmopolitan city in the world. The Mayor is committed to promoting London's cultural diversity by supporting initiatives such as the Respect festival and Diwali Week.

The universities are keen to promote their own cultural activities to a wider audience within London. These are often unnoticed outside of the HE institutions and there is an opportunity to raise the profile of this dimension of the capital's cultural life in partnership with the GLA.

Research on London; A number of 'one-off' projects are being organised by the Mayor to highlight specific issues of importance to London. Again, the Universities represent both an important constituent of the city and so should be consulted on such projects for their own views and ideas, but also a valuable resource. Universities contain some of the brightest and most gifted people to be found in the city and to harness at least some of that potential in such project work will add enormously to any results/proposals achieved. An example is collaboration on the "Case for London" where the Mayor has led a campaign to ensure that the capital receives a fair share of national funding.

Contribution of Universities to London's Economic Development

The specific contribution of Universities to London's economy is reflected in London's new Economic Development Strategy produced by the LDA. This provides a new focus – backed up with new government funding – for the sector to maximise its impact upon London's economy.

London Development Agency missions (in Economic Development Strategy)	Related actions by university and college staff, students and graduates
Develop and enhance London as a world centre for business	Stimulate innovation through start-ups, expertise and placements. Reinforce London's reputation as a world knowledge centre.
Use London's strengths to promote the regeneration of its disadvantaged communities	Campus development in regeneration areas. New inter-disciplinary courses for professionals. Medical and nursing schools working with Mayor's health strategy.
Ensure that economic opportunity is open to all citizens	Commitment to widening access and to lifelong learning. Tailor courses to the needs of students and businesses.
Ensure that London's development is socially, economically and environmentally sustainable	Support commercial applications in "green" industries. Research into more sustainable transport. Reduce the institutions' own energy use and environmental impacts.

Conclusion

This paper has demonstrated that on a range of issues, London's HE sector and the GLA share a common interest. The establishment of new government for London allows the opportunity to develop these interests together, bringing a fresh focus to the role of the Universities and HE institutions on London's development. Within a year of establishing the GLA, the Mayor has already set up a structured approach to collaboration with the sector, which has already seen a range of initiatives developed. Universities are a vital and valuable part of London and it would be of great interest to compare how other European capitals engage with their own HE sector.

7 Madrid

Approaching the issue

In Madrid, relationships between the government and administrative (Council) organs and the Universities have always existed since they are, after all, unavoidable. From the Council's point of view, because the establishment within the city of educational facilities of the size required by the Universities makes them undeniably necessary. Indeed, the Universities need considerable space within the city and moreover this must be dynamic since they are constantly growing. They also depend upon the provision of transport connections for a high volume of use in order to cope with the huge number of students which attend them. All these factors make the city a vital population centre which requires a tremendous network of infrastructures and services.

From the Universities' point of view, because the wide range of responsibilities and services which are managed by a Council the size of that of Madrid makes it very attractive for the education of the future professionals which they are training. These students should not be distanced from the actions which are carried out by the Council in fulfilling its responsibilities.

Following the passing of our current Constitution in 1978, the principle of autonomy was recognised for both municipal districts and Universities. By virtue of this principle and subsequent regulations which were approved during its later development, the relationship which had existed until then has been substantially increased. This will be explained in greater detail later on.

In order to give some background to the relationship between the two Institutions, it should be highlighted that there are several Universities, both state and private, within the Autonomous Region of Madrid. To be precise, in the city of Madrid there are six (6) state universities and four (4) private ones. In order to give an idea of the size of the state universities, we shall quote some figures regarding the number of students enrolled at each one for the current academic year 2000–2001:

University	No. Students
Autónoma	31,047
Carlos III	14,632
Complutense	98,628

Nacional de Educación

A Distancia (Open University)	185,000
Politécnica	43,496
Rey Juan Carlos	9,072
Total No. Students:	381,875

These figures in themselves are enough to show the importance of the Universities for the city of Madrid.

Collaboration agreements as a practical expression of the relationship with the universities

Clearly, the extensive and complex relationship which is maintained between the Council and the Universities is not limited to the signing of documents in which both parties make mutual commitments. The rich variety of situations which require a good understanding between the two Institutions cannot be and, in fact, are not limited exclusively to these kinds of agreements.

However, the existence of these relationships reaches its maximum expression and richness in conventional agreements which are normally called “Collaboration Agreements”. These are, as their name suggests, authentic agreements by which both parties commit themselves to give and receive. They are signed by the highest representatives of the two Institutions and may be classified as Framework Agreements or true Collaboration Agreements depending on whether the content of the agreement creates a framework for subsequent specific actions or, on the contrary, it directly establishes the details of the obligations which are accepted by both (the vast majority of those signed by the Council of Madrid are of the second type).

Collaboration Agreements usually follow a similar structure; they begin with some general principles which reflect the objectives that the agreement is intended to fulfil and the quotation of the legal regulations which authorise its signing; they continue with the provisions which constitute the core of the obligations and rights established for each signing party; and they usually conclude with provisions for the creation of an organ to monitor and control the actions which have been agreed upon.

Collaboration Agreements have been signed with almost all the state and private Universities established in Madrid and they deal with very varied subjects. Some statistical information is provided below for the period from 1985 until the present day.

A. Agreements signed	No	%
– With State Universities	78	88.63
– With Private Universities:	10	11.36
TOTAL	88	100
B. Subjects dealt with in the agreements.	No.	%
– Town Planning	5	5.68
– Environment	11	12.50
– Culture and Cultural Historical Heritage	9	10.22
– Training Activities and Work Experience	24	27.27
– Urban Research	16	18.18
– Cession of Buildings and Municipal Facilities	12	13.63
– Public Health	11	12.50
TOTAL	88	100

Examples of good practices through collaboration agreements

Given the limited scope allowed for in this report, we shall now describe some of the relationships which exist between the Council of Madrid and the Universities in three specific sectors: town planning, environment and culture.

Co-operation in town planning

From the point of view of town planning and other related matters, the need to maintain a good co-operative relationship has been noted. This is due to the amount of land which these kind of educational installations occupy and the transport infrastructure which they need.

In this sector, Agreements have been signed regarding alterations to plans requested by the Universities and also regarding the preparation of constructive profitability studies for housing constructed by the Council. However, we would like to highlight the Town planning collaboration agreement signed in relation to the development of the University Campus where three state Universities are located.

Since its foundation in 1928, the Madrid University Campus has steadily grown, both in terms of physical space and the number of students. This area (which is shared by three Universities) has been included in the new city planning with the objective of avoiding any unplanned enlargement of the installations and to provide a response to the requirements made by the Universities. The Special University Campus Plan which was approved on 7/7/2000 responds to this and for its development it has required, amongst other determining factors, the signing of an Agreement between the Council and the Universities involved.

As a result of this collaboration, expressed at the time of the preparatory work for the Special Plan and the subsequent regulatory developments, new roads have been planned, accessibility has been improved and new, controlled growth has been made possible. Specific measures have also been laid down for the protection of the historical heritage of the Universities, to define the complementary installations and facilities and to adopt measures for environmental regeneration.

In the last line of action and in that regarding the restoration of the natural surroundings of the University campus, the Universities have committed themselves to implement a comprehensive waste management system for the refuse produced by research and teaching and to promote and make the entire university community aware of the importance of the environment.

Co-operation in environmental matters

In this field, there also exist numerous declarations of co-operation between the Council and the Universities. With essentially practical aims, they are intended to promote educational and research initiatives directed towards specific actions for im-

mediate implementation.

Thus, a Collaboration agreement has been signed to study the measurement procedures for soundproofing against air noise. The objective consists of checking that the soundproofing measurement procedures established in the municipal regulations are suitable for the inspection functions conferred on the Council. Similarly, to detail the possible corrective measures intended to reduce the levels of sound transmitted from the outside to the inside of houses.

In order to carry out the given objective, the Council of Madrid bears the financial costs whilst the University supplies the human resources and materials which are necessary to achieve the indicated aims.

In the same way, there exist other Agreements to determine the parameters of the solid fuels used in the urban area of the capital or to study the characteristics of the atmospheric pollutants in Madrid.

Agreements have also been signed regarding gardening and landscaping. These are intended to create new green areas and to ecologically restore those that already exist. The collaboration of the Universities is required for the technical work such as collecting and managing the field data, its processing and analysis and the preparation of conclusions which allow the definition of initiatives to be introduced in the future and the implementation of new technologies.

The University, on the other hand, needs training practice opportunities for the students and therefore the Council can contribute by providing these. In this way, the two Institutions carry out training activities together, with university students forming part of the Council's Work Teams and completing their training practice over a fixed period of time. Specific R+D work will be performed in the Council's priority interest areas.

Co-operation in cultural matters

The Universities' objectives also include the promotion of artistic and cultural creativity through the organisation of top-level cultural activities. These objectives coincide with and complement those conferred on the Council of Madrid.

Most of the Agreements signed in this sector deal with the promotion of cultural initiatives and the recovery of artistic-historical heritage (eg. school materials and documents used throughout Madrid's history).

The most recent agreement will soon be signed between the Municipal Ceramics School and the Complutense University. By virtue of this, the School will give Courses and Seminars in the field of ceramics to University students who will in this way obtain credits which are necessary in order to obtain academic qualifications. A university network of teachers and researchers will be developed which will focus their activities on the knowledge, promotion and production of contemporary ceramics. University students will also have access to the School's bibliographic resources.

Similarly, specific collaboration programmes are anticipated between both parties which will require definite proposals capable of establishing the work programme, proposed aims and the resources necessary for its completion.

Lastly, the aforementioned Agreement provides for the creation of a Joint Co-ordination Committee with the authority to decide the specific actions to be developed in following agreements.

Conclusions: some possible lines of action for the future

From a general viewpoint, one must conclude by recognising that the Council and the Universities are Institutions which have shared interests in many of their areas of activity. In this respect, they are destined to find a mutual understanding and to constantly strive for a satisfactory collaboration. More specifically, the Universities wish to obtain financing and material resources for their external activities. The Council relies on their support for the implementation of sectorial policies which affect them and for the development of the theoretical aspects and the technical methods which make these policies possible. In this way, the Collaboration Agreements provide a suitable instrument for obtaining the indicated objectives.

With regards to the future, some lines of action may be identified:

The duality offered by the Framework Agreements and the Collaboration Agreements has been shown to be satisfactory. Nonetheless, further work is needed with regards to finding more practical, concise and easily attainable objectives.

The monitoring of the content of the Agreements should be improved in order to, on the one hand, obtain the desired objective more easily and, on the other hand, obtain practical results with respect to later agreements, thus improving the management of municipal and university services.

The Collaboration Agreements should unite the greatest possible conjunction of wishes on the part of the Universities, provided that this is possible. Or, at least, they should offer the possibility of extension to other Universities which may be interested in adhering to them.

One must recognise that these Agreements may also refer to projects which could be attractive for businesses. Companies could collaborate in their financing and in putting the sought-after results into practice.

8 Paris

Relations between the City of Paris and academic education

Over 300,000 students (in all fields), 8 universities, most “Grandes Ecoles”, numerous business and engineer schools, and in addition preparatory classes to “Grandes Ecoles” and technician sections, all this makes the landscape of academic education in Paris.

Paris constitutes the first French pole for academic education and research.

Paris, academic capital and political, economic and administrative capital

The history of France is marked, undoubtedly more than any other European country, by a high centralization. Holding concurrently the functions of political, economic and administrative centre of an already very centralized state, the City of Paris has quite naturally become for centuries the academic and scientific centre.

Already during the Middle Age, the Sorbonne embodied Paris intellectual pre-eminence, in spite of other important universities in the country – like the one of Montpellier, for instance. This tradition continued with the “Ecoles Royales” of the “Academies” situated in Paris, and the Revolution and the Empire concluded it by setting up in Paris most of their academic creations (“Ecole Normale Supérieure”, “Ecole Polytechnique”, “Ecole Centrale”, etc.)

From this period on, the development of the “Republican meritocracy” still accentuated the trend, attracting the best elements of the education system for the service of the state, and, among this elite, the very best for the service of central and governmental administrations, all situated in Paris.

Despite recent decentralization and deconcentration measures, Paris remains therefore today France’s academic, political, economic and administrative centre. And today as well as in the past, this cannot be the result of a fortuitous juxtaposition.

Therefore, in order to keep Paris national and international influence, the City of Paris Government wishes to develop its academic and scientific potential and multiply exchanges between this potential and other activities of the community.

Universities and other academic education institutions in Paris

The City of Paris owns a huge number of buildings used for academic education. They are, among others, the Sorbonne, the former **Faculté de Droit** on the **Panthéon Square**, buildings of the former **Faculté de Médecine**, the **Ecole Nationale Supérieure de Chimie de Paris (ENSCP)**, the **Ecole Nationale Supérieure des Arts et Métiers (ENSAM)** and the **Institut de Phonétique** in the **Rue des Bernardins**.

The ownership of the **Sorbonne** results from the 1789 Revolution, during which a patrimony of the former Paris Theology Faculty (founded in 1257 by Robert de SORBON) was nationalized and allotted to civics. Later, Louis-Napoléon BONA-PARTE, as president of the 2nd Republic, transferred the ownership of this building through a decree in 1852 to the City of Paris. At the end of the 19th century, the Municipality rebuilt and extended the **Sorbonne** to give it its present aspect.

This house has always been used for teaching activities. Today, the **Sorbonne** hosts the administration of the Paris Director of Education, the *Ecole Pratique des Hautes Etudes*, the *Ecole des Chartes* and a part of the Paris I, Paris III, Paris IV and Paris V Universities

Nowadays, eight different universities are situated in Paris. Universities born after the Spring '68 events, the breaking up of the old Université de Paris, aiming at creating specialized channels in certain fields. Universities have thus developed in this historic heart of the Quartier Latin, between Panthéon and Sorbonne:

- **Paris I – Panthéon-Sorbonne** (In 1971), with a pluri-disciplinary education
- **Paris II – Panthéon-Assas** (1970), resulting from the Law Faculty. It extended its initial education to economic sciences, social sciences and communication
- **Paris III – Sorbonne Nouvelle** (1970), resulting from the splitting up of the Paris Arts and Literature Faculty
- **Paris IV – Paris Sorbonne** (1970), specialized in the study of literature and foreign civilizations
- **Paris V – Renè DESCARTES** (1970), resulting from the medicine and social science schools. Already existing in Paris as soon as during the second half of the 12th century
- **Paris VI – Pierre & Marie CURIE** (1970), resulting from the former Sorbonne science faculty
- **Paris VII – Denis DIDEROT** (1970), pluri-disciplinary
- **Paris IX – Paris Dauphine**, the last of the Parisian universities, whose statutes have only been adopted in 1988, specialized in the field of management, tools (mathematics and data processing) and methods (applied economics, company and organization management).

Engineer schools in Paris

Beside universities, “grandes écoles” and particularly engineer schools, belong to academic education. Nine engineer schools, among the most prestigious in France, have joined **Paris Tech** (the *Institut Technologique de Paris*). They are, among others, the *Ecole Supérieure de Physique et de Chimie Industrielles* (ESPCI) the *Ecole Nationale des Ponts et Chaussées*, the *Ecole Nationale Supérieure des Arts et Métiers* (ENSAM) the *Ecole Nationale Supérieure de Chimie de Paris* (ENSCP) and the *Ecole des Mines de Paris*. Schools which gave within twenty years 3 Nobel Prizes to France: Maurice ALLAIS in economics (88), Pierre-Gilles de GENNES (91) and George CHARPAK (92) in physics, the two last one being respectively director and professor at the ESPCI.

Paris Tech, resulting from the association of the *Grandes Ecoles d'Ingénieurs de Paris* (GEIP) created in 1991, issues through its schools about 2,500 engineer diplomas each year and counts over 1,200 researchers with a doctorate education. One of **Paris Tech** objectives is to stimulate the international recognition of diplomas issued by these schools, and to make them known to foreign companies. A particular effort is therefore being made in order to develop a business-school cooperation and multiply links between Parisian and foreign schools.

The excellence of Parisian research

It is important for Paris that this exceptional gathering of universities and “grandes écoles” develops its mission as an international academic and research pole.

This is the signification of the creation of associations such as **Paris Tech** and **Universités de Paris** (aiming at defending Parisian universities’ common interests, their rank in the development of scientific research and at developing their international role). Their education tasks being indissociable from their research ones, both are complementary in order to ensure Parisian research competitiveness on national and international scale.

The Ile-de-France region constitutes the first French pole for basic and applied research and within this region, Paris ranks first. Universities and “grandes écoles” thus play an often underestimated but quite essential economic part. Moreover, they make important efforts in order to adapt their courses to the evolutions of the employment market and the needs of businesses.

Even if communes and departments are not competent for academic education, the City of Paris is particularly interested in stimulating the development and the modernization of its education and research centres.

Therefore, given the level and variety of its research, the intensity of its international relations and the quality of its transport means, the Parisian pole is particularly favourable for the establishment of high technology businesses.

In this perspective is planned the development area ZAC Paris Rive Gauche and business creation centres. Reinforced synergies between sophisticated businesses and research may thus be developed on these sites.

The action of the City of Paris in the field of academic education

The City of Paris policy in the field of academic education is based on both an historic context and a political and economic motivation for the development of the Parisian research potential.

The municipal academic patrimony

One of the main actions of the City Government in favour of academic education is being made through its real estate patrimony. As a real estate owner, the City of Paris devotes yearly huge funds for the maintenance of its buildings. Paris owns almost 20% of buildings allotted to universities.

A renovation program of the **Sorbonne**, started in 1995, aims at improving the functionality and accessibility of the space, particularly for handicapped persons, as well as the security with the creation of additional stairs and exits. Other renovation actions, like the one of the Sorbonne Great Amphitheater are also planned.

Moreover, within the framework of an agreement with the State, the City of Paris carries out important works in other buildings owned by the City and allotted to universities. These investments aim at developing the quality of the municipal patrimony but also concretely testify to the interest of the City of Paris for the modernization of these rooms and the security of their users.

Finally, another important program has been started at the ESPCI, aiming at restructuring and extending the school area. Some buildings will be raised, biology laboratories created and the security reinforced.

The municipal academic schools

The City of Paris not only owns, a huge number of buildings allotted to academic education but also manages fully municipal institutions, that is to say the rooms, the budget and the staff. There are mainly three schools the **ESPCI**, the *Ecole professionnelle supérieure d'arts graphiques et d'architecture de la Ville de Paris* (**EPSAA**) and the *Ecole des ingénieurs de la Ville de Paris* (**EIVP**).

The **ESPCI**, already mentioned, is a fully municipal school made famous by several Nobel prize winners: Pierre and Marie **CURIE**, Frédéric and Irène **JOLIOT-CURIE** and, more recently, Pierre-Gilles de **GENNES** (presently director of the school) and Georges **CHARPAK**. Founded in 1882, this school trains physicists and chemists, for research and industrial development. 72 students are taken each year for a four years study. At the **ESPCI**, research has become tradition, supported by powerful means. This school ranks among fine six best French schools for its internationally recognised scientific and technical research potential.

The **EPSAA**, formerly *Ecole Supérieure d'Arts et Techniques de la Ville de Paris* (**EMSAT**) founded in 1983, offers 2 three-years trainings preparing for the professional diploma of graphic designer (BTS level) as well as to the one of architecture assistant. The graphic section offers a training based on a balance between fine arts and professional training to 150 students. It recruits at two levels:

- at the preparatory workshop for fine arts school competitions (1 year), (“baccalaureat level”)
- for the 1st training year for graphic design (3 years program), access through competition

The architecture section prepares 60 students for the architecture assistant diploma, recruited according to an competition after the “bac”.

Finally, the EIVP, created in 1959 by the Seine Prefecture in order to deal with recruitment problems due to the development of the Parisian urban area, trains specialized engineers for the planning and application of urban technics. Since 1977, as a City of Paris school, it prepares for the urban engineering diploma, trains most engineers of the City administration and, since 1986, faced with an increased demand from private or semi-private companies, it also takes students who are not civil servants.

Aid for academic education

Paris also aids certain projects aiming at improving life conditions of students. It created, among other things, the **Municipal Law Thesis Prize** in 1997, awarded each year to a law student who has obtained his law doctorate in a French university. This prize is awarded by a jury of specialists for a high level work and constitutes an essential encouragement for lawyers at the beginning of their career.

In 1998, in order to contribute to international students exchanges, the City Council passed a deliberation creating a system of municipal scholarships granted to Parisian students staying in another European country within the framework of the **ERASMUS** program. Each year, the City of Paris gives 2 million Francs to universities and other institutions which have signed an agreement with the city. These scholarships are granted to students on the basis of academic and social criteria. The City of Paris intends with such a measure to assert Paris rank of European level and thus contribute to the necessary students exchange, in order to ensure an adapted training within the new context of international competition.

Finally, since autumn 1999, the City Council decided, within the framework of the system called **Scholarships of the Year 2000**, to grant an aid to students attending for the first time an institution for academic education or a preparatory class for “grandes écoles” situated on the Paris area. The increase of the number of students over the last years resulted in an increase of students from a modest origin, depending either on revenues from a job after their classes or on the aid of the State. The capital, willing to improve student life conditions chose the start of the year 2000 to propose an action aiming at enabling as many as possible to have an access to academic education. These aids, paid in partnership with the Paris CROUS, are planned for the poorest students, or for students not helped by the State.

Within the competition among great world metropolises, Paris intends to keep playing its role of great intellectual and academic capital. Its scientific potential and intellectual influence are assets in this competition.

Paris is the first French university and research pole, but this does not exclude a solidarity of the capital with other parts of the country and other university cities. Paris must remain strong so that the national economy benefit by its potential and dynamism.

The university plan for the third millenium (U3M)

The City of Paris wished to significantly commit itself in favour of academic education on the occasion of the application of the plan “University of the third millennium (U3M)”. This plan carried out during the period of two agreements between the State and the region will be decisive for the future of Paris and its role as a university capital.

The agreement on academic education, research and municipal institutions in Paris, signed on October 25th, 2000 between the City and the State will enable to put this commitment in concrete form.

Creation of a new university area in the LAC Paris-Rive-Gauche

The City of Paris decided to create a new university area, a “new Sorbonne”, in the Eastern part of the city. This operation will enable to establish in the neighbourhood of the Bibliothèque Nationale de France (national library) the University Parts VII – Denis Diderot, the National Institute for Oriental Languages and Civilisations (INALCO or Langues’O) and its library – integrated in a section for languages and civilisations – the Ecole Pratique des Hautes Etudes (EPHE) presently at the Sorbonne, the Ecole d’Architecture de Paris Val-de-Seine and the UFR STAMPS (Sciences and technics of physical and spoil activities) of the University Paris V.

For the application of this program, the City and the Departement of Paris agreed to offer to the State the necessary site of about 200,000 square meters.

The Paris VII University, with the help of the City of Paris, will be rebuilt on area of 150,000 square meters in the Grands Moulins and Halle aux Farines renovated buildings. The first buildings should be completed for the academic year 2004. The INALCO and the section world languages and civilisations should benefit by about 50,000 square meters, for their teaching and research activities. The transfer of this institution could start for the academic year 2004.

The commitment of the City of Paris for this operation has been estimated to 1.5 billion Francs (a bit less than 230 million Euros).

Redesigning the Parisian universities map

At the Sorbonne, the removal of the Director of Education administration, the Ecole des Chartes and the EPHE will enable a modernization of academic education and research rooms as well as the development of access capacities of the Bibliothèque de la Sorbonne (library). On the area La Villette-Aubervilliers, a new university pole will be created enabling the extension of the IUT – Physical measures of the Paris VII – University and the establishment of a section for image and sound.

The City of Paris also committed itself with the State for large restructuring and security operations of certain university sites, particularly the Jussieu campus. In order to accelerate the removal of asbestos and improve the safety at Jussieu, the City of Paris put at disposal of the University Paris VI as soon as for the academic year 2002

rooms in the former Hospital Boucicaut. Other operations such as the restructuring of the Assas Centre (6th) of the Paris II University, the removal of asbestos and the improvement of the safety in the Censier centre (5th) of the Paris III University or the reconstruction and extension of the Clignancourt centre (18th) of the Paris IV University will also benefit by a disposal of transition rooms of the City of Paris during the time of the works.

Finally, the City of Paris also participates in the achievement of the Parisian Academic Network (RAP), a high flow network aiming at linking all academic and research institutions of the capital. For this project, the City of Paris granted a subsidy of 9.56 million Francs to the Paris VI University, responsible for the project. This very high flow, based on an innovative, flexible and evolutionary technology, constitutes the most adapted solution, with regard to the very high concentration of academic institutions in Paris. This project is essential since new information and communication technologies are among the main concerns of education and research institutions. This achievement will enable Paris to reinforce its privileged position in this field.

On the whole of the Paris area, the restructuring of academic sites and the renovation of rooms will be facilitated by the creation of new university areas. All universities and large Parisian institutions therefore benefit by the U3M Plan.

A decisive effort in favour of life conditions for students in Paris

The City of Paris will essentially improve life conditions of students. In order to remedy the important deficit in the field of social housing for students, the creation of 5,000 flats has been planned for the time of the U3M plan, 3,000 being already at disposal before 2006. 600 apartments will be built in the development area ZAC-PRG. The City of Paris will also contribute to the renovation of apartments in the Cité internationale Universitaire.

The City of Paris also intends to essentially contribute to the development of university and inter-university libraries. Paris will participate in the construction of the Paris VII libraries and of the language and civilization section, by offering land and financially participating in their building with an amount of 155 million Francs. At the heart of Paris, on the site of the former Sainte-Barbe Collège (close to the Sorbonne and the Cujas and Sainte Geneviève libraries), the City of Paris participates in the creation of a library with at least 1,200 spaces. Paris contribution for this facility will be 63 million Francs.

The City of Paris will organize on November 15th and 16th the « Etats Généraux de la Vie Etudiante A Paris », a meeting with Parisian students associations. The creation of a Student Life Council, as an extra-municipal committee responsible for a contribution to the definition and application of a municipal policy in favour of students, will be announced on that occasion. A House of Parisian Students Associations will be opened as soon as 2002. Moreover, a 2.7 million Francs credit will be offered from 2001 on in order to support students initiatives and a scholarship project for international exchanges will be carried out as soon as for the academic year 2002. Municipal academic scholarships will be increased this year to reach 6,000 FRF.

9 Stockholm and its academic institutions

Stockholm is Sweden's largest centre for higher education and research. In the city and its close vicinity are 20 institutions of higher education. Six of these are full research universities including the world-renowned Karolinska Institutet and the Royal Institute of Technology. Beside the universities are eleven independent research institutes with different industrial focus. Stockholm also hosts the Academies of Science and Literature which are responsible for selecting and awarding the Nobel prize winners. Among the academic institutions are also a number of independent Arts Colleges specialised in Opera, Music, Dance, Theatre and Fine Arts, Handicraft and Design.

The number of students enrolled in academic study programs in Stockholm exceed 60,000. The number of graduate students are more than 5,000. The total university budget for R&D in the region is 3.5 billion SEK. This is more than one third of the national R&D budget. 60 % of this comes from the government and 13 % from national research councils.

The role of higher education

The increasing importance of the universities in modern economic life is evident. Sweden and Stockholm is far ahead in the transitional process from an industrial society to a information or knowledge society. The latest ranking by the IDC/World Times Information Society Index (ISI) places Sweden in the top position in this respect – closely followed by the other Scandinavian countries. One of the more important contributing factors to our strong position is the scope and the quality of the educational system. In Stockholm 37 percent of the working population has an academic degree. This number must however expand in the future to meet the challenges from the labour market and from a complex society built upon active participation from individuals taking responsibility for their own lives and able to choose among a multitude of serviceoffers within various areas of life.

Thus increased access to higher educational programs – not least in science and technology is a vital part of any political program for the future. A problem in this context is the too low number of young people willing to join a scientific and technical program in secondary school. A coherent strategy for attracting young people to science and technology programs is essential.

The role of academic research

Research produced at universities is increasingly the base for innovations. The development and dynamics of innovation systems are heavily dependent on academic research results. Thus a strong scientific base is absolutely essential for the future eco-

conomic success of our region. Interaction with universities is therefore a natural part of the city's economic strategy for the future. This interaction is and should be handled mainly by universities and the companies without interference from the municipality. There are however a number of areas where the city can and should play a more active part.

The city, the universities and international networking

Universities are by nature international and scholars have from the very beginning formed transnational academic networks based upon their search for new knowledge. This global networking based on merit and collegiality is a valuable asset for our city and could be regarded as a role model for other international co-operations. Networks between universities in capital cities – university management, researchers, teachers and students should be encouraged and used as platforms to link the cities closer together.

The city's economic development strategy

The economic development strategy that has been adopted by the Stockholm City Council emphasises the need for close co-operation with universities,

The Economic Development agency which is responsible for implementing the City Council strategy takes as its starting-point the strong economic innovation clusters of the city and the region: Biotechnology, Information and Communication Technology, Environmental Technology and Banking and Financing.

Within all four clusters committees or think tanks have been created or are being shaped.

Those committees include representation from industry as well as from the academic world.

Information and Communication Technology/Mobile Valley

Stockholm and Kista Science Park is sometimes regarded to be the second most important Science Park after Silicon Valley particularly for new ICT technologies. The presence of the new IT-university focusing on telecommunication and planning for an intake of 8000 students during the coming decade will further add to the economic value being created in the area.

To maintain and further develop Kista Science City the Electrum Foundation with representatives from the City, the universities and industry has been created. One of Electrum's tasks is to develop efficient mechanisms for supporting spin-offs both from the university and the large companies present in the area. The presence of research foundations such as Swedish Institute for Computer Science, SICS, and Acreo are valuable resources in this context.

Cross-fertilisation between technology and arts

The combination of hard technology and softer content-oriented competencies in the ICT industry has created an increased interest not only in engineering and natural sciences but also in humanities and arts. The need for cross-fertilisation between science and humanities/arts both within academic programs and in the development of new products and services is evident in a market where design and entertainment values are decisive competitive factors. The City of Stockholm hosts the TIME-project (TIME = Telecommunications, IT, Media and Entertainment) which serves as a platform for actors within industry and public organisations including academic institutions.

BioTechnology

The biotechnology companies are characterised by close connections between academia and companies. The Stockholm-Uppsala region is the strongest academic and industrial cluster in Sweden in biotechnology. Karolinska Institutet is the dominant actor when scientific articles is concerned. 36 percent of all articles on biotechnology in Sweden originate from Karolinska Institutet. The tradition to collaborate with industry is however generally low within Swedish universities. This is particularly true for those with a high concentration on basic research.

The good news is that this indicates a potential for increased knowledge flow and more spin-offs from the universities. According to the Principal of Karolinska Institutet, Professor Hans Wigzell, researchers at Karolinska institutet have a more positive attitude towards collaborating with industry nowadays than they used to. A way of increasing interaction between universities and industry would be by increasing mobility of people between those two institutions. Schemes to support such mobility are necessary.

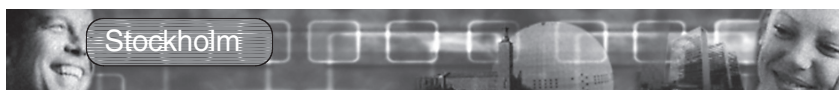
It is important to give researchers with new ideas a good environment in which they can start their firm in Stockholm rather than have them go to for instance the United States.

A new BioScience Park with incubator facilities for start-ups – a co-project recently launched by Karolinska Institutet, the Royal Institute of Technology, Stockholm University and Stockholm School of Economics – is an example of an interesting vision where the City Planning Administration and the Economic Development Agency has to join forces with the universities to find solutions. The urban planning process has to balance an increasing demand for new housing areas with the need for science parks and office facilities for new start-ups in close vicinity to the academic institutions. The ability to solve these sometimes conflicting interests will be of great importance for the future development of the city.

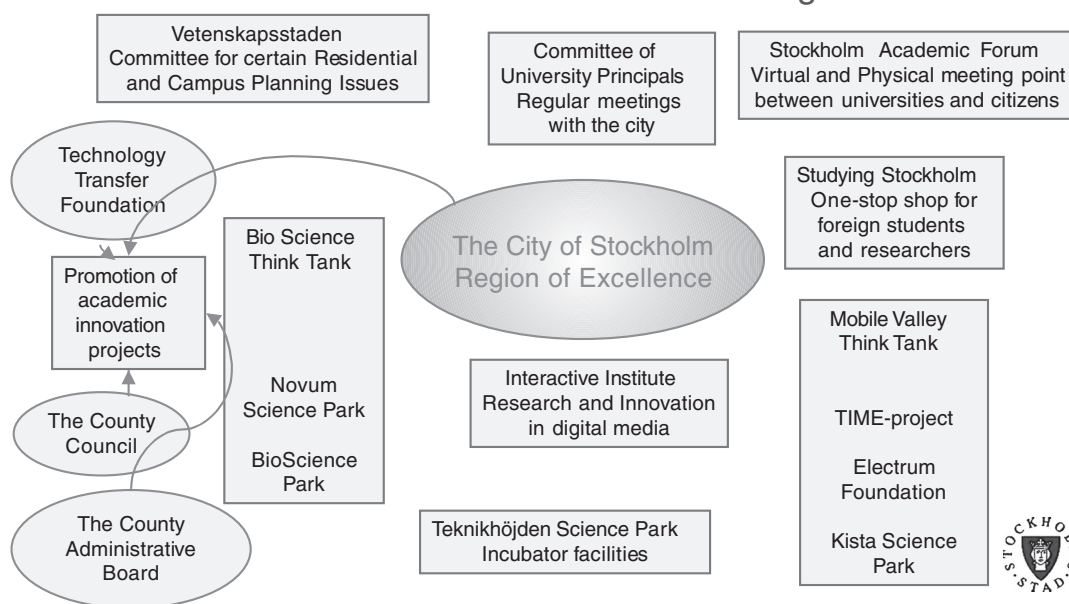
Region of Excellence

The Stockholm region has been chosen to join the European Commissions Club of Excellence Among the other fourteen regions of Excellence are also Helsinki and Madrid, München, Milano and Barcelona. This membership offers an opportunity to influence the European innovation policy and the 6th Framework Program in the future. The Commission has recently decided to hold the 3rd Forum on Innovative Enterprises in Stockholm in April 2001. This conference is a natural platform for highlighting themes of cities' competitiveness and development of local innovation systems.

Being capital cities we have a lot of shared problems and visions concerning the role of universities as driving forces for economic and cultural growth. There is a need to strengthen the science bases; to develop incentives to keep talented people and to attract talented people from other parts of the world (when salaries and conditions offered by for instance US universities and research companies are hard to beat); exchange of best practices on mechanisms to facilitate the setting-up of new knowledge-based firms. These are examples of possible areas of common interests. Below you will find a figure showing some existing platforms for co-operation between the city and the universities. The figure includes the Science Parks, to which the city makes an economic contribution and the Vetenskapsstaden, which is the general arena for discussions on campus planning issues. This overview is far from being complete and should be seen as the tip of an iceberg. Under the surface are a huge number of day-to-day contacts between individual employees at various levels within the city administration and the universities.



Some examples of cooperation between the City of Stockholm and universities in the region



10 Vienna – University Town and City of Sciences

In Vienna, there are eight universities with high international reputation, the Academy of Sciences, which recently celebrated its 150th anniversary and houses a number of renowned research institutes, and the Ludwig Boltzmann Research Association including 131 institutes and research units, 64 of which were established in co-operation with the City of Vienna. Furthermore, there are a large number of scientific institutes which perform innovative work in many research fields.

Vienna has a rich tradition as a university town and as a city where innovative research has been initiated and further developed. The names of well-known people and schools of thought (Vienna schools) that have influenced the international development of sciences bear witness to these traditions: Alfred Adler, Ludwig Boltzmann, Karl and Charlotte Bühler, Sigmund Freud, Robert Koch, Richard Johann Kuhn, Konrad Lorenz, Lise Meitner, Wolfgang Pauli, Erwin Schrödinger, Eduard Suess, Ludwig Wittgenstein, the Vienna Circle, the Vienna School of Medicine, the Vienna School of National Economy, the Vienna School of Art History, etc.. This heritage has always been a basis for current excellent achievements with regard to the present topical and theoretical basis as well as to “Vienna” as a trademark in fields such as psychotherapy, medicine, and law.

The City of Vienna aims to increasingly link competent and high-ranking experts from Viennese institutions, to stimulate knowledge transfer between research institutions and application units, and to better utilise science potentials. The City’s activities in these fields regard

- promoting, discussing and presenting the Vienna schools (Vienna School of Medicine, Vienna School(s) of National Economy, Vienna School of Law, Vienna School of Physical Sciences – Ludwig Boltzmann, Ernst Mach, Erwin Schrödinger, Wolfgang Pauli – Vienna School of Behavioural Science, Vienna School of Art History, etc.)
- promoting and presenting Vienna as a city of psychotherapy. Vienna is the place where people such as Sigmund Freud, Alfred Adler, Karl and Charlotte Bühler, Wilhelm Reich, August Aichhorn, Viktor Frankl, Oskar Spiel, and Hans Strotzka were born and worked.
- promoting and presenting Vienna as a city of medicine
- promoting and presenting Vienna as a city of technology
- promoting and discussing Vienna as a city of culture. Vienna’s cultural history is closely linked to and has been shaped by people such as Egon Friedell, Karl Kraus, Alfred Loos, Robert Musil, Anton Kuh, Thomas Bernhard, Elfriede Jelinek, Franz Schuh, Josef Haslinger, Christoph Ransmayer, all of whom are known as masters of close observation, differentiated and critical presentation of past and present, and their situations in society.

- organising international psychotherapy congresses. Vienna has organised the biennial World Congress on Psychotherapy for 5 years.
- organising international geriatric congresses
- organising international logotherapy congresses
- strengthening Vienna as a biotechnology location

Promoting Sciences and Innovation

At the onset of the 21st century, developed societies are involved in a new and deep transformation process. Producing knowledge has become increasingly more important than industrial production. Knowledge as production factor has gained importance and has become a central resource for society. Societies are turning into knowledge societies. The City of Vienna therefore highly regards promoting research and science, as well as researching and further developing the Vienna knowledge basis to position itself on an international level. The City of Vienna has established four Funds in the past four years to promote innovative sciences. Apart from that, there are a large number of initiatives by the City of Vienna which are dedicated to promoting excellent and innovative sciences.

- Anniversary Fund of the City of Vienna for the Austrian Academy of Sciences. Established in 1997 on the occasion of the 150th anniversary of the Austrian Academy of Sciences, this Fund promotes research in all scientific fields which have been initiated by Viennese researchers, have their “home” in Viennese research institutions, support current research developments, and set impulses to strengthen Austria’s innovative potential.
- Anniversary Fund of the City of Vienna for the Vienna University of Economics and Business Administration. Established in 1998 on the occasion of the 100th anniversary of the Vienna University of Economics and Business Administration to promote economic-scientific research which is qualified to give new momentum to business in Vienna, this Fund primarily aims to strengthen and renew the flows of knowledge transfer with regard to economic sciences and business in Vienna.
- Viktor Frankl Fund of the City of Vienna to promote sense-oriented humanistic psychotherapy. Established in 1999 to honour the great achievements of the Viennese physician and psychotherapist Viktor Frankl and to document his scientific work, the Viktor Frankl Fund aims to strengthen and accentuate the innovative potential in the field of psychotherapeutic sciences and to present Vienna’s position as an international city of psychotherapy.
- City of Vienna Fund for innovative inter-disciplinary cancer research. Established in 2000 to promote innovative projects in the field of cancer research which are qualified to give an impulse to progress in biological understanding, diagnostics and / or therapies for malicious diseases. By establishing this Fund, the City of Vienna recognises the work and importance of innovative cancer research in Vienna having in mind the great achievements of medical schools in Vienna, the “City of Medicine”.

- Promoting knowledge transfer between sciences, business and administration.
- Promoting international congresses which are qualified to establish Vienna as an international city of sciences
- Promoting advanced research and technologies with particular regard to biotechnology (Inter-Disciplinary Co-operation Project for Molecular Medicine – ICP, Vienna Biocenter – Institute for Molecular Pathology, IMBA)
- Awarding recognition awards for excellent scientific achievements
- Awarding promotion prizes to young and excellent scientists
- Awarding scholarships

Promoting Young Scientists

A central task for Vienna's scientific work is to promote outstanding young scientists via a large spectrum of prizes and scholarships, which shows these young people that society is interested in their training and qualifications. The City of Vienna has set up several initiatives to search for talented scientists, it helps qualified young scientists with their careers, and starts contacts between excellent young researchers and the administration, which is necessary and useful for a future-oriented solution of their problems.

- Awarding scientific scholarships to young university graduates under 40 years of age
- Awarding research scholarships to highly-qualified university graduates under 45 years of age
- Awarding Talenta scholarships to the authors of the five best theses at the Vienna University of Economics and Business Administration
- Promoting Jozsef scholarships for student exchange programmes for students and graduates from Central and Eastern European Countries at the Vienna University of Economics and Business Administration
- Awarding Apart scholarships of the Austrian Academy of Sciences
- Awarding foreign scholarships
- Promoting the best theses at the Vienna University of Technology

Analysing and Presenting Scientific Life

Viennese knowledge has a number of strengths which are of societal importance both in the narrow sense of sciences and in the broad sense of a knowledge base. It is essential to find and promote these knowledge bases. And it is also vital to strengthen the public's awareness of living in a city of knowledge and sciences. The following measures are to help the Viennese to increasingly identify themselves with the concept of Vienna as a city of knowledge and sciences:

- Increasing Internet presentations of scientific life in Vienna
- Project "Virtual Vienna University"
- A number of initiatives to link sciences, business and administration

- Project “Vienna Knowledge Base”
- Since early 1999: brochure on scientific events in Vienna
- Database of Vienna-related theses and dissertations
- Documentation of scientific associations in Vienna
- Promoting the Theodor Herzl lectureship

***Wiener Vorlesungen* – Meetings on rationalism**

Wiener Vorlesungen, or Viennese Lectures, are among Vienna’s most successful projects to present science in the 20th century and will soon celebrate their 14th anniversary. The concept of these lectures is explicit and clear: renowned thinkers put up for discussion their analyses and studies on how current problems emerged and could be solved. In the framework of *Wiener Vorlesungen*, the Vienna City Hall, the place where political intentions for the municipality are formed and the seat of the City Administration, changes from a house of politics and administration to a city university. The audience consists of citizens with very different social backgrounds, and many Viennese attend the lectures because they identify themselves with the City Hall as a place which represents their interests. Their presence strengthens the democratic character of the building.

Wiener Vorlesungen aim to raise awareness and consciousness on differentiated and contradictory realities. A clear view of problems calms emotions and is the basis for rationally analysing and solving problems, as well as a foundation for a humane world. By participating in *Wiener Vorlesungen*, the audience “spreads the virus” which is responsible for a good political climate.

Renowned people who have held lectures in the framework of *Wiener Vorlesungen* include: Kofi Annan, Ulrich Beck, Bruno Bettelheim, Pierre Bourdieu, Jimmy Carter, Marion Dönhoff, Irenäus Eibl-Eibesfeldt, Manfred Eigen, Mario Erdheim, Vilem Flusser, Viktor Frankl, Peter Gay, Maurice Godelier, Ernst Gombrich, Michail Gorbachev, Jeanne Hersch, Eric J. Hobsbawm, Werner Hofmann, Ivan Illich, Marie Jahoda, Otto F. Kernberg, Rudolf Kirchschräger, Franz König, Erwin Kräutler, Bruno Kreisky, Viktor Matejka, Adam Michnik, Hugo Portisch, Uta Ranke-Heinemann, Eva Reich, Horst-Eberhard Richter, Erwin Ringel, Richard Sennett, Edward Shorter, Wole Soyinka, Marcel Tshiamalenga Ntumba, Desmond Tutu, Paul Watzlawick, Georg Weidenfeld, Erika Weinzierl, Hans Zeisel.

Discussing Vital Questions of Promoting Sciences, of Science Policies and of Sciences as Instruments for Discussing and Solving Current Questions

There are manifold new connections between sciences, science policies, and science management. The organisation of sciences is currently abandoning last relicts of a feudal Constitution. “Which contents should university curricula have?” is the question asked by the public. Scientists demand universities to increasingly consider cur-

rent qualification demands, and basically question public financing of education and training, culture, and science. New forms of funding and public private partnerships are being discussed.

The City of Vienna has been reflecting on lectures, meetings and workshops on questions and problems regarding programming management and financing science, and has been organising meetings and workshops to discuss possibilities, chances, and models for a knowledge transfer between sciences, business and administration.

***Wien Akademie* of the City of Vienna and of Vienna University**

Wiener Vorlesungen, organised by the City of Vienna, and Vienna University started an initiative in the summer semester of 1999 which should link the city more closely to its oldest university. *Wien Akademie* of the City of Vienna and of Vienna University sees itself as platform to network urban and university discussions and as intellectual impulse for Vienna. *Wien Akademie* is an inter-disciplinary observatory for the city where Vienna-related questions are discussed on a highly scientific level.

In the framework of *Wien Akademie*, the City of Vienna and Vienna University link their conclusions potential, their analysis capacity, and their knowledge to solve the task of precisely presenting historical bases and developments as well as current difficult situations.

Wien Akademie organises lecture series and symposia on the university campus and analyses intellectual, artistic, political and social constellations which have formed the city, its mentality, structure and forms of expression. *Wien Akademie* lectures and symposia focus on students interested in inter-disciplinary analyses of Vienna as a university town and on Viennese citizens who want to learn more about Vienna from the perspectives of latest research results. So far, the following lectures have been held in the framework of *Wien Akademie*:

- Focus on: Vienna. Austrian Cultural History
- Viennese Modernism
- Viennese Art Objects
- Vienna. Places of Remembrance
- Vienna – International City
- Vienna and Technology
- Culture on Ringstrasse

Co-operation with Universities

The City of Vienna believes that universities are eternal sources of science in Vienna. A large number of initiatives and a series of presentations by universities in the framework of *Wiener Vorlesungen* help Viennese citizens appreciate the importance of universities for the city's intellectual climate.

There are eight universities in Vienna with 6,000 professors teaching 130,000

students. Approx. 15 % are students from abroad. Including families and friends of students and professors, almost 25 % of the city's population are in some way linked to research and sciences.

Vienna has important scientific traditions in many research fields. A large number of Nobel prize winners and important schools of thought that have analysed, formed and changed scientific and social life have had their roots in the city. Scientific institutions outside universities have been highly important in Vienna but universities have always been the focus of research.

Today, universities and the city want to raise awareness on the historical meaning of sciences in Vienna and strengthen current scientific life and innovation potentials. The City of Vienna wants to link the potentials of sciences, business and administration with a large number of initiatives in terms of profitable urban development. The following measures should help to achieve this aim:

- Strategically harmonising the interests of the city and of universities
- Co-operating in large projects (e.g. new university campus)
- Providing land for scientific purposes (e.g. IMBA)
- Providing start up support for innovative scientific projects
- Promoting guest lectureships and fellowships
- Providing prizes for innovative scientific achievements
- Presenting universities in the framework of *Wiener Vorlesungen*
- Urban fellowships of the City of Vienna
- *Cities in Motion* – Vienna prizes for excellent pupils and students for competitions on Vienna-related issues
- *Joseph von Sonnenfels Kreis* of *Wiener Vorlesungen* for leading science managers of the City of Vienna
- University meets public. In the framework of this initiative and in co-operation with the City of Vienna, universities in Vienna present selected research results which are of interest for the broad public.

By promoting sciences and research, the City of Vienna aims to give impulses to Vienna as an intellectual city, a brain trust for innovative research, a central place for practising and criticising art and for discussing culture. Happiness in life and a sophisticated lifestyle have always been linked to searching for truth and reaching conclusions. Investing in sciences and cultivating knowledge therefore means investing in a better life.