



**OAW**

Austrian Academy  
of Sciences

# Intellectual Capital Report 2006

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## » 1 Preface

*Vienna, September 2007*

The Österreichische Akademie der Wissenschaften (Austrian Academy of Sciences or the Academy) has positioned itself as a site and a platform for high-performance, basic research in Austria. The Academy was founded in 1847, in 1921 it was granted the special protection and patronage of the Federal Republic of Austria and in 1947 it expanded from Vienna to all federal states. Today, the Academy's mission is to promote the sciences and the humanities – in its role as a learned society, as a research performing organisation and as a career builder. In the performance of its tasks, the Academy generates a broad gamut of knowledge through the interaction of these three pillars. Ever increasing competition for the best brains, infrastructure, research accomplishments and funding has made it necessary to render proper account of any services provided and communicate intellectual capital both internally and externally.

Reporting on knowledge in general and the sciences and the humanities in particular is a challenging endeavour. Quite a number of science politicians and many researchers doubt whether it is possible at all to measure and to adequately compare the quality of research. This is partly due to the fact that cutting-edge research is characterised by originality and creativity, i.e. by features that are impossible to standardise and that need to be embedded in one of the numerous different research cultures. Albeit the above, at least some objectifiable factors and criteria can be found in the individual disciplines and beyond, which appear useful to record and to communicate to interested parties both inside and out of the Academy – not least due to the added value generated through a status-quo analysis and critical self-assessment during the reform process the Academy is currently undergoing.

Intellectual capital reports facilitate a process of reflection on tasks, they support value creation potential and are apt to further the performance of an organisation, creating transparency throughout the reporting period. The Academy seeks to actively keep abreast with and pave the way for new developments internally as well as in science and society. Indicators are indispensable for the process of intellectual capital reporting, but must be neither overrated nor regarded as the sole and central feature. Many performance features can simply not be quantified. But quantifiable features are imperative when it comes to assessing the acceptance and sustained effect of research output. It is decisive for intellectual capital reporting to focus attention on the Academy's objectives, to acknowledge diversity and to assure and improve quality in the common discourse.

In awareness of this, the Academy has been developing, implementing and continuously improving its intellectual capital reporting on its own initiative since 2004. The Academy's 2006 performance report has been prepared in the form of an intellectual capital report and marks yet another milestone along the way.

In the near future, it will be essential to integrate intellectual capital reporting with other evaluation components to form a quality assurance system that caters to the needs of the sciences and the humanities while focusing on strategic objectives. Many thanks to all members and colleagues, to the staff in the Academy's research units and the service facilities for their support in collecting, analysing, and interpreting the data included in this intellectual capital report. •

**Peter Schuster**

President of the Austrian Academy of Sciences

## » 2 Mission Statement: Tasks and Objectives of the Academy

To meet its statutory mission of promoting the sciences and the humanities in every respect, and in the awareness of its social, cultural and economic responsibility, the Academy promotes and conducts basic research.

Renowned researchers from Austria and abroad have formed a comprehensive knowledge pool covering a wide array of disciplines for the sake of progress in science and research as a whole. In all its activities, the Academy is closely networked at national, EU, and international level with university and non-university partners.

As a learned society, the Academy contributes decisively to assuring the high competitiveness of basic research in Austria, advising decision-makers in politics, business, and society on science-related issues while informing the interested public about major scientific discoveries. The Academy's members support this process by making their broad range of expertise available for the Academy's activities.

The Academy gives new impetus by taking up new, forward-looking research areas. Scientific quality, innovation potential and sustainability are the main criteria for the Academy's research profile. As centres of excellence, the Academy's research units must stand the test of international competition in the form of periodic evaluations.

The Academy offers fellowships to talented young researchers in promotion programmes that are committed exclusively to the standards of the international scientific community, thus giving highly qualified junior researchers an opportunity to develop scientific expertise. In granting awards, the Academy commends outstanding scientific achievements. •

## » 3 Intellectual Capital Reporting at the Academy

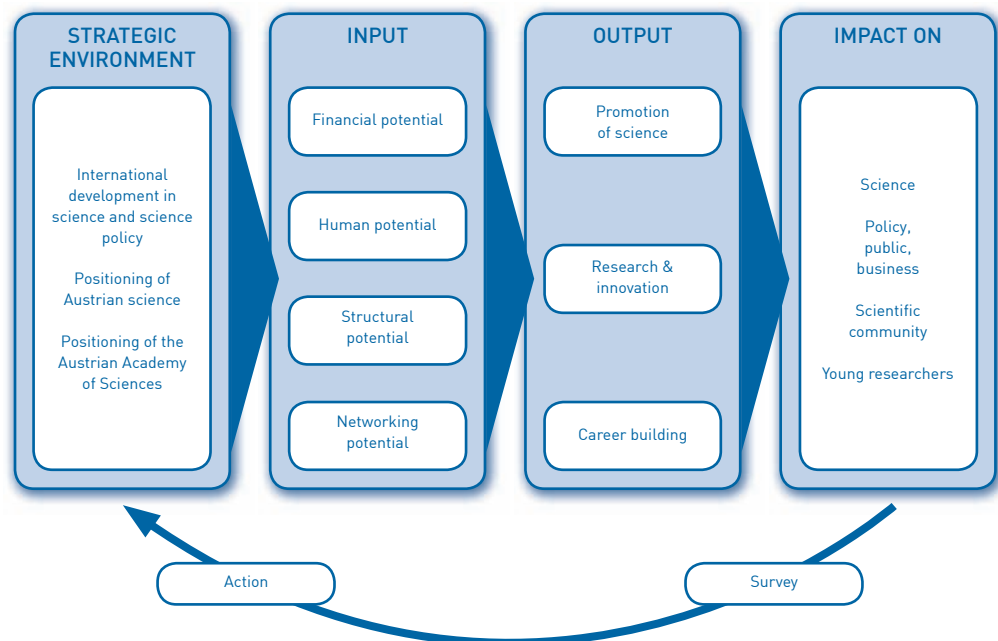
As a report focusing on intangible assets, the intellectual capital report (ICR) has developed into an internationally accepted controlling and communications tool for knowledge-based companies in general and for scientific organisations in particular. As such, it creates the conditions necessary for analysing existing potential against the objectives of the overall organisation and reporting achievements and impacts that are difficult to quantify in monetary terms.

The Academy's commitment to intellectual capital reporting is to be understood as part of a comprehensive quality assurance process that addresses the needs of the sciences and the humanities by building a bridge to strategic and operative controlling. Management can resort to the report to gain an overview of current developments and make swift and well-founded decisions.

Over and beyond this, intellectual capital reporting decidedly serves the purpose of internal and external communication. Based on the intellectual capital report, Academy members, financiers, sponsors, cooperation partners, and the general public are able to appreciate what the Academy stands for and what its scientific and social contributions are. The aggregated form of reporting facilitates mutual understanding and strengthens the Academy's anchoring in science and society.

The Academy's Intellectual Capital Reporting is based on the model developed by Schneider/Koch\*:

\* Schneider, Ursula (2004): Wissensbilanzen an Forschungsinstitutionen. Zeitschrift für Wissensmanagement. Special edition. Lemmens Publishing House.



*A brief explanation of the ICR model used at the Academy:*

*The Austrian Academy of Science is embedded in a national and international scientific and social context. The position the Academy assumes is determined by the mandate given to it*

## » 3 Intellectual Capital Reporting at the Academy

*under Austrian law and by the dialogue between science and politics.*

*All of the Academy's activities are based on a specific mixture of value creation potential, divided into human, structural, and networking potential, as well as the size of its financial endowment. The outstanding scientific profile of its members, the proven professionalism of its staff, the availability of state-of-the-art research infrastructure, the high degree of international networking and lots more ensure the level of excellence to which the Academy feels committed.*

*Three core competencies – promotion of science, research and innovation, career building – are reflected in the Academy's central performance processes. These are incorporated in the Academy's three pillars: the learned society, the research performing organisation (this pillar includes the limited liability research companies) and the career building institution - all three in turn benefit from the central service facilities.*

*The most important and hardly quantifiable success criterion is whether a certain activity has the desired impact in the end. Action must be taken depending on the degree of compliance with objectives and the occurrence of intended or unintended impact.*

Based on the model detailed above, the structure of the “Intellectual Capital Report of the Austrian Academy of Sciences” has changed considerably since 2005:

The financial resources of the overall organisation will now be treated in a separate chapter. Additional value-creation potential, achievements and impacts are covered individually for each of the three specified pillars and the service facilities in order to make the Academy's intellectual capital report more eloquent and coherent.

The general overview of the Academy's performance as a research performing organisation is followed by individual presentations of the individual areas of research in the mathematics and natural sciences cluster and the centres of the humanities and social sciences cluster. For this purpose, the level of aggregation of the selected indicators is scaled down to the level of research areas and centres.

Based on the 2005 Intellectual Capital Report, validation and differentiation efforts were focused on central performance indicators. This way, their relevance and topicality has been enhanced. Some of the indicators used in 2005, whose relevance has been challenged and for which data collection has continued to prove difficult, have been cancelled, others were newly developed.

The Academy received most of the data underlying the indicators directly from the research units. Release of the data – including the attached responsibility for their accuracy – is the task of the heads of the respective research units. The aggregated indicators were calculated with the help of the Academy's research information system AkademIS.

Any centrally available information included in this intellectual capital report was identified by the Academy's respective service units. •

## » 4 The Academy's Financial Potential

### 4 The Academy's Financial Potential

Reliable and adequate funding is the main prerequisite for the successful realisation of all further potential, be it that of "best brains", state-of-the-art infrastructure or the maintenance of international relations for the long-term benefit of scientific discovery and development. •

#### 4.1 Overall budget

##### *Ordinary budget*

The Academy's ordinary budget in 2006 was fed by three sources: the ordinary budget of the Federal Ministry for Education, Science and Culture (BMBWK), the funds from dedicated government programmes, and the funds of the National Foundation for Research, Technology and Development. The funds were available for the largely discretionary global budget and for the contracts and membership fees that are not directly controlled by the Academy.

Academy Budget	
Total budget 2006, incl. budgets of subsidiaries (in EUR '000)	74,458.2
with funds from:	
· BMBWK (ordinary budget)	37,500.0
· Dedicated government programmes (Offensivprogramme)	17,475.0
· National Foundation (Nationalstiftung)	14,000.0
· Release of own resources	5,483.2
with budgeted funds of (as a % of the allocated funds in 2006):	
· Learned society	1.1 %
· Research-performing units	76.6 %
· for MN cluster	59.6 %
· for HS cluster	17.0 %
· Career-building institution	4.9 %
· Service facilities (incl. building activities)	11.2 %
· Contracts	1.8 %
· Membership dues	4.4 %

##### *Indirect funding by the Federal Ministry for Education, Science and Culture*

In addition to the funding shown above, the Academy also received the following indirect subsidies from the Federal Ministry for Education, Science and Culture:

- EUR 3,844,700 for personnel expenses of federal employees seconded to the Academy. These are the Ministry's personnel expenses for the government employees and contract employees assigned to the Academy. The Ministry has promised to increase the Academy's basic funding if federal positions become vacant and are not filled again.
- Approx. EUR 800,000 for rental expenses for properties used by the Academy.
- Approx. EUR 400,000 for extra expenses, such as travel expenses of federal employees.
- Approx. EUR 200,000 for various projects.

##### *Secure funding*

In 2006, the Academy was again granted an annual budget without considering a multi-year forecast. In light of the numerous medium- and long-term research activities, this considerably prejudices the Academy's financial planning. Planning during 2006 was initially determined by requirements and restrictions in the allocation of dedicated government funds and the funds of the National Foundation. Hence, the funds from the Ministry's ordinary budget were the only



## » 4 The Academy's Financial Potential

funds that were regularly available. To ensure future planning security, a multi-year performance-oriented global budget is being prepared in cooperation with the Federal Ministry of Science and Research (BMWF). •

### 4.2 Selected expenses

In 2006, the personnel expenses payable by the Academy and its subsidiaries (internally funded personnel expenses) amounted to more than EUR 38.1 million.

*Personnel expenses*

Personnel expenses				
	Total	MN cluster	HS cluster	service facilities
In EUR '000	38,148.52	23,747.24	9,548.26	4,853.02

Personnel expenses paid by own or third party funds in 2006 totalled EUR 48.9 million. EUR 4.4 million were spent for research-related third-party services.

The amount of capitalised expenses for own and third party buildings also includes investments by subsidiaries. As in 2005, investments into the Academy's Life Sciences Centre used by the IMBA (Institute of Molecular Biotechnology) and the GMI (Gregor Mendel Institute of Molecular Plant Biology) were a major cost factor. It must be noted that part of the investments included in the central budget went into research units of both clusters.

*Investments in buildings*

Investments in buildings				
	Total	MN cluster	HS cluster	invested centrally
In EUR '000	3,521.43	1,723.60	1.25	1,796.58

Investments into equipment cover movable assets such as scientific and computer equipment, furniture, and machinery. Investments of the Academy's subsidiaries are included in the figures. Here again, it must be pointed out that part of the investments included in the central budget was allocated to research units of both clusters.

*Investments in equipment*

Investments in equipment				
	Total	MN cluster	HS cluster	invested centrally
In EUR '000	13,077.39	11,726.05	247.57	1,103.77

Career-building activities are mainly funded as part of the Academy's global budget. Whereas the budget for promoting junior researchers has remained unchanged in the past five years, the organisation's global budget has seen an increase during the same period.

*Expenditures for career building*

About 24 percent of all income from public funds is derived from special allocations. These allocations need to be contractually agreed every year and concern DOC-fFORTE as part of the campaign for women in the natural sciences entitled "Women in research and technology – fFORTE" initiated by the National Foundation for Research, Technology and Development, and DOC-team, an initiative to promote trans-disciplinary research in Austria. A relatively small portion of 0.6 percent is allocated to the

## >> 4 The Academy's Financial Potential

outgoing ROME project, i.e. research grants of the Austrian Historical Institute at the Cultural Forum in Rome. 7.6 percent of the funds for career building come from income provided by the Federal State of Vienna. In 2006, no public funds at all were made available for prizes awarded to young researchers, which are exclusively funded by private foundations. The European Social Fund funded 46 percent of the DOC-fORTE scholarship program in 2006. •

Expenses for career-building activities			
Career-building programmes	Financing in EUR '000		Percentage of publicly financed total budget for (w/o EU) career building at the Academy
	Domicile of client/funder in Austria	in EU	
APART	1,817.0	0	34.0%
APART-urban	45.1	0	0.8%
DOC	1,817.0	0	34.0%
DOC-urban	16.9	0	0.3%
DOC-fORTE	265.7	226.3	5.0%
DOC-team	1,000.0	0	18.8%
ROM	33.8	0	0.6%
Anniversary Fund / City of Vienna	345.4	0	6.5%
<b>Total</b>	<b>5,340.9</b>	<b>226.3</b>	<b>100.0%</b>

## » 5 The Academy's Learned Society

### 5 The Academy's Learned Society

Thanks to its full and corresponding members, the Academy has become a knowledge pool that is unparalleled across Austria in terms of variety. This pool sets impulses for an adequate, balanced and continuous development of the sciences and the humanities in Austria. By virtue of its interdisciplinary, inter-institutional and international composition, the learned society is able to gain a general overview of the sciences and of the performance of universities and non-university research institutions but also to detect gaps in the research spectrum and any innovation potential. In this way, the Academy – unrivalled by other Austrian research institutions – sets accents for and in research. Because of the Academy's autonomy guaranteed under Austrian law, both the sciences and the humanities are promoted – above all under the responsibility of the Academy's learned society – largely independent of any particular interests with the aim of positioning Austrian research in relevant fields of research, ensuring high quality in Austrian science policy and creating an understanding for science and research in Austria.

*Promoting research*

Like Europe's other major academies, the Austrian Academy of Sciences is also a learned society. It is comprised of two sections, one for mathematics and the natural sciences, and one for the humanities and the social sciences. Scholars from Austria and abroad are elected as full, corresponding or honorary members of the Academy with elections taking place once yearly based on the principle of co-optation by existing full members. According to the Academy's bye-laws, full members (f.m.) and corresponding members (HM) in Austria (c.m.i.A.) must be resident in Austria while corresponding members abroad (c.m.a.) must be resident outside Austria. The Academy's statutes provide for 90 full members, 45 for each section, and 250 corresponding members, 125 for each section, of these 55 in Austria and 70 abroad. In accordance with the statutes, members aged 70 or older retain all rights, but are not included in the above figures. This means that the Academy's statutes merely stipulate the number of persons under the age of 70 that may become members in the learned society. •

### 5.1 Value-creation potential of the learned society

#### 5.1.1 Human potential

The learned society consisted of 633 members by the end of 2006.

*Composition of the learned society*

Composition of the learned society (as of 31/12/2006)					
	Total	MN section		HS section	
		m	f	m	f
Total number of members	633	321	12	274	25
of which:					
· f.m.	165	84	3	73	5
· c.m.i.A.	150	77	2	65	6
· c.m.a.	300	151	7	128	14
· HM of Academy of Sciences	1	-	-	-	-
· HM of sections	17	9	0	8	0

## » 5 The Academy's Learned Society

### *The excellence of Academy members in research and research management*

The number and quality of publications by the Academy's members is a direct measure for the scientific productivity of the members in the learned society. Their works – mostly rendered in their capacities as university staff - are listed individually in the Academy's annual almanac.

Insofar as members publish books or papers as part of their active research work in the Academy's units, such publications are included in the publication figures of the Academy.

In addition to the recognised scientific excellence, the learned society also comprehends science management skills, thus strengthening the Academy's claim that it disposes of top-notch control and decision-making structures in addition to purely scientific expertise. Over and beyond the diversity of university management functions, Austrian Academy members have in the course of their careers served in scientific and science-policy bodies of the European Union (EU) and the European Science Foundation (ESF). Appointments to managerial positions went beyond the European area and even included the NASA for instance.

The Academy continues to benefit from the experience gained by members in the high realms of politics, e.g. as former ministers, in the judiciary either at the Constitutional Court of Austria or the European Court of Human Rights as well as in the management of large museums such as the Kunsthistorisches Museum Vienna. The wealth of experience gained by members in the private sector should also not be underestimated, as managing directors of limited liability research companies or in banking institutions for instance.

In 2006, five Nobel laureates ranked among the members of the Academy's learned society, all from the Section for Mathematics and the Natural Sciences:

- George Charpak, Nobel Prize for Physics 1992, honorary member
- Manfred Eigen, Nobel Prize for Chemistry 1967, honorary member
- Ernst Otto Fischer, Nobel Prize for Chemistry 1973, corresponding member abroad († July 2007)
- Eric Kandel, Nobel Prize for Physiology and Medicine 2000, honorary member
- Carlo Rubbia, Nobel Prize for Physics 1984, honorary member

### *New members of the learned society*

In April 2006, seven full members, eight corresponding members in Austria, and sixteen corresponding members abroad were newly elected by the General Assembly. From 2006 until today, Maria Schaumayer, retired President of the Austrian National Bank, has been the sole honorary member of the full Academy of Sciences.

New members					
	Total	MN section		HS section	
		m	f	m	f
Number of newly elected members in 2006, of which:	32	13	4	10	4
· f.m.	7	2	1	3	1
· c.m.i.A.	8	2	2	3	1
· c.m.a.	16	9	1	4	2
· HM of Academy of Sciences	1	–	–	–	–

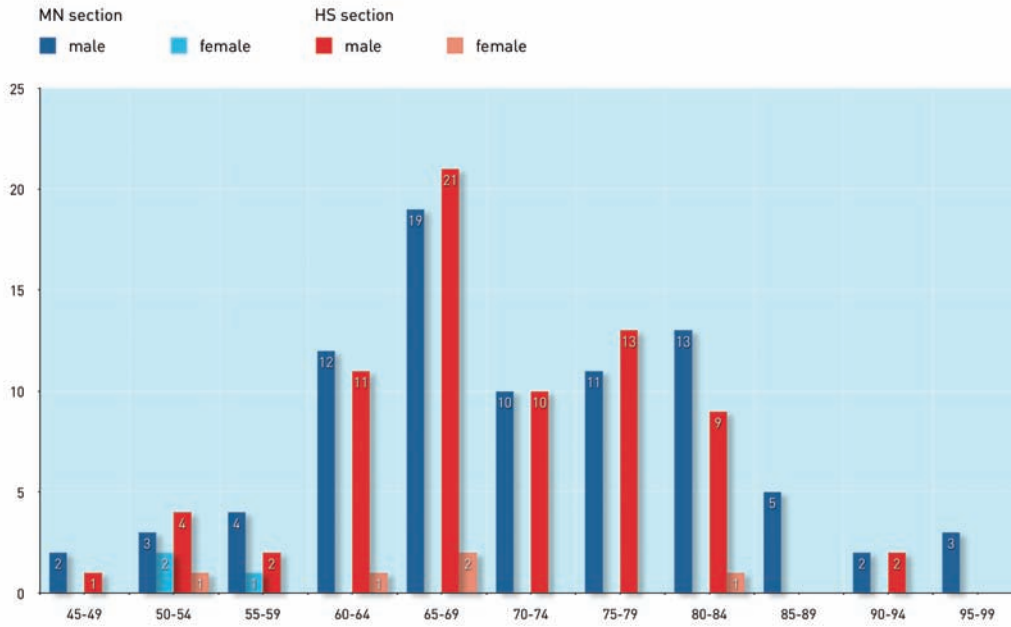
As set forth in its statutes, the Academy's strategic and operative management is in the hands of its members in Austria, in particular its full members.

### *Age structure of f.m. and c.m.i.A.*

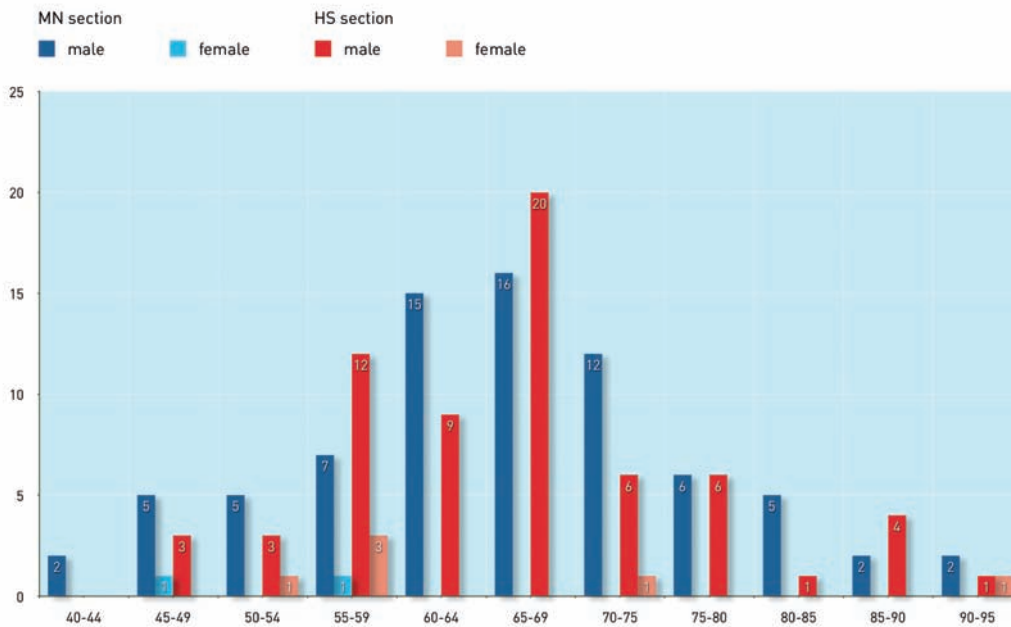
The age profile of the Academy's domestic members reflects the fact that the selection of members is often based on the outstanding scientific achievements of an entire life time. However, the Academy's reform efforts also aim to rejuvenate the learned society. •

## » 5 The Academy's Learned Society

### Age structure of full members



### Age structure of corresponding members in Austria



## » 5 The Academy's Learned Society

### 5.1.2 Structural potential

*The research spectrum covered by domestic members*

The enormous range of scientific competence of Academy members ensures the promotion and assessment of science and research at large.

Coverage of the research spectrum (according to the 2-digit classification of ÖSTAT) is 86 percent each for full and for corresponding members. All in all, domestic members cover 90 percent of the research spectrum.

Of the main research fields, all areas (according to 2-digit classification of ÖSTAT) of natural sciences, humanities and social sciences are covered by Austrian Academy members. In the technical sciences only traffic systems and transportation, in human medicine only forensic medicine are not represented by at least one member. The area of "Agriculture and forestry, veterinary medicine" is less well represented, as only "horticulture and fruit growing" is represented by the expertise of at least one member.

*Coverage of the research spectrum results from the allocation of the expertise of full members (f.m.) and corresponding members in Austria (c.m.i.A.) to the ÖSTAT classification pursuant to the ÖFOS 2002 standard taken from Statistics Austria. The 2-digit classification distinguishes between 49 scientific disciplines. A scientific discipline is considered covered by the Academy if it is represented by at least one full member or corresponding member in Austria.*

*Institutional spectrum of membership*

By far the most of the Academy's members pursued or currently pursue the main part of their scientific activities at a university.

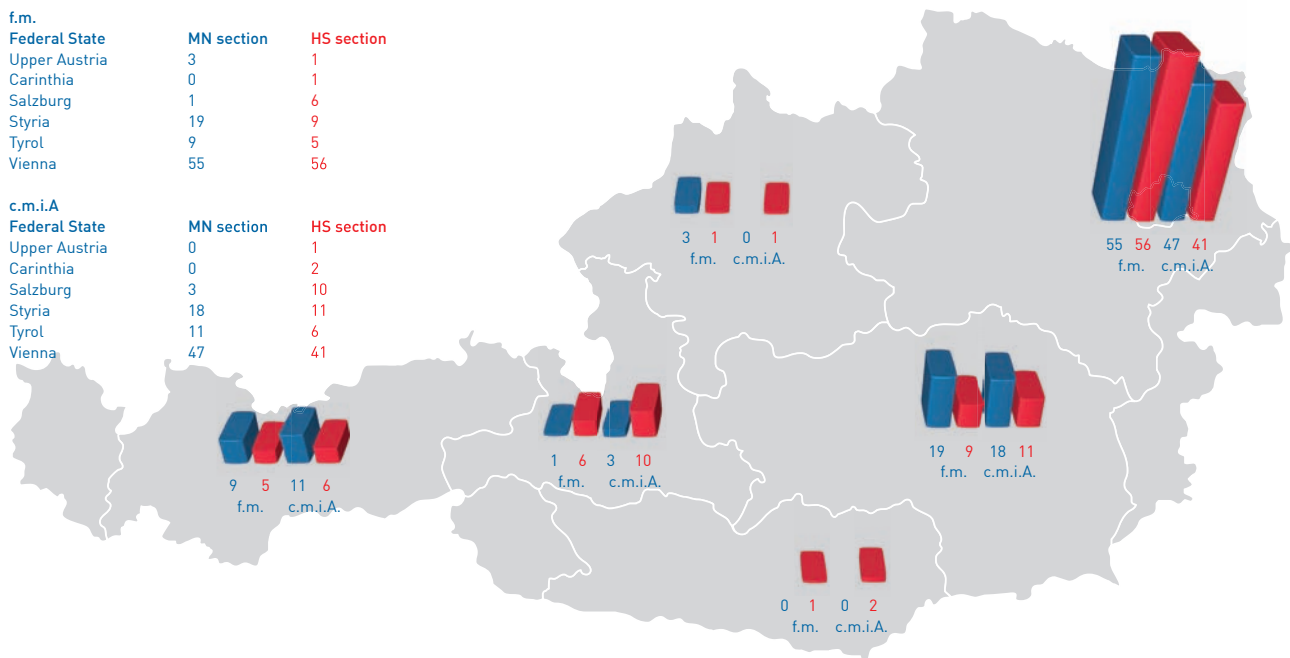
Institutional spectrum of members in Austria (as of 31/12/2006)					
	Total	MN section		HS section	
		m	f	m	f
Main affiliation of f.m. with:					
· University	152	80	2	66	4
· Non-university research institution	6	2	1	2	1
· Business enterprise	1	1	0	0	0
· Other	6	1	0	5	0
Main affiliation of c.m.i.A. with:					
· University	131	65	2	58	6
· Non-university research institution	13	8	0	5	0
· Business enterprise	1	1	0	0	0
· Other	5	3	0	2	0

*Regional spectrum of Austrian membership*

For most members in Austria – and this applies to both sections – it has been shown that their scientific activities were or are centred in Vienna. In addition, numerous Academy members had or have their main place of work in Styria, followed by Tyrol and Salzburg. •

## » 5 The Academy's Learned Society

### Regional spectrum of members in Austria



### 5.1.3 Networking potential

The Senate was established in April 2005 upon resolution by the General Assembly. As an external advisory body, it supports the Academy in resolving issues of principle, forming an interface to politics, business and the public.

*The Senate of the Academy*

The Senate of the Academy is comprised of top-notch members. In 2006, the following senators were active for the good of the Academy:

- Incumbent president of the National Assembly (chairperson): Andreas Khol (until October 2006), followed by Barbara Prammer
- Incumbent chairperson of the Conference of Provincial Governors: Jörg Haider (until June 2006), followed by Josef Pühringer
- Clemens Jabloner, President of the Administrative Court
- Johanna Rachinger, Director-General of the Austrian National Library
- Knut Consemüller, Chairman of the Austrian Council for Research and Technology Development
- Peter Gruss, President of the Max Planck Society for the Advancement of Science
- Susanne Suter, President of the Swiss Science and Technology Council
- Hannes Androsch, AIC Androsch International Management Consulting GmbH
- Walter Rothensteiner, Director-General of Raiffeisen Zentralbank Österreich AG

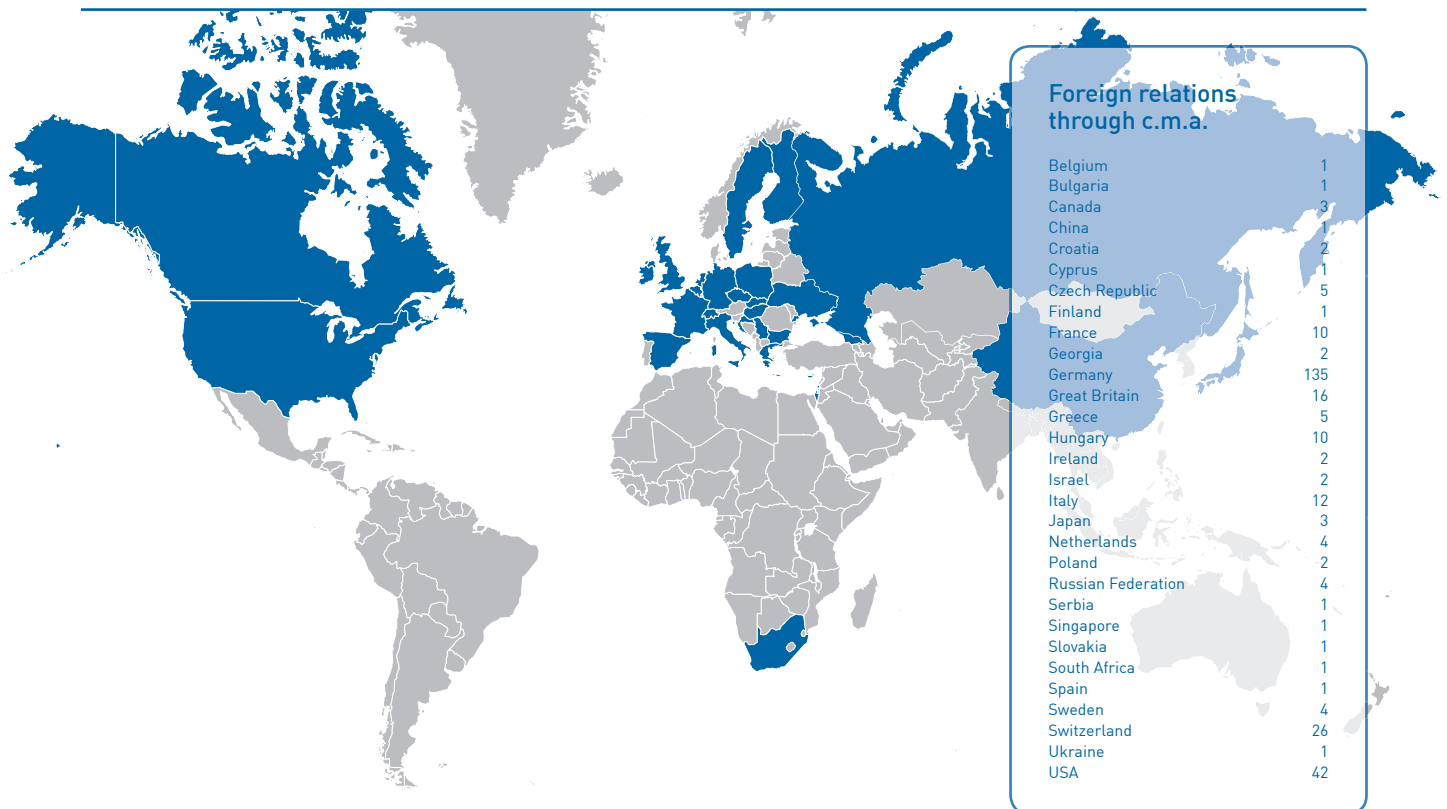
In May 2006, a statutory meeting of the Senate of the Academy was held.

## » 5 The Academy's Learned Society

The scheduled second annual meeting of the Senate had to be postponed until 2007 due to the change in the chair of both the Senate and the Presiding Committee of the Academy. Outside Senate meetings, senators provided advice, in particular to members of the Academy's Presiding Committee.

*Foreign relations through corresponding members abroad*

The corresponding members abroad (c.m.a.) are held in high regard within the learned society. Many of them are actively involved in the Academy, usually becoming active in an advisory or expert capacity concerning Academy matters at the request of a Presiding Committee member.



As an active promoter of cooperation in the sciences and the humanities and as an advocate of international contacts for Austrian research, the Academy taps existing synergies and strengthens Austrian research. The aim is to assume international leadership positions and, in the European and international context, to reconcile and give a focus to current research themes.

*Framework agreements at the level of the Academy of Sciences*

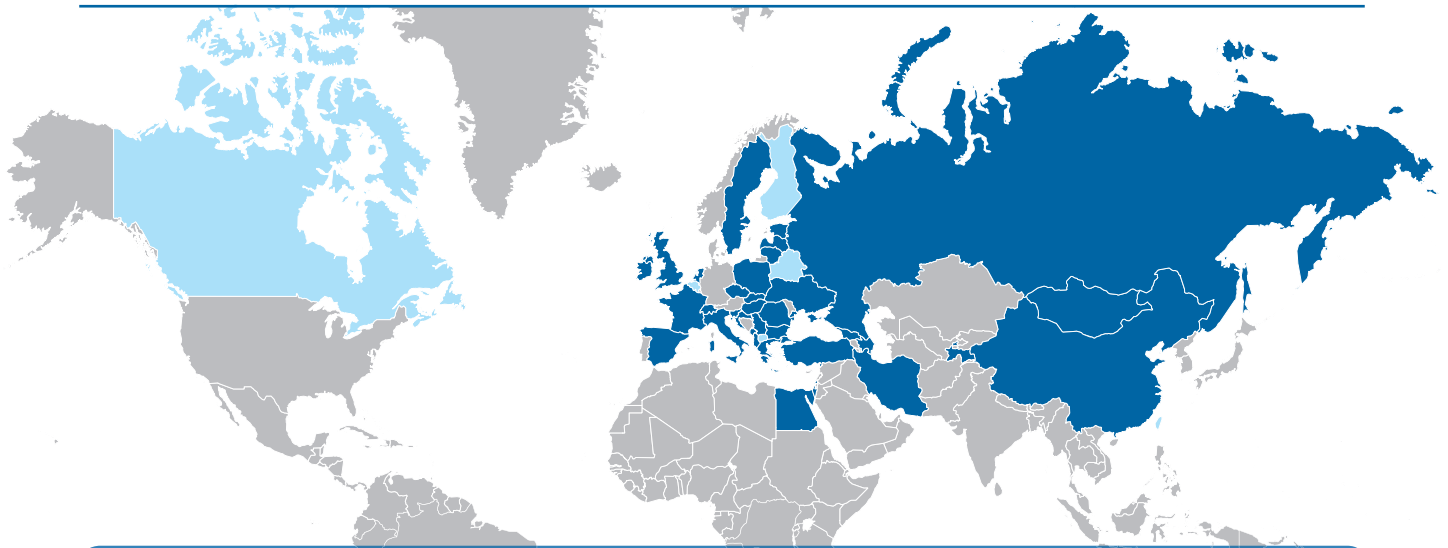
The Academy maintains contractual relationships with scientific institutions the world over, in particular with scientific academies. It secures first-class access for Austrian scholars to foreign researchers and to research subjects and scientific sources in selected regions. In specific areas, the Academy becomes active directly on behalf of the Federal Republic of Austria; it represents Austrian interests in international associations and programmes. In a unified Europe, and particularly beyond the borders of the enlarged European Union, bilateral contacts play a decisive role



## » 5 The Academy's Learned Society

when it comes to strengthening and networking national research interests and supporting the mobility of researchers.

The Academy currently has 43 scientific framework collaboration agreements in place. Specifically, these are agreements concluded between the Academy and scientific academies as well as similar non-university facilities. Framework agreements are classified as “active” if activities were actually carried out under them in 2006 and “inactive” if they existed formally, but were not inspired with life in 2006.



### Active framework agreements of the Academy in 2006 / Inactive framework agreements of the Academy in 2006

- |   |   |  |   |
|---|---|--|---|
| <p>1) <b>Albania</b><br/>Albanian Academy of Sciences, Tirana</p> <p>2) <b>Azerbaijan</b><br/>Azerbaijan National Academy of Sciences, Baku</p> <p>3) <b>Belarus</b><br/>National Academy of Sciences of Belarus, Minsk</p> <p>4) <b>Belgium</b><br/>Royal Academy of Sciences and Arts of Belgium, Brussels</p> <p>5) <b>Bulgaria</b><br/>Bulgarian Academy of Sciences, Sofia</p> <p>6) <b>Canada</b><br/>Royal Society of Canada, Ottawa</p> <p>7) <b>China</b><br/>Chinese Academy of Sciences, Beijing</p> <p>8) <b>China</b><br/>Chinese Academy of Social Sciences, Beijing</p> <p>9) <b>China</b><br/>Tibetan Academy for Social Sciences, Lhasa</p> <p>10) <b>Croatia</b><br/>Croatian Academy of Sciences and Arts, Zagreb</p> <p>11) <b>Czech Republic</b><br/>Academy of Sciences of the Czech Republic, Prague</p> | <p>12) <b>Egypt</b><br/>Academy for Science Research and Technology of the Arab Republic of Egypt, Cairo</p> <p>13) <b>Estonia</b><br/>Estonian Academy of Sciences, Tallinn</p> <p>14) <b>Finland</b><br/>Academy of Finland, Helsinki</p> <p>15) <b>France</b><br/>National Centre for Scientific Research (CNRS), Paris</p> <p>16) <b>Georgia</b><br/>Georgian Academy of Sciences, Tiflis</p> <p>17) <b>Great Britain</b><br/>Royal Society, London</p> <p>18) <b>Great Britain</b><br/>British Academy, London</p> <p>19) <b>Greece</b><br/>Athenian Academy, Athens</p> <p>20) <b>Hungary</b><br/>Hungarian Academy of Sciences, Budapest</p> <p>21) <b>Iran</b><br/>Academy of Sciences of the Islamic Republic of Iran, Teheran</p> <p>22) <b>Ireland</b><br/>Royal Irish Academy, Dublin</p> | <p>23) <b>Israel</b><br/>Israeli Academy of Sciences, Jerusalem</p> <p>24) <b>Italy</b><br/>National Academy of Sciences, Rom</p> <p>25) <b>Latvia</b><br/>Latvian Academy of Sciences, Riga</p> <p>26) <b>Lithuania</b><br/>Lithuanian Academy of Sciences, Vilnius</p> <p>27) <b>Macedonia</b><br/>Macedonian Academy of Sciences and Arts, Skopje</p> <p>28) <b>Mongolia</b><br/>Mongolian Academy of Sciences, Ulan Bator</p> <p>29) <b>Netherlands</b><br/>Royal Netherlands Academy of Arts and Sciences, Amsterdam</p> <p>30) <b>Poland</b><br/>Polish Academy of Sciences, Warsaw</p> <p>31) <b>Romania</b><br/>Romanian Academy of Sciences, Bucharest</p> <p>32) <b>Russia</b><br/>Russian Academy of Sciences, Moscow</p> | <p>33) <b>Serbia and Montenegro</b><br/>Serbian Academy of Sciences, Belgrade</p> <p>34) <b>Slovak Republic</b><br/>Slovak Academy of Sciences, Bratislava</p> <p>35) <b>Slovenia</b><br/>Slovenian Academy of Sciences, Ljubljana</p> <p>36) <b>Spain</b><br/>Spanish Scientific Research Council (CSIC), Madrid</p> <p>37) <b>Sweden</b><br/>Royal Swedish Academy of Sciences, Stockholm</p> <p>38) <b>Sweden</b><br/>Royal Swedish Academy of Letters, History and Antiquities, Stockholm</p> <p>39) <b>Switzerland</b><br/>Swiss Academy of Sciences, Bern</p> <p>40) <b>Taiwan</b><br/>Academia Sinica, Taipei</p> <p>41) <b>Tajikistan</b><br/>Academy of Sciences of the Republic of Tajikistan, Dushanbe</p> <p>42) <b>Turkey</b><br/>Turkish Academy of Sciences (TÜBA), Ankara</p> <p>43) <b>Ukraine</b><br/>National Academy of Sciences of Ukraine, Kiev</p> |
|---|---|--|---|

## » 5 The Academy's Learned Society

In its bilateral activities, the Academy carries on a tradition established back when it was first founded, and this line of action has become politically indispensable in the international network of connections and in the Academy's role as door opener and bridge builder. By progressively building formal, bilateral contacts with national academies of sciences in Central and Eastern Europe, the Academy has, undeterred by the geopolitical realities, contributed substantially to establishing and realising the vision of a European research area early on by strengthening and networking national research interests and by facilitating the mobility of researchers. Apart from the Academy's special emphasis on collaboration with partner academies in the successor states of the former Soviet Union, the Academy is keen to gradually develop its traditionally strong position in Asia. In this regard, it was most gratifying for the Academy to sign a bilateral treaty with the Academy of Sciences of Taiwan in spring 2006. Visits by members of the Academy's Presiding Committee to research institutions abroad serve to strengthen the Academy's international contacts just as do visits by representatives of foreign research institutions at the invitation of the Presiding Committee. Top-level contacts were maintained in the course of 2006, among them with representatives of the academies of sciences of Egypt, Bulgaria, China, Finland, Croatia, Latvia, Mongolia, Romania, Taiwan, Ukraine and Uzbekistan as well as the Vojvodina Academy of Sciences. The participation of the President of the Academy in the state visit of Austrian President Heinz Fischer to Romania in May 2006 merits particular mention.

### *Delegation of members to scientific or science-political bodies and conferences*

Numerous members are lending their expertise on behalf of the Academy to bodies and organisations committed to the development and resolution of scientific and science-political issues. By virtue of these networking and consulting activities, which cover a wide array of disciplines, members warrant the fulfilment of the Academy's statutory mission of promoting the sciences in every respect and beyond the research done at the Academy.

In addition, the networking and consulting function performed by members upon direct request by the Academy covers the selective participation in conferences. In 2006, Academy members participated e.g. in the 4th Iranian-Austrian Conference for Inter-Religious Dialogue. •

## » 5 The Academy's Learned Society

### 5.2 Activities and accomplishments of the learned society

#### *Participation of members in internal bodies*

Academy members, in particular full members, are engaged in numerous bodies and are active in an honorary capacity involving a considerable expenditure of time for the collective tasks assigned to the Academy.

The multi-disciplinary composition of the learned society allows for a balanced and comprehensive consideration of various scientific and science-political issues. The Academy's top decision-making body is the General Assembly which is composed of the full members and convenes eight times a year. In section-related matters, the meetings of both sections – which also convene eight times annually – also play a decisive role.

In operative terms, the Presiding Committee – composed of four full members elected by the General Assembly – is at the helm of the Academy. In April 2006, elections were held for the position of president and vice president. President Peter Schuster replaced his predecessor Herbert Mang on 1 October 2006. Vice President Herbert Matis was confirmed in office for a further three years.

Academy members are also active in internal administrative commissions, which have advisory and recommendatory functions. Ad-hoc commissions which are set up to take on current events or issues, such as the Reform Commission established in 2006, also require the expert knowledge of Academy members.

#### *The Academy's national and international research programmes*

The national and international research programmes managed and conducted by the Academy with considerable involvement of its members are either part of international programmes (UNESCO, UNO, ICSU, EU) or are internationally networked through agreements and cooperative relations.

#### **Alpine research:**

This programme is part of the research cooperation "International Scientific Committee on Alpine Research" (ISCAR) established in 1999. The aim of this cooperation is to promote collaboration across the alpine regions and across the various disciplines in alpine research as well as the transfer of research results into practice and to the general public. Central research areas are, among others, climate change, water, transport, natural disasters, biodiversity, social economy and earth sciences.

#### **Geophysics of the earth's crust:**

This research programme established in 1979 promotes projects of applied, near-surface geophysics, e.g. the interpretation of potential fields, modelling of electro-magnetic data, refined recording methods for seismic refraction measurements and studies of slope movements such as by way of rockfall.

#### **Global Change Programme:**

This programme – launched in 1990 – combines three international research networks devoted to investigating the global environmental changes:

- International Geosphere-Biosphere Programme (IGBP)
- World Climate Research Programme (WCRP)
- International Human Dimension Programme (IHDP)

## » 5 The Academy's Learned Society

### **Hydrology of Austria (HÖ):**

This programme is Austria's contribution to the UNESCO's "International Hydrological Programme (IHP)". Soil moisture, modelling, and precipitation forecasting as well as runoff generation in alpine catchment areas were the key research points in 2006.

### **International Strategy for Disaster Reduction (ISDR):**

This UN programme was launched in 1990 and promotes projects investigating the causes and risks of natural hazards, the development of methods for the early detection of natural disasters and the formulation of preventive measures to reduce their impact.

### **International Geoscience Programme (IGCP):**

This programme (launched in 1973) promotes geo-science collaboration projects on research themes defined by the UNESCO. Core research areas are quaternary geology, environmental and engineering geology, sedimentology, mineral deposits, geochemistry, geophysics and structural geology.

### **Man and Biosphere Programme (MAB):**

The UNESCO programme, which was established in 1971, serves to further application-oriented scientific discoveries in the natural and social sciences for the long-term protection of natural resources and biodiversity. MAB encourages interdisciplinary and internationally networked research, modelling, and training to promote sustainable use of natural resources. The concept of the global biosphere network is the key component in the implementation of a sustainable concept of the relationship between mankind and the environment. In its research projects, the Austrian MAB National Committee places the focus on research in and for the benefit of domestic biosphere parks.

### **Commission for the Coordination of Nuclear Fusion Research in Austria - (KKKÖ):**

After Austria became a member of the European Union, this commission, which was established in 1980, laid the foundations for the Contract of Association with EURATOM, concluded in 1996 between the Academy and EURATOM. Priority objectives are government advice on all relevant matters and coordination of Austria's research activities in this field. Currently, the Commission is chiefly promoting technological projects aiming to complete the "Construction of the ITER fusion test facility" while at the same time coordinating the Academy's EURATOM office and participating in the European JET fusion experiment. Right from the start, the EURATOM-Academy association involved research and development projects of the European nuclear fusion programme in the fields of plasma physics and fusion technology including socio-economic aspects. In this way, a significant return of funds to the Austrian institutions gathered in this association is ensured.

The above-referenced research programmes are managed by national committees consisting of renowned researchers and representatives of ministries and federal state organisation and are each managed by an individual Academy member.

## » 5 The Academy's Learned Society

Members with expert assessor function for national and international programmes		
Research programmes in 2006	f.m.	c.m.i.A.
Alpine research	5	3
Geophysics of the earth's crust	3	2
Global Change Programme	4	4
Hydrology of Austria	1	3
International Strategy for Disaster Reduction	6	1
International Geoscience Programme	2	2
Commission for the Coordination of Nuclear Fusion Research in Austria	3	3
Man and Biosphere	2	3

In 2006, with the exception of one female full member in the MAB programme, all members active in the national and international programmes were male.

These are some of the tasks of the national committees:

- Coordination of research activities in their respective research sector
- Drafting of programme-related research strategies
- Quality assurance of research projects
- Forward-looking development of new core research areas
- Stimulation and financing of new projects and research cooperation

The national committees consider it one of their main tasks to act pre-emptively in response to challenges such as global change and to establish strategic core research areas in a timely manner. The projects managed by the national committees are of high significance for a number of reasons:

- Career building: The projects promoted under the research programmes provide an opportunity to promote outstanding young researchers in research areas of relevance to Austria.
- Added social value: The research work performed in the programmes serves not only the interests of the scientific community, it also generates a high level of added social value (e.g. disaster prevention, awareness creation through the participation of schools).
- Unique selling position: For many research issues in Austria, the only available funding is that provided by the Academy's research programmes. Moreover, in certain projects with a strong reference to Austria (e.g. MAB research in and for the national biosphere parks) not only the usually required scientific excellence is brought to bear but also national interest or added value for society.

National and international programmes at the Academy				
Research programmes in 2006	Funds granted (in EUR '000)	Number of projects	Project leadership	
Alpine research	257.60	7	5	2
Geophysics of the earth's crust	163.48	3	3	0
Global Change Programme	140.64	8	5	3
Hydrology of Austria	198.30	4	4	0
International Strategy for Disaster Reduction	212.70	3	3	0
International Geoscience Programme	37.15	3	3	0
Commission for the Coordination of Nuclear Fusion Research in Austria	75.00	1	1	0
Man and Biosphere	195.46	5	4	1

## 5.2 Activities and accomplishments of the learned society

# » 5 The Academy's Learned Society

To enhance transparency, a two-tier evaluation procedure was introduced in 2004. The procedure consists of a “letter of intent/interest” and a full application. Only the best project proposals are invited to submit a full application. Project funds are granted after external assessment and ranking by an international jury. Finally, the scientific quality of the research results is reviewed by the national committee on the basis of project reports.

*Quality assurance in national and international programmes*

To encourage the scientific output and ensure public access to the results of projects funded, the option of publishing projects reports online has been introduced in cooperation with the Austrian Academy of Sciences Press. By the end of 2006, for instance, ten project reports had been published online. Furthermore, project results are usually published in internationally renowned peer-reviewed journals.

The presence of the national committees' work in national and international media has been strong and this exposure will be stepped up even further through targeted media work.

The Academy comprises outstanding researchers covering a wide array of disciplines, from Austria and abroad. The Academy is thus the ideal body to express opinions on research policies and furnish expert statements, fulfilling an “advisory function”. In no small part, it is for the political decision makers and authorities to make increasing use of this option in order to intensify the dialogue between research, on the one hand, and policy makers, on the other hand.

*Science-policy advice by Academy members*

To give an example:

In February 2006, the President of the Academy was requested by the federal minister in charge to appoint two experts as members of the founding committee of the Institute of Science and Technology Austria (ISTA). Due to their expertise, Georg Stingl (full member) and Eduard Arzt (corresponding member abroad) were appointed to the ISTA founding committee. Georg Stingl as representative of medicine, and Eduard Arzt as representative of materials sciences, were thus able to discharge the science-political mandate entrusted to the Academy.

Scientific and popular-science events are a key mode of knowledge transfer within the scientific community and to the interested public. With its public lectures and debates, the Academy seeks to bring the current research topics closer to the interested public. Here, the initiative of Academy members plays an important role. Thanks to their outstanding national and international contacts, they have been able to win the support of excellent researchers for the Academy's events.

*Events at the initiative of Academy members*

### **Symposium on Autoimmunity**

At the initiative of Georg Stingl, the Academy held the “Symposium on Autoimmunity” in January 2006. Thanks to the support of the German Academy of Sciences Leopoldina, the crème de la crème of international researchers in the field of autoimmunity accepted the invitation to Vienna. The symposium dealt with the fundamental mechanisms of autoimmunity. New systematic approaches and new development models of individual organ-specific autoimmune diseases were presented. The impact of congenital immunity was discussed as well as the role of viral infections.

## » 5 The Academy's Learned Society

### **Karl von Frisch Lectures**

In 2006, the Karl von Frisch Lectures were continued. These were held at the initiative and under the scientific patronage of Friedrich G. Barth. The Karl von Frisch Lectures introduced cutting-edge research in the field of biology. This research addresses issues that arise from a complex integrative approach and attempts to understand whole organisms and their behaviour, their evolution and how they master specific life conditions.

The internationally renowned experts who participated in this lecture series highlighted the important role of the integrative approach in modern biology and the fascinating insights gained from it. On average, each of the Karl von Frisch Lectures 2006 had an audience of 400 people.

### **Böhm Bawerk Lectures**

In 2006, three lectures were held as part of the Böhm Bawerk Lectures which had been launched in 2005. With this lecture series, which was held at the initiative of Erich Streissler, the Academy for the first time held a lecture series on economics with its wide variety of topics ranging from globalisation to the adequate handling of information.

### **Ernst Mach Forum**

In 2006, the “Ernst Mach Forum. Science in Dialogue” was resumed. As part of the series that started in 2003 at the initiative of Moritz Csáky, members of various disciplines meet twice a year to join in round-table talks on topical themes of science and research each of which are followed by an open floor discussion with the audience.

In March 2006, the “Ernst Mach Forum” addressed the topic “Science cultures in a globalised world: Does Europe need repositioning?”, in October 2006, it dealt with the subject “Citation – copyright and fabrication in the sciences”.

### **Leibniz Lectures**

In 2005, the Leibniz Lectures were launched at the initiative of Herta Nagl-Docekal. In this lecture series, a public guest lecture is held every year, documenting the current relevance of philosophy.

The second lecture of the series was held in November 2006. Otfried Höffe from Tübingen University spoke about the “Variety of cultures in the oneness of world law”. An open discussion was held on these topics on the day after the lecture. •

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### *Prizes and awards granted to Academy members*

#### **5.3 Impact of the learned society**

Prizes and awards to Academy members reflect the public appreciation of the outstanding achievements of learned society members. They are thus a further indication for the excellence of this knowledge pool that comprises almost all disciplines.

The prizes include both prestigious awards for outstanding achievements in various fields of research as well as acknowledgments of scientific and/or science-political achievements. To give some examples:

- Pioneer Prize of the International Council for Industrial and Applied Mathematics (ICIAM) – a prestigious award in the field of applied mathematics presented to Heinz Engl

## » 5 The Academy's Learned Society

- Dirac Medal for achievements in the field of quantum physics awarded to Peter Zoller
- Grand Decoration of Honour in Gold for Services to the Republic of Austria awarded to Renée Schroeder
- Prize of the City of Vienna for Medical Sciences awarded to Georg Stingl
- Grand Decoration of Honour in Gold of the Federal State of Styria to Siegfried Bauer
- Grand Kardinal Innitzer Prize awarded to Günther Bauer and Kardinal Innitzer Prizes to Marjorie Matzke and Andreas Kappeler

Prizes and awards are met with special attention by the public and hence they also play a major role in the public awareness concerning the learned society. In 2006, the media reported 72 times about prizes awarded to Academy members.

*Media presence*

The learned society is mentioned in the media primarily on account of individual research achievements by members and science-political or representative functions of members of the Presiding Committee.

Presiding Committee members are mentioned in the media as frequently as the best-known Academy research units.

The following members were mentioned most frequently in the media in 2006:

- Josef Penninger (225)
- Peter Schuster, President of the Academy since 1 October 2006 (166)
- Herbert Mang, President of the Academy until 30 September 2006 (107)
- Rainer Blatt (94)
- Peter Zoller (66)
- Rudolf Grimm (55)
- Andre Gingrich (40)
- Herbert Matis, Vice President of the Academy (33)
- Heinz Engl (30)
- Bert Fagner (28)
- Anton Zeilinger (27)
- Georg Stingl, Secretary of the Academy (25)
- Sonja Puntischer Riekmann (23)
- Ernst Bruckmüller (22)
- Maria Schaumayer (22)
- Werner Welzig (22)

In 2006, the learned society as such was the topic of media reports, particularly in connection with the Academy's internal reform efforts.

The lectures initiated by Academy members (Karl von Frisch Lectures, Böhm Bawerk Lectures, Leibniz Lectures) met with strong interest. Overall, the Academy was mentioned 125 times in the media as organiser of these lecture series.



## » 5 The Academy's Learned Society

*Hannes Androsch  
Foundation as a token of  
continued high regard for  
the Academy*

Hannes Androsch, former Vice-Chancellor of Austria, set up a foundation bearing his name in 2004. The foundation aims to promote research work dealing mainly with labour and the consolidation of social balance and peace in cooperation with the Academy. What's more, the foundation intends to launch a Hannes Androsch Prize starting in 2007. Plans are to increase the assets of the foundation to ten million euros over the coming years. The Hannes Androsch Foundation is the most important privately funded non-profit foundation exclusively supporting science and research in Austria since 1945. •

6.1 Value-creation potential of the research performing organisation >> 6.1.1 Human potential  
 >> **6 The Academy as Research Performing Organisation**

**6 The Academy as Research Performing Organisation**

**As research performing organisation, the Academy conducts knowledge-oriented basic research in selected areas through its many research units, demonstrating international competence leadership in innovative, interdisciplinary, high-risk fields of research.**

*Research and innovation*

Altogether, in 2006, the Academy supported 64 own research units and three limited liability research companies of outstanding quality in those fields which in spite of their importance are not or only inadequately addressed at universities or other institutions in Austria.

The focus of the Academy's research activities is on exploratory activities. These are characterised by a certain risk, a high level of novelty, and, as the case may be, by an above-average continuity.

Through collaboration, the Academy's research activities further support existing strengths of Austrian research with a view to tapping synergies and assuming leadership positions at international level. By virtue of its extensive collection and documentation activities, the Academy contributes to the preservation of cultural heritage.

Wherever necessary, the research units develop and secure infrastructure in order to meet these challenges. •

**6.1 Value-creation potential of the research performing organisation**

**6.1.1 Human potential**

Staff of the Academy's research units, incl. subsidiaries					
Average number of staff (incl. seconded federal employees) in 2006	Total	MN cluster		HS cluster	
		m	f	m	f
<b>Persons</b>	<b>1,027</b>	<b>420</b>	<b>271</b>	<b>149</b>	<b>187</b>
<b>FTE equivalents</b>	<b>811.9</b>	<b>354.6</b>	<b>192.3</b>	<b>125.6</b>	<b>139.4</b>
of which:					
· funded by third parties	221.9	100.1	68.2	24.9	28.7
· funded by the Academy	590.0	254.5	124.1	100.7	110.7
of which:					
· short-term	241.5	97.2	62.0	36.9	45.4
· for an indefinite period	348.5	157.3	62.1	63.8	65.3
· scientific staff	616.3	279.2	104.3	121.8	111.0
· higher qualified					
non-scientific staff	177.5	69.9	76.9	3.8	26.9
· other	18.1	5.5	11.1	0.0	1.5

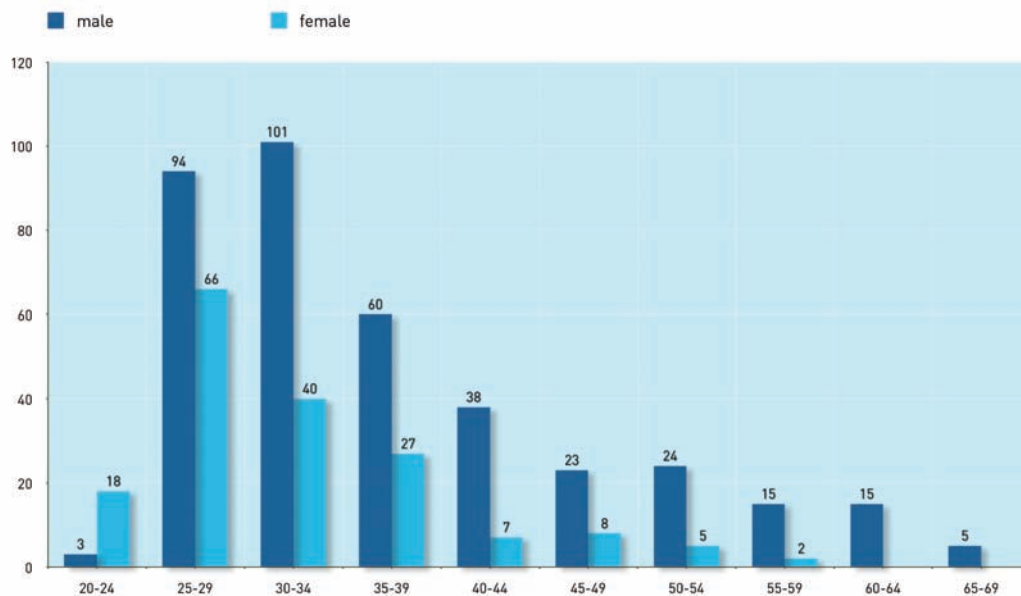
*Staff capacities and qualifications*

*The scientific staff comprises persons who through internal or external funding are active in R&D directly within the Academy or in one of the Academy's limited liability research companies.*

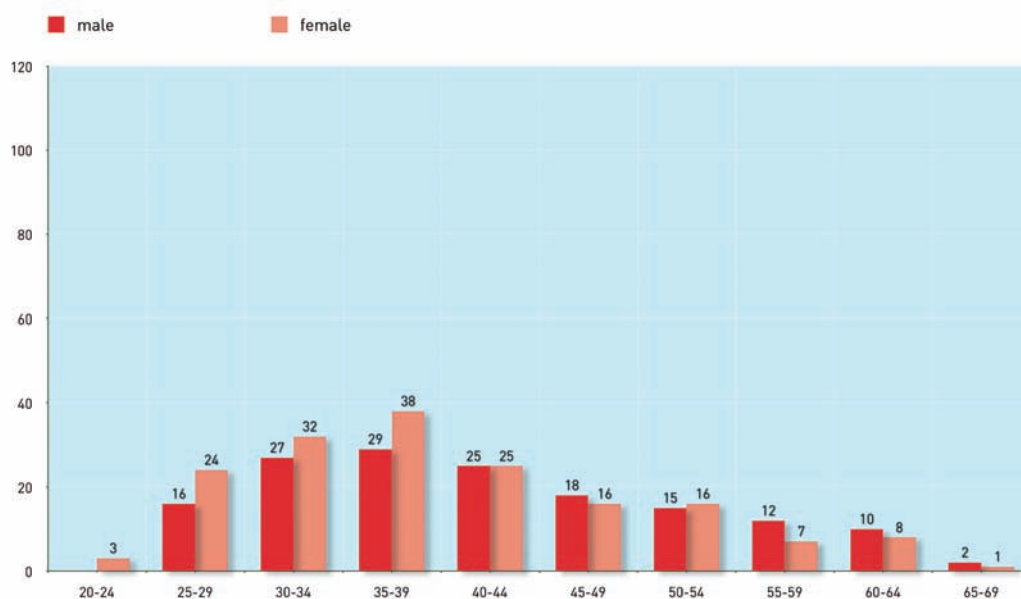
6.1 Value-creation potential of the research performing organisation » 6.1.1 Human potential  
 » 6 The Academy as Research Performing Organisation

Age structure of scientific staff

Age structure of scientific staff in the MN cluster



Age structure of scientific staff in the HS cluster



Scientific qualification at the Academy

In accordance with the requirements of the European Charter for Researchers, the Academy strives to involve young researchers in research projects and thus start them off on a suitable career. As part of its research operations, the Academy provides short-term positions with a special emphasis on promoting junior researchers.

As part of a wide range of offered scientific “on-the-job” qualification programmes, e.g. in post-doc positions, the Academy offers junior researchers in Austria viable development opportunities. In this way, the Academy contributes considerably to strengthening Austria’s position within the European research area.

6.1 Value-creation potential of the research performing organisation » 6.1.1 Human potential  
 » 6 The Academy as Research Performing Organisation

Young researchers					
	Total	MN cluster		HS cluster	
		m	f	m	f
Number of young researchers active in 2006	503	240	161	42	60
of which:					
· diploma students	70	31	33	1	5
· doctoral students, junior scientists	257	125	80	23	29
· post-docs	144	71	42	13	18
· junior group leader, etc.*	32	13	6	5	8
<b>Funding:</b>					
· funded by the Academy	238	101	75	27	35
· funded by third-party	265	139	86	15	25
PhDs under the age of 33	123	70	24	18	11

\* Given the different structures with regard to junior positions in the two sections, the management of an individual research project of the Academy with at least one further full-time equivalent as further project staff member or the management of a third-party project are considered equivalents of junior group leader positions.

The Academy's Section for the Humanities and the Social Sciences regards the promotion of young researchers as one of its tasks. In 2006, a doctoral candidate programme was introduced to give young researchers a chance to carry out independent dissertation-related work in a research institution of the Section for the Humanities and the Social Sciences and within its scientific programme. For the institution, the doctoral candidate programme is a way to attract fledgling researchers to the specific research field and involve them in ongoing projects.

The Section for the Humanities and the Social Sciences awards up to ten doctoral candidate positions per year. The fellowships are awarded based on an international assessment procedure by the Presiding Committee of the Section for the Humanities and the Social Sciences.

The term of each position is limited to a maximum of three years. The progress of work is reviewed at least once a year by the head of the research institution by way of a written report.

In 2006, nine dissertation fellowships were awarded, four to female and five to male applicants.

*Doctoral candidate programme of the Section for the Humanities and the Social Sciences*

Research management competence of managing scientific staff					
	Total	MN cluster		HS cluster	
		m	f	m	f
Average number of management positions held by managing scientific staff in the course of their career	2.8	2.5	2	3.6	1.8

*Competence of scientific staff in research management*

Scientific creativity paired with qualified project development, planning, and execution is the underpinning of excellent scientific work.

Scientific staff with project management functions (as of 31/12/2006)					
	Total	MN cluster		HS cluster	
		m	f	m	f
Number of scientific staff with management functions in research projects	363	129	15	138	81
of which:					
· funded by third-parties	145	39	4	76	26
· funded by the Academy	218	90	11	62	55
of which:					
· short-term	81	33	4	23	21
· for an indefinite period	137	57	7	39	34
Percentage of scientific staff with project management functions in relation to the total number of scientific staff	43%	35%	9%	50%	43%

6.1 Value-creation potential of the research performing organisation » 6.1.1 Human potential  
 » **6 The Academy as Research Performing Organisation**

*Continuing education* The continuous development of professional knowledge is of special relevance in our knowledge society. In order to keep pace with the constantly changing requirements, the Academy is thus keen on ensuring the continuing education of researchers in their respective fields and of the administrative staff in the research units.

Continuing education in research units staff					
	Total	MN cluster		HS cluster	
		m	f	m	f
Number of staff participating in further education activities in 2006	166	29	21	41	75
Percentage of staff participating in further education activities in relation to the total number of scientific staff	14%	6%	6%	26%	35%
Number of further education activities of which:	487	40	59	148	240
· computer training	192	13	50	53	76
· specialised further training	188	11	3	77	97
· soft skills	92	11	3	14	64
· other	15	5	3	4	3

*Synergies between the learned society and the research performing organisation* The Academy as research performing organisation benefits substantially from the expertise and experience of its members.

Many Academy members are active researchers – mainly within commissions – and serve in an honorary capacity. The bye-laws stipulate that commissions must be headed by a member of the Academy.

In addition, members take on advisory and supervisory functions in various Academy bodies such as scientific advisory boards (SABs) etc., which support the Academy's research units. •

Academy members active as advisors or as researchers in Academy research units					
	Total	MN cluster		HS cluster	
		m	f	m	f
Number of members active as researchers in Academy research units in 2006, incl. limited liability research companies	166	57	3	99	7
of which:					
· f.m.	85	30	2	50	3
· c.m.i.A.	62	23	1	34	4
· c.m.a.	19	4	0	15	0
· in management position of the research unit	45	14	1	28	2
Number of members active as advisors in scientific advisory councils etc. of the Academy in 2006	160	81	1	72	6
of which:					
· f.m.	102	55	1	43	3
· c.m.i.A.	29	13	0	15	1
· c.m.a.	28	12	0	14	2
· HM	1	1	0	0	0
· chairing the board	24	11	1	11	1

6.1 Value-creation potential of the research performing organisation » 6.1.2. Structural potential  
 » **6 The Academy as Research Performing Organisation**

**6.1.2. Structural potential**

The Academy's research work is carried out in research units, such as research institutes, commissions as well as in limited liability research companies at sites all across Austria.

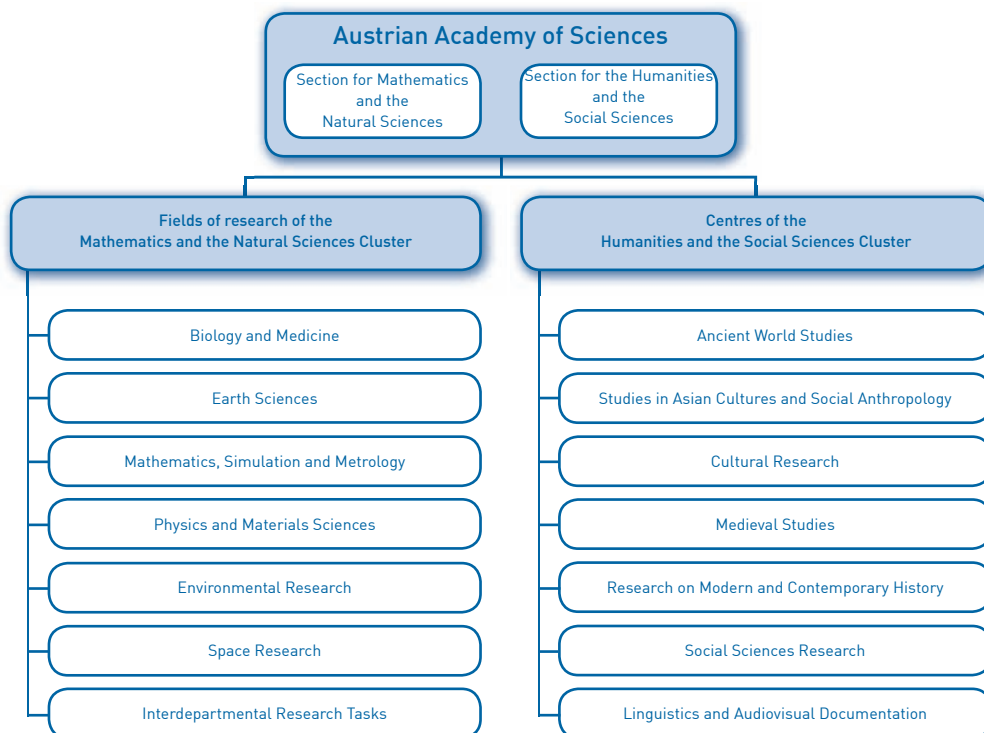
*Organisational structure of the Academy's research units, incl. subsidiaries*

Each of the Academy's research units has been allocated to one of the two sections or – in case of issues that reach across the two sections – to the full Academy of Sciences. In terms of administration, however, the research units of the full Academy of Sciences also belong to one of the two sections – as a rule, to the one that is closer in terms of research activities performed.

The research units of the MN cluster have only recently been integrated into seven fields of research. This helps to make the core research activities more visible, provides a structural framework and demonstrates the proximity of research activities represented within a field of research. Unlike the centres of the Section for the Humanities and the Social Sciences, the fields of research do not have any superordinate advisory and supervisory bodies. The scientific support in the form of SABs takes place directly at the level of the individual research unit.

Upon the resolution adopted by the General Assembly on 28 April 2006 and at the Presiding Committee's suggestion, the research units of the Section for the Humanities and the Social Sciences were integrated into seven centres. The purpose of establishing such centres was to leverage synergies with a stronger external impact and the implementation of joint projects, workshops and cooperation activities. One scientific advisory board consisting of international experts was set up for each centre.

**The Academy as research performing organisation** (as of 31/12/2006)



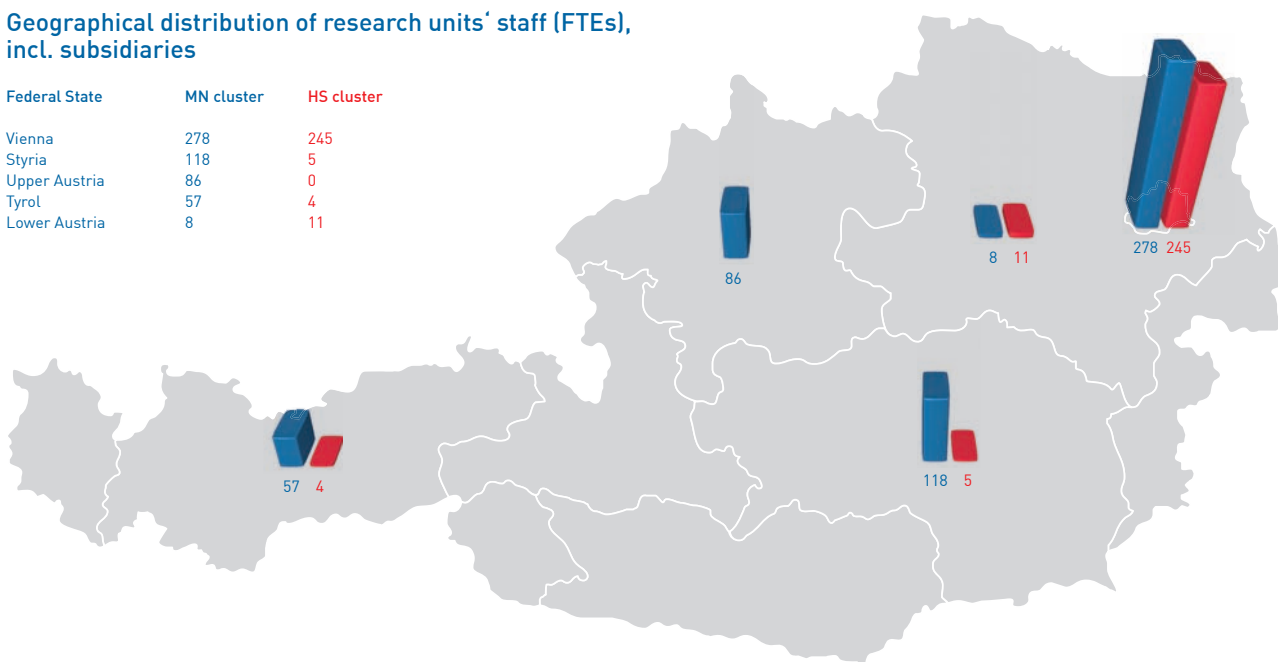
6.1 Value-creation potential of the research performing organisation >> 6.1.2. Structural potential  
 >> **6 The Academy as Research Performing Organisation**

*Locations of the Academy's research units*

With the exception of one in Innsbruck and one in Krems, all research units of the HS cluster are based in Vienna. In the MN cluster, locations are also concentrated in Vienna. However, in Dornbirn, Leoben, Linz, Mondsee, Salzburg and Wiener Neustadt, there is one MN research unit each. Two research units are located in Graz and two in Innsbruck, as the Institute for Quantum Optics and Quantum Information is divided up between two sites – Vienna and Innsbruck.

**Geographical distribution of research units' staff (FTEs), incl. subsidiaries**

Federal State	MN cluster	HS cluster
Vienna	278	245
Styria	118	5
Upper Austria	86	0
Tyrol	57	4
Lower Austria	8	11



The research units for Geographic Information Science (Salzburg) and for Breath Research (Dornbirn) – which were established just recently in 2006 – did not yet have any staff employed by the Academy during the period under review.

*Usable space available to the Academy's research units, incl. subsidiaries*

Thanks to the implementation of a facility management scheme in 2006, more precise and differentiated space surveys are now available for all Academy units.

Usable space available to research units (as of 31/12/2006)			
	Total	MN cluster	HS cluster
<b>Total space in sq.m.</b>	<b>50,492.60</b>	<b>41,442.13</b>	<b>9,050.47</b>
divided up for the following types of use:			
· circulation space	13,879.22	12,496.32	1,382.90
· offices and meeting rooms	13,817.88	7,642.04	6,175.84
· workshops and laboratories	11,044.73	10,832.45	212.28
· technical rooms	3,547.94	3,286.19	261.75
· storage and archives	2,594.71	2,029.90	564.81
· classrooms and libraries	1,377.73	1,216.90	160.83
· function rooms	331.31	311.43	19.88
· space used for other purposes (e.g. residential, lounges, rooms with medical equipment, etc.)	3,899.08	3,626.90	272.18

## » 6 The Academy as Research Performing Organisation

The total space of the MN cluster comprises relatively large areas reserved for workshops and laboratories. Institutes such as the Erich Schmid Institute of Material Science, the Konrad Lorenz Institute for Ethology, the Space Research Institute, the Institute for Quantum Optics and Quantum Information or the subsidiaries, for example, require one fourth of their total usable space for laboratories in order to house the technical equipment needed for their research.

The marked increase in total space for research purposes of the MN cluster in 2006 can be ascribed to the opening of the Academy's Life Sciences Centre (IMBA and GMI GmbH) in Vienna.

The total space available to the HS cluster features a large share of office space. This share amounts to approx. 70 percent of the total usable space in research units such as the Institute of Urban and Regional Research, the Institute of Demography or the Institute for Medieval History Research.

In 2006, it was again necessary to build information and communications infrastructure at new Academy sites. For example, at the Academy's new Life Sciences Centre in Vienna, a modern ICT infrastructure with high-performance internet connections was designed, implemented and put into operation.

In the course of restructuring the mail servers on a running system, the Academy's central mail systems in Vienna and Graz were rebuilt in 2006.

*IT structure*

In cooperation with ACOnet (Austrian Scientific Computer Network), the Academy is involved in the international EDUROAM (Education Roaming) project. In 2006, Vienna's existing wireless infrastructure was upgraded and integrated into the EDUROAM. Plans are to integrate all Austrian Academy sites into the EDUROAM in 2007.

The increasing volume of research results, which are available in digital form (databases, image data, electronic media, audio and video material) and the associated rise in the number of IT services call for the establishment of a fail-safe infrastructure for additional storage and backup systems. Confidentiality, integrity, and availability of data must be ensured.

The Academy's research controlling supports the Presiding Committee in planning, implementing and evaluating research projects.

*Research controlling and evaluation: planning and quality control*

Research activities, i.e. the formulation of scientific objectives, are planned in the course of medium-term research programmes. The Academy's medium-term research programme comprises research sub-plans of the research units. These sub-plans must be approved by the respective Academy section. The preparation of any medium-term research programme involves a five-year projection of the Academy's scheduled research activities with a description of the individual research projects. The programme is continuously adapted to meet the requirements of the new tasks resulting from the progress achieved.

The scientific advisory boards (SABs) base their evaluating work on the extensive annual reports prepared by the research units and their projections for further scientific work. In addition, the representatives of the various research units are obliged to report regularly in the sections.

All of the Academy's research units are required not only to accept expert support from the scientific advisory boards on a regular basis but also to submit to external evaluations. The Academy was the first research organisation in Austria to have its units periodically evaluated by independent groups composed



## » 6 The Academy as Research Performing Organisation

of international experts. These expert groups are set up by the chairperson of the respective evaluation group. The group disbands once it has completed its task. It does not replace the existing advisory bodies of the Academy.

The conclusions drawn by the evaluation groups are weighty recommendations for the Academy. They are in part structural and in part thematic. Thematic recommendations are proposals made to the units on how to improve their work. They form a major component of quality management and play a key role in research controlling. They form the last stage of the review, evaluation and advisory process to which the Academy's Presiding Committee can resort.

In this way, research controlling at the Academy generates information and data, allowing the Presiding Committee and the General Assembly to make decisions regarding further arrangements such as the establishment of new units, or the modification or even close-down of existing ones.

In 2006, external evaluations of the Academy's research units were continued along this line. Specifically, the AAC – Austrian Academy Corpus was evaluated in July 2006 by a three-member expert group. All three evaluators were full professors at Swiss universities.

Evaluation of European Languages and Literatures did not commence until at the end of 2006. The following research units were affected thereby: Commission for the Publication of the "Fackel" Text Dictionary (FACKELLEX), Institute of Lexicography of Austrian Dialects and Names, and the Balkans Commission.

A separate set of controlling guidelines apply to the three research subsidiaries IMBA, GMI and CeMM. Once every quarter, all managing directors of the Academy's scientific subsidiaries convene for a meeting with the Presiding Committee. Research projects and a report on their scientific and financial impact are submitted for approval. Each of the research units set up as limited liability companies has separate, internationally composed SABs. These bodies – comprised of top-level international researchers – represent an essential aspect of research controlling, in particular since the SABs evaluate all research groups and projects several times over.

The CeMM also has a scientific advisory board which serves as interface between the Academy and the Medical University of Vienna and the Vienna General Hospital (AKH). In addition, the IMBA has a supervisory board, and a separate supervisory board will be set up for the GMI in 2007.

External experts involved in research controlling and evaluation					
Number of external experts active in internal and external evaluations of Academy research units	Total	MN cluster		HS cluster	
		m	f	m	f
	150	67	10	60	13

By introducing intellectual capital reporting as part of the control process, the various evaluation processes are strengthened as external, highly qualified and forward-looking drivers for the Academy's medium-term research programme.

The overriding objective of evaluation processes and thus of research controlling at the Academy is to assess the quality of scientific work done at the Academy's research units and as a consequence to upgrade this work even further. Identifying key issues helps to activate communication within the Academy's decision-making bodies and enhance the transparency of actions to achieve the objectives. •

## » 6 The Academy as Research Performing Organisation

### 6.1.3 Networking potential

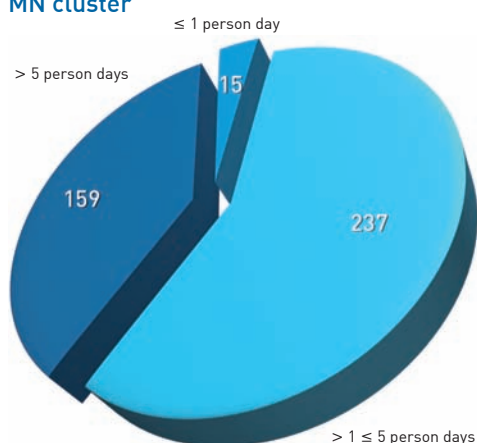
The level of mobility is indicative of vibrant exchanges within each scientific community. Academy staff stands to benefit from such foreign exchanges, which help to broaden their horizons and allow them to grow personally and socially in addition to developing their scientific knowledge. Thus, the Academy is keen to motivate its staff, especially its junior researchers, to spend time abroad, and has created the necessary conditions, e.g. by amending its collective contract and setting up a scientist exchange programme.

*Mobility of  
Academy researchers*

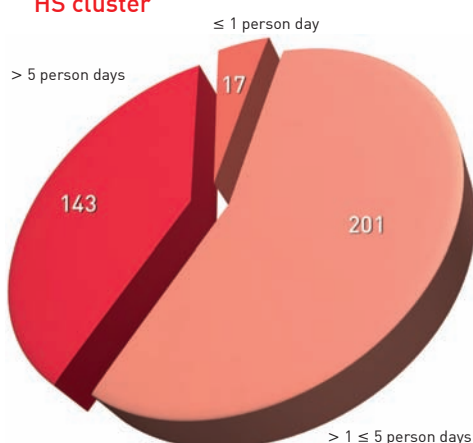
Stays abroad					
	Total	MN cluster		HS cluster	
		m	f	m	f
Number of stays abroad of scientific staff in 2006	772	371	40	215	146
of which in the framework of the Academy's exchange programme	97	24	3	46	24
<b>Purpose of stay:</b>					
· research as part of an Academy research project	270	143	17	66	44
· scientific advisory services	31	19	1	8	3
· lecturing	191	42	8	91	50
· continuing education	29	6	2	4	17
· other purpose with scientific relevance	251	161	12	46	32
<b>Place of stay:</b>					
· within the EU (excl. Austria)	548	257	26	152	113
· outside of the EU	224	114	14	63	33
<b>Funding:</b>					
· external or mixed funding	233	83	8	102	40

### Duration of stays abroad of scientific staff

#### MN cluster



#### HS cluster



Attending conferences helps staff to keep abreast of current developments in their area of research. Participation in science conferences promotes international networking and helps develop scientific knowledge.

## » 6 The Academy as Research Performing Organisation

Participation of scientific staff in conferences					
Number of participations in scientific conferences in 2006	Total	MN cluster		HS cluster	
		m	f	m	f
	1,995	528	120	725	622
<b>Venue:</b>					
· in Austria	1,246	224	71	476	475
· in the EU (excl. Austria)	555	200	32	203	120
· outside of the EU	194	104	17	46	27

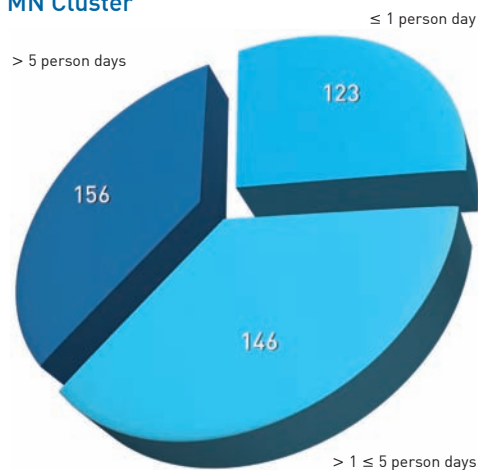
*Attractiveness for foreign researchers*

As a hub for the creation of scientific networks in the international arena, the Academy occupies a key position, allowing visiting researchers of a high calibre to work in an excellent research environment in Austria for a certain amount of time.

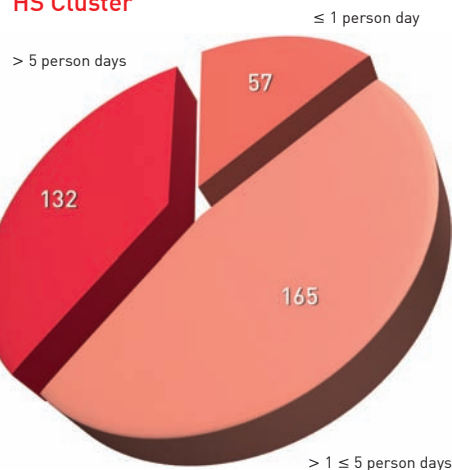
Scientists visiting from abroad					
Number of visitors from abroad at Academy research units in 2006 of which in the framework of the Academy's exchange programme	Total	MN cluster		HS cluster	
		m	f	m	f
	779	358	67	193	161
	207	49	16	72	70
<b>Purpose of stay:</b>					
· research as part of an Academy research project	382	169	37	85	91
· scientific advisory services	21	1	0	13	7
· scientific lecturing	347	177	21	87	62
· other purpose with scientific relevance	29	11	9	8	1
<b>Place of origin:</b>					
· inside the EU (excl. Austria)	508	208	39	130	131
· outside the EU	271	150	28	63	30
<b>Funding:</b>					
· internal funding	453	241	37	97	78
· external funding	270	108	29	70	63
· mixed funding	56	9	1	26	20

### Duration of stays of scientists visiting from abroad

#### MN Cluster



#### HS Cluster

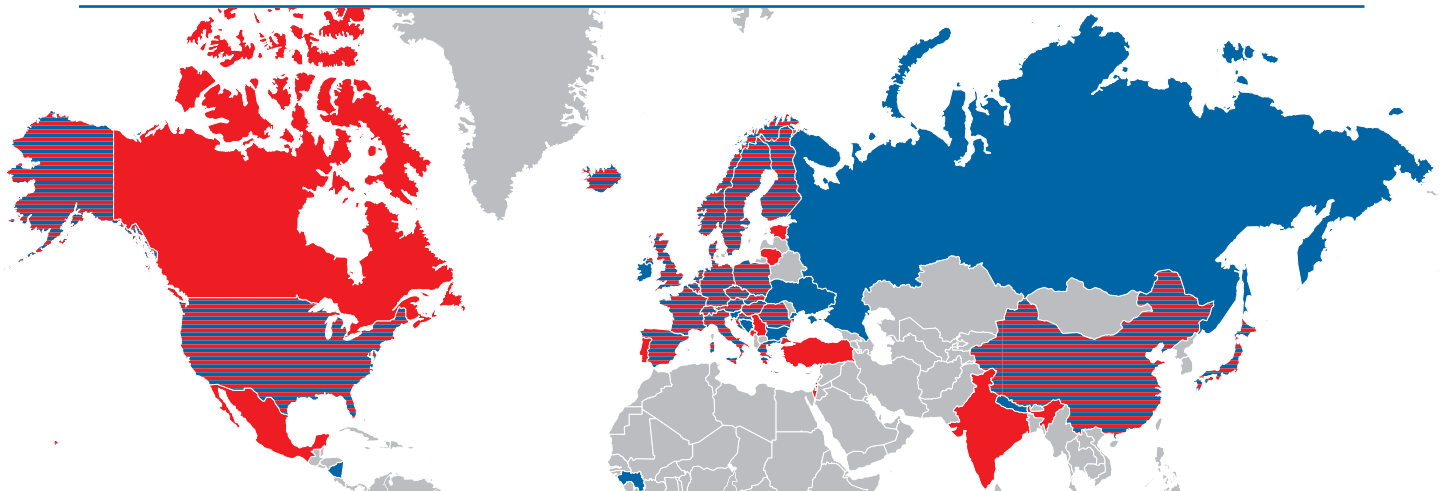


6.1 Value-creation potential of the research performing organisation >> 6.1.3 Networking potential  
 >> **6 The Academy as Research Performing Organisation**

In order to gain access to the latest knowledge and knowledge carriers on a worldwide scale, it is essential to initiate and maintain relationships within the international scientific community. The purpose, number and duration of research visits of foreign researchers at the Academy are a measure of the interest and topicality of our research projects.

Top-notch research without scientific cooperation is inconceivable in our ever more globalised research landscape.

*Scientific cooperation activities*



**Geographical distribution of research cooperation partners**

	MN Cluster	HS Cluster
Austria	52	87
-----		
In the EU	MN Cluster	HS Cluster
Belgium	4	3
Bulgaria	1	0
Czech Republic	2	8
Denmark	5	1
Estonia	0	2
Finland	4	1
France	18	10
Germany	34	43
Great Britain	13	7
Greece	3	4
Hungary	4	7
Ireland	1	0
Italy	11	13
Lithuania	0	2
Luxembourg	0	2
Netherlands	4	10
Poland	2	5
Portugal	0	3
Rumania	1	2
Slovakia	3	5
Slovenia	1	0

Spain	6	2
Sweden	7	1
-----		
Outside the EU	MN Cluster	HS Cluster
Argentina	1	0
Bosnia and Herzegovina	1	0
Canada	0	1
China	5	2
Croatia	1	2
Guinea	1	0
Iceland	1	1
India	0	1
Israel	0	3
Japan	3	5
Mexico	0	1
Nepal	1	0
Nicaragua	1	0
Norway	4	1
Palestinian Territories	0	1
Russian Federation	6	0
Serbia	0	1
Switzerland	7	6
Turkey	0	3
Uganda	2	0
Ukraine	2	0
USA	24	9

## » 6 The Academy as Research Performing Organisation

In a unified Europe, bilateral contacts at the research institution level – especially across the borders of the enlarged European Union – are decisive in promoting and cross-linking national research interests and in enhancing the mobility of researchers. Here, the Academy significantly contributes to the realisation and strengthening of a European research area. Even outside Europe, researchers working for the Academy have numerous scientific co-operative relationships.

Cooperation partners in research			
Number of cooperation agreements of the Academy's research units in 2006, incl. subsidiaries	Total	MN cluster	HS cluster
		491	236
of which:			
· agreements with universities	255	118	137
· agreements with non-university institutions	131	70	61
· other	105	48	57

*Contributions to research quality assurance beyond the Academy*

Academy members in an advisory function do not only take on a multitude of national tasks, but are concerned with worldwide evaluation activities of science and research projects.

External functions in the course of research quality assurance					
Number of functions exercised by scientific staff for scientific journals and book series in 2006	Total	MN cluster		HS cluster	
		m	f	m	f
	188	126	11	42	9
in indexed journals	131	101	9	16	5
in the function of:					
· editor, editor-in-chief	14	1	1	11	1
· editorial board member, associated editor	59	23	2	26	8
· reviewer, referee	115	102	8	5	0
Number of functions exercised by scientific staff as experts or evaluators for external research institutions or programmes in 2006 for external units:	124	44	5	43	32
· in Austria	52	17	1	26	8
· in the EU (excl. Austria)	55	17	2	12	24
· outside of the EU	17	10	2	5	0

Numerous staff members are active members in societies and organisations that focus on science or on scientific policy, both on a national and an international level. •

## » 6 The Academy as Research Performing Organisation

### 6.2 Activities and accomplishments of the research performing organisation

#### Research portfolio

Research activities of the Academy are of a heterogeneous nature. In all scientific projects the self-imposed claim to excellence applies.

*The following indicators, which are provided to give readers an overview of the Academy research portfolio, are derived from the classification of current research projects:*

- *by type of research. This figure is determined on the basis of the attribution of the active research projects in 2006 to one of the following three research categories (in accordance with the R&D Statistics Ordinance): basic research, applied research and experimental development.*
- *by research objective (in accordance with the R&D Statistics Ordinance). This is expressed as a percentage of all objectives of the projects ongoing in 2006 and determined on the basis of the attribution of research projects to one of the thirteen socio-economic targets listed in the table below.*

Research portfolio			
Classification of all research projects underway in 2006 in % by field of research	Total	MN cluster	HS cluster
<b>Types of research:</b>			
· basic research	83.3 %	76.8 %	87.2 %
· applied research	13.3 %	17.0 %	11.2 %
· experimental development	3.4 %	6.2 %	1.6 %
<b>Socio-economic research objectives:</b>			
1. Promotion of the exploration of Earth, the oceans, atmosphere and space	9,6 %	24,6 %	0,7 %
2. Promotion of agriculture and forestry	0,3 %	0,7 %	0,0 %
3. Promotion of retail, trade and industry	1,3 %	3,4 %	0,1 %
4. Promotion of the generation, storage and distribution of energy	0,1 %	0,2 %	0,0 %
5. Promotion of transport, traffic and telecommunications	0,6 %	1,6 %	0,0 %
6. Promotion of education and learning	1,7 %	0,7 %	2,2 %
7. Promotion of health care	6,7 %	17,3 %	0,4 %
8. Promotion of urban and spatial planning	1,0 %	0,2 %	1,5 %
9. Promotion of environmental protection	0,7 %	2,0 %	0,0 %
10. Promotion of national defence	0,0 %	0,0 %	0,0 %
11. Promotion of other objectives	11,4 %	15,7 %	8,9 %
12. Promotion of general expansion of knowledge	58,8 %	28,2 %	77,0 %
13. Promotion of social and socio-economic development	7,8 %	5,4 %	9,2 %

## » 6 The Academy as Research Performing Organisation

*The definition of the term “research project” used by the Academy is derived from the Common European Research Information Format (CERIF), and is as follows: “A research project is any research or development activity with a specific objective, having a date of start and an expected ending date, carried out within an Academy research unit, with or without a certain amount of external funds.”*

*Each research project has at least one project participant connected with the Academy either as an elected member or a staff member of the Academy. Internal Academy quality assurance methods and regular external evaluations ensure the high standard of research carried out at the Academy*

*Research projects*

Ongoing research projects			
	Total	MN cluster	HS cluster
Number of research projects underway in 2006	<b>1.499</b>	<b>552</b>	<b>947</b>
of which:			
· funded by Academy	560	212	348
· funded by third party	939	340	599

It is a challenge to strike a perfect balance between competition and cooperation that maximises scientific advancement. The aim of scientific cooperation at project level is to create a critical mass that enables researchers to find solutions to ever more complex problems, but also to ensure the availability of sufficient financial resources so as to prevail in the face of international competition.

*Research project-related cooperation with external partners*

Research projects with external partners			
	Total	MN cluster	HS cluster
Number of research projects underway with external partners in 2006	<b>410</b>	<b>172</b>	<b>238</b>
of which EU projects	45	29	16
<b>Cooperation partners:</b>			
· universities	492	271	221
· non-university R&D institutions	200	109	91
· private sector economy	31	18	13
· public sector	27	8	19
· international organisations	8	3	5
· scientific expert societies	8	4	4
· research organisations	4	2	2
· other external units	54	19	35
<b>Partner’s institution of origin:</b>			
· in Austria	170	63	107
· in the EU (excl. Austria)	425	216	209
· outside the EU	229	155	74

### The ERA-AGE Project

The vision of a European Research Area (ERA), which was introduced by Commissioner Busquin as early as 2000, is intended to make Europe the leading knowledge-based economic area worldwide. The main instrument used to realise this ambitious aim are the European research programmes. Under the 6th EU Framework Programme, ERA-NET has supported projects that

*High-profile research projects with external partners*

## » 6 The Academy as Research Performing Organisation

will, in the medium and long run, develop a coordinated Europe-wide approach in the promotion, tendering, evaluation, and financing of forward-looking fields of research. 106 ERA-NET projects from various European countries have resulted from a total of five calls for project proposals. Austria has participated in 40 ERA-NET projects, which are still ongoing.

Through its Institute for Biomedical Aging Research, the Academy is a highly successful participant in the ERA-NET project in Ageing (ERA-AGE). The aim of this project, which is co-financed by the European Commission, is to promote and motivate the development of a European strategy for researching the ageing process. The Academy, in its capacity as Austrian coordinator, plays a key role in ERA-AGE. In close cooperation with the relevant institutions in Austria, the Academy assumes its responsibilities on the European level as a multiplier and focal point for excellent and topical research areas.

### **SCIEM 2000**

SCIEM 2000 (“The Synchronization of Civilizations in the Eastern Mediterranean in the Second Millennium BC”) is a special research programme initiated in 1999 that is jointly financed by the Academy and the Austrian Science Fund. For the first time, the Academy is the carrier organisation of a special research programme funded by the FWF.

SCIEM 2000 is concerned with the task of reconciling the substantially divergent chronological tables for the Eastern Mediterranean in the 2nd millennium BC. This is done in close cooperation with a large number of Austrian and international institutions. In the period under review, 15 sub-projects were underway within the framework of this special research programme, which is to run for 10 years. The special research programme SCIEM 2000 thus consists of a network of integrated interregional and regional sub-projects. The interregional projects include deriving a date line from prospected Thera ash, deriving date lines from the first appearance of widespread ceramics, C-14 investigations of annual plants, and dendrochronology of cedar wood. The regional projects are concerned with Egypt, Palestine/Israel, Jordan, Syria, Cyprus, Mesopotamia, Turkey and the Aegean and have the task of determining the finer details of the relative chronology and of establishing its relationship with the chronologies of neighbouring cultures, especially Egypt, on the basis of trade relations.

Most projects are carried out in cooperation with Austrian and international institutions, such as the Egyptian Supreme Council of Antiquities, archaeological institutes in Cairo and numerous universities. Other projects are conducted independently abroad, yet, in a coordinated manner: this promotes communication among the researchers working in different geographical regions. The Mycenaean Commission of the Academy is taking part in SCIEM 2000 with the sub-project “The End of Mycenaean Culture”.

#### *Internal cooperation within the Academy*

Increasingly, synergies have developed between the Academy’s research units. This has also led to the establishment of centres inside the HS cluster.

The year 2006 saw numerous cooperation activities among the research units belonging to one of the centres, both at the level of research projects and in the form of publications. For instance, three



## » 6 The Academy as Research Performing Organisation

research units of the Social Sciences Research Centre – the Institute for European Integration Research, the Institute for Urban and Regional Research and the Commission for Migration and Integration Research – worked together on the EU-funded IMISCOE research project, which is carried out under the 6th Framework Programme and is concerned with questions of integration, migration and social cohesion.

Research units of different centres have also utilised the possibilities open to them for scholarly interdisciplinary cooperation, such as units of the Centre for Ancient World Studies and those of the Centre for Medieval Studies.

Cooperation was also implemented across different clusters, for example between the Institute for Demography (project management) and the Konrad Lorenz Institute for Ethology for the research project titled “Human Reproduction is Density-dependent”. Furthermore, the Commission for Scientific Visualization participated in a number of projects together with research units of the HS cluster, e.g. within the EU-funded BERNSTEIN project.

The proportion of interdisciplinary projects demonstrates the ability of researchers to work not only in their own areas of expertise but to engage in scientific research in other academic disciplines, deriving knowledge that integrates aspects of several academic disciplines at the same time.

*Interdisciplinary  
research projects*

*For the purpose of this publication, interdisciplinarity is defined as the involvement of at least two branches of science in one research project, be it in the form of active scientific debate or direct interaction (in accordance with the two-digit classification in ÖSTAT).*

### Degree of interdisciplinarity

Percentage of interdisciplinary projects in research projects underway in 2006 per field of research	Total	MN cluster	HS cluster
	46.4 %	38.6 %	52.0 %

The Academy generally does not issue directives as to the proportion between short, medium and long-term research projects for its research units. Depending on the expertise requirements and the specific task of the institution, the duration of projects is decided directly by the researchers in charge of the project. Quite often, long-term projects are bundled projects that are broken down into individual short-term sub-projects.

*Project duration*

### Project duration

Percentage of short-, medium- and long-term projects of the research projects underway in 2006	Total	MN cluster	HS cluster
· Short-term projects (< 1 year)	9.2 %	10.7 %	8.2 %
· Medium-term projects ( $\geq 1 \leq 3$ years)	34.5 %	39.7 %	31.5 %
· Long-term projects (> 3 years)	56.3 %	49.6 %	60.3 %

## » 6 The Academy as Research Performing Organisation

### *Third-party funding*

Third-party funds are an important source of financing capital for research institutions. Third-party funds are all those capital inflows that do not form part of the regular federal budget. These are all additional, earmarked funds provided to the Academy and its research units by Austrian and foreign private and public corporations. In 2006, third-party funds made up 28.1 percent of the total Academy budget. This figure only includes third-party funds that are used in the Academy. Funds provided to Academy units in their capacity as project coordinators, which are then sent on to partners outside of the Academy, are not taken into account.

<b>Third-party funds and funders</b>			
<b>Third-party funds in 2006 (in EUR '000) to the Academy</b>	<b>Total</b>	<b>MN cluster</b>	<b>HS cluster</b>
	<b>17,355.9</b>	<b>13,418.4</b>	<b>3,937.5</b>
of which solicited from:			
· <b>FWF</b>	<b>5,434.5</b>	<b>3,096.6</b>	<b>2,337.9</b>
· <b>Federal Government</b> (w/o FWF and FFG)	<b>2,227.3</b>	<b>2,088.9</b>	<b>138.4</b>
· <b>OeNB</b>	<b>1,196.6</b>	<b>1,022.1</b>	<b>174.5</b>
· <b>FFG</b>	<b>402.7</b>	<b>402.7</b>	<b>0.0</b>
· <b>Federal States</b>	<b>1,706.9</b>	<b>1,262.1</b>	<b>444.8</b>
· Vienna	783.5	506.5	277.0
· Tyrol	441.5	401.0	40.5
· Lower Austria	437.8	354.6	83.2
· Upper Austria	41.4	0.0	41.4
· Vorarlberg	1.7	0.0	1.7
· Styria	0.4	0.0	0.4
· Burgenland	0.4	0.0	0.4
· Salzburg	0.2	0.0	0.2
· <b>Municipalities</b>	<b>41.7</b>	<b>1.5</b>	<b>40.2</b>
· Krems	26.0	0.0	26.0
· Enns	14.2	0.0	14.2
· Graz	1.5	1.5	0.0
· <b>EU</b>	<b>4,189.1</b>	<b>3,777.7</b>	<b>411.4</b>
· <b>Foundations</b>	<b>179.1</b>	<b>155.0</b>	<b>24.1</b>
· in Austria	81.6	75.0	6.6
· abroad	97.5	80.0	17.5
· <b>Organisations</b>	<b>1,192.1</b>	<b>837.5</b>	<b>354.6</b>
· in Austria	735.6	408.5	327.1
· abroad	456.5	429.0	27.5
· <b>Business enterprises</b>	<b>781.9</b>	<b>773.3</b>	<b>8.6</b>
· in Austria	731.0	725.3	5.7
· abroad	50.9	48.0	2.9
· <b>Donations</b>	<b>4.0</b>	<b>1.0</b>	<b>3.0</b>

Other third-party funds were obtained for services that cannot be counted directly toward research activities within the two clusters. These services are related to the scholarship programmes of the Academy, the Austrian Academy of Sciences Press, IFAC, IFIP and various series of lectures. The third parties providing funds for these other services are the federal government, the FWF, the city of Vienna, as well as various organisations and companies.

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**The publication of new scientific findings in a form that befits the respective scientific community and elicits as much scientific debate as possible is a prerequisite for further research work and the implementation of findings in various applications, either in new approaches or methods, improved academic education or innovative products. Furthermore, scientific publications of all types indirectly certify the quality of any research performed.**

*Dissemination of  
research results*

*In the course of the further development of the Academy's intellectual capital reporting, changes had to be made to the classification of publications to improve consistency. However, the objective, which was to map the publishing efforts of the overall Academy, was not changed. Intensive discussions with heads of Academy research units revealed that, for the most part, the MN cluster and the HS cluster agreed on the differentiation into five categories for types of publication. Nevertheless, the boundaries of the categories are fuzzy. At the level of the two clusters, these categories – which have been condensed into three meta-categories to facilitate depiction – consist of 22 different types of publication. They take into account the differences between the various publishing cultures, the amount of work involved in each type of publication and certain quality assurance aspects: naturally, these formal aspects only allow for limited inferences about the quality and value of each publication.*

### **Category A:**

*Within most disciplines of the HS cluster, monographs are considered to be the most valuable types of publication, whereas externally reviewed articles are favoured by most research units of the MN cluster. All contributions printed in journals or anthologies counted toward category A have undergone an external peer review. Thus, each contribution has been reviewed by at least two internationally recognised scientists in the field, of which at least one works outside Austria. The subgroup to category A – articles in indexed journals – takes into account that indexing is a widely accepted, albeit disputed, quality feature for some disciplines. The following indices have been evaluated: the Science Citation Index (SCI), Social Sciences Citation Index (SSCI), Arts and Humanities Citation Index (AHCI) and the European Reference Index for the Humanities (ERIH). The European Reference Index for the Humanities is still work in progress by the ESF. In this Intellectual Capital Report, the first tranche of indexed journals issued by the ESF was taken into account. This tranche comprises publications from the fields of anthropology, archaeology, classical studies, gender studies, history, history and philosophy of science, linguistics, musicology, pedagogical and educational research, philosophy as well as religious studies and theology.*

### **Category B:**

*Editorships and longer articles that have not been reviewed externally were included into a second category ex aequo by leading representatives of the two clusters at the Academy. This category comprises reports on proceedings, fascicles and part-deliveries of antholo-*

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gies, as well as discussions of court decisions that are longer than 10,000 characters, i.e. approx. four printed pages.

### Category C:

All other scientific contributions that have not undergone an external review, including those of less than 10,000 characters in length, are included in this category. These are research and project reports, working papers, short contributions to proceedings, journals or anthologies, extended abstracts, short scientific multimedia publications, reviews as well as standards, guidelines and recommended practices.

Electronic publications, particularly publications in electronic journals, are generally treated in the same way as print publications and may therefore be assigned to any of the categories. The sole precondition is that this electronic journal (or book) is published by a publishing house or a scientific society.

Scientific publications			
		MN cluster	HS cluster
	Books / monographs or editions	8	58
A.	Peer-reviewed contributions in scientific journals or anthologies · of which in indexed journals	670 477	213 31
B.	Editorships Lengthier contributions without peer review in specialised journals or anthologies	12 124	50 254
C.	Other scientific publications	142	434

Moreover, 635 encyclopaedia entries have been written and published by the HS cluster, which are not listed as separate publications.

In connection with the research conducted by the Academy and its subsidiaries, junior researchers in the MN cluster in 2006 published 19 diploma theses, 18 doctoral theses and 2 professorial dissertations; those in the HS cluster published three diploma theses and eleven doctoral theses.

All in all, articles of the Academy were cited approx. 10,000 times in 2006 according to ISI Web of Science, with two thirds of these cited articles having been published between 2000 and 2006.

*Selected articles from research units of the MN cluster*

### Molecular cell organisation mapped in its entirety

In a joint effort with German colleagues, researchers of the Center for Molecular Medicine (CeMM) have decrypted the molecular organisation of one of the most important model organisms in the field of biology: bakers' yeast. The results were published in the online edition of the scientific journal "Nature" (January 2006).

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### **Viennese researchers solve old mystery of bone metastases**

An international team of researchers of the Institute of Molecular Biotechnology identified a molecule that is instrumental in the development of bone metastases in cancer patients. The findings were published in the scientific journal “Nature” (March 2006).

### **Tumour stem cells - a key to cancer therapy**

Scientists of the Institute of Molecular Biotechnology are researching how stem cells develop into tumours. The latest findings open up new possibilities for selective cancer therapies. This was published in the journal “Cell” (March 2006).

### **Mysterious quantum states observed for the first time**

Experimental physicists in Innsbruck, from the Institute for Quantum Optics and Quantum Information and other institutes, have for the first time successfully observed so-called Efimov states. These were predicted theoretically more than 35 years ago by Russian scientist Vitali Efimov and have since then been a highly sought-after object of a great many research teams. This was published in the journal “Nature” (March 2006).

### **Highest-precision measurement of anti-proton mass**

An international team of researchers, including researchers from the Stefan Meyer Institute for Subatomic Physics, successfully measured the mass of an anti-proton at a hitherto unattained level of precision in an experiment at CERN in Geneva. The results were published in the journal “Physical Review Letters” (June 2006).

### **Electricity heals wounds**

Scientists from Austria, Scotland, the USA and Japan have successfully proven that electricity has a substantial influence on the healing of wounds. The researchers hope that their findings will lead to the development of new methods for treating wounds that do not heal properly. The team of the Institute of Molecular Biotechnology published its article in the journal “Nature” (July 2006).

### **Quantum logic for a new generation of atomic clocks**

Researchers from the Institute of Experimental Physics of the University of Innsbruck and from the Institute for Quantum Optics and Quantum Information laid the groundwork for even more precise atomic clocks. This was published in the journal “Nature” (September 2006).

### **The chemistry of human odour**

It has long been assumed that just as every person has a unique fingerprint, every person also has a unique body odour. Researchers from the Konrad Lorenz Institute for Ethology carried out an international, interdisciplinary study with behavioural biologists, geneticists, chemists, microbiologists and statisticians to test this hypothesis. The results were published online in the “Journal of the Royal Society Interface” (November 2006).

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*Selected publications from  
research units of  
the HS cluster*

### **Austrian Biographical Encyclopaedia**

The Austrian Biographical Encyclopaedia and Biographical Documentation Institute presented the 12th volume of the Austrian Biographical Encyclopaedia in February 2006. This volume contains 932 biographies. The encyclopaedia is to have a total of 15 volumes.

### **We increasingly consider ourselves Europeans**

The development of a European identity is a question of time and of a change of generations. This was the bottom line of an analysis carried out in conjunction with the Institute for Demography. The study was published in the journal "Science" (October 2006).

### **International acclaim for archaeological sensation**

The infant graves discovered by researchers from the Prehistoric Commission two years ago at Wachtberg/Krems (Lower Austria) are not only the oldest burials in Austria but also unique in the world. Until now, no graves with such young deceased persons have been found dating from the Upper Palaeolithic period. This discovery, which has received much international attention, was presented in the journal "Nature" (November 2006).

### **From classicism to the contemporary avant-garde**

The large-scale project "Austrian Music Encyclopaedia", which was compiled by the Commission for Music Research and published by the Austrian Academy of Sciences Press, was completed in November 2006. This five-volume standard work containing 7,474 terms on 2,778 pages is also available online at [www.musiklexikon.ac.at](http://www.musiklexikon.ac.at).

*Scientific lectures and  
poster presentations*

The Academy's scientific staff is encouraged to present the latest findings at conferences and the like. The directness of the personal encounter and immediate discussions are an enrichment for every researcher and help to develop the relevant scientific topics as quickly and profoundly as possible.

*In the Intellectual Capital Report of the Austrian Academy of Sciences a distinction is drawn between lectures (categories A and B) and poster presentations (category C), because these two types of presentations at scientific events are of a different value in almost all disciplines.*

*Lectures count as "invited" (category A) if a personal invitation was extended; lectures held in response to general invitations, e.g. calls for papers, are excluded from this category.*

*Keynotes and so-called "named lectures" are an especially highly appreciated subgroup of invited lectures and are therefore accounted for separately.*

*Keynotes are the main presentations at scientific events. They are held upon special invitation by the organisers, and are characterised by the fact that they are generally held before a plenum or in larger meetings and are longer than other lectures.*

*Named lectures are presentations at conferences named after a well-known personality and are usually held in regular intervals.*

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Contributions to scientific events			
		MN cluster	HS cluster
A.	<b>Invited lectures</b>	<b>425</b>	<b>362</b>
	· at international events	204	68
	· keynotes and named lecturers	26	35
B.	<b>Other lectures</b>	<b>516</b>	<b>137</b>
	· at international events	261	40
C.	<b>Scientific poster presentation</b>	<b>311</b>	<b>17</b>
	· at international events	150	10

Austria is still lagging behind other countries in the transition from application-oriented basic research to product development. The Academy is aware of this problem.

*En route to  
technology transfer*

In order to evaluate, and later utilise, intellectual property rights, the Academy has concluded a framework contract with Austria Wirtschaftsservice GmbH (AWS), enabling – but not forcing – the Academy to carry out utilisation activities via the AWS. Once an invention has been made, the Academy will evaluate, depending on the internally available know-how, whether intellectual property rights can be obtained either by the Academy directly or through the AWS. If the result of the evaluation is positive, the Academy will claim the rights to the invention and initiate utilisation. Generally, the options open to the Academy are either to grant licences or create spin-off companies. Which option is chosen depends on the scientific and economic potential of each type of utilisation.

The following table includes the number of computer programs that were developed by an Academy research institution or one of the research subsidiaries and that are protected by copyright law as intellectual property of their creator, as well as software licences granted by the Academy.

Patents			
	Total	MN cluster	HS cluster
Total number of patents in 2006	<b>10</b>	<b>10</b>	<b>0</b>
of which:			
· submitted	2	2	0
· awarded	5	5	0
· in process	3	3	0
Utility models and licenses granted in 2006	<b>12</b>	<b>9</b>	<b>3</b>

In 2006, the Academy continued to protect the cultural heritage, which has been its task since its inception.

*Scientific archiving,  
documentation and  
analysis of objects*

This heritage is maintained not only in the Phonogrammarchiv (Audiovisual Research Archive), but also in a multitude of other units of the HS cluster, such as the Institute for the Material Culture of the Middle Ages and the Early Modern Period, the Institute for Medieval History Research, the Austrian Biographical Encyclopaedia and Biographical Documentation Institute and the Commission for Culture Studies and History of Theatre. The Institute of Lexicography of Austrian Dialects and Names and the AAC – Austrian Academy Corpus – are focused on the systematic analysis and interpretation of language and digitised text objects.

In order to provide a basis and starting point for the research project “Die Wiener Hofburg: For-

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schungen zur Planungs-, Bau- und Funktionsgeschichte” (“The Vienna Hofburg: Research on the Planning, Construction and Functional History”), the Commission for the History of Art has digitally analysed and documented a large number of papers and documents in the archives.

Outside of the task to safeguard our cultural heritage, institutes of the MN cluster, such as the Institute for Biomedical Aging Research, provide object-based, catalogued data collections of experimental series.

Looking back on 2006, it can be said that many Academy research units have once again analysed and documented a wide spectrum of systematically generated data of scientific relevance. This data concerns extremely heterogeneous materials – covering everything from archaeological, historical sites to inscriptions and images or scans of research results that are relevant to natural sciences and technology. Systematic data preparation usually pursues one of two distinct aims: it either serves the purpose of documentation and archiving, making it accessible to researchers beyond the Academy or it is intended directly for application in a specific, initially Academy-internal, research process.

The amount of work involved in data preparation, the depth of data collection and the significance of the individual data must be assessed very differently, depending on the task at hand and the subject concerned. The amount of effort involved in archiving photographic documents complete with formal categorisation, for instance, differs significantly from that of annotating a complete text made available both as a simple digitised version and an image from within a complex database. For so-called “running words”, used as a quantifier in addition to occupied storage space in digital text analysis, it must be carefully ascertained whether they were determined intelligently or opportunistically, and whether they have been systematically post-processed or not.

In 2006, more than 21 million running words and more than 335,000 other cultural content entries were newly documented by research units of the HS cluster. Another 1,200 inscriptions and further text documents must be added to this figure. Moreover, more than 76,000 digitised texts and scans, as well as almost 5,600 audio, photographic and video documents were processed.

### *Scientific events*

Expert events are an important part of scientific networking. Big international conferences, conventions and workshops are held at the Academy. Academy research units habitually initiate and organise or assist in organising such events.

Organisation of scientific events					
Number of scientific events organised by staff in 2006	Total	MN cluster		HS cluster	
		m	f	m	f
	335	69	30	135	101
<b>of which:</b>					
· congress/symposium/conference/meeting	134	37	12	57	28
· workshop/seminar	110	26	9	31	44

### *Scientific events of the MN cluster*

#### **Quantum research elite meets in Innsbruck**

More than 800 physicists from all over the world met in Innsbruck in July 2006 for the 20th International Conference on Atomic Physics, including eight Nobel laureates and other outstanding personalities in the field of quantum physics. The main topics of the conference were quantum information



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processing, cold atoms and molecules, and precision spectroscopy. The highly prestigious conference was organised by the internationally renowned Innsbruck-based team of quantum physicists headed by Rainer Blatt, Rudolf Grimm and Peter Zoller, who also work for the Academy's Institute for Quantum Optics and Quantum Information.

### **Computer graphics conference in Vienna**

In September 2006, approximately 500 experts from across the globe came to the Academy in Vienna to attend the leading computer graphics conference in Europe. The main conference of the European Association for Computer Graphics – Eurographics – was organised by the Institute of Computer Graphics and Algorithms of the Vienna University of Technology and the Commission for Scientific Visualization of the Academy.

### **Summit meeting of leading plant research scientists**

In late September 2006, European and US plant research scientists of international renown met at the Academy's Life Sciences Centre in Vienna to report on their latest scientific findings in the areas of plant physiology, developmental genetics, pest control and adjustment mechanisms of *Arabidopsis thaliana*, a model organism.

### **Age Cultures of the Medieval and Early Modern Period**

In October 2006, the Academy's Institute for the Material Culture of the Middle Ages and the Early Modern Period in conjunction with the Donau-Universität Krems held the international conference "Alterskulturen des Mittelalters und der frühen Neuzeit" ("Age Cultures of the Medieval and Early Modern Period") in the city of Krems. The conference covered a range of topics, including life expectancy and the quality of life in the late medieval and early modern period, recommendations in German literature on the treatment of the elderly and medical aspects, such as caring for the elderly in hospitals and medicinal products to be taken for longevity. Physical changes and the identity of the elderly in the 16th century were discussed, as well as the concept of being old and ageing in the public mind of the early and high Middle Ages.

*Scientific events of  
the HS cluster*

### **What does "European" mean?**

As part of the Gedächtnis – Erinnerung – Identität ("Memory – Remembrance – Identity") research programme, the Commission for Culture Studies and History of Theatre held an international conference with the title "Was ist europäisch?" ("What does 'European' mean?"). The aim of the conference, which was attended by researchers from the disciplines of linguistics, literature, cultural studies and history, as well as from such varied areas as economics, integration research, philosophy and theology, was to critically re-examine the current discussion about European values.

### **Meeting of European migration experts**

The research network IMISCOE (International Migration, Integration and Social Cohesion), which receives funding from the European Union, held its annual meeting in Vienna in September 2006. Approximately 200 researchers from 14 countries debated on the future of migration, integration and society. The meeting was held at the initiative of the Commission for Migration and Integration Research of the Academy in Vienna.

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*Communicating scientific findings to interested members of the public*

**In view of the public funds invested in basic research in general and in the research activities of the Academy in particular, it would seem logical to inform interested members of the public about such publicly financed research, allowing the latest findings in science and research to find their way into society.**

*As part of the further development of intellectual capital reporting by the Academy, a unique new indicator concerning popular-scientific publications has been created. This figure demonstrates the importance that the Academy assigns to the transfer of knowledge beyond the confines of scientific debate. The following four categories of publications piercing the limits of scientific debate are different from one another, especially in their scope and the effort involved in publication, as well as in their mode of communication – written, oral, with visual aids or animated.*

*Publications have not been organised into a hierarchy on the basis of this categorisation. The Academy's definition of "popular science" goes beyond science journalism targeted at interested laypersons, whose main goal is the popularisation of science and research. Thus the indicator also takes into account teaching materials whose main target audience are persons in education who are not yet members of the relevant scientific community.*

Popular science publications		
	MN cluster	HS cluster
Number of popular science publications of staff in 2006	49	89
of which:		
· popular science books incl. multi-media publications	4	18
· textbooks in scientific publishing houses	0	1
· other popular science publications or other teaching material	45	70
· popular science lectures / presentations	58	58

*Popular science events*

In public lectures and discussions, staff of the Academy's research units acquaint interested members of the general public with current research and address target audiences outside the scientific community, especially school children.

### Research Days: Lectures 2006

The lectures held during the Research Days 2006 conference at the Academy in September 2006 were met with a great deal of interest. Researchers from the Academy picked out controversial issues from the areas of life, society and health, and made them the centre of discussion.

For the "life" theme, Josef Penninger (of the Institute of Molecular Biotechnology) talked about how the genetic descriptions of life have changed our world. Claudia Jonak (of the Gregor Mendel Institute of Molecular Plant Biology) explained how plants adapt to adverse environmental conditions.

For the "society" theme, Bert G. Fragner (of the Academy's Institute for Iranian Studies) lectured on

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Iran and its path to modernity. Monika Mokre (of the Academy's Institute for European Integration Research) reflected on the future outlook of the European Union.

For the "health" theme, Giulio Superti-Furga (of the CEMM – Center of Molecular Medicine at the Academy) offered a glimpse of the medicinal products of the future. Beatrix Grubeck-Loebenstein (of the Academy's Institute for Biomedical Aging Research) explained the importance of healthy ageing for the future of our society.

### **Vienna Open Lab**

In the Academy's Life Sciences Centre in Vienna, a laboratory for children and youngsters was set up in cooperation with the Verein Dialog Gentechnik. Upon registration, children even of primary-school age can, for example, extract DNA and make it visible, under guidance by a specialist.

### **Participation in Kinderuni Wien ("Children's University Vienna")**

Researchers of the Academy's Institute of Lexicography of Austrian Dialects and Names demonstrated how a dictionary is produced using cutting-edge computer technology in an event with the title "How dictionaries are made" held during the Kinderuni Wien event in July 2006. In addition, the children, who were aged between 10 and 12, were taught interesting facts about the meaning of their first names.

### **Be a physicist for one day**

The Academy's Institute for High Energy Physics offered 21 school children the opportunity to be a high-energy physicist for one day as part of the European Particle Physics Masterclasses in March 2006. Throughout Europe, approx. 3.000 pupils took part in approx. 60 masterclasses.

### **Live at a satellite launch**

On the occasion of the launch of the space probe COROT on 27 December 2006, the Academy's Space Research Institute extended an open invitation to the "COROT Launch Event". Visitors to the institute were able to watch the launch of the satellite live and to learn many interesting facts about the mission in a number of lectures. One of the main tasks of COROT is the discovery of further extrasolar planets. •

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## **6.3 Research activities in fields of research and centres**

Below, the main tasks and activities in 2006 in the fields of research and centres are described to provide a brief overview, and are depicted using selected indicators broken down to the level of each field of research or centre. •

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### **6.3.1 Fields of research in the MN cluster**

In recent history, hardly another area has seen such rapid advances in basic, application-friendly research as the fields of biology and medicine. The Academy has taken this development into account and strengthened existing research institutions, defined main areas of future research and explored new research areas.

*Biology and Medicine*

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Institute for Biomedical Aging Research  
Institute of Biophysics and Nanosystems Research  
Konrad Lorenz Institute for Ethology  
Breath Research Unit  
CeMM - Center of Molecular Medicine  
GMI - Gregor-Mendel-Institute of Molecular Plant Biology  
IMBA - Institute of Molecular Biotechnology

It is the primary aim of biomedical aging research to enable people to age with dignity and in good health. Research is primarily focused on age-related diseases. In order to better understand aging processes, they are analysed at the cellular level. The research results of biomedical aging research can be applied when developing new diagnostic methods, preventive measures and therapies.

The central theme of biophysics and nanosystems research is the investigation of relationships between structure, dynamics and functions in supramolecular nanosystems, as found in biological membranes or lipoproteins. Research is focused on the following: nanosystems research in multi-component lipid-membrane systems, in-situ cinematography of supramolecular nanosystems, interrelationship of antimicrobial peptides with membrane-mimetic systems and structural determination of human proteins.

Ethology is concerned with basic questions of behavioural patterns and behavioural ecology. The focus is on the investigation of mate selection and conflicts, in particular the adaptive functions that appear in the process.

Breath analysis for medical diagnosis is a non-invasive method that combines work from the academic disciplines of medicine, chemical analysis, biochemistry, mathematics, computer software and hardware. The research objective is to detect various organic trace elements in exhaled human breath using sensitive mass-spectrographic methods. This allows medical professionals to detect metabolic disturbances and malignant growth.

Molecular medicine is a new, interdisciplinary research area that, in particular, pursues application-oriented research by combining and promoting the inter-reaction of basic and clinical research. Special areas of interest are cancer, inflammation processes and immunological diseases. By using the latest scientific methods, such as mass spectrometry, researchers attempt to link the systematic relationships of the effectiveness of medicinal products with research results from the field of proteomics.

Molecular plant biology is generally concerned with the physiology, cell biology, developmental biology and genetics of plants. In particular, research has focused on the following areas: molecular mechanisms of epigenetic inheritance phenomena, signal transmission and stress response, chromosome biology and questions of developmental genetics.

The vision of molecular biotechnology is to explain fundamental molecular-biological relationships at the onset of diseases using model organisms and the latest findings of "functional genomics". Interdisciplinary teams of researchers develop integrative approaches and combine methods of systematic genetic analysis, investigations on cell mobility and RNA interference, and the latest imaging techniques with the expertise to create animal disease models in order to study the effects of genetic modifications on physiology and pathogenesis.

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Biology and Medicine			
Average number of <b>staff</b> in 2006 (incl. seconded government employees)		m	f
		133	180
Number of <b>full-time equivalents</b> of which:		104.4	124.7
· scientific staff		78.1	74.7
<b>Basic budget</b> (in EUR '000)		21,206.0	
<b>Third-party share*</b>		21.36%	
Research projects underway in 2006		182	
Publications			
A.	Peer-reviewed contributions in journals or anthologies	144	
	- of which in indexed specialised journals	128	
	Books / monographs	2	
B.	Lengthier contributions without peer review in journals or anthologies	6	
	Editorships	1	
C.	Other scientific publications	0	
Lectures			
A.	Invited scientific lectures	83	
	· of which at international events	48	
	· of which keynotes and named lectures	14	
B.	Other scientific lectures	43	
	· of which at international events	30	
C.	Scientific poster presentation	111	
	· of which at international events	65	

\*The percentage of third-party funds is defined as the proportion of total third-party funds awarded to a relevant research entity to the overall budget of the respective research institution or entity in 2006.

Non-university Academy research endeavours to focus, complement and deepen the expertise of Austrian universities in the earth sciences research field. The aim is to enable synergy effects in this field of research, which has a long-standing tradition in Austria.

*Earth Sciences*

Commission for Geophysical Research

Commission for Basic Research on Mineral Raw Materials

Commission for the Palaeontological and Stratigraphical Research on Austria

Commission for Quaternary Research

Research Unit for Geographic Information Science

Geophysical research focuses on glaciology, seismology and gravimetry. Developing an inventory of Austrian glaciers, participating in international projects of deep seismic reflection measurements of the Alps and gravity measurements in Austria are the focal points of geophysical research. Of exceptional quality – and considering the global climate change, also of special international significance – is the glaciology project with the three-dimensional inventory of Austrian glaciers (thickness-area-volume). The gravity map of Austria, which is nearly complete, is also considered an exceptional accomplishment that will pave the way to many practical and research applications.

The field of mineral raw materials research is mainly concerned with the coordination of research activities and the promotion of national and international cooperation of the various research disciplines in

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this field, as well as with raising awareness among the general public for the importance of mineral raw materials research. Academic disciplines involved in this research are geology, mineralogy, cosmogeochemistry, geophysics, materials science, chemistry, applied materials sciences, mining and processing.

In 2006, the research programme involving the palaeontological and stratigraphic investigation of Austria was marked by the decision to make basic palaeontological and stratigraphic research one of the focal points of research. Intensive work is currently being done on the survey and documentation of the taxonomic inventory of Miocene dinoflagellate cysts and their importance for stratigraphy and on the reconstruction of palaeontological environmental conditions in the Austrian Miocene era using geochemical signatures of mollusc shells.

The quaternary research undertaken at the Academy attempts to promote all aspects of Austrian quaternary research and covers a wide spectrum of basic research by involving the disciplines geology, glaciology, physical geography, palaeontology, speleology, zoology, botany, isotope and nuclear physics as well as prehistory.

An up-and-coming scientific discipline has developed at the interface of geographic concepts and information science, brought on by information technologies (enabling technologies): geographic information science. This has successfully bridged the gap between remote-sensing image data and thematic geodata through the image-segmenting approach and in particular the integrated (spectral and thematic) analysis with geometric and topological conditions and classification on the basis of fuzzy logic.

Earth Sciences			
Average number of <b>staff</b> in 2006 (incl. seconded government employees)		m	f
		2	1
Number of <b>full-time equivalents</b> of which:		1.0	0.5
· scientific staff		1.0	0.0
<b>Basic budget</b> (in EUR '000)		299.50	
<b>Third-party share</b>		15.03 %	
Research projects underway in 2006		10	
Publications			
A.	Peer-reviewed contributions in journals or anthologies	5	
	· of which in indexed journals	5	
	Books / monographs	2	
B.	Lengthier contributions without peer review in journals or anthologies	13	
	Editorships	0	
C.	Other scientific publications	23	
Lectures			
A.	Invited scientific lectures	8	
	· of which at international events	0	
	· of which keynotes and named lectures	0	
B.	Other scientific lectures	13	
	· of which at international events	13	
C.	Scientific poster presentations	1	

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Compared to the other fields of research – with the exception of Interdepartmental Research Tasks – Earth Sciences only includes commissions whose scientific staff works on a honorary basis.

Mathematics, simulation and metrology are ever more developing into links connecting individual fields of research and are often used as tools without which it would be impossible or very difficult to carry out a comprehensive analysis of data obtained. This demonstrates the necessity of an interdisciplinary approach and requires a comprehensive approach to the problems. Ideally, this can be realised in a non-university research performing organisation.

*Mathematics,  
Simulation and  
Metrology*

Johann Radon Institute for Computational and Applied Mathematics  
Acoustics Research Institute  
Commission for Scientific Visualization  
Research Unit for Integrated Sensor Systems

In mathematics, application-oriented basic research is conducted in various fields, such as analytical and numerical mathematics for direct and inverse problems, as well as for optimisation tasks in partial differential equations. A special emphasis is placed on the combination of analytical and numerical methods with symbolic and algebraic methods. In financial mathematics, too, synergies are exploited, in this case between stochastic and number-theoretic methods.

The main areas of application are mathematical methods for image processing, as well as numerical and optimisation methods for solid-state and flow mechanics. Another objective is to significantly strengthen the activities in mathematical methods used in biology.

Acoustics research is following a new, trans-disciplinary research programme, which consists of the following main components: numerical acoustics, psychoacoustics, medical engineering and acoustics, experimental audiology, digital signal processing, as well as mathematics and measuring methods. Current projects within numerical acoustics include simulations of a wide range of sound waves, such as multi-layer strings for cellos, instabilities in ship propellers, noise protection for motorways and complex sound projection of high-speed trains. The optimisation of numerical techniques and the development of new methods to allow work on higher perception-relevant frequency ranges remain an important objective. The objective in psychoacoustics is to develop and evaluate both signal-driven (bottom-up) and perception-relevant (top-down) models. In sound quality design (virtual sound engineering) or in a subjective assessment of component noises, also in the perception of music, psychoacoustic models are already successfully being applied.

Scientific visualisation is concerned with research issues in the fields of theoretical and applied visualisation, which also includes the processing of signals, their analysis and depiction. The emphasis is on questions of basic research and on problems that result from certain applications. The most important areas of application are imaging techniques in medicine, virtual archaeology, codicology, computer art, cognition science and speech processing.

Research in sensory engineering combines, in an application-friendly and interdisciplinary way, the research areas of sensory technology, microelectronics and communication technology, which are

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essential for the development of modern integrated sensor systems.

The focus is on micromechanical and miniaturised thermal sensors, system architectures and signal processing for integrated sensors, as well as synchronisation and security issues in sensor networks.

The projects include problem issues from automation, medicine and metrology.

Mathematics, Simulation and Metrology		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	74	17
Number of <b>full-time equivalents</b> of which:	58.8	13.3
· scientific staff	55.3	11.2
<b>Basic budget</b> (in EUR '000)	3,275.10	
<b>Third-party share</b>	58.68%	
Research projects underway in 2006	126	
Publications		
A.	Peer-reviewed contributions in journals or anthologies · of which in indexed journals	214 94
	Books / monographs	1
B.	Lengthier contributions without peer review in journals or anthologies	6
	Editorships	1
C.	Other scientific publications	15
Lectures		
A.	Invited scientific lectures · of which at international events · of which keynotes and named lectures	114 85 0
B.	Other scientific lectures · of which at international events	136 84
C.	Scientific poster presentations · of which at international events	10 4

### *Physics and Materials Sciences*

Physics and materials science rank among the basic sciences in natural scientific research. The four Academy research institutes that are active in this area define the research landscape in Austria in these research areas, as they enjoy the highest reputation on account of their research priorities and accomplishments, and make important contributions to international cooperation. Both in the field of physics and in materials science, the Academy's research units have succeeded in strengthening their position among the elite of research institutions by sensational publications and crucial participation in large-scale research endeavours.

Stefan Meyer Institute for Subatomic Physics

Institute for High Energy Physics

Institute for Quantum Optics and Quantum Information

Erich Schmid Institute of Materials Science

The focus of subatomic physics research is on exotic atoms, where ordinary stable components of atoms are replaced by exotic, often unstable components, leading to completely new properties. Highly interesting results with kaonic hydrogen have been published. The investigation of the interrelation between mat-



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ter and antimatter, or respectively their symmetrical properties, guarantee an interesting area of research for the future.

High-energy physics is done at the Academy in cooperation with CERN and other high-energy laboratories. Since the new high energy particle accelerator at CERN, LHC, will not be put in operation until 2007, the focus in 2006 was on developing the new detectors for this facility. Research is planned to be done on the smallest building blocks of matter, their interrelationships and the role they played in the emergence of the universe. New experiments that have been met with much interest were conducted at KEK in Japan. The main research focus is on fundamental symmetry laws in nature.

Quantum physics is concerned with fundamental physical questions, such as the existence of overlapping and integration of quantum states and their significance for applications. Theoretical and experimental research has made some exciting developments since the discoveries by Max Planck, and scientists today are able to manipulate quantum systems of photons and individual or small numbers of ions and atoms with extreme precision. The use of quantum physics in information technology opens the door to promising applications in the future, such as the development of quantum computers, quantum cryptography and quantum metrology. Works pertaining to “ultra-cold atoms and quantum gases” and contributions to “quantum computing” have received special awards, with the first quantum byte realised at the atomic level.

Materials sciences are concerned mainly with the properties of complex materials of dimensions ranging from the macro to the nano level. Internationally, basic research is successfully being conducted on the synthesis of new nanocrystalline materials by severe plastic deformation and the analysis of deformation and fracture properties of composite materials and miniaturised materials. Cooperation with the University of Leoben and the relevant Christian Doppler Laboratory have resulted in very positive synergy effects. Application-friendly basic research in materials science and physics guarantees numerous contacts to partners in industry and close cooperation with research institutions throughout the world.

Physics and Materials Sciences		
	m	f
Average number of staff in 2006 (incl. seconded government employees)	120	27
Number of full-time equivalents of which:	106.2	19.7
· scientific staff	78.3	5.5
Basic budget (in EUR '000)	10,123.00	
Third-party share	27.72%	
Research projects underway in 2006	85	
Publications		
A.	Peer-reviewed contributions in journals or anthologies · of which in indexed journals	199 155
	Books / monographs	0
B.	Lengthier contributions without peer review in journals or anthologies	9
	Editorships	1
C.	Other scientific publications	54

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Lectures		
A.	Invited scientific lectures	133
	· of which at international events	21
	· of which keynotes and named lectures	11
B.	Other scientific lectures	190
	· of which at international events	21
C.	Scientific poster presentations	95
	· of which at international events	3

*Environmental Research*

In this field, research is carried out in ecology, limnology and issues as diverse as air quality and the impact of new technologies on the environment and society. In view of the current climate debate, insights into ecosystems, biodiversity and the distribution and impact of air pollutants are thus of tremendous relevance. But the implications of new technologies for the environment and for society are also becoming increasingly important. In these areas, the research units of the Academy provide important fundamental knowledge. Quality objectives can thus be formulated with respect to existing gaps and requirements in a scientific and socio-political context, while strategies to achieve these objectives can be developed.

Institute for Limnology  
 Clean Air Commission  
 Commission for Interdisciplinary Ecological Studies  
 Institute of Technology Assessment  
 Austrian IIASA Commission at the Academy

Limnology research is concerned with the biological properties of inland waters in their physical and chemical environment. Scientists analyse aquatic organisms and ecosystems with a view to recognising universal key processes and structures. Research findings are used to provide advice and solutions to application-oriented problems in the planning, utilisation and protection of inland waters at national and international level.

Clean air as a subject area comprises all issues relating to air quality and the associated implications, particularly all factors affecting air quality (emission), the distribution and modification of air pollutants in the atmosphere (transmission), the effects on different objects such as humans, animals, plants, soil, climate and material goods (immission) and the interlinking of these different problems.

Interdisciplinary studies deal with complex ecological questions requiring interdisciplinary or trans-disciplinary collaboration between different scientific disciplines. Priority is given to the recording and documentation of biodiversity in Austria. It is with this end in mind that the series *Catalogus Florae Austriae*, *Catalogus Novus Faunae Austriae*, *Checklists of the Flora and Fauna of Austria* and *Biosystematics and Ecology* are published. In support of this work, special studies are carried out in taxonomy, phylogenetics, evolutionary biology and biogeography. Here, particular importance is given to the synthesis of organismic and molecular effects.

Highly relevant areas of research at the interfaces between technology, environment and society are dealt with in interdisciplinary basic research in technology assessment. The studies into the protection of privacy proved to be of crucial significance in 2006, as this issue is being accorded growing importance in security and data protection policy in Austria and in the EU as a whole. Of particular relevance to decision-makers

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are the ongoing efforts in the field of e-government and, more recently, the risks posed by nanotechnology. Attention has also been focused on questions relating to the realisation of environment-friendly technologies and the public perception of modern genetic research, to name just two examples.

Environmental Research		
Average number of staff in 2006 (incl. seconded government employees)	m	f
	34	28
Number of full-time equivalents	31.4	19.9
of which:		
· scientific staff	23.8	7.0
Basic budget (in EUR '000)	2,790.00	
Third-party share	50.24%	
Research projects underway in 2006	70	
Publications		
A.	Peer-reviewed contributions in journals or anthologies · of which in indexed journals	30 24
	Books / monographs	0
B.	Lengthier contributions without peer review in journals or anthologies	15
	Editorships	4
C.	Other scientific publications	31
Lectures		
A.	Invited scientific lectures · of which at international events · of which keynotes and named lectures	33 8 0
B.	Other scientific lectures · of which at international events	27 13
C.	Scientific poster presentations · of which at international events	14 0

Space research and the associated missions typically involve multilateral cooperation, an interdisciplinary approach and projects lasting several years. In order to fulfil these research activities, characterised by continuity and sustainability, a suitable research institution with the appropriate expertise is required. The Academy responded to the challenge and now operates two research units in the field of space research. This allows the Academy to support long-term missions and contribute its long-established reputation in international cooperative ventures, and also to flexibly coordinate Austrian research activities.

### *Space Research*

Space Research Institute  
Commission for Astronomy

The Space Research Institute carries out scientific research in space plasma physics, the exploration of the solar system and the exploration of the Earth's gravitational field. In terms of the development of instruments, the institute specialises in the construction of magnetometers, the calibration of antennas and laser distance measurements to satellites. It is currently involved in 12 space missions, most notably with ESA, NASA and the national space agencies of France, Japan and China, as well as the Austrian space industry and more than

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100 research institutes around the world. These missions range from the measurement of the Earth's gravitational field (GOCE) and fleets of near-Earth satellites (Cluster, Double Star, THEMIS, MMS) to solar observation (STEREO) and the exploration of planets such as Saturn (Cassini), Venus (Venus Express) and Mercury (BepiColombo) as well as extrasolar planets (COROT) and comets (Rosetta). These missions can last between 10 and 20 years from the construction of the instruments to the evaluation of the data.

Activities in the field of astronomy concentrate on assigning Austrian representatives to international astronomy committees, bringing together research activities in Austria, publishing an international journal on asteroseismology and dealing with topics of Austria's astronomical history. Contributions to solar research are another key area of activity which is continually growing in importance

Space Research		
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	m	f
	56	14
Number of <b>full-time equivalents</b> of which:	51.8	11.6
· scientific staff	41.7	5.5
<b>Basic budget</b> (in EUR '000)	4,046.50	
<b>Third-party share</b>	16.30 %	
Research projects underway in 2006	61	
Publications		
A.	Peer-reviewed contributions in journals or anthologies · of which in indexed journals	77 71
	Books / monographs	1
B.	Lengthier contributions without peer review in journals or anthologies	74
	Editorships	5
C.	Other scientific publications	8
Lectures		
A.	Invited scientific lectures · of which at international events · of which keynotes and named lectures	54 42 1
B.	Other scientific lectures · of which at international events	104 100
C.	Scientific poster presentations · of which at international events	80 78

### *Interdepartmental Research Tasks*

Even though the Academy encourages the formation of focused fields of research, it also aims to support research projects that cannot be definitively assigned to any of the fields of research already mentioned.

Commission for the History of Natural Sciences, Mathematics and Medicine

Commission for Developmental Issues at the Academy

Commission for Scientific Cooperation with the Austrian Federal Ministry of Defence

The Commission for the History of Natural Sciences, Mathematics and Medicine is primarily concerned

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with the indexing of two collections of books and documents in the possession of the Academy. In addition it organises lectures and conferences to bring the history of the natural sciences to a wider audience.

One special area, and from a historical point of view an extremely interesting part of our cultural heritage, is the Woldan Collection. This collection of historical geographica, cartographica and coins from the period 1500–1918 was systematically collected by the private scholar Erich Woldan, who bequeathed it to the Academy in his last will and testament. Since 1985, the Commission for the History of Natural Sciences, Mathematics and Medicine has been creating a database of the collection, with brief commentaries, making it accessible to others.

Research into development issues brings together academic problems with a specific application in development policy, acting as a bridge between them. This objective is realised through both applied cooperative research projects with partners in developing countries and by advising scientific institutions and funding providers on scientific issues relating to development cooperation. The provision of mediation services for organisations in science, industry and development cooperation both in Austria and abroad, proactive information activities and the networking of institutions in both areas are also seen as essential tasks. This has resulted in a multi- and interdisciplinary platform for all individuals and institutions involved in scientific issues of development cooperation.

In accordance with the agreement between the Academy and the Austrian Federal Ministry of Defence, the aims of the scientific collaboration with departments of the ministry consist in the provision of material and financial support for basic research by the Academy in areas of relevance to the ministry. The Federal Ministry of Defence can take advantage of the opportunity to assign research requirements which it is unable to cover itself to members of Austria's most prestigious scientific institution. •

Interdepartmental Research Tasks			
		m	f
Average number of staff in 2006 (incl. seconded government employees)		1	4
Number of full-time equivalents		1.0	2.6
of which:			
· scientific staff		1.0	0.4
Basic budget (in EUR '000)		256.0	
Third-party share		3.0%	
Research projects underway in 2006		18	
Publications			
A.	Peer-reviewed contributions in journals or anthologies	1	
	· of which in indexed journals	0	
	Books / monographs	2	
B.	Lengthier contributions without peer review in journals or anthologies	1	
	Editorships	0	
C.	Other scientific publications	11	
Lectures			
A.	Invited scientific lectures	0	
B.	Other scientific lectures	3	
	· of which at international events	0	
C.	Scientific poster presentations	0	

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### *Centre for Ancient World Studies*

#### **6.3.2 Centres of the HS cluster**

The aim of the Centre for Ancient World Studies is to link-up all ancient world research at the Academy. The geographical area covered stretches from Central Europe across the Mediterranean region to Egypt and the cultures of the Middle East and Southern Asia; the time period covered ranges from prehistory and early history to the arrival of the Arabs. The research projects are as diverse as the working methods employed. Individual projects, joint ventures with Austrian and foreign institutions and an interdisciplinary special research section supplement the current state of research into the history, material culture, religion, law, literature, art and economy of ancient cultures. Special attention is given to the editing and publication of archaeological, epigraphical and numismatic primary sources, the patrology of late antiquity and papyrology. Owing to the scope, methodical approach and academic effort involved, these are projects that can no longer be handled by universities.

Institute for Studies of Ancient Culture

Commission of Asia Minor

Commission for Egypt and the Levant

Commission for Ancient Literature and Latin Tradition

Commission for Legal History of Ancient States

Commission for Editing the Corpus of the Latin Church Fathers (CSEL)

Commission for Mycenaean Studies

Numismatical Commission

Prehistoric Commission

The work of the Institute for Studies of Ancient Culture focuses on basic research into the material culture of antiquity, paying special attention to the Aegean cultural area and the formerly Roman provinces in Austria. Specialist methods are further developed within the framework of individual projects and interlinked across specialisms through intra- and interdisciplinary cooperation.

The Commission of Asia Minor deals with the recording, documentation, publication and interdisciplinary evaluation of the Greek and Latin inscriptions of ancient Asia Minor and the exploration of all aspects of the history and cultural history of this region.

In addition to carrying out its own research projects, the Commission for Egypt and the Levant serves as an interface for research within Egyptological institutions in Austria. One of the Commission's core projects is the collaboration on the excavation in Auaris/Tell el-Dab'a in Egypt's eastern delta. In 2006, further work was carried out on a vast royal precinct from the early Tuthmosidic period.

The Commission for Ancient Literature and Latin Tradition is mainly involved in collaborating on two dictionary projects based in Munich, the *Thesaurus Linguae Latinae* and the *Mittellateinisches Wörterbuch* (Dictionary of Middle Latin), and in the scholarly study of "ancient music" – the reconstruction of musical instruments and the techniques needed to play them based on existing fragments of music and archaeological findings.

The Commission for Legal History of Ancient States carries out research into ancient legal history, focusing on the law of the Greek polity and epigraphy, legal life in Graeco-Roman Egypt, Byzantine legal history and the law of the Christian Orient.

## 6.3 Research activities in the fields of research and centres » 6.3.2 Centres of the HS cluster

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The main objective of the Commission for Editing the Corpus of the Latin Church Fathers (CSEL) is to record as fully as possible the surviving handwritten works of the Latin church fathers, in other words Christian writers from the third to the sixth century.

The Commission for Mycenaean Studies carries out research into the ancient and early history of Greece and the Aegean from prehistoric cultures to the age of Homer, including Europe's first great civilisations in Minoan Crete and Mycenaean Greece. It is also devoted to the study of Mycenaean Linear B texts and the non-written cultures of the post-Mycenaean period.

The Numismatical Commission is devoted to the study of coins themselves, their historical monetary and financial backgrounds and the cultural-historical context of monetary media. Its work currently focuses on exploring the history of coins and money in ancient Austria, the Roman Empire and the Iranian cultural area in pre-Islamic times.

The activities of the Prehistoric Commission comprise research projects dealing with the Palaeolithic, the Middle / Late Bronze Age and the Late Iron Age. The excavations at Krems-Wachtberg in 2005/2006 revealed two graves. There is also a unique, 27,000-year-old double burial of two newborns. The careful construction of the grave, and the grave goods, bear witness to the value placed upon these newborns and their integration in society.

<b>Centre for Ancient World Studies</b>		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	24	34
Number of <b>full-time equivalents</b> of which:	20.9	23.8
· scientific staff	20.9	22.8
<b>Basic budget</b> (in EUR '000)	1,622.50	
<b>Third-party share</b>	48.99%	
<b>Research projects</b> under way 2006	126	
<b>Publications</b>		
A.	Books / monographs or editions	7
	Peer-reviewed contributions in journals or anthologies	50
	· of which in indexed journals	2
B.	Editorships	9
	Lengthier contributions without peer review in journals or anthologies	30
C.	Other scientific publications	57
	Encyclopaedia articles	134
<b>Lectures</b>		
A.	Invited scientific lectures	50
	· of which at international events	6
	· of which keynotes and named lectures	0
B.	Other scientific lectures	18
	· of which at international events	4
C.	Scientific poster presentations	7
	· of which at international events	5

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### *Centre for Studies in Asian Cultures and Social Anthropology*

The aim of the Centre for Studies in Asian Cultures and Social Anthropology is to carry out research into social, cultural and historical facts and contexts which are rooted in, or have their origins in, selected regions of Asia. In terms of methodology and science history, the Centre for Studies in Asian Cultures and Social Anthropology employs a range of pluralistic approaches, drawn from the traditions of the “philological-historical method” but which has long adopted methods from social science and cultural studies (including literature, religion etc.). Particularly in this context, social anthropology, a core aspect of the Centre’s work, takes on a special role, linking as it does different methodologies. Long-term cultural developments, historical, cultural and civilisational change and the interplay between tradition and modernity, locality and globality, characterise the thematic and methodical approaches of the Centre. It is necessary for all the involved disciplines to retain firm roots in their own research traditions. The researchers’ main aim is not to identify unique aspects of Asian cultures, but – with due respect for their particular characteristics – to understand their general place within global cultural processes affecting the whole of humankind.

Commission for Social Anthropology  
Institute for Iranian Studies  
Institute for the Cultural and Intellectual History of Asia

Social and ritual change, consensus and conflict, are current research topics handled by scholars of the Commission for Social Anthropology – which became the Social Anthropology Research Unit on 1 January 2007. In geographical terms, this covers the Arab world, including North Africa, Central Asia with Mongolia and Tibet, South-East Asia and the islands of the Indian Ocean. These selected regions of Asia are the subject of contemporary and historical studies into issues such as the formation of identity in the Islamic world, tradition and change in the cultures of central Asia and the turbulent dawn of modernism in South-East Asia. These serve as important aids for people in the political sphere and the general public in understanding current affairs.

“Iranian-influenced cultures between tradition and modernity” is the key area of research of the Institute for Iranian Studies. The Institute’s aim is to contribute to a better understanding of the historical background to the current cultural situation in Islamic cultures in Iran, Afghanistan, Central Asia, and the Indian Subcontinent and to establish general principles of cultural history. Research is also carried out with regard to the relations between the Iranian cultural area and the Asian region as a whole. Researchers employ methods of literature and linguistics, historical research, religious studies, sociology and the history of art. This is complemented by traditional linguistic research and Iranian studies in relation to Austria. This Institute of the Academy also serves as a hub for the Central European Network of Iranian Studies.

What historical traditions lie behind the thinking and behaviour of modern Asian societies? The Institute for the Cultural and Intellectual History of Asia aims to understand the many different developments, contacts and mutual influences of Asian cultures. In cultural and geographical terms, the focus is on eastern, south-eastern, southern and central Asia and comprises research into the history of cultures and ideas in the scholarly disciplines of Indology, Tibetology, Japanology, the study of Buddhism and religious studies. Researchers see it as their main task to make original sources available to a wider readership.



6.3 Research activities in the fields of research and centres >> 6.3.2 Centres of the HS cluster  
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For the history of philosophy and religion in India and Tibet they produce editions and interpretations; for Japan they publish studies of the history of religion and mentality.

<b>Centre for Studies in Asian Cultures and Social Anthropology</b>		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	19	17
Number of <b>full-time equivalents</b> of which:	17.7	10.7
· scientific staff	17.4	7.0
<b>Basic budget</b> (in EUR '000)	1,447.00	
<b>Third-party share</b>	32.83%	
Research projects underway in 2006	112	
<b>Publications</b>		
A.	Books / monographs or editions	12
	Peer-reviewed contributions in journals or anthologies	11
	· of which in indexed journals	0
B.	Editorships	5
	Lengthier contributions without peer review in journals or anthologies	0
C.	Other scientific publications	67
<b>Lectures</b>		
A.	Invited scientific lectures	45
	· of which at international events	5
	· of which keynotes and named lectures	0
B.	Other scientific lectures	10
	· of which at international events	0
C.	Scientific poster presentations	0

The Centre for Cultural Research is involved in projects in the fields of philology, music, the history of art and theatre, literature and culture, and text technology. This Centre provides an internationally visible platform for key areas of the humanities which also promotes the networking of interdisciplinary topics.

*Centre for  
Cultural Research*

AAC - Austrian Academy Corpus  
 Commission for Culture Studies and History of Theatre  
 Commission for the History of Art  
 Commission for Music Research  
 Commission for the "Fackel" Text Dictionary  
 Commission for Literature (until 31/12/2006)

The digital online edition of "Die Fackel", which was made freely available on the internet on 1 January 2007, was produced by the AAC – Austrian Academy Corpus of the Academy. The magazine "Die Fackel", which was published by Karl Kraus in Vienna from the beginning of April 1899 until February 1936 with 922 editions and 415 issues, is unique in the field of German literature.

One of the AAC's research projects is developing text technology on the basis of a large, annotated and complex

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collection of digitised complete texts illustrating German language and literature between 1848 and 1989.

The research programme “Gedächtnis – Erinnerung – Identität” (Memory – Remembrance – Identity) run by the Commission for Culture Studies and History of Theatre responds to current social issues with empirical surveys. The call for stable European places of memory and a binding European identity stands opposite the equivocality of memories, remembrances and identities resulting from Europe’s cultural diversity.

The complex history of the planning and construction of the Hofburg Imperial Palace in Vienna, which spans some seven centuries, is the subject of a major project being undertaken by the Commission for the History of Art. A team of art historians, archaeologists, historians and garden historians are studying the planning, construction and function of the palace throughout history, its architecture and garden layout, artistic features and the underlying programmatic concepts. From a historical and artistic point of view, the Hofburg Imperial Palace in Vienna is one of the most important secular building complexes in Europe.

2006 witnessed the completion of the “Oesterreichisches Musiklexikon” project, undertaken by the Commission for Music Research. This reference work on Austrian music comprises 2,778 pages and 7,474 index words on topics relating to the music of Austria. The encyclopaedia, published by the Austrian Academy of Sciences Press, can also be accessed online and is being continuously updated. The Commission is also involved in an international partnership for the edition of Schubert works and the new edition of the catalogue of Anton Bruckner’s works.

The task of the Commission for the “Fackel” Text Dictionary is to produce a three-part dictionary for the magazine “Die Fackel”, published in Vienna by Karl Kraus. The second volume, “Schimpf- und Schmähwörterbuch”, is currently in preparation.

Centre for Cultural Research		
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	m	f
	21	21
Number of <b>full-time equivalents</b> of which:	16.4	17.9
· scientific staff	16.4	15.9
<b>Basic budget</b> (in EUR '000)	1,026.50	
<b>Third-party share</b>	58.98%	
Research projects underway in 2006	134	
Publications		
A.	Books / monographs or editions	9
	Peer-reviewed contributions in journals or anthologies	46
	· of which in indexed journals	4
B.	Editorships	11
	Lengthier contributions without peer review in journals or anthologies	86
C.	Other scientific publications	80
	Encyclopaedia articles	489

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Lectures		
A.	Invited scientific lectures	40
	· of which at international events	18
	· of which keynotes and named lectures	6
B.	Other scientific lectures	8
	· of which at international events	5
C.	Scientific poster presentations	1
	· of which at international events	1

The units of the Centre for Medieval Studies carry out concerted research into cultural history and are concerned with recording, publishing, documenting and interpreting written, pictorial and material sources, in the broadest sense of the word, dating from the medieval and early modern periods in Europe and the eastern Mediterranean.

### *Centre for Medieval Studies*

The Centre's main areas of work include the study of all aspects of material culture as a testimony to the diversity of human experience in medieval and early modern Europe, the critical editing of official records, the publication of sources of medieval legal history, the filming and editing of Austrian inscriptions for documentation purposes, the study of ethnic identities in early medieval Europe, the recording and documentation of basic geographical material and monuments of the Byzantine Empire in its various stages of expansion, lexicographical studies of Greek in the Middle Ages, the systematic study of Byzantine seals, studies of Byzantine records, the cataloguing of manuscripts in Austrian libraries (with particular attention being given to illuminated manuscripts) and the documentation of watermarks from the medieval and early modern periods using betaradiography. In all these areas, the research carried out in the Centre's units is amongst the most advanced in the world.

Institute for Byzantine Studies

Institute for Medieval History Research

Institute for the Material Culture of the Middle Ages and the Early Modern Period

Commission for Palaeography and Codicology of Medieval Manuscripts in Austria

Basic research into the historical geography, language, diplomacy, palaeography, sigillography, music and literature of the Byzantine period is carried out by the Institute for Byzantine Studies. The spectrum ranges from the publication of an historical atlas covering various regions of Asia Minor ("Tabula Imperii Byzantini") with accompanying text volumes to the recording and editing of Greek manuscripts in European libraries.

During the Middle Ages, the process by which ethnic identities become the basis for political power took on its formative direction. The development of ethnic identities in early medieval Europe is the key area of concern of the Institute for Medieval History Research. The Institute coordinates an international network, within the framework of which researchers from all over Europe and the United States study the development of the ethnic and political map of Europe. By adopting a comparative perspective of this period, it is possible to gain a better understanding of today's world. A range of written sources are evaluated, including chronicles, records, sermons, letters, inscriptions and Bible commentaries.

The Institute for the Material Culture of the Middle Ages and the Early Modern Period is devoted to studying

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the diversity of the human experience on the basis of material culture. The sources used include physical evidence as well as images and texts, in which clues to extinct ways of life are systematically studied and evaluated. The multi-layered cultural context in which objects of daily life exist and the variety of clues left to us demand an interdisciplinary discourse and a form of analysis that transcends sources and subjects. The Institute provides a freely accessible online image database.

The scientific recording of the medieval manuscripts in Austrian libraries is carried out almost exclusively by the Commission for Palaeography and Codicology of Medieval Manuscripts. The Commission produces special catalogues for manuscripts selected on the basis of a particular characteristic, such as illuminated manuscripts, and also general catalogues describing the outward appearance and content of all manuscripts in a fund. Through the "Medieval Watermarks" collection, which currently includes 8,000 records, the Commission is involved in the EU project BERNSTEIN, which links European databases relating to paper. Watermarks provide us with information on when and where paper was manufactured.

Centre for Medieval Studies		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	26	26
Number of <b>full-time equivalents</b> of which:	25.0	19.6
· scientific staff	24.0	15.9
<b>Basic budget</b> (in EUR '000)	1,648.00	
<b>Third-party share</b>	49.05%	
Research projects underway in 2006	189	
Publications		
A.	Books / monographs or editions	9
	Peer-reviewed contributions in journals or anthologies	14
	· of which in indexed journals	2
B.	Editorships	6
	Lengthier contributions without peer review in journals or anthologies	66
C.	Other scientific publications	64
Lectures		
A.	Invited scientific lectures	67
	· of which at international events	17
	· of which keynotes and named lectures	1
B.	Other scientific lectures	9
	· of which at international events	3
C.	Scientific poster presentations	1
	· of which at international events	0

### *Centre for Research into the Modern Period and Contemporary History*

The research units of the Centre for Research into the Modern Period and Contemporary History are concerned with the position of the Habsburg monarchy and the Republic of Austria in the context of the multicultural conflict society of modern central Europe.

The largest individual project deals with the comparative history of "Continental European Empires 1700–1920". The research area entitled "Die Höfe des Hauses Österreich, 1550–1850" (The Courts of the

6.3 Research activities in the fields of research and centres » 6.3.2 Centres of the HS cluster  
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Austrian Monarchy, 1550-1850), covering an extensive period of history, addresses issues of complexity and functionality in the Austrian monarchy as a complex political system. The editorial publication of sources of Austrian legal history helps researchers to analyse the fundamental aspect of the Austrian legal system and, increasingly, its eastern neighbours. In international research, the history of the Habsburg monarchy in the 19th century is considered to be a model case when it comes to the possibilities and limitations of the organisation of a multicultural and federal multinational state, historically seen as an alternative to the nation state and currently as an example for European politics. A lexical aid is provided by the “Österreichisches Biographisches Lexikon” (Austrian Biographical Encyclopaedia), a systematic compendium of prominent individuals covering the period 1815–1950.

Historical Commission

Commission for the History of the Habsburg Monarchy

Commission for Austrian Legal History

Austrian Biographical Encyclopaedia and Biographical Documentation

The Historical Commission is mainly concerned with the study of phenomena transcending nations and states in modern European history, such as the power struggles of the “imperial powers”, structures of European absolutism and the position of Austria in international politics since World War II.

The two volumes completed in 2006 as part of the series on “The Habsburg Monarchy 1848–1918” are devoted to political mobilisation in central Europe between 1848 and 1918. This is the first detailed research carried out in this area. This gap in scholarship is being filled by the Commission for the History of the Habsburg Monarchy with its extensive research mandate. It cooperates with 80 researchers in 14 different countries through its international network.

The Commission for Austrian Legal History is concerned with the publication of legal sources. These include, for example, town charters and the ordinances of guilds and craftsmen, which are published in the Fontes Iuris series.

A network of staff from Austria, Germany, Poland, the Czech Republic, Hungary, Croatia, Slovenia and Italy contribute to the work produced by the institute Austrian Biographical Encyclopaedia and Biographical Documentation, the Austrian Biographical Encyclopaedia. This includes individuals who have made outstanding contributions in a wide range of fields – such as politics, science or art. The 12th volume, which contains 932 biographies, was completed in 2006. The online edition of volumes 1 to 12 contains over 16,000 biographies.

Centre for Research on Modern and Contemporary History		
	m	f
Average number of staff in 2006 (incl. seconded government employees)	12	13
Number of full-time equivalents	9.6	11.3
of which:		
· scientific staff	8.6	8.3
Basic budget (in EUR '000)	650.20	
Third-party share	19.38%	
Research projects underway in 2006	70	

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Publications		
	Books / monographs or editions	3
A.	Peer-reviewed contributions in journals or anthologies	13
	· of which in indexed journals	1
B.	Editorships	3
	Lengthier contributions without peer review in journals or anthologies	25
C.	Other scientific publications	14
	Encyclopaedia articles	4
Lectures		
A.	Invited scientific lectures	9
	· of which at international events	1
	· of which keynotes and named lectures	0
B.	Other scientific lectures	1
	· of which at international events	0
C.	Scientific poster presentations	0

### *Social Sciences Research Centre*

The Social Sciences Research Centre comprises all those research units concerned with the diverse phenomena of behaviour and the co-existence of human beings in society. This broad spectrum directs attention to often neglected correlations and facilitates the study of borderline areas and interdisciplinary problems.

One key area of interest is the relationship between people and space, which involves the documentation, analysis and interpretation of regional, inter-urban and intra-urban disparities in society and land use and the significance of global change for mountain areas. Another key area is devoted to the emergence of a supranational political community and its constitutionalisation, and the analysis of migration and integration processes in Austria and Europe.

The relationship between the individual and society is another of the Centre's main areas of concern. It studies the social phenomenon of mass media and its impact on political communication in a democratic society. Other projects take a comparative approach to tort law, an important aspect of human co-existence, which governs compensation for harm or loss and therefore steers human behaviour. Finally, there is a large area devoted to the description, explanation and prediction of demographic processes.

Research Unit for European Tort Law

Research Unit for Mountain Research: Man and Environment

Institute for Demography

Institute for European Integration Research

Institute for Urban and Regional Research

Commission for Migration and Integration Research

Commission for Comparative Media and Communication Studies

The Research Unit for European Tort Law is concerned with comparative law. It endeavours to compare European legal systems and also those of the US, South Africa, Israel, Japan and Korea, to study the doctrines underlying different solutions to similar legal matters and to create an understanding of the legal cultures of different countries. This results in valuable input, both for the continued development

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of national legal systems and for legal harmonisation in the European Union.

Scholars in the Research Unit for Mountain Research: Man and Environment study not only the scope and impact of global change and its implications for mountain areas, but also formulate proposals for regional sustainability strategies. The existing network of high-altitude measurement stations for climate observation and impact assessment is being maintained and expanded. There are several regional studies devoted to the socio-cultural and economic problem of globalisation in various mountain regions around the world.

Research into population trends is one of the key areas of concern at the Institute for Demography. The Institute has developed a “birth barometer”, the first method anywhere in the world to allow a detailed analysis of monthly trends in birth intensity. The monthly approach makes it possible to analyse the temporal relationship between the introduction of new family policy measures and birth trends, adjusted for external factors.

The Institute for European Integration Research is primarily concerned with the political science aspect of the integration process. The European integration process and its democratic quality are analysed with the aid of key areas, European statehood, European citizenship and the European public. The aim is to analyse the process of European integration theoretically and empirically, to examine its implications for democracy and to draw conclusions of relevance to European polity formation.

The Institute for Urban and Regional Research takes an interdisciplinary and comparative approach to the development potential of European metropolitan areas, sub-urbanisation and the significance of migration, particularly the impact of east-west migration on the development of European cities. The Institute’s tasks include the documentation, analysis and interpretation of regional, inter-urban and intra-urban disparities in society and land use.

The Commission for Migration and Integration Research links the Academy to the European research programme IMISCOE (Immigration, Integration and Social Cohesion in Europe). The aim of this programme is the integration of European migration research, in other words to bundle previous research work and jointly develop new research approaches.

One of the key research areas of the Commission for Comparative Media and Communication Studies is the analysis of the Austrian newspaper market in terms of its historical development and in the European context. The Commission is the Austrian partner in the international project “Europäische Pressemärkte im Vergleich” (Comparison of European Press Markets).

<b>Social Sciences Research Centre</b>		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	34	44
Number of <b>full-time equivalents</b> of which:	23.9	31.3
· scientific staff	22.6	23.9
<b>Basic budget</b> (in EUR '000)	3,378.40	
<b>Third-party share</b>	23.47%	
Research projects underway in 2006	162	

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Publications		
	Books / monographs or editions	14
A.	Peer-reviewed contributions in journals or anthologies	60
	· of which in indexed journals	17
B.	Editorships	16
	Lengthier contributions without peer review in journals or anthologies	26
C.	Other scientific publications	131
Lectures		
A.	Invited scientific lectures	79
	· of which at international events	14
	· of which keynotes and named lectures	21
B.	Other scientific lectures	45
	· of which at international events	12
C.	Scientific poster presentations	4
	· of which at international events	0

### *Centre for Linguistics and Audiovisual Documentation*

The Centre for Linguistics and Audiovisual Documentation serves as an interface for an inter- and intradisciplinary association of research units that combine a rich tradition with innovative approaches. The projects in which the Centre is involved are concerned with the documentation, study and analysis of language(s) and names, taking into account their past and present cultural and social dimensions; the study of spoken variants in Austria and neighbouring, formerly German-speaking areas; and the languages of South-Eastern Europe, particularly the Slavic languages (which are also minority languages in Austria). Another area is concerned with covert and overt first language acquisition in children and the impairment caused by language disorders, and also engages in therapy research. The Centre's research findings are obtained by building up project-specific corpora, the evaluation of cultural-historical and linguistic sources, and contemporary information. These findings are made publicly available using modern methods of edition and publication based on new media, which provide timely access to the sources. The Centre's other main tasks include the production and archiving of phonographic and videographic research documents, primarily in the fields of social and cultural anthropology, music ethnology and linguistics, and providing advice and support for Austrian research projects for the acquisition of such research documents. These are accompanied by the ongoing development of methodology and technology in scientific phonography and videography, and source-critical processes and standards for the analogue-digital transfer of audiovisual sources to make them available in digital form in the long term.

Balkans Commission

Institute of Lexicography of Austrian Dialects and Names

Commission for Linguistics and Communication Research

Austrian Audiovisual Research Archive (Phonogrammarchiv)

The Balkans Commission is concerned with the study of the cultures, languages and literatures of the Balkan peninsula, paying special attention to their ethnography and history. Special areas of interest include reciprocal effects between languages and cultures within the Balkan language area.

The Institute of Lexicography of Austrian Dialects and Names is a competence centre for scholarly research,



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documentation and investigation of Austro-Bavarian dialect variants and the study of past and present place names and personal names in Austria. The dialects and names of Austria and South Tyrol are comprehensively documented in the “Wörterbuch der bairischen Mundarten in Österreich” (Dictionary of Bavarian Dialects in Austria) and the “Altdeutsches Namenbuch” (Dictionary of Old German Names). The Institute of Lexicography of Austrian Dialects and Names serves as a coordinating body, representing all of Austria’s national and regional bodies concerned with geographical names on an international level.

The Commission for Linguistics and Communication Research studies the acquisition and usage of language and the impairment of language abilities in children and adults. Its main task is to systematically gather and analyse long-term and cross-sectional data on language disorders, speech processing and first language acquisition of German compared with other languages by recording spontaneous speech and carrying out experiments.

Unlike text documents, the long-term storage of audiovisual documents as stores of knowledge presents specific challenges in terms of conservation and restoration. The Austrian Audiovisual Research Archive dedicates special attention to this problem. The methods of audiovisual field research are further developed and the experiences gathered from third-party projects supervised by the Institute are shared. A selection of the Archive’s collection is published on CD, for example the complete edition of the historical stock (1899–1950) recorded in the International Register of UNESCO’s “Memory of the World” programme. •

Centre for Linguistics and Audiovisual Documentation		
	m	f
Average number of <b>staff</b> in 2006 (incl. seconded government employees)	13	32
Number of <b>full-time equivalents</b> of which:	12.1	24.7
· scientific staff	11.9	17.2
<b>Basic budget</b> (in EUR '000)	1,688.50	
<b>Third-party share</b>	15.77%	
Research projects underway in 2006	154	
Publications		
A.	Books / monographs or editions	4
	Peer-reviewed contributions in journals or anthologies	19
	· of which in indexed journals	5
B.	Editorships	0
	Lengthier contributions without peer review in journals or anthologies	21
C.	Other scientific publications	21
	Encyclopaedia articles	8
Lectures		
A.	Invited scientific lectures	72
	· of which at international events	7
	· of which keynotes and named lectures	7
B.	Other scientific lectures	46
	· of which at international events	16
C.	Scientific poster presentations	4
	· of which at international events	4

## » 6 The Academy as Research Performing Organisation

### 6.4 Impact of the research performing organisation

In view of the heterogeneity of the Academy, the impact of the research performing organisation is almost impossible to quantify. It would seem feasible, however, to measure with some degree of accuracy the impact of Academy's researchers on external stakeholders, be it universities, other organisations or interested members of the public, which indicates the broad and considerable value placed on the work of the Academy.

#### *Staff commitment in higher education*

The scientific expertise of Academy staff is recognised outside the Academy. The organisation's scientific staff are valued colleagues with active teaching commitments at almost all Austrian universities and a large number of universities of applied sciences. Thus, the basic research carried out by the Academy flows directly into academic teaching.

Teaching at universities and universities of applied sciences					
Number of courses held by Academy staff in 2006	Total	MN cluster		HS cluster	
	265	m	f	m	f
<b>of which:</b>					
· courses and seminars at universities (with course no.)	224	75	18	94	37
· special lectures (w/o course no.)	19	2	0	12	5
· courses of university level	11	4	0	5	2
· courses at universities of applied sciences	11	6	3	0	2

#### *Institutional link-up with universities via doctoral candidate programmes*

In recent years, growing importance has been attached to potential contributions to higher education at the level of the Academy's research units, particularly in relation to doctoral courses. In addition to the mentoring to dissertation students offered by many Academy units, there is increasing participation in special PhD programmes.

To name just a few examples:

The Institute of Biomedical Ageing Research cooperates with the Medical University of Innsbruck on the PhD programme "The Ageing of Biological Communication Systems". The aim is to identify the basic mechanisms of cell aging and associated age-related diseases.

The GMI and IMBA play a successful part in the international PhD programme of the Vienna Biocenter. Highly-qualified candidates from all over the world are selected to access the results of cutting-edge research and to take an active part in the institutes' research activities.

RICAM is a partner of the FWF doctoral course "Molecular Biophysics: From molecular recognition to membrane transport". It is particularly concerned with the modelling and simulation of membrane transport, contributing the expertise of the Academy institute to this career-building programme.

#### *Prizes and awards for scientific staff*

The number and reputation of prizes and awards bestowed on scientific staff are a powerful indicator of the high level of research. Prizes and awards give recognition to the achievements of individual researchers. Indirectly, they also recognise the scientific community and the institution in which these achievements were made. Prizes and awards are regarded with special consideration by the public.

## » 6 The Academy as Research Performing Organisation

Prizes and awards					
Number of staff members who received a prize or award in 2006	Total	MN cluster		HS cluster	
		m	f	m	f
	18	6	6	3	3
<b>Domicile of awarding institution:</b>					
· in Austria	7	2	4	1	0
· in the EU (excl. Austria)	7	2	2	1	2
· outside the EU	4	2	0	1	1

Here are a few examples:

In the MN cluster:

- START Prize: Hartmut Häffner, Institute for Quantum Optics and Quantum Information
- Eminent Scientist of the Year 2006: Ruth Prassl, Institute of Biophysics and Nanosystems Research
- Lower Austrian Science Prize 2006: Meinhard Regler, Institute for High Energy Physics

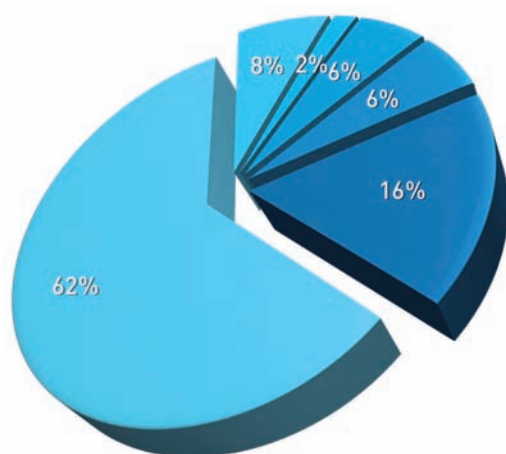
In the HS cluster:

- European Latsis Prize 2006: Rainer Bauböck, Institute for European Integration Research
- ARSC Award: Franz Lechleitner, Audiovisual Research Archive
- Culture Medal of Upper Austria: Elisabeth Maier, Commission for Music Research

Prominent prizes and awards were also bestowed on members (cf Ch. 5.3) who are involved in Academy research units.

The media presence of the Academy is primarily determined by the achievements of its research units. Current research results, the completion of projects, the launch of new research projects – for example an EU project – and publications in leading academic journals often attract media attention. Of all reports relating to the Academy in 2006, 62% concerned the Academy's research work.

*Media presence of the Academy as a research performing organisation*



Research	62%
Learned society	8%
Career building	2%
The Academy in the context of science policy	6%
Prizes and awards to Academy members and staff	6%
Events and miscellaneous	16%

## » 6 The Academy as Research Performing Organisation

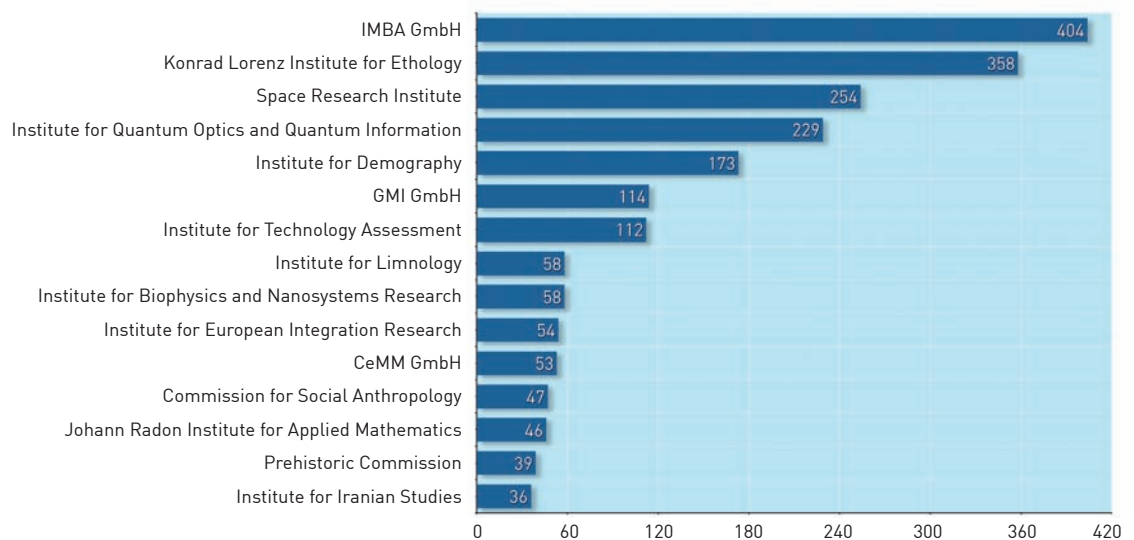
In addition to recording the thematic context, media monitoring also records how frequently the Academy’s individual research and organisational units feature in the media. In 47% of cases, the Academy is given a general mention – about two thirds of the time in conjunction with a research unit. Another 38% relate to specific research units. Where research units are specifically named, 78% are from the MN cluster and 22% from the HS cluster.

Almost all research units of the Academy were mentioned in the media in 2006. The most prominently featured unit was the Institute for Molecular Biotechnology (with press reports covering, for example, research into the formation of bone metastases and the study of how tumours form from stem cells). Significant media presence was also given to the various missions in which the Space Research Institute was involved and the research carried out by the Institute for Quantum Optics and Quantum Information (e.g. the observation of quantum states). Particular mention should be made of the unusually high coverage given in 2006 to the research work of the Konrad Lorenz Institute for Ethology on the individuality of human odour.

There was considerable media interest in issues such as population trends, and also the discovery of the prehistoric skeletons of two infants, which led to frequent mentions of the Institute for Demography and the Prehistoric Commission.

The most frequently mentioned research units in the print media, on the internet, on the radio and on television were as follows:

**Media presence of Academy research units incl. limited liability research companies**



### *Internet popularity of research units*

The websites of the Academy’s research units are a core part of the Academy’s website. They account for about 77% of all visits on Academy websites. The sites of the individual units provide information on organisation, key areas of research, projects and publications and details of scientific and public events. Features such as online databases, documentation of research activities with images and audio samples increase the appeal of the online content. •

## » 6 The Academy as Research Performing Organisation

Internet popularity of research units	
Number of hits* in 2006 on websites of the Academy's research units, incl. limited liability research companies	23,136,106
Total number of hits on www.oeaw.ac.at	30,160,456
Hits on research units, websites from the domain:	
· com	35.2%
· at (excl. .ac.at)	5.8%
· ac.at	16.1%
· net	12.6%
· de	5.8%
· edu	1.2%
· other	23.3%

\* To calculate the number of page hits, the number of times image files and CSS files were accessed was subtracted from the total number of website visits. The figures comprise both external hits and hits from within the oeaw.ac.at domain, which accounts for approximately 11.4%. No data was available for the Institute for Biomedical Aging Research for the period under review. The data for the Institute for the Material Culture of the Middle Ages and the Early Modern Period, the Commission for Scientific Visualisation, the Institute for High Energy Physics, the Institute of Molecular Biotechnology GmbH, the Space Research Institute and the Institute of Biophysics and Nanosystems Research were incomplete and were extrapolated for the year. The data for the Institute for Quantum Optics and Quantum Information were provided by the institute itself.

## » 7 The Academy as Career Builder

### 7 The Academy as Career Builder

The Academy is committed to helping junior researchers start out on their careers. It develops its own grant programmes, and manages and bestows its own awards and grants from special-purpose public funds, third-party funds, and with the assistance of private sponsors. The scientific and professional development of grant recipients is actively monitored.

#### 7.1 Value-creation potential of career building

##### 7.1.1 Human potential

To be able to select the best talents, the Academy has developed elaborate assessment mechanisms. These are mainly carried out by members of the Academy but also to a substantial extent by other experts from the Austrian and international scientific community.

*Assessment of applications by international peer review*

Applications for grants and awards are assessed by means of an international peer review system to ensure a high level of quality in career building.

External expert assessors in career building			
	Total	m	f
Number of active external expert assessors for the Academy's career-building programmes in 2006	508	397	111
<b>of which for career-building programmes:</b>			
· APART	183	152	31
· DOC	187	143	44
· DOC-fFORTE	79	61	18
· DOC-team	39	24	15
· MAX KADE	0	0	0
· ROM	1	1	0
· Anniversary Fund of the City of Vienna for the Academy	3	2	1
· Ignaz L. Lieben Prize	16	14	2
<b>Origin of assessors</b>			
· from Austria	98	73	25
· from EU (Excl. Austria)	298	234	64
· from outside the EU	112	90	22

The Academy has implemented a selection process – especially in the case of grant programmes – that relies heavily on the expertise of international expert assessors – more than 80% of external assessors are based abroad. As with other institutions of this type, the majority of assessors are recruited from Western Europe (mostly from Germany, from where there are 226, followed by Switzerland and Great Britain). Outside the EU, the largest number of assessors comes from the United States with 60 individuals. Of all the career-building awards given in 2006, external assessors were only involved in the prominent Lieben Prize.

Almost 22% of all expert assessors are women. The largest proportion of female assessors is to be found in

## » 7 The Academy as Career Builder

programmes in the humanities, social sciences and cultural studies – more than one third of participating experts in the selection process for DOC-team are women. A significantly lower number of women are recruited to provide expert opinions in programmes relating specifically to the natural or technical sciences. The exception to this rule is the review situation with the DOC-fORTE initiative.

An examination of the acceptance rates for the individual programmes reveals a correlation between the number of applications and evaluation standards: programmes that use transparent review processes to select successful candidates are more in demand than those where the selection process is less transparent. In 2006, the Academy signed the Charter for Researchers drafted by the European Commission and the Code of Conduct for the Recruitment of Researchers, committing itself to international standards in the quality assurance process.

Responsibility for quality assurance in career-building activities lies mainly with full and corresponding members in Austria. As part of their activities on the award committees for the grant programmes, they nominate international assessors, prepare decisions in individual jury panels and monitor the progress of projects carried out by grant recipients.

*Awarding decision and quality assurance by Academy members*

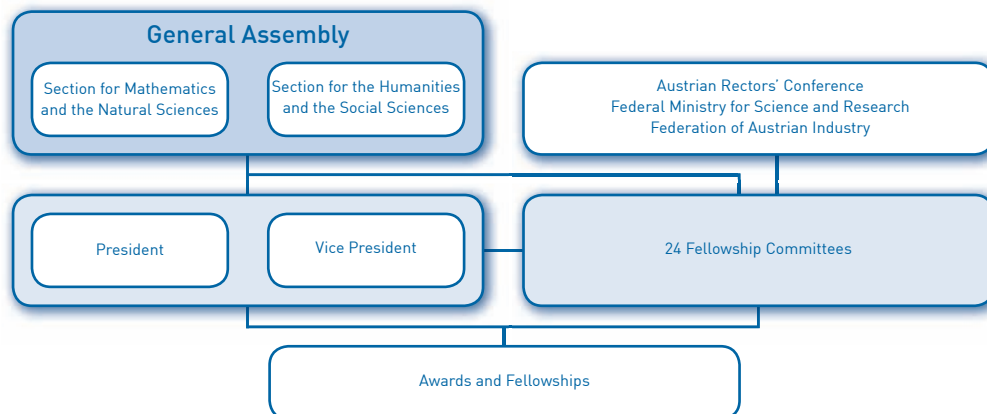
Internal expert assessors in career building							
	f.m.		c.m.i.A.		c.m.a.		Percentage of internal expert reviewers in the relevant body
	m	f	m	f	m	f	
Number of internal expert assessors for the Academy's career-building programmes in 2006	74	5	18	4	2	0	
of these in committees for:							
· Academy fellowship programmes (DOC, DOC-fORTE, APART)	8	2	4	1	0	0	54%
· DOC-team	5	0	0	0	0	0	45%
· MAX KADE	6	0	2	0	0	0	80%
· ROM Board of Trustees of the Academy	6	1	2	2	0	0	65%
· Anniversary Fund of the City of Vienna for the Academy	8	1	1	1	0	0	58%
of these for commissions regarding:							
· Othenio Abel Prize	2	0	3	0	0	0	100 %
· Edmund and Rosa Hlawka Prize	2	0	1	0	0	0	60%
· Fritz Pregl Prize	5	0	0	0	0	0	100%
· Alois Sonnleitner Prize	5	0	0	0	0	0	100%
· Jubilee Prize of Böhlau Verlag Vienna	5	1	0	0	0	0	67%
· Figdor Prize for Linguistics and Literature Studies	7	0	2	0	0	0	90%
· Figdor Prize for Law, Social and Economic Sciences	6	0	1	0	0	0	88%
· Richard G. Plaschka Legacy	5	0	1	0	0	0	75%
· Ignaz L. Lieben Prize	4	0	1	0	2	0	100%

Since the sections do not represent the full range of subjects taught at university level, a number of external experts are called in. In the case of the recently implemented career-building activities, only around half of the jury members were members of the Academy. The majority of female members – 5.6% of all Austrian members are women – is very actively involved in the Academy's efforts to encourage the next generation of researchers. •

## » 7 The Academy as Career Builder

## 7.1.2 Structural potential

The structure of the Academy's career-building activities is very heterogeneous, with a wide range of programmes of different scope and a considerable variation in acceptance rates.



Four organisations send delegates to the award committees: the Academy's General Assembly, the Austrian Rectors' Conference, the federal ministry in charge and the Federation of Austrian Industry.

Once again, the administrative costs for all career-building activities were kept very low in 2006 – with 2.9% of the total funds available for sponsorship.

*Approval rates*

Career-building initiatives vary greatly in structure. As far as grants are concerned, there is a variation in approval rates of 13% to 73%. For career-building awards, the variation is even greater, with approval rates ranging from 3% to 100%, showing the widely differing appeal of individual sponsorship programmes. This discrepancy is also revealed by the variation in endowments for both grants and awards.

Approval rates									
Career building programme	Applications			Approvals			Approval rate in %		
	Total	m	f	Total	m	f	Total	m	f
· APART	139	85	54	19	10	9	13	7	6
· DOC	228	111	117	37	19	18	16	8	8
· DOC-fFORTE	91	0	91	29	0	29	32	-	32
· DOC-team	18	6	12	6	2	4	33	11	22
· MAX KADE	10	7	3	6	4	2	60	40	20
· ROM	11	5	6	8	2	6	73	18	55
· Anniversary Fund of the City of Vienna for the Academy	60	37	23	4	3	1	7	5	2
· Othenio Abel Prize	1	1	0	1	1	0	100	100	0
· Edmund and Rosa Hlawka Prize	5	5	0	1	1	0	20	20	0
· Fritz Pregl Prize	2	2	0	2	2	0	100	100	0
· Alois Sonnleitner Prize	5	2	3	1	0	1	20	0	20
· Jubilee Prize of Böhlau Verlag Vienna	10	3	7	2	0	2	20	0	20
· Figdor Prize for Linguistics and Literature Studies	7	4	3	1	0	1	14	0	14
· Figdor Prize for Law, Social and Economic Sciences	19	10	9	2	0	2	11	0	11
· Richard G. Plaschka Legacy	5	4	1	2	2	0	40	40	0
· Ignaz L. Lieben Prize	30	22	8	1	1	0	3	3	0



## » 7 The Academy as Career Builder

The table shows that approval rates for women in 2006 were very high. This serves to highlight the Academy's commitment to gender mainstreaming measures in this area.

A comparison of the Academy's approval rates with those of other research funding institutions reveals a clear difference. In 2006, only 13% of applications for APART were approved, while 50% of applications for the Erwin Schrödinger Fellowship, offered by the Austrian Science Fund, were successful.

The acceptance rate for DOC is 16%, for the Austrian Science Fund's individual projects it is 40% (project funding is mainly awarded to doctoral candidates). In the years to come, this may result in a severe disadvantage to the Academy as a career builder, as programmes with low approval rates are perceived less attractive to the scientific community.

In terms of publicly funded grants, 48.6% of funds were awarded to women and 51.4% to men.

If we look at awards funded by private foundations, the proportion of women increases slightly: in 2005, the figure was 32.5%, but in 2006, 33.5% of researchers who received funding were women.

The proportion of women in programmes devoted to the humanities, social sciences and cultural studies is higher than for funding programmes related to other fields of research. •

*Gender aspects of career building*

#### Distribution of funds for career-building programmes under gender aspects

	Funds in EUR '000		
	Total	m	f
<b>Total expenditures for career-building programmes</b>	<b>4,890.54</b>	<b>2,631.22</b>	<b>2,259.32</b>
of which:			
· APART	1,805.23	1,282.63	522.60
· DOC	1,175.53	700.80	474.73
· DOC-fFORTE	534.73	-	534.73
· DOC-team	776.33	196.00	580.33
· MAX KADE	343.58	290.73	52.85
· ROM	33.84	10.26	23.58
· Anniversary Fund of the City of Vienna for the Academy	180.70	123.80	56.90
· Othenio Abel Prize	3.70	3.70	0.00
· Edmund and Rosa Hlawka Prize	1.90	1.90	0.00
· Fritz Pregl Prize	3.70	3.70	0.00
· Alois Sonnleitner Prize	3.70	0.00	3.70
· Jubilee Prize of Böhlau Verlag Vienna	2.50	0.00	2.50
· Figdor Prize for Linguistics and Literature Studies	3.70	0.00	3.70
· Figdor Prize for Law, Social and Economic Sciences	3.70	0.00	3.70
· Richard G. Plaschka Legacy	3.70	3.70	0.00
· Ignaz L. Lieben Prize	14.00	14.00	0.00

#### 7.1.3 Networking potential

All career-building activities at the Academy are designed to ensure that grant recipients can engage in research at the institution most suited to their academic development, be it in Austria or abroad, at a university or in a non-university research institution.

*Institutional and regional affiliation of grant recipients*

## 7.2 Activities and accomplishments in career building

### » 7 The Academy as Career Builder

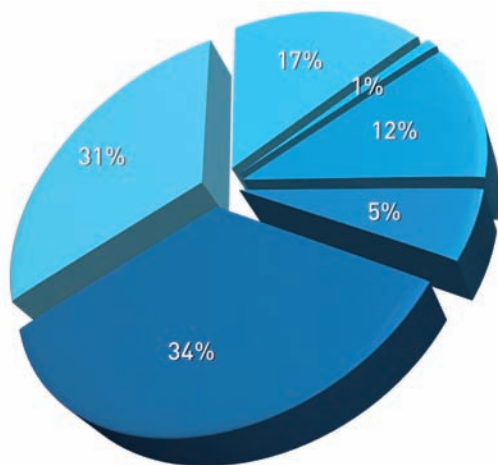
Institutional and regional distribution of fund recipients		
Activity of fund recipient in research institutions	Number of fund recipients	Share in %
<b>in Austria</b>	<b>155</b>	
of which at		
· universities	144	93%
· non-university institutions	11	7%
<b>abroad</b>	<b>66</b>	
of which at		
· universities	42	64%
· in Switzerland	1	2.4%
· in Germany	6	14.3%
· in Great Britain	9	21.4%
· in the USA	18	42.9%
· in other countries	8	19.0%
· non-university institutions	24	36%

In 2006, 70% of the total of 221 funding recipients took advantage of the allotted grants in Austria and 30% abroad. Most researchers carrying out research abroad are post-doctoral researchers. Grant recipients who receive funding as part of DOC programmes were only included in the breakdown as researchers working abroad if they completed their thesis at a foreign university. Short stays abroad are not taken into account in these statistics. 64% of the grant recipients doing research outside Austria work at universities and 36% at non-university institutions. The diagram shows that almost half of these researchers work in the US – which is also due to the fact that one of the Academy's funding programmes (MAX KADE) was set up exclusively to fund visits to the US. The second largest group of funding recipients goes to Great Britain to work on research projects there. Of the funding recipients who stay in Austria, 93% go to an Austrian university and 7% to a non-university institution. As a result, the Academy's programmes primarily fund research at universities. In 2006, 17 of 21 state-funded universities in Austria hosted grant recipients carrying out research. The most strongly represented institutions are the University of Vienna, followed by the Universities of Graz and Salzburg.

#### 7.2 Activities and accomplishments in career building

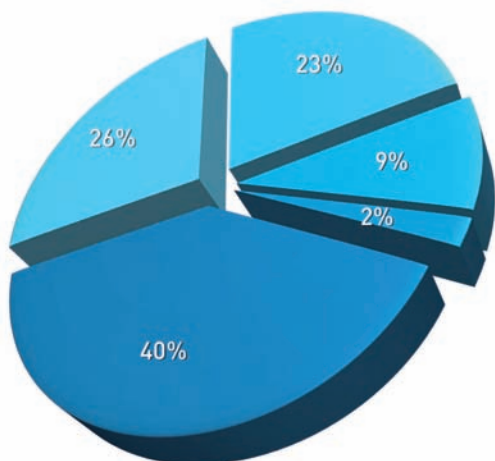
In 2006, a total of 221 women and men received funding from altogether seven grant programmes. Looking at the funding recipients by field of research reveals an astonishing trend. This trend is aided by the DOC-fORTE initiative of the Federal Ministry of Education, Science and Culture, which supports female doctoral candidates in the natural and life sciences, technical sciences, mathematics and medicine. It can be seen that the proportion of women and men in the individual disciplines is approximately equal. 10 years ago, women were traditionally represented very strongly in the humanities and social sciences; now, there is no longer a significant difference in the distribution of fields of research. However, the representation of individual fields of research remains unchanged: funding recipients in the natural sciences are the most strongly represented for both women and men, followed by grant recipients in the humanities and social sciences. A detailed analysis of the proportions of subject areas within scientific disciplines in 2006 reveals differences in distribution between men and women. Women researchers in the natural sciences mostly concentrate on biology, botany and zoology. Their male counterparts are mostly concerned with questions relating to physics and astronomy. Funding recipients in the social sciences are mostly involved in economics research projects. In the humanities, the historical sciences are particularly well represented amongst both men and women. •

## » 7 The Academy as Career Builder



**Fields of research of women in receipt of funds in 2006**

Humanities	31%
Social sciences	17%
Agriculture, forestry, veterinary medicine	1%
Medicine	12%
Technical sciences	5%
Natural sciences	34%



**Fields of research of men in receipt of funds in 2006**

Humanities	26%
Social sciences	23%
Medicine	9%
Technical sciences	2%
Natural sciences	40%

### 7.3 Impact of career building

The Academy has intensified its monitoring activities to continue beyond the end of the funding period. The primary aim is to observe the compliance with the funding objective.

*Compliance with funding objective*

#### Target compliance of funded activities

	Total		m		f	
	End of funding period	Completion	End of funding period	Completion	End of funding period	Completion
Number of completions by grant receivers in 2006, one year after end of the funding period	80	50	40	27	40	23
<b>DOC</b>	<b>56</b>	<b>37</b>	<b>29</b>	<b>22</b>	<b>27</b>	<b>15</b>
of which						
· natural sciences	24	17	14	11	10	6
· technical sciences	2	2	2	2	0	0
· medicine	7	7	3	3	4	4
· agriculture, forestry, veterinary medicine	2	1	1	0	1	1
· social sciences	9	2	4	1	5	1
· humanities	12	8	5	5	7	3

## » 7 The Academy as Career Builder

<b>DOC-fFORTE</b>	<b>8</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>8</b>	<b>7</b>
of which						
· natural sciences	7	6	-	-	7	6
· technical sciences	0	0	-	-	0	0
· medicine	1	1	-	-	1	1
<b>APART</b>	<b>16</b>	<b>6</b>	<b>11</b>	<b>5</b>	<b>5</b>	<b>1</b>
of which						
· natural sciences	7	3	5	3	2	0
· technical sciences	1	0	1	0	0	0
· social sciences	3	2	2	1	1	1
· humanities	5	1	3	1	2	0

The table refers to three programmes (DOC, DOC-fFORTE and APART) to show how many former grant recipients achieved the aim defined in the programme statutes one year after funding had ended. In the case of the doctoral candidate programmes, this means the successful completion of a doctoral thesis and in the case of APART it means the bestowing of the *venia legendi* or an equal academic achievement.

If we compare the programmes, we can see that, in 2006, the programme for the promotion of women researchers, DOC-fFORTE, exhibited the best target compliance rate: 88% of funding recipients received their doctorate within a year of the end of funding. For DOC this was the case with around two thirds of programme graduates, with marked differences between the compliance rates within individual disciplines. It should be noted that grants which ended in 2006 were awarded as partial funding. At the end of 2006, the first grants were approved for funding of up to three years, i.e. for an entire doctoral course.

There are also significant deviations in the figures for individual fields of research in the APART programme. In the natural sciences, almost 40% of funding recipients received the *venia legendi* after the end of the funding period, whereas the figure for the humanities is only 20%.

### *Sponsoring for career building purposes*

The Academy is highly successful at attracting private sponsors for its career-building initiative – an indicator of external appreciation of its efforts to promote young researchers.

Income from sponsoring and dedications		
Total income from sponsoring and dedications for purposes of career building	Income in EUR '000	Sponsor(s)
of which for:		
APART	45.10	RZB / Agrana / UNIQA
MAX KADE	343.58	Max Kade Foundation, NY
Othenio Abel Prize	3.70	Dedication Othenio Abel Prize, sponsored by Erich Thenius
Edmund and Rosa Hlawka Prize	1.90	Edmund and Rosa Hlawka Dedication
Fritz Pregl Prize	3.70	Fritz Pregl Dedication
Alois Sonnleitner Prize	3.70	Dr. Alois Sonnleitner Foundation

## » 7 The Academy as Career Builder

Jubilee Prize of Böhlau Verlag Vienna	2.50	Böhlau Verlag Vienna
Figdor Prize for Linguistics and Literature Studies	3.70	Gustav Figdor Prize Foundation
Figdor Prize for Law, Social and Economic Sciences	3.70	Gustav Figdor Prize Foundation
Richard G. Plaschka Legacy	3.70	Richard Georg Plaschka Legacy
Ignaz L. Lieben Prize	14.00	Alfred and Isabel Bader

In 2006, a total of EUR 388,680 was raised for grant programmes, in addition to EUR 40,600 for career-building awards financed by private foundations. Financial resources came from business (for example, three companies – RZB, Agrana und UNIQA – funded an APART grant), private foundations such as the Max Kade Foundation in New York, which has been awarding grants to young Austrian researchers since the early 1960s, and sponsors in Austria and abroad – including a number of Academy members.

As part of media monitoring efforts, coverage in Austrian and foreign print and online media is also recorded whenever the Academy's career-building initiative, grant recipients or award recipients are mentioned.

*Media presence of career building*

Media presence [related to career-building activities]	
Number of articles in 2006 with mentions of Academy awards or fellowships	125
of which	
· print	75
· internet	48
· radio and TV	2

In 2006, a total of 125 articles mentioned the Academy as a career builder, an increase of 14% on the previous year. The website [www.stipendien.at](http://www.stipendien.at) provides information on the Academy's career-building programmes. It also provides details about applications and documents for grant recipients, and the general public can consult a database of funded projects.

*Internet popularity of career building*

Internet popularity [related to career building]	
Number of hits on <a href="http://www.stipendien.at">www.stipendien.at</a> in 2006 *	1,736,267
these also include	
· fellowship programmes	128,934
· prizes	91,971
· persons in receipt of funds (project database)	14,458
· DOC	33,180
· APART	19,619
· MAX KADE	15,446
· DOC-fORTE	10,370
· DOC-team	10,088
· ROM	6,016

## » 7 The Academy as Career Builder

In 2006, the pages on the website were visited more than 1.7 million times. Information on the grants and awards offered by the Academy attracts most interest. There is also a lot of demand for the database of information on funding recipients, which received over 14,000 visits.

DOC is the most popular programme with over 30,000 enquiries. What is surprising is the high number of visits to the pages with information on MAX KADE – more than 15,000 visits were recorded. This is in clear contrast to the low number of applications. •

## >> 8 Service Facilities of the Academy

### 8 Service Facilities of the Academy

The service facilities of the Academy – central administration, library & archive and the Austrian Academy of Sciences Press – successfully assist the Academy in achieving its aims.

#### 8.1 Central administration

The central administration is the first point of contact for the senior managers of the Academy, the research units, Academy members and the general public. Its task is to provide a service to the sciences and the humanities, that lives up to constantly changing requirements. •

##### 8.1.1 Value-creation potential of the central administration

#### Human potential

Staff in the central administration			
Average number of staff (incl. seconded federal employees) in 2006	Total	m	f
Persons	81	31	50
Full-time equivalents	73.8	28.6	45.2
· of which academics	27.6	14.4	13.2

*Human resources in the central administration*

In administration, continuing education is also indispensable. In addition to the training opportunities offered by the staff committee, central administration staff takes advantage of external training to enhance their skills.

*Continuing education of administrative staff*

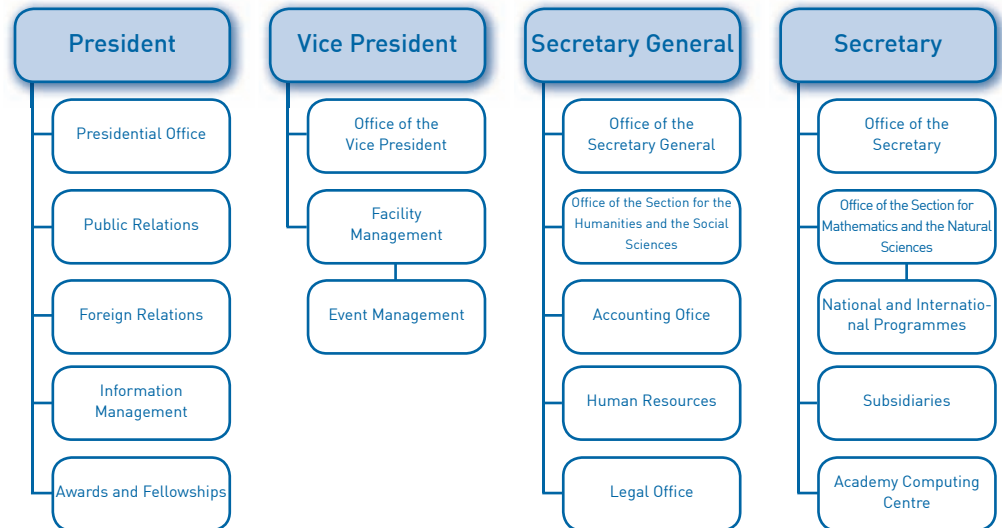
Continuing education for central administration staff			
Number of staff participating in continuing education programmes in 2006	Total	m	f
Number of continuing education programmes of which:	67	30	37
· computer training	53	24	29
· specialised continuing education	7	4	3
· soft skills	7	2	5

#### Structural potential

The individual administrative units each report to a member of the Presiding Committee, who plays a supervisory role.

## >> 8 Service Facilities of the Academy

Central Administration of the Academy (as of 31/12/2006)



Internal Auditing and the building and maintaining company Akademie-Gebäude-Errichtungs- und -Instandhaltungs-GmbH (AGEI GmbH) do not strictly form part of the central administration and are therefore not shown in the above organisational chart.

Internal Auditing is a process-independent monitoring body whose job is to ensure that the principles of cost-effectiveness and purposefulness are upheld. Its area of responsibility also covers the limited liability research companies in which the Academy has a stake. It reports to the Auditing Committee and has an Auditing Scheme. In 2006, Internal Auditing was involved in the auditing of individual projects, particularly in connection with the Academy's construction activities and its subsidiaries.

In 2000, AGEI GmbH became involved in the Academy's Life Sciences Centre Vienna project on behalf of the construction venture IMBA/GMI GmbH. The project was completed in 2005. Ever since, the AGEI GmbH has handled property administration for the building. In 2006, AGEI GmbH was also involved in planning work for the CeMM research building project at the site of the Vienna General Hospital (AKH).

### *Usable space of the central administration*

The central administration has just under 10,000 m<sup>2</sup> of usable space, of which office space accounts for approximately 1,460m<sup>2</sup> and meeting rooms and similar facilities for 3,450 m<sup>2</sup>. The Academy's main building, which is home to the majority of the central administration services, is also used for all the Academy's statutory meetings – 255 in 2006. The main building is also home to the offices of the Academy's staff committee, consisting of 13 active members. In 2006, the staff committee was assisted by two administrative members of staff.

### *Staff committee*

The staff committee is primarily responsible for representing and furthering the legal, social and economic issues affecting members of staff. The legal basis of the staff committee is set out in the Austrian Labour Constitution Act, which was expressly declared applicable to the Academy by the act pertaining to "The Academy of Sciences in Vienna", in the version of 30 December 2003. •



## >> 8 Service Facilities of the Academy

### 8.1.2 Services of the central administration

Every year, one administrative unit of the Academy is given the opportunity to present its activities in more detail at this point of the Academy's Intellectual Capital Report. There follows a brief outline of how the AkademIS research database project developed into the information management unit.

The information management unit (VIM) was founded in November 2006 to respond to the need for the central storage of research-related data at the Academy. The Academy responded to this need with the research information system AkademIS. Until VIM was set up, the AkademIS project fell within the framework of the Computing Centre.

AkademIS is a modern web-based research information system for the recording and evaluation of research-related data. The type of data stored in the database includes projects, publications, events, and many more. Data is evaluated for the purposes of the Intellectual Capital Report and the annual reports of the individual research units. Individual enquiries regarding research-related data can also be dealt with centrally, to a high quality standard. The Academy website will soon be linked to AkademIS, so that data on organisation and research results stored in AkademIS can be accessed through the Academy's website.

2006 was a year of ongoing development for AkademIS. The project management for AkademIS involves, for example, identifying the requirements of all areas of the Academy, converting these requirements into a technical specification. But simply achieving the technical implementation is not enough to make the system a productive part of the organisation. For this reason, communication relating to AkademIS represented a significant part of the task. In 2006, a number of forums including user meetings and a workshop with around 70 participants provided an opportunity to communicate directly with users and obtain comments and suggestions from a wide range of people as to how AkademIS should progress. •

*Information Management*

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### 8.1.3 Impact of the central administration

The impact of a central administration, whose activities are mostly internal, is almost impossible to quantify. However, in cases where the responsibilities of an administrative unit are largely focused outside the organisation, for example the public relations office or the event management unit, it is well worth taking a closer look at the impact achieved during the period under review.

For a number of years, the Academy has been organising lecture series aimed at the public with an interest in scientific issues. Through these events, it has succeeded in acquiring cooperation partners and sponsors, who provide crucial support for these lecture series. The first mention should go to the Federation of Austrian Industry, which has co-hosted the lecture series since they were first started and also supports them financially. Raiffeisen Zentralbank also acts as a valued sponsor. In addition, financial contributions are received from the Society of Friends of the Academy.

*Sponsoring of public outreach activities*

In 2006, the Academy's public relations office intensified its activities to increase public awareness of the Academy. This primarily involved the provision of information to the media by increasing the number of press releases issued. In 2006, around 20% more press releases were sent out and published on the Academy website than in the previous year – a total of 130, or an average of 2 to 3 per week. Almost all material sent out is

*Media presence of the Academy as a whole*

published as original material in APA-ZukunftWissen, so it reaches researchers and other individuals involved in research policy and funding in Austria. Many of the Academy's press releases are edited by APA before being made available to all the key Austrian media.

The greatest number of reactions to the Academy's press releases came in response to the following topics:

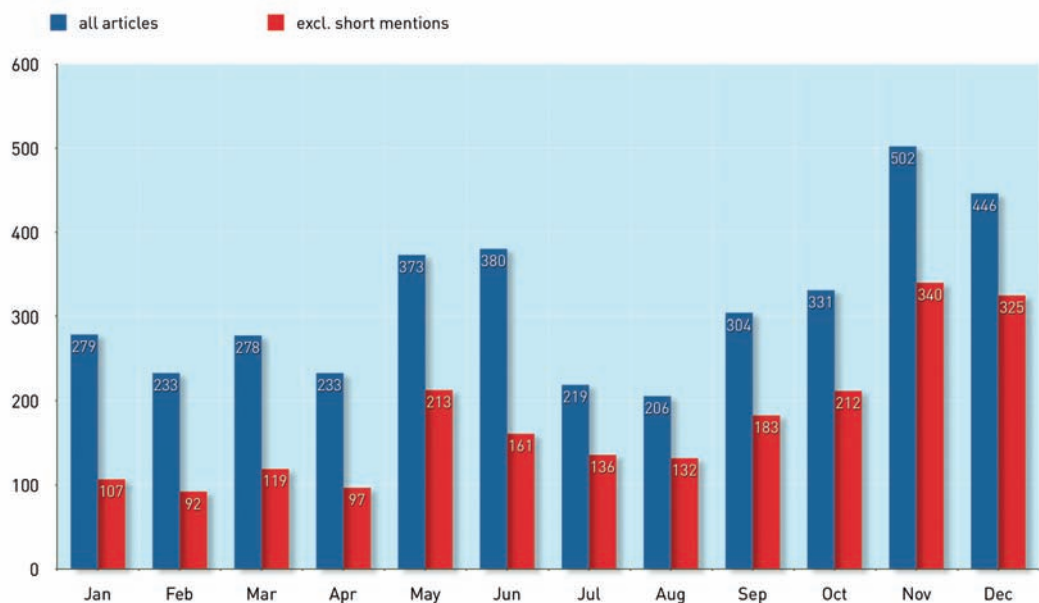
- The chemistry of human odour (332)
- Europe's lakes are getting warmer (38)
- Culture of childlessness (32)
- Erwin Schrödinger Prize 2006 awarded to Rainer Blatt (c.m.i.A.) (34)
- International attention for archaeological sensation (34)
- Countdown for the planet hunters (33)
- Opening of the Academy's Life Sciences Centre Vienna (31)

In another initiative to raise the Academy's public profile, the first media cooperation was arranged with the daily Austrian newspaper Die Presse. All of the Academy's research units are presented in full-page advertorials, with a total of ten editions being planned. The cooperation started in October 2006 and four full-page advertorials had appeared by the end of the year. Another media cooperation was arranged in 2006 with another daily Austrian newspaper Der Standard.

*Number of articles and media*

In 2006, the Academy was mentioned as a research performing organisation, learned society or promoter of research activities in a total of 3,784 articles, 16% of which were in the foreign media. If we compare the number of explicit mentions of the Academy in 2005 and 2006, we can see a 22% increase in the Academy's media profile in 2006. Approximately 3% of articles contained controversial debate on the Academy, particularly with respect to the need for reforms within the organisation and voting arrangements for the Presiding Committee.

**Media clippings pertaining to the Academy per month in 2006**



## >> 8 Service Facilities of the Academy

*The articles found include reports, summary reports and mentions, with the latter having only little significance as the Academy was usually merely mentioned as the organiser of an event, for instance.*

The number of articles pertaining to the Academy appeared in a total of 577 different media (including 145 outside Austria). The media that most frequently report on the activities of the Academy are Der Standard (print and online versions), Die Presse (print and online versions), Wiener Zeitung, ORF On Science and ORF Ö1 (particularly in the programmes Wissen aktuell and Dimensionen) and various APA formats. Wienweb, Österreich Journal and presstext Austria are all important online media as far as the Academy is concerned. Abroad, the Academy is most frequently mentioned in Germany's Süddeutsche Zeitung.

Of all the articles published, 54% appeared in print media, 43% on the internet and 3% on radio and television. An analysis of articles appearing in the Austrian print media shows that in 2006, more than 60% of articles appeared in daily newspapers and more than 70% in inter-regional print media.

The Academy's website, maintained by the central administration, provides general information on the organisation's locations, structure and tasks. Contact details of the Presiding Committee, members, staff and the directors of the Academy's research units can also be found on the site. The Academy's online presence is used for both internal and external communication.

### Media categories

### Internet popularity

Internet popularity of the information and services sections of the Academy website	
Number of hits* in 2006 on the information and services sections of the Academy website	5,260,465
of which on "What's New"	2,069,601
Hits on the information and service sections of the Academy website from the domain:	
· com	46.2%
· at (excl. .ac.at)	7.5%
· ac.at	18.2%
· de	4.0%
· edu	1.4%
· other	22.7%

\* To calculate the number of page hits, the number of times image files and CSS files were accessed was subtracted from the total number of website hits. The numbers include both external hits and hits from computers in the oeaw.ac.at domain. The latter amount to approx. 13.2 percent of the overall number of hits.

The "What's New" section of the Academy website is where journalists and other interested users can access information about upcoming events and the Academy's press releases. The news and events archive goes back to 1997 and is a very popular feature. Image material, current job vacancies and the monthly newsletter can also be accessed. September 2006 saw the launch of the "Topic of the Month" section, which presents a different area of the Academy's research every month.

The Information Service allows users to subscribe to the e-mail newsletter and the latest press releases. The website also features a special service in the form of the Academy's AUDIOlectures, multimedia-based lectures that can be viewed online. Since the end of 2006, the site has also included information on the Academy's premises in Vienna, which can be rented for scientific and cultural events.

## » 8 Service Facilities of the Academy

*Appreciation of the Academy as an event centre*

In 2006, rooms in the Academy’s main building (Dr. Ignaz Seipel-Platz 2, 1010 Vienna) and the neighbouring building (Sonnenfelsgasse 19) played host to 81 different events of a scientific nature. The historic premises were in use for 120 days. The Academy is the preferred venue for international symposia, workshops and conferences, which are organised by the research units of the Academy and also by universities, government ministries, foundations and scientific bodies. In 2006, the proportion of events organised by external parties was 14%. In recent years, the Academy has chosen to focus on events dedicated to popular science. The aim of this initiative is to stimulate and enhance dialogue between the sciences and the humanities on the one hand, and interested members of the public on the other. In 2006, the proportion of popular science events was 23%. •

### 8.2 Library and archive

The library and archive are vital for the functioning of the Academy. They represent a living link between past and present, and ensure the provision and sharing of scientific knowledge far beyond the limits of the Academy and the borders of Austria. •

#### 8.2.1 Value-creation potential of the library and archive

##### Human potential

*Human resources of library and archive*

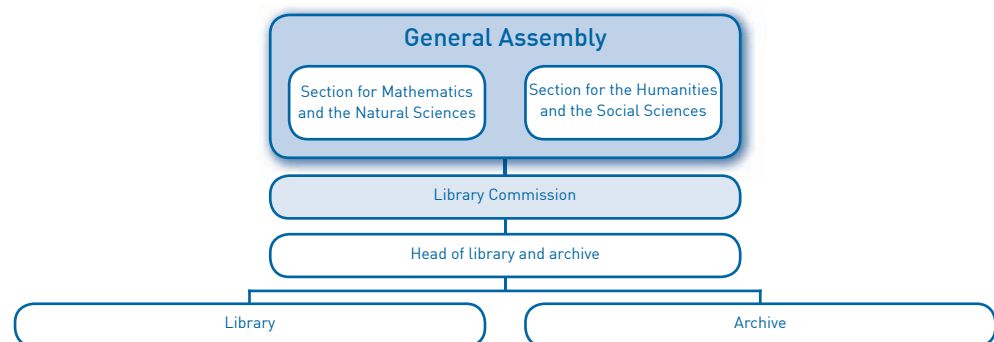
Staff in library and archive			
Average number of staff (incl. seconded federal employees) in 2006	Total	m	f
Persons	11	3	8
Full-time equivalents	8.2	3.0	5.2
· of which academics	4.0	1.0	3.0

*Continuing education*

Library and archive staff successfully completed various continuing education courses in 2006, particularly in the field of electronic cataloguing and system librarianship. Library staff also attended in-house training events to enhance their subject-specific knowledge. For example, the library’s system administrator offered a two-day advanced course on indexing periodicals.

##### Structural potential

##### Library and archive of the Academy



## » 8 Service Facilities of the Academy

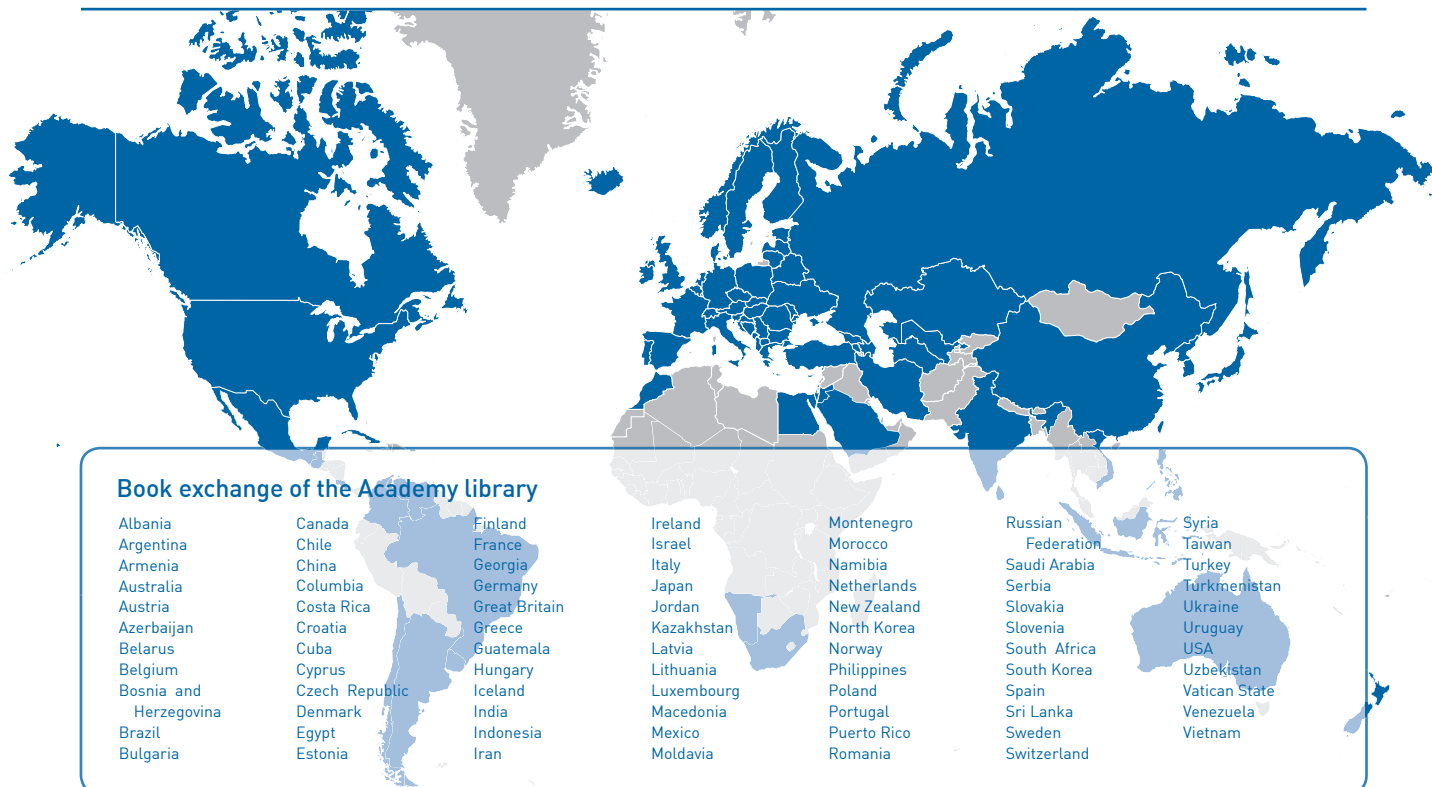
The library and archive have a total usable space of somewhat more than 1,350 m<sup>2</sup>. The main library, which is located in the Academy's main building in Vienna, is easily accessible for many of the Academy's research units.

*Usable space of library and archive*

### Networking potential

As a book exchange library, the library of the Academy owes its success to its broad network of contacts. It maintains mutually beneficial, contractually regulated book exchange partnerships with 1,049 academies and other academic institutions in 432 locations in 81 different countries. These serve to disseminate knowledge acquired in Austria and published by the Austrian Academy of Sciences Press throughout the world and also help to make knowledge published elsewhere available in Austria.

*Book exchange library*



### 8.2.2 Services of the library and archive

The library of the Academy consists of literature relating to the humanities and – to a greater extent – the natural sciences. At the end of 2006, the total stock amounted to 337,077 volumes; in addition to individual monographs, this includes 12,500 periodical titles and series. It should be stressed that of these, 4,371 titles can only be found in the Academy library and nowhere else in Austria.

*Range of library services*

The job of the Academy library is not only to index and make available the stock entrusted directly to it but also to take care of the special book stock at research units of the Academy (including those outside Vienna). The collections of 19 research units of the Academy were fully recorded by the end of

## » 8 Service Facilities of the Academy

2006 and a further six are in progress.

During the period under review, according to the statistics of the Austrian Library Association, the Academy's library introduced 10,151 titles into the association network.

The quantity of monographs, periodicals and series added to the library stock in 2006 amounted to 6,468. As part of exchange partnerships, the Academy's library acquired 6,435 volumes of printed periodicals and series. It purchased seven printed periodicals and 36 monographs, of which 10 were passed on to the Academy's research units and do not appear in the stock of the central library of the Academy.

Library: book movements	
Number of book movements in 2006	12,838
of which:	
· purchases	33
· donations to the Academy	65
· exchanges	12,740
of which:	
· outgoing books	6,370
· incoming books	6,370

For both clusters, negotiations have been in progress for some time on setting up a consortium of online databases and electronic journals. The estimated cost of this project is around EUR 1.2 million. The acquisition was approved by the Presiding Committee in 2004; however, the urgently needed implementation ran once again into budgetary difficulties in 2006.

### *Use of the library*

The number of library users in the period under review was 897 persons. 1,433 volumes were consulted in the library's reading room. 257 volumes were loaned out to the Academy's members and units, and 280 to external parties. The remote lending service received 360 requests. In terms of remote borrowing, i.e. loans from other academic institutions in Austria and abroad as a service of the library to the research units of the Academy, 128 received a positive response; of the 232 external requests, 197 were fulfilled.

### *Training and events organised by the library*

The library runs regular basic continuing education courses at all locations on the formal indexing of special book collections held by the research units of the Academy. Each year, it also gives tours of the Academy's library, the archive and the Woldan Collection to training candidates of the Austrian National Library and the Vienna University Library.

In 2006, the library also organised the 12th meeting of Austrian System Librarians at the Academy's own premises.

### **Archive services**

The archive of the Academy stores 54 academic bequests – some of which are very extensive – of researchers who had a special relationship with the Academy. These bequests, which form part of the cultural heritage, usually include unique items, such as the correspondence and manuscripts of renowned scholars from Austria and abroad, which are of great interest to academics around the world.

## » 8 Service Facilities of the Academy

The material includes special archives such as the collection of the former Academy's Institute for Radium Research, which brought many researchers from the US, Greece and Germany to Vienna in recent years. In 2006, the archive was entrusted with the conservation and handling of two further academic bequests (Burchard Brentjes and Rudolf Noll).

The archive is also the “memory” of the Academy. It provides extensive archival support, storing historical minutes of meetings, files of great importance to the history of the Academy, experiment notes, photographs of scientific experiments, reports, manuscripts, expert opinions, contracts and so on. In 2006, the number of files acquired in recent times amounted to 311.

The variety of research units encompassed by the Academy, past and present, is now reflected in the specific structure of the archive's groups of collections, which were developed in 2006 to make research more accessible. 51 indexes were made available as “archive assistants” for the same purpose.

In 2006, the archive was used externally by science historians (mainly from Europe and the US) and internally by members and staff of the Academy. 92 academic enquiries from Austria and abroad were handled successfully.

Tours were given by the archive for staff of the Technisches Museum, the Austrian Central Library for Physics and the Austrian National Library.

The archive of the Academy is also actively involved in public relations. A presentation was designed for Slovenian television, which was making a film about Fritz Pregl, on the relationship between Pregl and the Academy. The presentation was given by the director of the archive. The programme was broadcast in November 2006.

### WOLDAN Collection

There are plans to make the objects in the Woldan Collection accessible to the public, in collaboration with the Academy's Commission for the History of Natural Sciences, Mathematics and Medicine, through single editions of old prints of travel literature (with translations and commentary) and an exhibition. The preparations for the “Woldan Edition” and the exhibition have been underway since 2006. •

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### 8.2.3 Impact of the library and archive

The nature of the Academy's library as a book exchange library ensures that the Austrian and foreign works of scientific academies and the publications of key allied institutions are collected in full at the library, to an extent that cannot be offered by Austrian university libraries or the National Library. The Academy's library therefore represents a key pillar of academic literature in Austria.

The success of the library's training courses is evident as in 2005 three freelance staff members and in 2006 four (out of eight) freelance staff members of the Academy's library were offered posts at other renowned libraries. •

**8.3 The Austrian Academy of Sciences Press**

The Austrian Academy of Sciences Press makes research results ‘visible’ to an international audience. It handles the production, administration and marketing of printed and electronic publications which are linked with the Academy’s research projects, involve the Academy’s research units or are associated with the research projects of Academy members. •

**8.3.1 Value-creation potential of the Austrian Academy of Sciences Press**

**Human potential**

*Human resources of the Austrian Academy of Sciences Press*

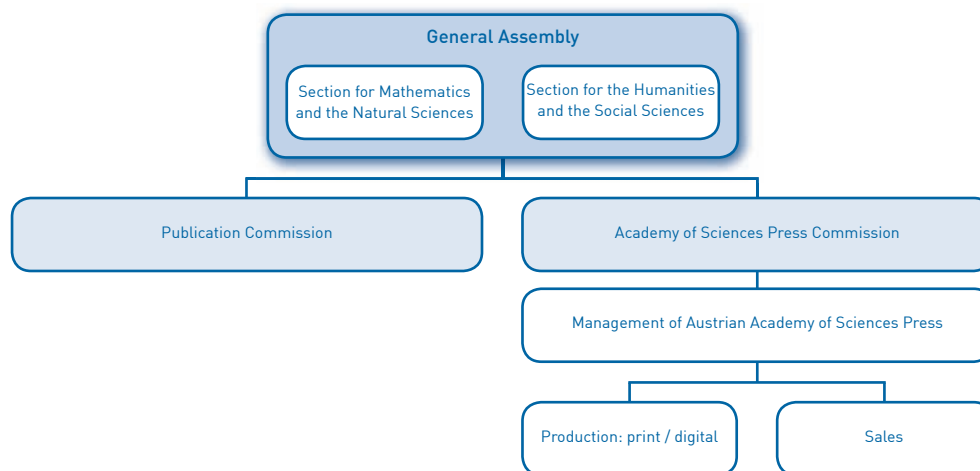
Staff in the Austrian Academy of Sciences Press			
Average number of staff (incl. seconded federal employees) in 2006	Total	m	f
Persons	10	5	5
Full-time equivalents	9.8	5.0	4.8
· of which academics	2.0	1.0	1.0

*Continuing education*

As information life cycle management is becoming increasingly important in academic publishing thanks to digitisation and the internet, the staff of the Austrian Academy of Sciences Press attended further training in process-oriented quality management, semantic web technologies, data structuring and prepress technologies in 2006. Staff members also attended courses on apprentice training and marketing know-how.

**Structural potential**

The Austrian Academy of Sciences Press is an internal service unit for content management and research marketing. Externally, the Austrian Academy of Sciences Press presents itself as a commercial enterprise.



The Austrian Academy of Sciences Press is headed by the executive management under commercial law (all members of the Presiding Committee of the Academy) and the chair of the Press Commission.

*Usable space*

The Austrian Academy of Sciences Press at Postgasse in Vienna 1010 has usable space of somewhat more than 2,100 m².



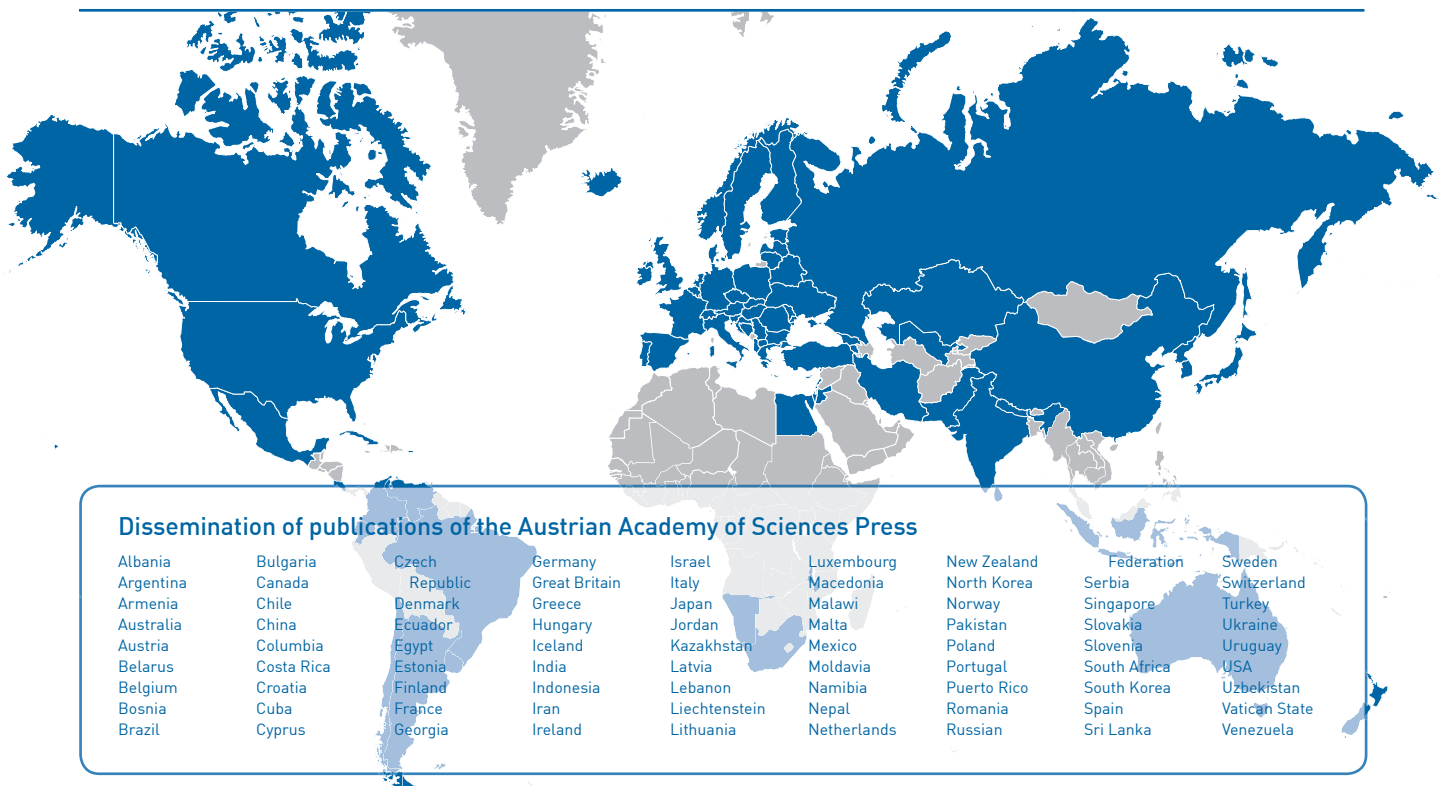
**Networking potential**

In 2006, 733 authors from 24 countries published their work in the Austrian Academy of Sciences Press. For many cooperation partners of Academy researchers, the option of publishing with the Austrian Academy of Sciences Press is an attractive incentive to scientific collaboration.

*Authors published by the Austrian Academy of Sciences Press*

In 2006, 5,244 customers in 79 countries were supplied with publications from the Austrian Academy of Sciences Press. This is in addition to customers and countries supplied by subscription agents. In the diagram below, the countries supplied directly by the Austrian Academy of Sciences Press in 2006 are shown in blue.

*Customer relations*



Because of its global reach and presence, the Austrian Academy of Sciences Press markets the work of countless scientific institutions and publishers from Austria and around the world, for example Joanneum Research, the Austrian Archaeological Institute and Österreichischer Bundesverlag.

*Production and sales cooperation*

The Austrian Academy of Sciences Press also draws on specialist partners for the dissemination of works in certain markets, for example the David Brown Book Company for sales in the US. The research units of the Academy often produce publications in collaboration with scientific institutions and publishers in other countries, for example the Hermitage in St. Petersburg, the Academies of Sciences of Poland and Bulgaria, the China Tibetology Research Centre in Beijing and the publisher Walter de Gruyter in Berlin.

## » 8 Service Facilities of the Academy

The publishing and technical infrastructure of the Austrian Academy of Sciences Press ensures that the Academy's publications are included in all major international search and library services. This visibility fosters the dialogue with scientific communities in other countries.

By providing a platform for dissemination, the Austrian Academy of Sciences Press makes a significant contribution to raising the importance of Austrian research in the global competitive environment for innovation, and its attractiveness as a central forum for international research.

Specifically, there are web-based partnerships with the academic search engines Google Scholar, Microsoft Live Academic, Scirus, OAIster and BASE. There are also project partnerships with the Bavarian State Library and the EU repository project DRIVER. The Austrian Academy of Sciences Press is a member of the CROSSREF Reference Linking Service and the Association of Learned and Professional Society Publishers (ALPSP) and its Learned Journals Collection for the global distribution of around 650 e-journals. E-journals and databases are also disseminated through Swetswise Information Services and the portal of the Electronic Journals Library in Regensburg, to which 300 libraries are linked.

Publications of the Austrian Academy of Sciences Press are indexed or available in abstracting services, in the national bibliographies of Austria and Germany, the British Library cataloguing system, the Library of Congress cataloguing system and online stores.

The Austrian Academy of Sciences Press is a registered open archive initiative data provider and was also the first Austrian publisher to sign a cooperation agreement with the Austrian National Library for the long-term archiving of research results. •

### 8.3.2 Services of the Austrian Academy of Sciences Press

#### *Manuscript submissions*

All members of the Section for Mathematics and the Natural Sciences and the Section for the Humanities and the Social Sciences are entitled to submit manuscripts for publication to the Austrian Academy of Sciences Press. The member submitting the material is responsible for the scholarly content. Manuscripts for monographs etc. are evaluated by two or three expert assessors, normally from outside the Academy, before being submitted to the section or its publication commission.

Manuscripts to be published by the Austrian Academy of Sciences Press			
	Total	MN section	HS section
Number of manuscripts approved in 2006	106	20	86
davon:			
· monographs	26	1	25
· anthologies	40	5	35
· journals	13	1	12
· multimedia publications	2	0	2
· databases incl. online access	1	0	1
· reference works	4	1	3
· contributions in "Anzeiger"	10	2	8
· contributions in "Sitzungsberichte"	10	10	0

A gender-specific breakdown of authors and editors for monographs and anthologies shows that in 2006, in the MN cluster, eight male authors / editors and two female authors / editors were in-

## » 8 Service Facilities of the Academy

volved in submitting manuscripts of these two types of publication. In the HS cluster, 61 male and 31 female authors or editors submitted manuscripts of monographs and anthologies for approval. Since several authors or editors are sometimes involved in a publication, the total number of authors and editors is greater than the number of approved manuscripts.

In commercial terms the Austrian Academy of Sciences Press generated sales revenues of EUR 900,156 in 2006, not including third-party funds received. About 75% of sales were made through exports.

*Sales revenues of the Austrian Academy of Sciences Press*

New publications by the Austrian Academy of Sciences Press			
	Total	MN section	HS section
Number of new publications in 2006	81	9	72
of which:			
· monographs	32	2	30
· anthologies	21	3	18
· journal issues	16	2	14
· reference works and databases	10	2	8
· multi-media publications	2	0	2

Of the new monographs published by Austrian Academy of Sciences Press in 2006, 23 were (co-) authored or (co-) edited by men (22 in the HS cluster and one in the MN cluster) and 13 by women (12 in the HS cluster and one in the MN cluster).

The total number of titles available from the Austrian Academy of Sciences Press was 2,808 (as of December 2006).

- The Austrian Academy of Sciences Press supplies publications to partner institutions of the Academy and external libraries, free of charge, through the sharing scheme of the Academy's library and by providing complimentary copies.
- The institutional repository epub.oew, Austria's largest digital publication portal of any research institution, the fifth largest in the German-speaking area and ranking 27th in the world, is operated on behalf of the Academy. Epub.oew fulfils several tasks:
  - Presentation of research results of the Academy, with full text and appropriate search options
  - Archiving of research results
  - International networking with other repositories
  - An innovative pilot project for new forms of academic communication (e-science)
  - Contribution to the promotion of open access publishing
- Academic editing systems developed by the Austrian Academy of Sciences Press are provided and maintained for the Academy's research units.
- An agreement was signed with the Austrian National Library for the long-term archiving of electronic publications. •

*Other services of the Austrian Academy of Sciences Press*

## » 8 Service Facilities of the Academy

### 8.3.3 Impact of the Austrian Academy of Sciences Press

*Media presence of the Austrian Academy of Sciences Press*

In the period under review, there were 207 cases where publications of the Austrian Academy of Sciences Press were the subject of reports or reviews in special-interest periodicals, online media, radio, television, and the daily and weekly press.

*Internet popularity of the Austrian Academy of Sciences Press*

In 2006, the online shop and publication portal of the Austrian Academy of Sciences Press recorded more than 4.2 million hits\*. Approximately 10% of site visitors were from Austria, the rest from other countries – a figure that illustrates the high profile of the Austrian Academy of Sciences Press beyond the borders of Austria. The highest number of visits to the publication server from any one country is from the US. More enquiries came from the US than from Austria. Austria is followed by Germany, Slovenia, the Netherlands, the Czech Republic, Switzerland, China, Italy, Great Britain and Turkey.

*Contribution to the Academy brand*

Around one million circulating books, the media presence outlined above, internet popularity statistics and numerous marketing activities such as 17 book presentations, participation in 31 trade fairs and congresses, six press releases, the dissemination of brochures and many others make Austrian research visible to the relevant audience and play a key role in promoting the Academy's public profile. •

\* To calculate the number of hits, the number of times image files and CSS files were accessed was subtracted from the total number of website visits. Internal hits from the oeaw.ac.at domain were taken into account because Academy staff are amongst the customers of the Austrian Academy of Sciences Press. Visits from the server of the Austrian Academy of Sciences Press itself were discounted.

## » 9 Future Prospects

### 9 Future Prospects

#### 9.1 Strategies of the Academy as a research performing organisation

Compared with other European non-university research institutions carrying out basic research, such as the Max-Planck-Gesellschaft in Germany or the Centre National de la Recherche Scientifique in France, the Academy is more than an order of magnitude smaller and must therefore adopt different strategies in order to pursue a successful non-university research programme. The most important objectives are:

- the establishment of research areas which cannot be pursued at universities because they require long-term projects, such as space research or the production of extensive encyclopaedias, provided that there is adequate expertise in this field in Austria,
- the establishment of research units which collaborate closely with major international research centres in order to carry out their research, for example High Energy Physics and the Conseil Européen pour la Recherche Nucléaire (CERN),
- the creation of new research disciplines which are not yet represented in Austria but which are of great importance to society, for example molecular medicine,
- highly specialised and urgently needed research projects with a long lifetime, such as the Hofburg project in Vienna, and
- the reinforcement of existing, already excellent groups through additional units outside higher education, to increase their competitiveness on an international level, as has already happened in quantum optics and applied mathematics.

The individual research units are given as much freedom and flexibility as possible to design their own research programmes. At the Academy, unlike in university research, there are no barriers between the different scientific disciplines, so research expressly geared toward interdisciplinarity, such as technology assessment, are in particularly good hands at the Academy.

For all these objectives, the creation of internationally competitive entities is an essential prerequisite. As a result, the Academy will never be able to cover the full spectrum of academic disciplines. To be successful, it is necessary to focus on a limited number of areas.

In order to ensure the quality of the research done, advisory committees have been set up. These committees are made up of international members who provide a global outlook and assist with research planning. The scientific advisory boards assist the research units, give advice and regularly monitor the work that has been achieved. An account is rendered of the research productivity of all the Academy's research units in an annual Intellectual Capital Report. 12 years ago, the Academy became the first research organisation in Austria to prescribe regular evaluations of all its units through international evaluation teams. As part of the ongoing reform of the Academy's organisational structure, attempts are also being made to further improve the evaluation process. The research units have constant access to the wide-ranging expertise of the learned society, which results in an especially valuable synergy between these two pillars of the Academy. There are plans to strengthen the cooperation between commissions, where work is mainly carried out by members of the learned society,

and other units entrusted with research tasks. The willingness of the Academy's units to cooperate with external research institutions is well developed, and will also be intensified. Most importantly, there are still opportunities for improvement in the direct utilisation and indirect exploitation (in partnerships with commercial companies) of research results which will be further developed in the years to come.

Both as a research performing organisation and as a promoter of research activities, the Academy is strongly involved in encouraging young researchers.

The units of the Academy provide doctoral candidates with support and the opportunity to be part of an international research team, without which it is impossible to enter the senior ranks of academia. The fact that doctoral candidates are supported by both universities and the Academy provides an excellent opportunity to create links between university and non-university research.

Postdoctoral assistants are an important pillar of research work at the Academy and there are plans to create even more positions for this high-quality training of postgraduate scientists.

There is an important career stage for researchers which is almost entirely lacking in Austria, that of the team leader for young researchers. For a set period – usually between three and eight years – talented younger researchers, selected by competition, are given the resources to carry out independent research as head of a small research group. After this period it is assumed that the individual has achieved the academic qualification to be appointed professor or become head of a research unit. Experience with posts of this type in other European countries is very encouraging. The Academy is committed to encouraging the creation of these positions and to establishing them within its own province.

Most researchers at an advanced stage of their careers in the Academy's research units are also university lecturers, thus bridging the gap between university and non-university research.

There is renewed interest in creating professorial posts at the Academy. This would involve financing two or more years dedicated to research for researchers with established track records, mainly university professors who would be "released" from their normal duties for a fixed period to devote themselves fully to an evaluated research project. •

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### 9.2 Reform efforts at the Academy

#### *Reform of the organisational structure*

In 2006, the Presiding Committee of the Academy, together with the Reform Committee, the Planning Committee and the Senate, further advanced the drafting of a position paper for reform measures. The main focus of consideration is the modernisation of the Academy's organisational structure, taking into account the principles of corporate governance from the world of business. Particular emphasis is being given to the definition, implementation and improvement of management and monitoring structures, with a view to achieving a clearer separation of supervisory and monitoring tasks and operative management functions within

## » 9 Future Prospects

the Academy. The intention is to achieve a more defined delineation of the competencies of the individual decision-making bodies, more productive cooperation between these bodies and therefore more efficient controlling – and to ensure that the interests of all internal and external stakeholders are taken into account.

The General Assembly remains the highest internal advisory, supervisory and control body for all academic matters, and the decision-making body for strategy development, the expansion of the learned society, changes to the statutes and bye-laws, the election of Presiding Committee members, confirmation of the budget and the discharging of the Presiding Committee.

The Presiding Committee is the highest executive and representative body of the Academy to external parties. In coordination with the General Assembly, it defines the direction in which the Academy will progress, in institutional, organisational and strategic terms. It is responsible for operational management, where it represents the highest instance, and deals with institutional, organisational and budget issues. The Presiding Committee is required to report to the General Assembly. The Presiding Committee can avail itself of a dedicated commercial management (in the sense of participatory management subject to instructions) and the various bodies of the central administration and individual administrative committees for the purpose of the commercial management of research units if assistance is required.

The current Planning Commission is to become the Strategy and Planning Commission, a permanent subcommittee of the General Assembly, to which it must report at least twice a year. It will assist the General Assembly in its advisory, supervisory and control capacities. The Strategy and Planning Commission is intended to serve as a link between the General Assembly and the Presiding Committee. Its members will be selected from amongst the full members, corresponding members and another new institution, the Young Academy.

In addition to the existing Senate, which as the Academy's external advisory body represents an interface to the general public, a Research Council will be set up comprising international members. This body will serve as an external scientific advisory board. Its members will consist of researchers working abroad with an excellent track record of work and experience in research management. The existing internal advisory body of the Conference of Institute Directors and Centre Spokespersons will continue to exist.

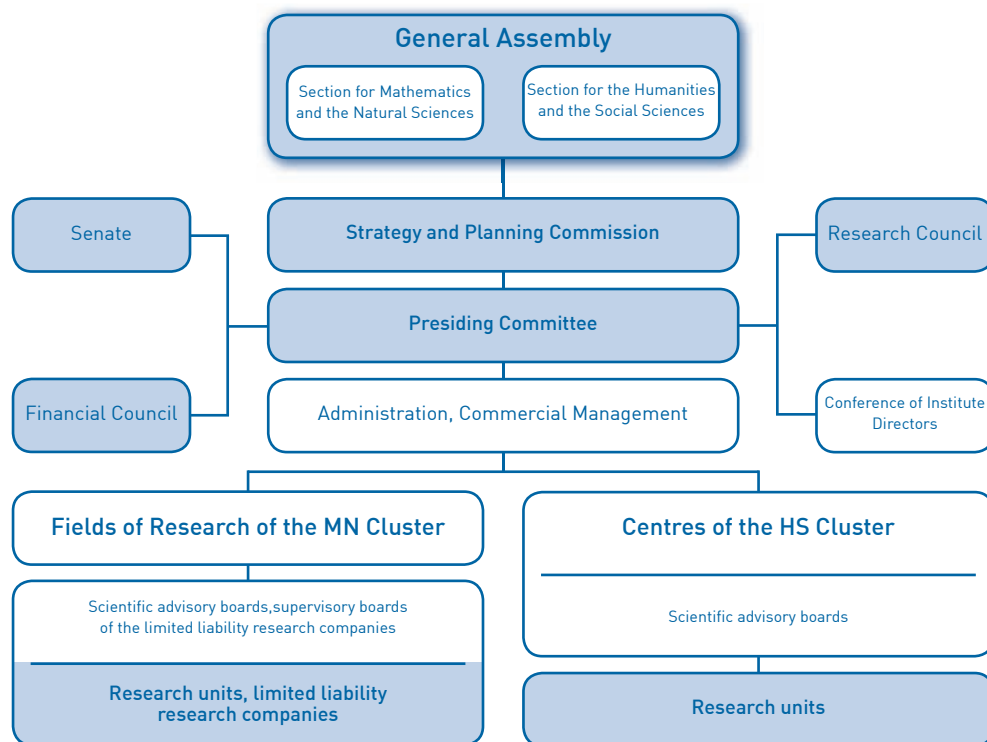
A Finance Council will be created as an external monitoring body. The Finance Council will examine the financial conduct of the Academy in accordance with the auditing standards on which the Austrian Court of Audit is also based.

The Finance Council, like the Strategy and Planning Commission, will therefore adopt a role similar to that of a supervisory board. Its members will be selected on the basis of co-determination by the General Assembly, the Senate and the Academy's financial investors.

The diagram on the next page illustrates how the various bodies will relate to one another:

## >> 9 Future prospects

### The future Academy structure:



#### *Curia of corresponding members in Austria*

The Presiding Committee is preparing to elect a Curia of corresponding members. For each section, eight corresponding members in Austria will be entitled to vote at meetings of the General Assembly. These will be elected for four years, and may be re-elected once. This approach is intended to ensure that the competence and expertise of corresponding members is better integrated in the Academy.

#### *Young Academy*

The Academy is to set up a “Junge Kurie” (Young Academy), a body consisting of outstanding representatives of the younger generation of researchers whose qualifications have been confirmed in international assessment procedures. It will consist of a maximum of 70 researchers. In the first year a nucleus of up to 40 individuals will be formed, which must be confirmed by the full members. As of the second year, new members will be elected to the Young Academy in accordance with the principle of co-option, although the requirement for confirmation will still apply. Membership is limited to eight years.

The Young Academy will play an active role in determining the course of the Academy – eight representatives of the Young Academy will be entitled to attend and vote at the General Assembly – and help the Academy to move forward rapidly into new areas of research. •

### 9.3 Hall of Science

The Hall of Science building is once again open to the public in the centre of Vienna. The building was fully renovated with public funds (between 2003 and 2006) to adapt it for new functions while retaining and even reinforcing its character with a contemporary approach.



## » 9 Future prospects

The Academy and the federal ministry in charge developed a concept for use of the building. The Hall of Science is primarily used for scientific events. It has two areas for this purpose, the ground floor and the large hall on the second floor. The mobile acoustic wall on the second floor makes it possible to create a space suited to the number of people in attendance (300 to 600 people). Both levels are equipped with a modern technical infrastructure.

Since the spring of 2007, these facilities have played host to regular press conferences, conventions, symposia, study presentations, workshop and public lectures held by universities, non-university research institutions, government ministries and commercial businesses. Ceremonies, prize awards, concerts and selected commercial events have also been held here in addition to the scientific events programme.

The renovation of the Hall of Science has given rise to a place where science and research can be presented and communicated. The programme of events and exhibitions will be designed to create public interest in scientific issues and achievements. •

## 10 Annex

*Given their topicality, the overviews in this annex are based on the level of information in September 2007.*

### 10.1 Overview: Full members of the Academy

#### Mathematics

- Christian, Curt
- Cigler, Johann
- Engl, Heinz
- Florian, August
- Gruber, Peter M.
- Hlawka, Edmund
- Kopetz, Hermann
- Reich, Ludwig
- Schmidt, Klaus
- Sigmund, Karl
- Zemanek, Heinz

#### Astronomy and Physics

- Bauer, Günther
- Burgdörfer, Joachim
- Grimm, Rudolf
- Haupt, Hermann
- Lintner, Karl
- Pfeleiderer, Jörg
- Preining, Othmar (+ 26.09.2007)
- Rauch, Helmut
- Schmidt, Arnold
- Thirring, Walter
- Zeilinger, Anton
- Zoller, Peter

#### Chemistry

- Falk, Heinz
- Komarek, Kurt
- Kratky, Christoph
- Neckel, Adolf
- Schubert, Ulrich
- Schurz, Josef
- Schuster, Peter

#### Earth Sciences

- Bauer, Siegfried J.
- Burkard, Otto
- Fliri, Franz
- Flügel, Helmut
- Heritsch, Haymo
- Köberl, Christian
- Kurat, Gero
- Moritz, Helmut
- Pichler, Helmut
- Schönlaub, Hans Peter
- Sünkel, Hans
- Weber, Franz Kurt
- Zemmann, Josef

#### Life Sciences

- Barth, Friedrich G.
- Dorner, Friedrich
- Ehrendorfer, Friedrich
- Glatzel, Gerhard
- Kreil, Günther
- Larcher, Walter
- Matzke, Marjori
- Popp, Marianne
- Schroeder, Renée
- Schweizer, Dieter
- Sleytr, Uwe
- Tuppy, Hans
- Wieser, Wolfgang

#### Medicine

- Deetjen, Peter
- Denk, Helmut
- Gadner, Helmut
- Guttmann, Giselher

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- Hornykiewicz, Oleh
- Kenner, Thomas
- Kraft, Dietrich
- Mayrhofer-Krammel, Otto
- Penninger, Josef
- Petsche, Hellmuth
- Schwarzacher, Hans Georg
- Seitelberger, Franz
- Smolen, Josef
- Stingl, Georg
- Utermann, Gerd W.
- Wolff, Klaus

### Engineering

- Fettweis, Günter B. L.
- Fischmeister, Hellmut
- Jeglitsch, Franz
- Kluwick, Alfred
- Mang, Herbert
- Paschke, Fritz
- Pischinger, Rudolf
- Rammerstorfer, Franz
- Riedler, Willibald
- Schneider, Wilhelm
- Troger, Hans
- Vellekoop, Michael
- Wagner, Horst
- Ziegler, Franz

### Ancient World Studies and Art History

- Alam, Michael
- Bietak, Manfred
- Birkhan, Helmut
- Dobesch, Gerhard
- Fillitz, Hermann
- Friesinger, Herwig
- Hunger, Hermann
- Jalkotzy-Deger, Sigrid
- Koder, Johannes
- Kresten, Otto
- Krinzinger, Friedrich
- Primmer, Adolf

- Rosenauer, Artur
- Schmidt, Gerhard
- Schwabl, Hans
- Smolak, Kurt

### History of the Middle Ages and the Modern Period, Auxiliary Sciences of History and Musicology

- Antonicek, Theophil
- Bruckmüller, Ernst
- Csáky, Moritz
- Gruber, Gernot
- Hageneder, Othmar
- Kappeler, Andreas
- Leitsch, Walter
- Matis, Herbert
- Pohl, Walter
- Riedmann, Josef
- Rumpler, Helmut
- Stourzh, Gerald
- Suppan, Arnold
- Walter-Klingenstein, Grete
- Wiesflecker, Hermann
- Wolfram, Herwig

### Law

- Burgstaller, Manfred
- Bydlinski, Franz
- Koppensteiner, Hans-Georg
- Korinek, Karl
- Koziol, Helmut
- Mantl, Wolfgang
- Matscher, Franz
- Mayer-Maly, Theo
- Ogris, Werner
- Pernthaler, Peter
- Ruppe, Hans Georg
- Schwendenwein, Hugo
- Schwind, Fritz
- Stoll, Gerold
- Tomandl, Theodor

#### Philosophy and Social Sciences

- Acham, Karl
- Borsdorf, Axel
- Brezinka, Wolfgang
- Bruckmann, Gerhart
- Dierker, Egbert
- Dostal, Walter
- Fassmann, Heinz
- Gingrich, Andre
- Klein, Hans-Dieter
- Lichtenberger, Elisabeth
- Nagl, Herta
- Puntscher Riekman, Sonja
- Rosenmayr, Leopold
- Streissler, Erich W.
- Tichy, Gunther
- Vodrazka, Karl
- Zechner, Josef

#### Linguistics and Literature

- Dressler, Wolfgang U.
- Foltinek, Herbert
- Hajnal, Ivo
- Hansen-Löve, Aage A.
- Katičić, Radoslav
- Mayrhofer, Manfred
- Metzeltin, Michael
- Neweklowsky, Gerhard
- Oberhammer, Gerhard
- Reiffenstein, Ingo
- Stanzel, Franz K.
- Steinkellner, Ernst
- Welzig, Werner
- Wiesinger, Peter
- Zacharasiewicz, Waldemar

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### 10.2 Overview: Research units of the Academy

#### Biology & Medicine

- Institute for Biomedical Aging Research (Innsbruck)  
Head: Beatrix Grubeck-Loebenstein
- Institute of Biophysics and Nanosystems Research (Graz)  
Head: Peter Laggner
- Konrad Lorenz Institute for Ethology (Vienna)  
Head: Dustin Penn
- Breath Research Unit (Dornbirn)  
Head: Anton Amann
- CeMM - Center of Molecular Medicine (Vienna)  
Scientific director: Giulio Superti-Furga
- GMI – Gregor-Mendel-Institute of Molecular Plant Biology (Vienna)  
Scientific director: Dieter Schweizer
- IMBA – Institute of Molecular Biotechnology (Vienna)  
Scientific director: Josef M. Penninger

#### Earth Sciences

- Commission for Geophysical Research (Vienna)  
Chair: Michael Kuhn
- Commission for Basic Research on Mineral Raw Materials (Vienna)  
Chair: Horst Wagner
- Commission for the Paleontological and Stratigraphical Research on Austria (Vienna)  
Chair: Werner E. Piller
- Commission for Quarternary Research (Vienna)  
Chair: Gernot Rabeder
- Research Unit for Geographic Information Science (Salzburg)  
Head: Josef Strobl

#### Mathematics, Simulation and Metrology

- Johann Radon Institute for Computational and Applied Mathematics (Linz)  
Head: Heinz Engl

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- Acoustics Research Institute (Vienna)  
Head: Werner Deutsch
- Commission for Scientific Visualization (Vienna)  
Chair: Wolfgang F. G. Mecklenbräuker
- Research Unit for Integrated  
Sensor Systems (Wiener Neustadt)  
Head: Thilo Sauter

### Physics and Materials Sciences

- Stefan Meyer Institute for  
Subatomic Physics (Vienna)  
Head: Eberhard Widmann
- Institute for High Energy Physics (Vienna)  
Head: Walter Majerotto
- Institute for Quantum Optics and Quantum  
Information (Innsbruck/Vienna)  
Head: Rainer Blatt
- Erich Schmid Institute of  
Materials Sciences (Leoben)  
Head: Gerhard Dehm

### Environmental Research

- Institute for Limnology (Mondsee)  
Head: Thomas Weisse
- Clean Air Commission (Vienna)  
Chair: Marianne Popp
- Commission for Interdisciplinary  
Ecological Studies (Vienna)  
Chair: Gerhard Glatzel
- Institute of Technology  
Assessment (Vienna)  
Head: Michael Nentwich
- Austrian IIASA Commission  
at the Austrian Academy of  
Sciences (Vienna)  
Chair: Kurt Komarek

### Space Research

- Space Research Institute (Graz)  
Head: Wolfgang Baumjohann
- Commission for Astronomy (Vienna)  
Chair: Michel Breger

### Interdepartmental Research Tasks

- Commission for the History of Natural Sciences,  
Mathematics and Medicine (Vienna)  
Chair: Hermann Hunger
- Commission for Scientific Cooperation with the  
Austrian Federal Ministry of Defense (Vienna)  
Chair: Hans Sünkel
- Commission for Development Studies at the  
Austrian Academy of Sciences (Vienna)  
Chair: Gerhard Glatzel

### Centre for Ancient World Studies

- Institute for Studies of Ancient Culture (Vienna)  
Head: Friedrich Krinzinger
- Commission of Asia Minor (Vienna)  
Chair: Gerhard Dobesch
- Commission for Egypt and the Levant (Vienna)  
Chair: Manfred Bietak
- Commission for Ancient Literature and Latin  
Tradition (Vienna)  
Chair: Joachim Dalfen
- Commission for Legal History of Ancient States (Vienna)  
Chair: Gerhard Thür
- Commission for Editing the Corpus of the Latin  
Church Fathers (CSEL) (Vienna)  
Chair: Kurt Smolak
- Commission for Mycenaean Studies (Vienna)  
Chair: Sigrid Jalkotzy-Deger
- Numismatical Commission (Vienna)  
Chair: Michael Alram
- Prehistoric Commission (Vienna)  
Chair: Herwig Friesinger

### Centre for Studies in Asian Cultures and Social Anthropology

- Social Anthropology Research Unit (Vienna)  
Head: Andre Gingrich
- Institute for Iranian Studies (Vienna)  
Head: Bert Fragner
- Institute for the Cultural and Intellectual  
History of Asia (Vienna)  
Head: Helmut Krasser

#### Centre for Cultural Research

- AAC – Austrian Academy Corpus (Vienna)  
Head: Evelyn Breiteneder
- Commission for Culture Studies and History of Theatre (Vienna)  
Chair: Moritz Csáky
- Commission for the History of Art (Vienna)  
Chair: Artur Rosenauer
- Commission for Music Research (Vienna)  
Chair: Gernot Gruber
- Commission for the „Fackel“ Text Dictionary (FACKELLEX) (Vienna)  
Chair: Werner Welzig

#### Centre for Medieval Studies

- Institute for Byzantine Studies (Vienna)  
Head: Peter Soustal
- Institute for Medieval History Research (Vienna)  
Head: Walter Pohl
- Institute for the Material Culture of the Middle Ages and the Early Modern Period (Krems)  
Head: Elisabeth Vavra
- Commission for Paleography and Codicology of Medieval Manuscripts in Austria (Vienna)  
Chair: Otto Kresten

#### Centre for Research on Modern and Contemporary History

- Historical Commission (Vienna)  
Chair: Arnold Suppan
- Commission for the History of the Habsburg Monarchy (Vienna)  
Chair: Helmut Rumpler
- Commission for Austrian Legal History (Vienna)  
Chair: Werner Ogris
- Austrian Biographical Encyclopaedia and Biographical Documentation (Vienna)  
Head: Helmuth Grössing

#### Social Sciences Research Centre

- Research Unit for European Tort Law (Vienna)  
Head: Helmut Koziol

- Research Unit for Mountain Research: Man and Environment (Innsbruck)  
Head: Axel Borsdorf
- Institute for Demography (Vienna)  
Head: Wolfgang Lutz
- Institute for European Integration Research (Vienna)  
Head: Sonja Puntischer Riekmann
- Institute for Urban and Regional Research (Vienna)  
Head: Heinz Fassmann
- Commission for Migration and Integration Research (Vienna)  
Chair: Heinz Fassmann
- Commission for Comparative Media and Communication Studies (Vienna)  
Chair: Herbert Matis

#### Centre for Linguistics and Audiovisual Documentation

- Balkans Commission (Wien)  
Chair: Gerhard Neweklowsky
- Institute of Lexicography of Austrian Dialects and Names (Vienna)  
Head: Ingeborg Geyer
- Commission for Linguistics and Communication Research (Vienna)  
Chair: Wolfgang Ulrich Dressler
- Phonogrammarchiv - Austrian Audiovisual Research Archive (Vienna)  
Head: Dietrich Schüller

## »10 Annex

### 10.3 Overview: Service facilities of the Academy

#### Central administration units

- Presidential Office  
Head: Claudia Heilmann-Sennhenn
- Public Relations  
Head: Marianne Baumgart
- Foreign Relations  
Head: Bernhard Plunger
- Information Management  
Head: Alexander Höfer
- Awards and Fellowships  
Head: Barbara Haberl
- Facility Management  
Head: Helmut Schuch
- Event Management  
Head: Martina Milletich
- Office of the Secretary General  
Head: Alexander Nagler
- Office of the Section for the Humanities  
and the Social Sciences  
Head: Lisbeth Triska
- Accounting Office  
Head: Wilhelm Henrich
- Human Resources  
Head: Gerhard Leder

- Legal Office  
Head: Christian Arthaber
- Office of the Section for Mathematics  
and the Natural Sciences  
Head: Guido Korlath
- Subsidiaries  
Head: Gerhard Schadler
- Computing Centre of the Academy  
Head: Melitta Kimbacher
- Internal Audit  
Head: Christophe Millischer
- Akademie-Gebäude-Errichtungs-  
und-Instandhaltungs-GmbH  
Managing Director: Gerhard Schadler

#### Library and Archive

Head: Christine Harrauer

#### Austrian Academy of Sciences Press

Sales Manager: Herwig Stöger

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### 10.5 List of abbreviations used

AAS:	Austrian Academy of Sciences
AGEI:	Akademie-Gebäude-Errichtungs- und -Instandhaltungs-GmbH
AKH:	General Hospital Vienna
APA:	Austria Presse Agency
APART:	Austrian Programme for Advanced Research and Technology
APART-urban:	Austrian Programme for Advanced Research and Technology, funded by the City of Vienna
ARSC:	Association of Recorded Sound Collections
BMBWK:	Federal Ministry for Education, Science and Culture (until February 2007)
BMWF:	Federal Ministry for Science and Research (since March 2007)
c.m.:	Corresponding member
c.m.a.:	Corresponding member abroad
c.m.i.A.:	Corresponding member in Austria
CERN:	Conseil Européen pour la Recherche Nucléaire
CSS:	Cascading Style Sheets
DOC:	Doctoral candidate programme of the Academy
DOC-fORTE:	Doctoral candidate programme of the Academy: women in research and technology
DOC-team:	Doctoral candidate programme for interdisciplinary work in the humanities, social and cultural sciences
DOC-urban:	Doctoral candidate programme of the Academy, funded by the City of Vienna
e.V.:	Registered association
ESA:	European Space Agency
EUR '000:	in thousands of euros
EURATOM:	European Atomic Energy Community
f.m.:	Full member
f:	Female
FFG:	Austrian Research Promotion Agency
FTE:	Full-time equivalent
FWF:	Austrian Science Fund
HM:	Honorary member

## »10 Annex

HS:	Humanities and social sciences
ICR:	Intellectual Capital Reporting
ICSU:	International Council of Scientific Unions
IFAC:	International Federation of Automatic Control
IFIP:	International Federation for Information Processing
ISI:	Institute for Scientific Information (Thomson Scientific)
m:	Male
MAX KADE:	Programme of the Max Kade Foundation
MN:	Mathematics and natural sciences
NASA:	National Aeronautics and Space Administration
Ö1:	Radio programme “Österreich 1”
OeNB:	Austrian National Bank
ÖNORM:	Austrian standard
ORF:	Austrian Broadcasting Corporation
ÖSTAT:	Statistics Austria
R&D:	Research and development
ROM:	Grants of the Federal Ministry for Science and Research for the Austrian Historical Institute at the Cultural Forum in Rome
RZB:	Raiffeisen Zentralbank
SAB:	Scientific advisory board

