

# Max Planck Society

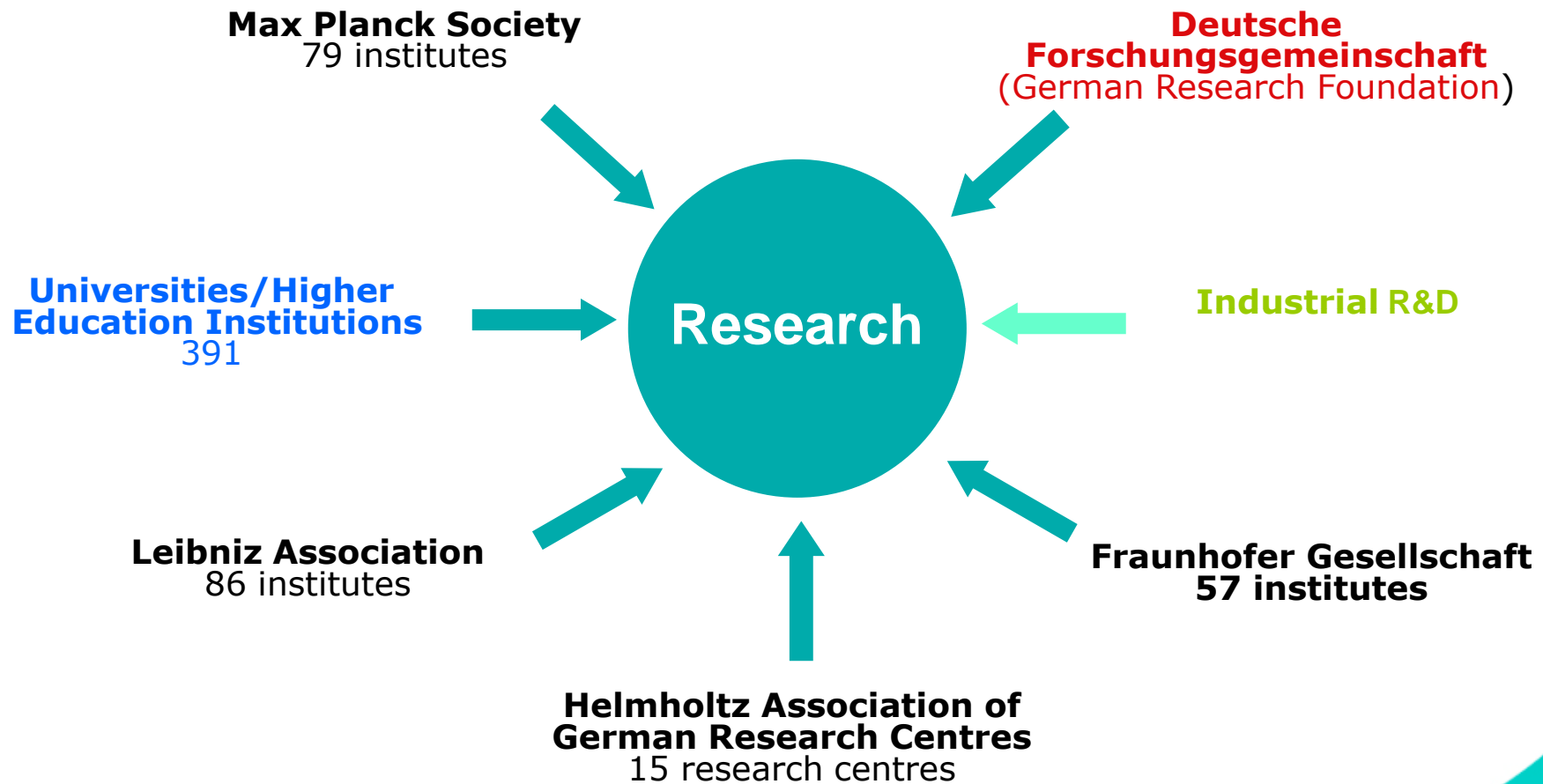
- ◆ **research organization**
- ◆ **complementary to Universities**

*(novel research areas / large equipment)*

- curiosity-driven research
- minds not programs



# The German Research Landscape



# Max Planck Society

**AUTONOMY**

**=> Scientists decide upon Science**





## CPTS

Chemistry,  
Physics and  
Technology Section



## BMS

Biology  
& Medicine  
Section



## HS

Human  
Sciences  
Section

Senate



President



Sections

**top down <-> bottom up approach**



# Max Planck Institutes

*.....are autonomous units*



# 79 Max Planck Institutes



- as big as two of the Berlin Universities
  - Stanford University
  - Yale University



# Governance of Max Planck Institutes

## Scientific Management of each Max Planck Institute...



- determines **research topics**
- chooses appropriate **research structures** (departments / projects)
- recruits **institute's staff** (scientific - incl. students / non scientific)
- manages **institute budget**
- chooses **collaboration partners**, both foreign and domestic
- acquires **additional funds**



# The MPI: autonomous organization

Scientific Management			
Director Dept. A	Director Dept. B	Director Dept. C	Director Dept. D
Rotating management duties			

+ *Research  
Group Leaders*

Scientific  
Advisory  
Board

Service facilities	
Library, Laboratories, IT	<b>Administration</b>



# Max Planck Society



***Results of trust in science***



# Scientific Excellence

17 Nobel Laureates since 1948  
3 Nobel Laureates since foundation in 1911

2007 Chemistry:	Gerhard Ertl
2005 Physics:	Theodor Hänsch
1995 Chemistry:	Paul Crutzen
1995 Medicine:	Christiane Nüsslein-Volhard
1991 Medicine:	Erwin Neher, Bert Sakmann
1988 Chemistry:	Johann Deisenhofer, Robert Huber, Hartmut Michel
1986 Physics:	Ernst Ruska
1985 Physics:	Klaus von Klitzing
1984 Medicine:	Georges Köhler
1973 Medicine:	Konrad Lorenz
1967 Chemistry:	Manfred Eigen
1964 Medicine:	Feodor Lynen
1963 Chemistry:	Karl Ziegler
1954 Physics:	Walter Bothe



## Appointment of MPI directors

---

**267** directors

**67 foreign citizens** (= 25,1 %)

from **19 countries**

### Nationality

USA	13
A	8
GB	11
CH	7





# Scientific Excellence

	Institution	Highly Cited Papers
<b>1</b>	HARVARD UNIV	4585
<b>2</b>	<b>MAX PLANCK SOCIETY</b>	<b>2153</b>
<b>3</b>	STANFORD UNIV	2114
<b>4</b>	UNIV CALIF BERKELEY	1911
<b>5</b>	MIT	1843
<b>6</b>	UNIV WASHINGTON	1819
<b>7</b>	JOHNS HOPKINS UNIV	1787
<b>8</b>	UNIV CALIF LOS ANGELES	1717
<b>9</b>	UNIV MICHIGAN	1500
<b>10</b>	UNIV CALIF SAN DIEGO	1458

Source: ISI - Essential Science Indicators

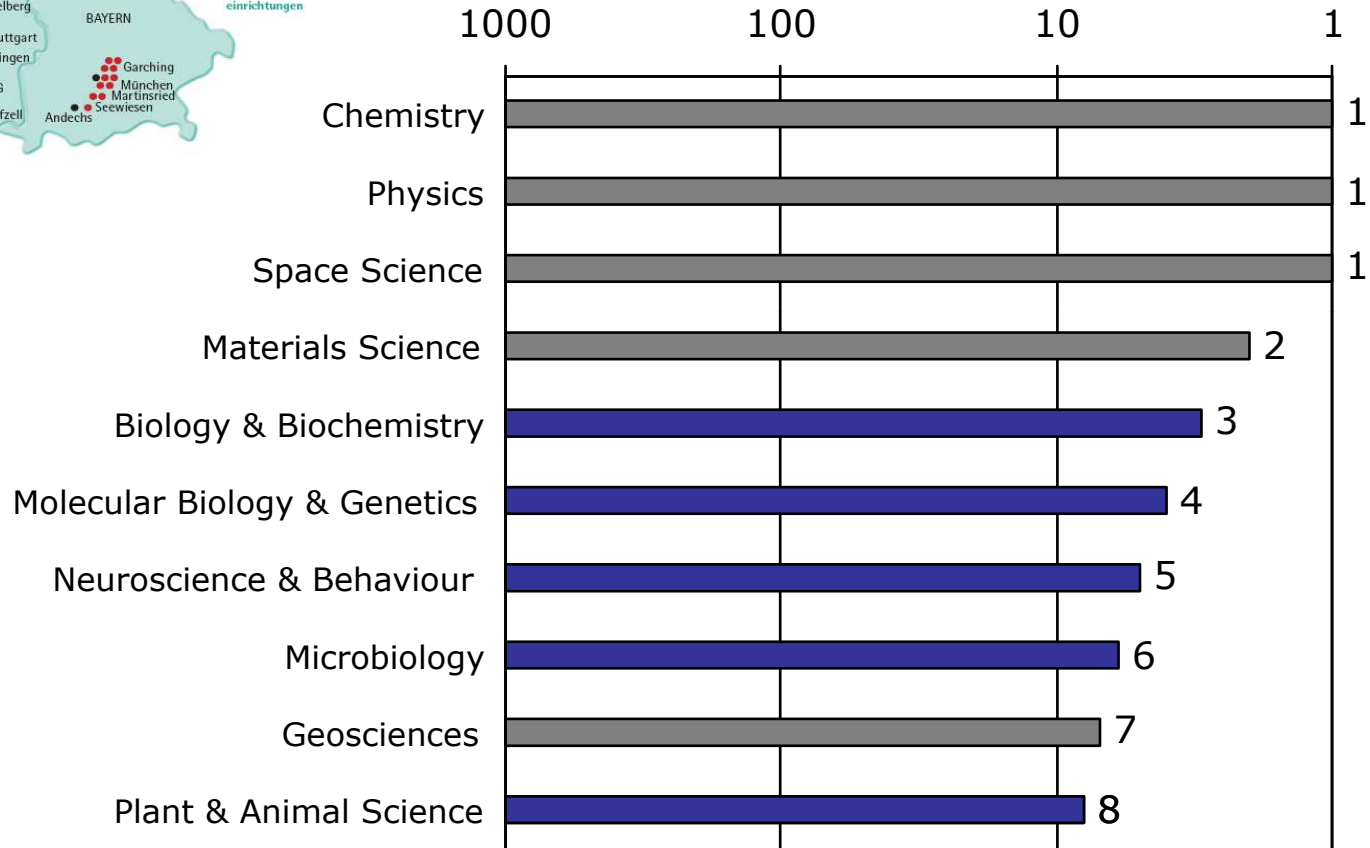
Basis: top 1% highly cited papers in 22 fields of science  
January 1997 – December 2007





# Scientific Excellence

## science performance statistics



Quelle: ISI - Essential Science Indicators





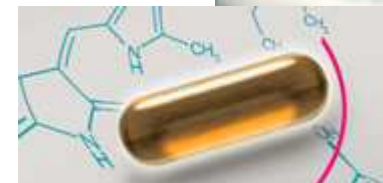
# Max-Planck-Innovation

=> *commercializing research results of the MPIs*

## ● Achievements

- ≥ 100 patent applications per year
- 72 MPG start-ups since 1990 / 42 VC fundings
- 7 companies on stock market
- > 2.500 workforce in spin-offs

Annual License Income: >20 M€



Max-Planck-Innovation



## recent example: Sutent®

- **A. Ullrich**  
MPI for Biochemistry
- Highly efficient cancer drug  
(-> kidney/stomach/colon)
- Sales of > 0.8 billion US\$ p.a.



# Participation of the Max Planck Society in European Framework Programmes



**MAX PLANCK SOCIETY**  
Building Excellence in Framework Programme 7



Peter Grass  
President of the Max Planck Society

Major targets of the Max Planck Society for the European Research Framework:

- Strengthening basic research to serve the scientific base of Europe and to boost its international competitiveness
- Implementation of an autonomous European Research Council for basic research
- Further expansion of the Marie Curie Programme
- Collaborative Research needs to address generic activities
- Substantial simplification of management aspects



The Max Planck Society has achieved one of the highest funding rates in Europe:

Almost 50 % of its projects are successful.

## European Framework Programmes:

1995 – 1998 13.50 million € p. a.

1999 – 2002 20,75 million € p. a.

2003 – 2006 36,77 million € p. a.

## plus EURATOM (IPP):

1995 – 1998 33,8 million € p. a.

1999 – 2002 29,0 million € p. a.

2003 – 2006 24,8 million € p. a.



# ERC Participation of the Max Planck Society

---

## 1st Call ERC Advanced Grants

- Rank 6 in Europe
- 6 Grantees



**13.7 Mio. Euro**

**Total Budget  
27.7 Mio. Euro**

## 1st Call ERC Starting Grants

- Rank 2 in Europe
- 12 Grantees



**14 Mio. Euro**



**Max Planck Society**

**and cooperation**



## International projects and networks

---

2007: **2,248 international projects** with  
**6,164 partners** in **117 countries**

Country		Country	
F	458	CH	243
USA	580	Spain	228
GB / IRL	480	RUS	114
I	328	S	175
NL	302	B	162
		AU	144



# MPS is international: Key Figures

---

## Personnel

- Share of individuals from abroad

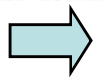
○ all staff members	13 %
○ Staff Scientists	27 %
○ Institute Directors	28 %
○ Ph.D. Students	47 %
○ Postdocs	80 %



# International MP Research Schools



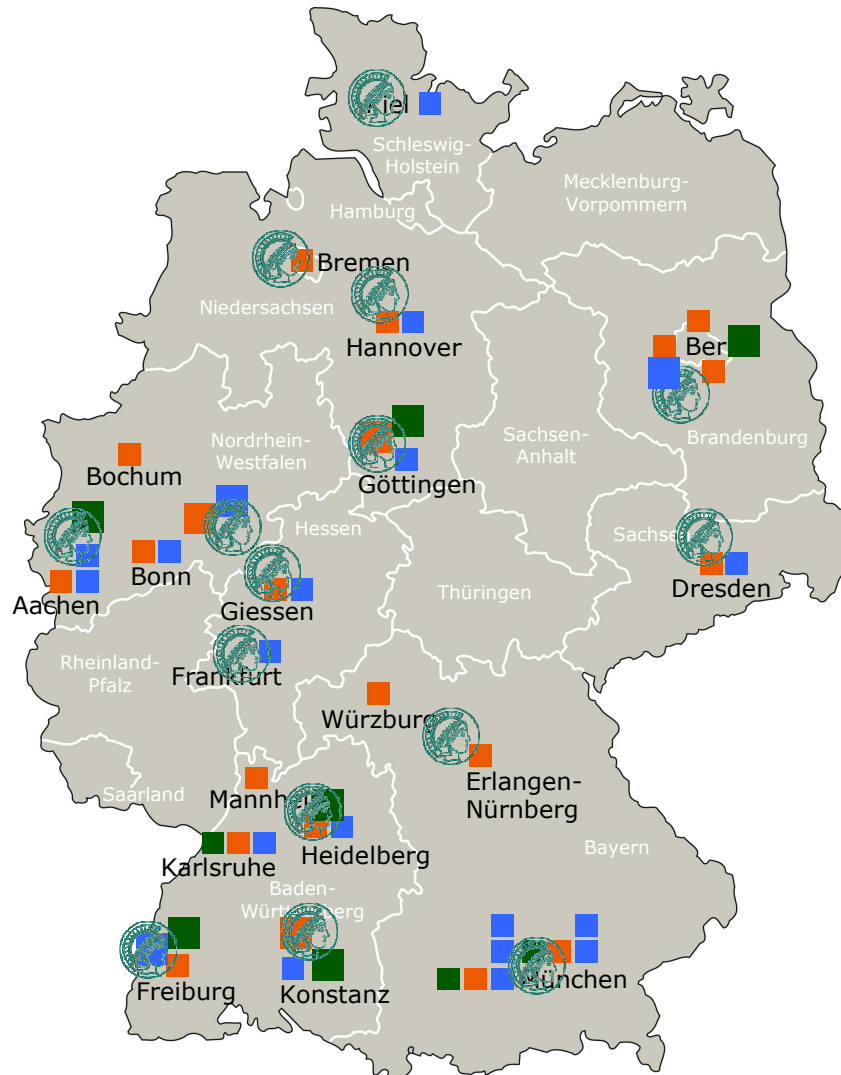
- special PhD programs
- intensive training (University & MPI)
- attractive research opportunities
- innovative and interdisciplinary topics






**51 IMPRSs running**  
**65 MP Institutes**  
**69 Universities (Faculties)**

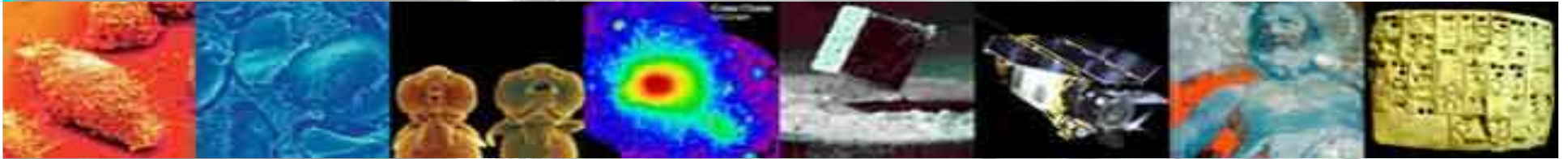
**> 2.000 PhD students**  
**> 60% non-German**  
**86 countries**

# Excellence Initiative and Cooperation



-  Cluster of Excellence
-  Graduate school
-  Elite University





**Herkese Teşekkür Ederim..**

**[r.hesse@max-planck.brussels.eu](mailto:r.hesse@max-planck.brussels.eu)**