

# **ESF Member Forum**

**Evaluation of Funding Schemes and Research Programmes  
Expectations, Practices and Experiences  
Berlin, October 22<sup>nd</sup> to 23<sup>rd</sup> , 2007**

**Performance Assessment and Programme Evaluation  
in the Austrian Science Fund (FWF)**

**Dr. Rudolf Novak**  
Head of Department for  
**Development & Strategy,**  
**National Programmes**

The FWF is Austria's **central body for the promotion of basic research.**

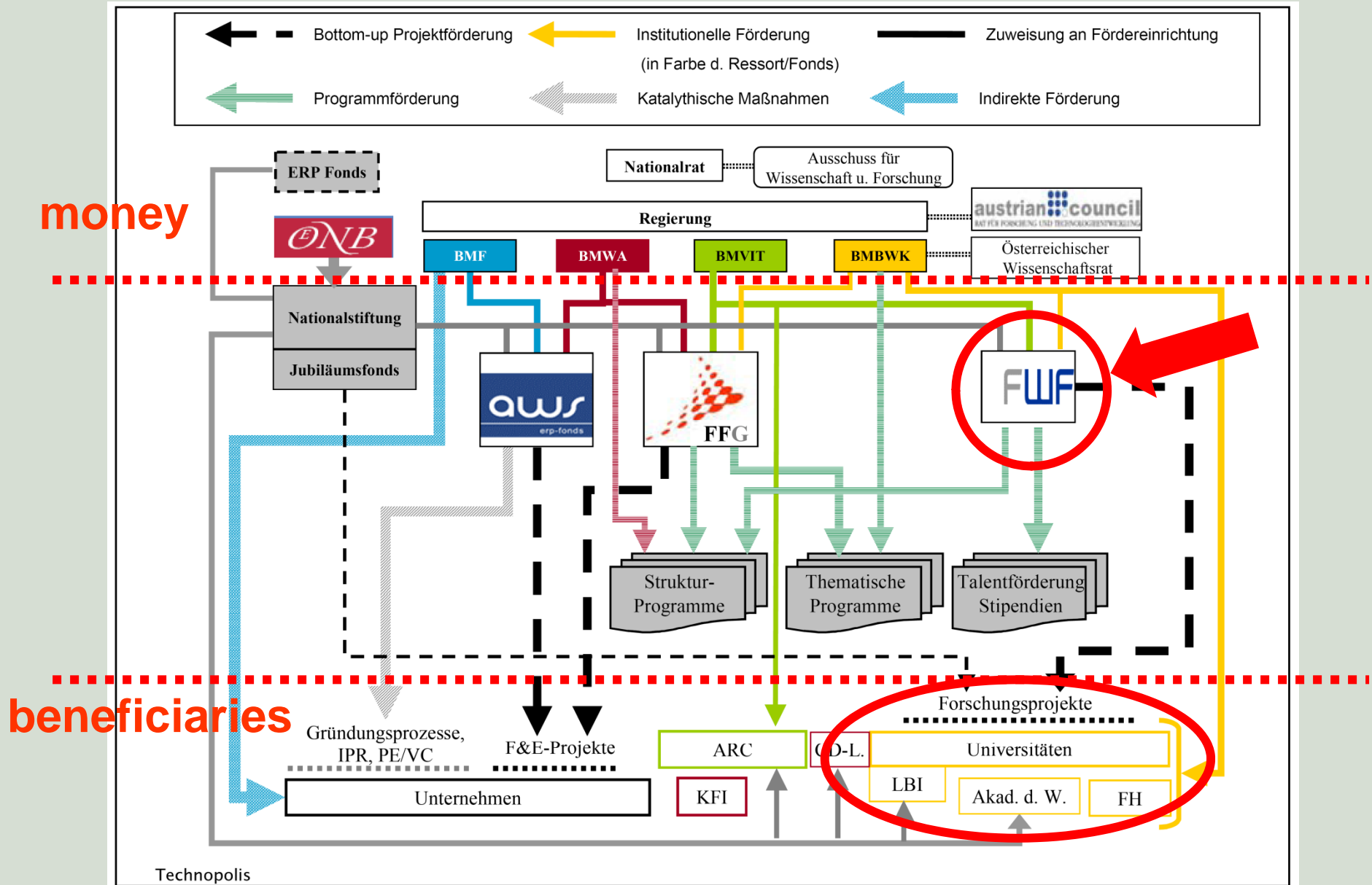
We invest in new ideas that contribute to an **advance in knowledge** and thereby to further developments. We are equally committed to **all branches of science and the humanities** and are guided in our operations solely by the **standards of the international scientific community.**

The FWF understands **scientific research** (fundamental or basic research) to mean research that aims not to make a profit but instead to develop scientific knowledge; its value relates primarily to its importance for science.

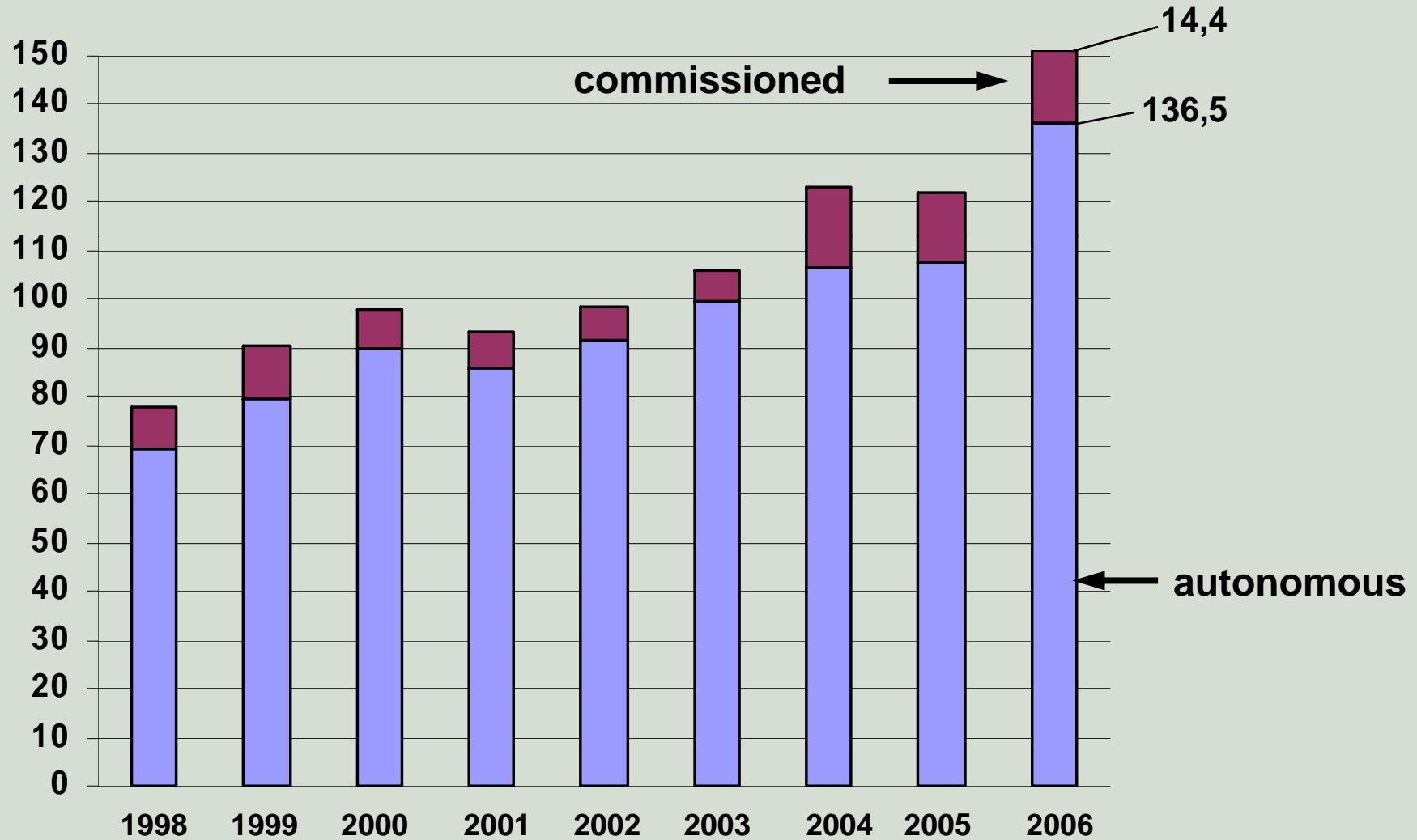
## The FWF

- covers all fields of science and the humanities  
(unlike e.g. the British Research Councils)
- is focussed on basic science  
(unlike e.g. RCN)
- does not run research institutes  
(unlike e.g. NWO)
- does not act as a strategic advisory council for the government (unlike e.g. RCN)
- uses *exclusively* reviewers from abroad  
(virtually unique in international funding scene)
- has a single budget for all disciplines  
(virtually unique in international funding scene)

## The most important players (within Austria)



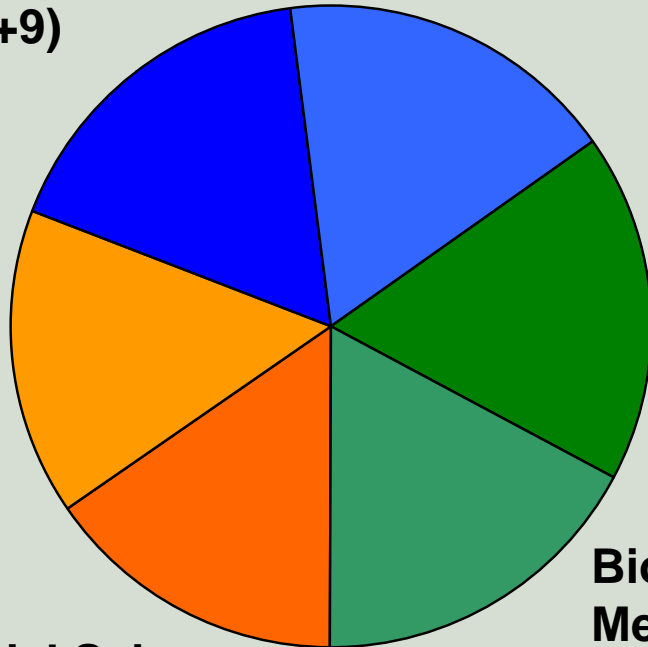
Sums granted 2006: 150,9 Mio. €\*)  
 (1998 – 2006 in Mio. €)



### FWF Board

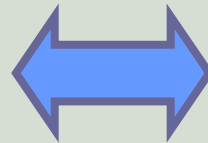
26 Reporters, 26 Alternates

Natural and  
Technical Sciences  
(9+9)



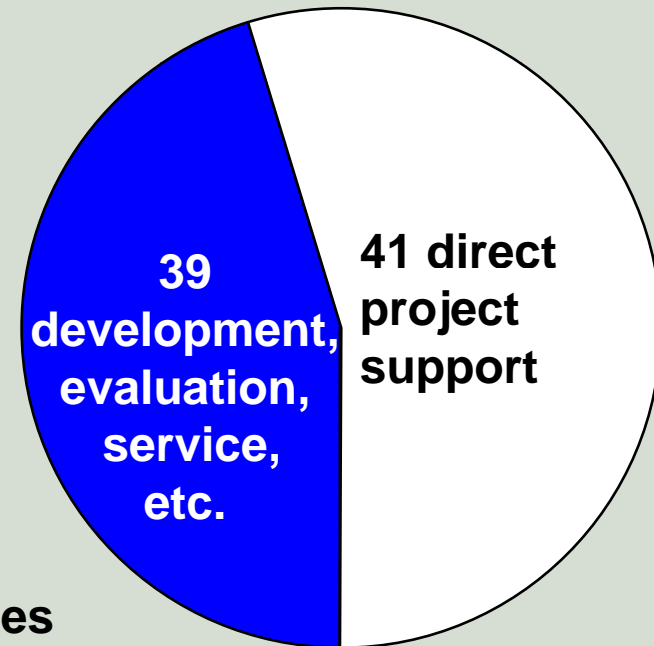
Social Sciences  
& Humanities  
(8+8)

Biological and  
Medical Sciences  
(9+9)



### FWF Secretariat

80 members of staff



39  
development,  
evaluation,  
service,  
etc.

41 direct  
project  
support

### **3 instruments:**

Funding of research projects,

funding of research networks

provision of fellowships for excellent  
investigators



### Stand-alone Research Projects

Publishing Costs

### Application Oriented

- Impulse Programme
- Translational Research Programme (incl. Translational Brainpower)

### Research Networks

with no predefined theme

- Special Research Programmes
- National Research Networks
- Graduate schools

with predefined theme

- EUROCORES (with ESF)
- NANO-Initiative (with FFG)

### International Mobility

- Schrödinger Grants (outgoing)
- Meitner Grants (incoming)

### Promotion of Women

Career Development Programme

- Firnberg Programme (Postdoc)
- Richter Programme (Senior Postdoc)

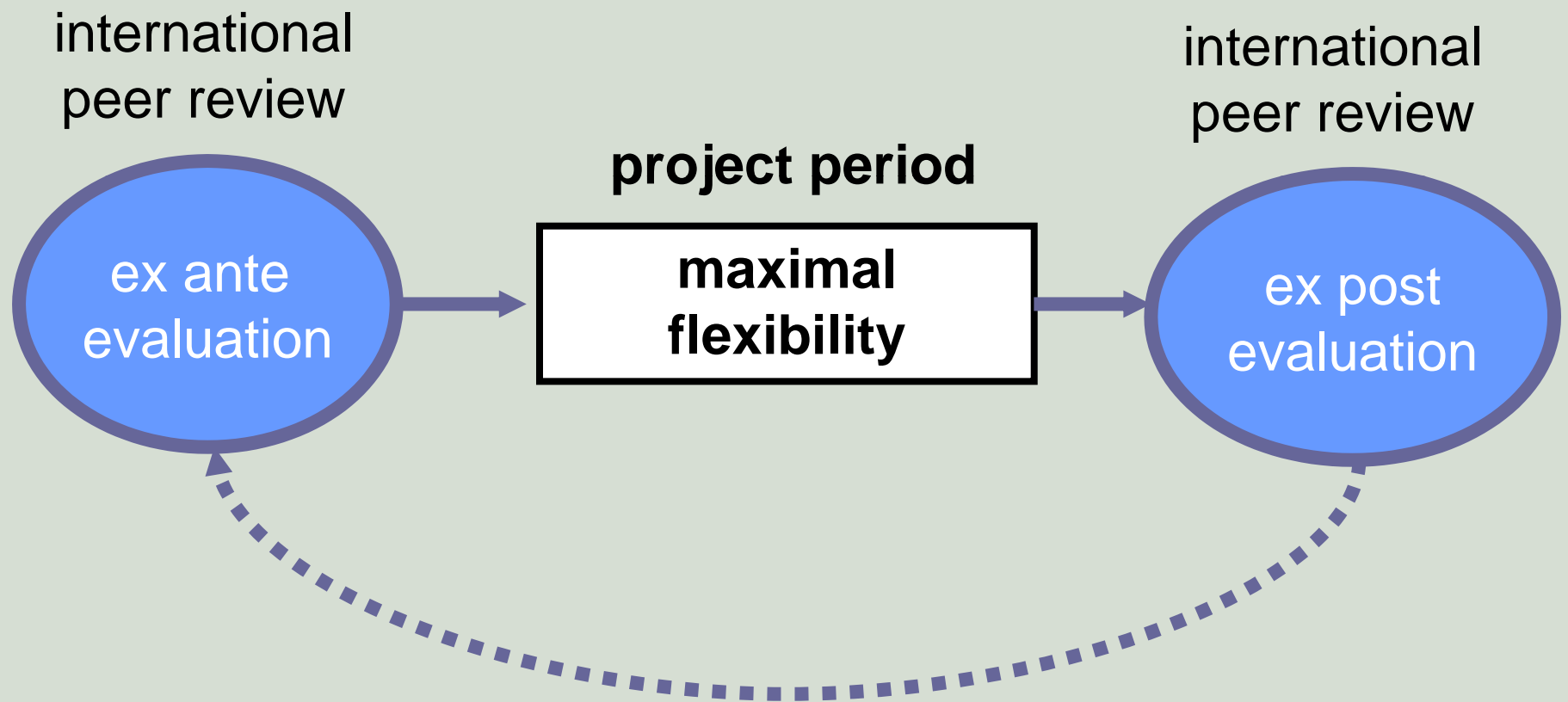
### Outstanding Researchers

- START & Wittgenstein Awards

- **Evaluation of Projects**
- **Evaluation Programmes**

### **not performed:**

- **Evaluation of individual scientist**  
(taken into account in the course of peer review of projects)
- **Evaluation of research institutions**  
(taken into account in the course of peer review of projects)
- **Performance Evaluation of scientific fields**  
(taken into account in the course of programme evaluations)



**Projects: quality assessment**

**Cooperations**

**International scientific community**

**National scientific community**

**FWF**

**FWF Board:  
Rep. + Alt.**

**FWF Secretariat:  
Scientific  
& Non- Scientific  
Administrators**

**Referees  
(peers)**

**Applicants**

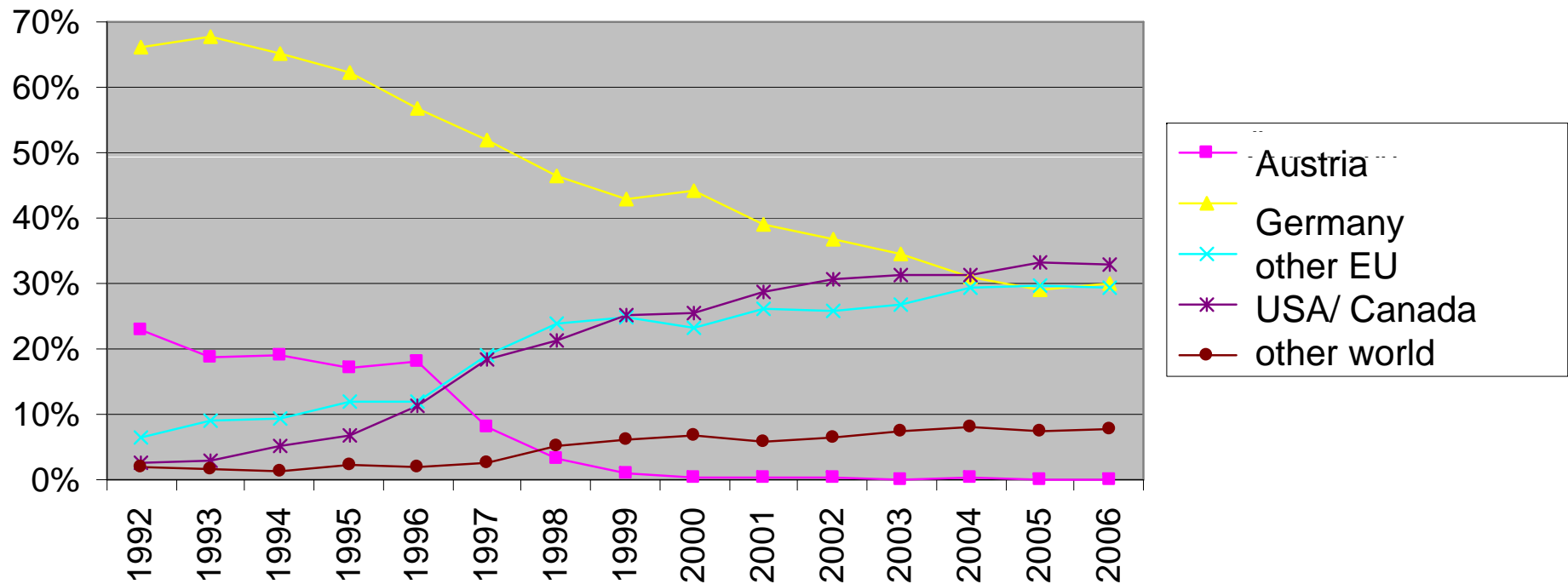
~~Cooperations~~

**Conflict of interest**

## Key points of the FWF procedure

- Strict bottom-up principle: no pre-defined themes, no quotas, no preferences
- Several people involved in all stages of procedure and in all decisions („checks and balances“)
- Close interactions with applicants for maximum transparency
- Independent international peer review as the basis for evaluation of quality
- Review texts are important basis for decisions (ratings are merely indicative)
- Discussion of and decisions concerning all projects from all scientific disciplines in a single Board containing representatives of all branches of science

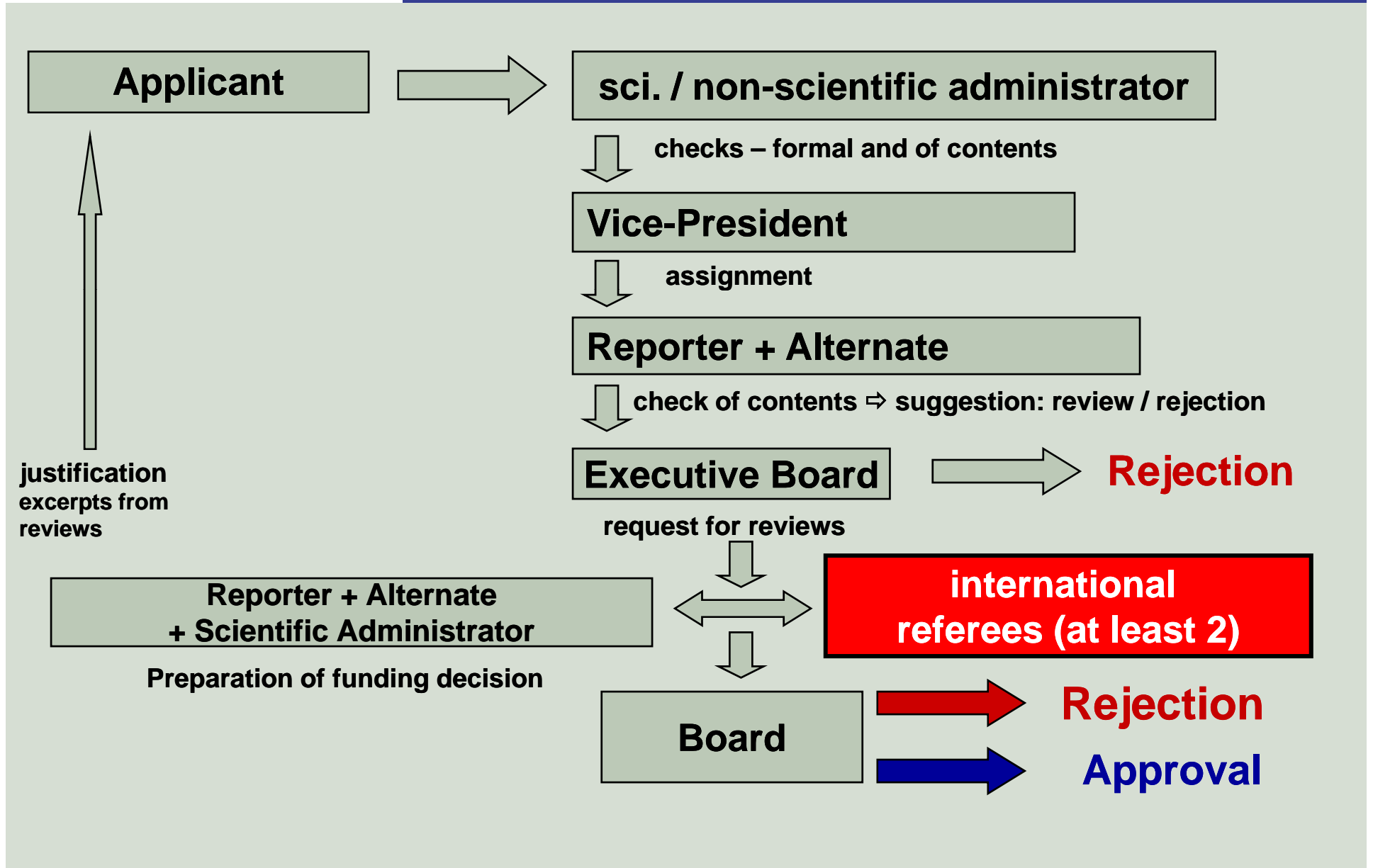
# Origin of reviewers 1992 – 2006



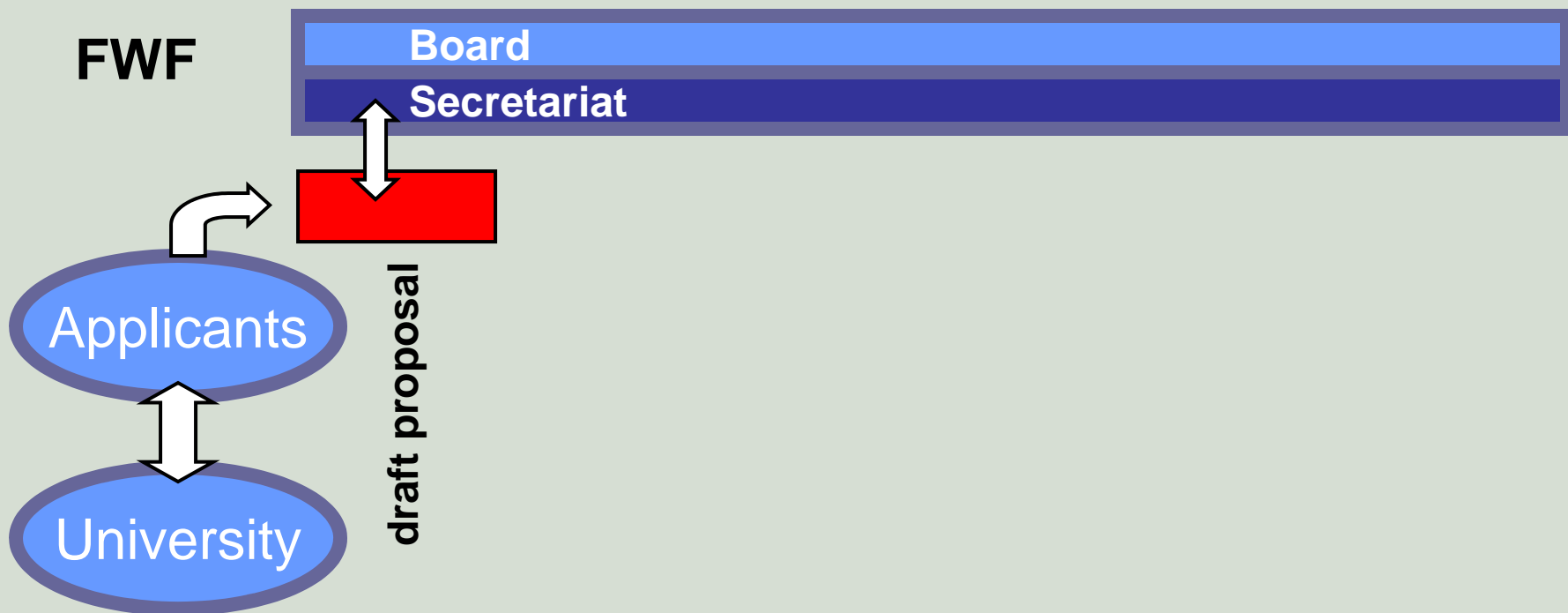
## General principles for review and decisions

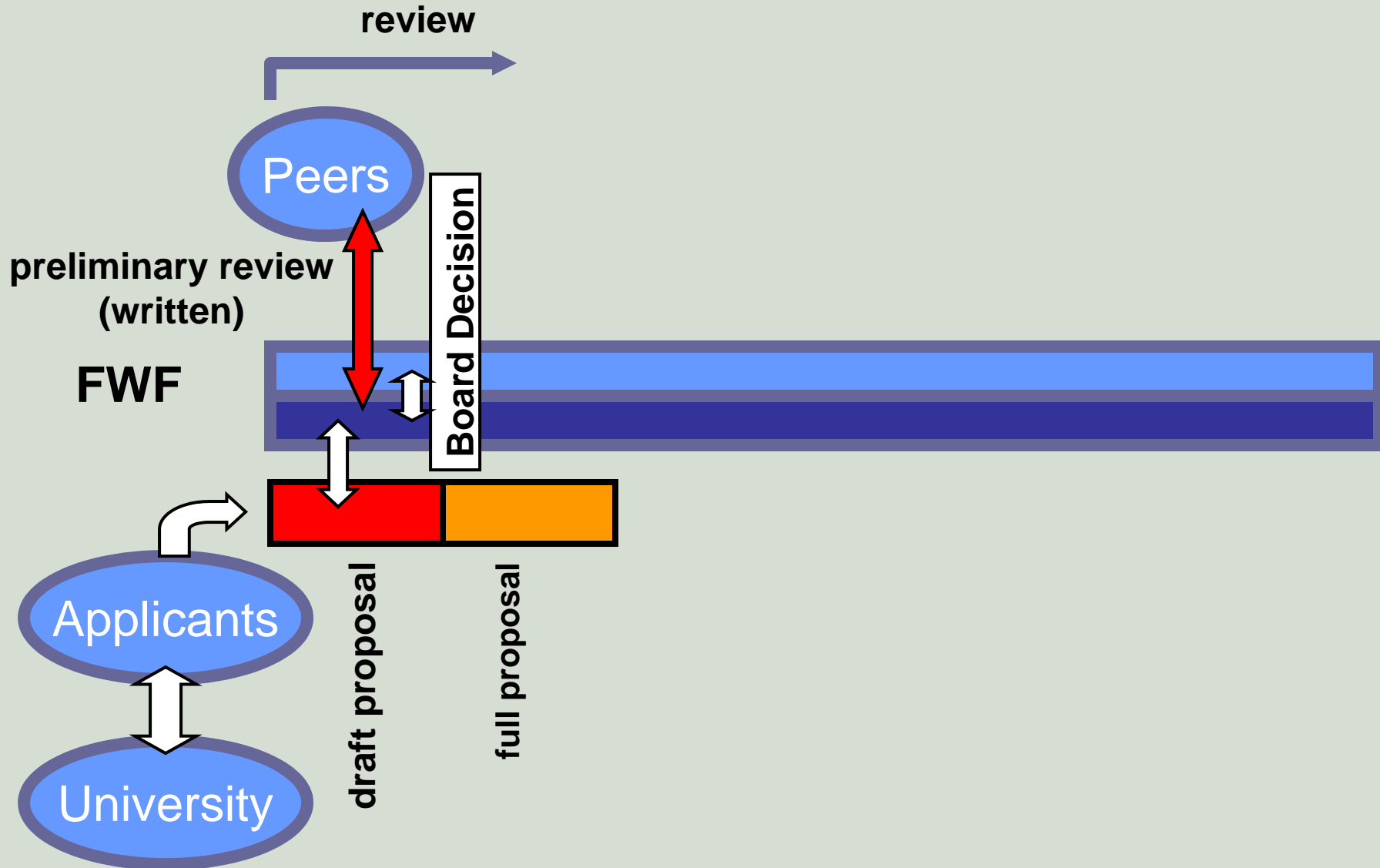
<b>Quality standard</b>	⇒	international scientific community
<b>Peer review</b>	⇒	exclusively outside Austria
<b>FWF Reporters</b>	⇒	nomination of referees
<b>FWF Executive Board</b>	⇒	request for reviews
<b>Number of reviews</b>	⇒	at least 2 (according to requested funding)
<b>Funding Decisions</b>	⇒	ca. every 2 months
<b>Decisions</b>	⇒	entire FWF Board based on the reviews
<b>Justification</b>	⇒	reviews made available to applicants
<b>ex post evaluation</b>	⇒	peer review of the final reports

## The FWF funding machine

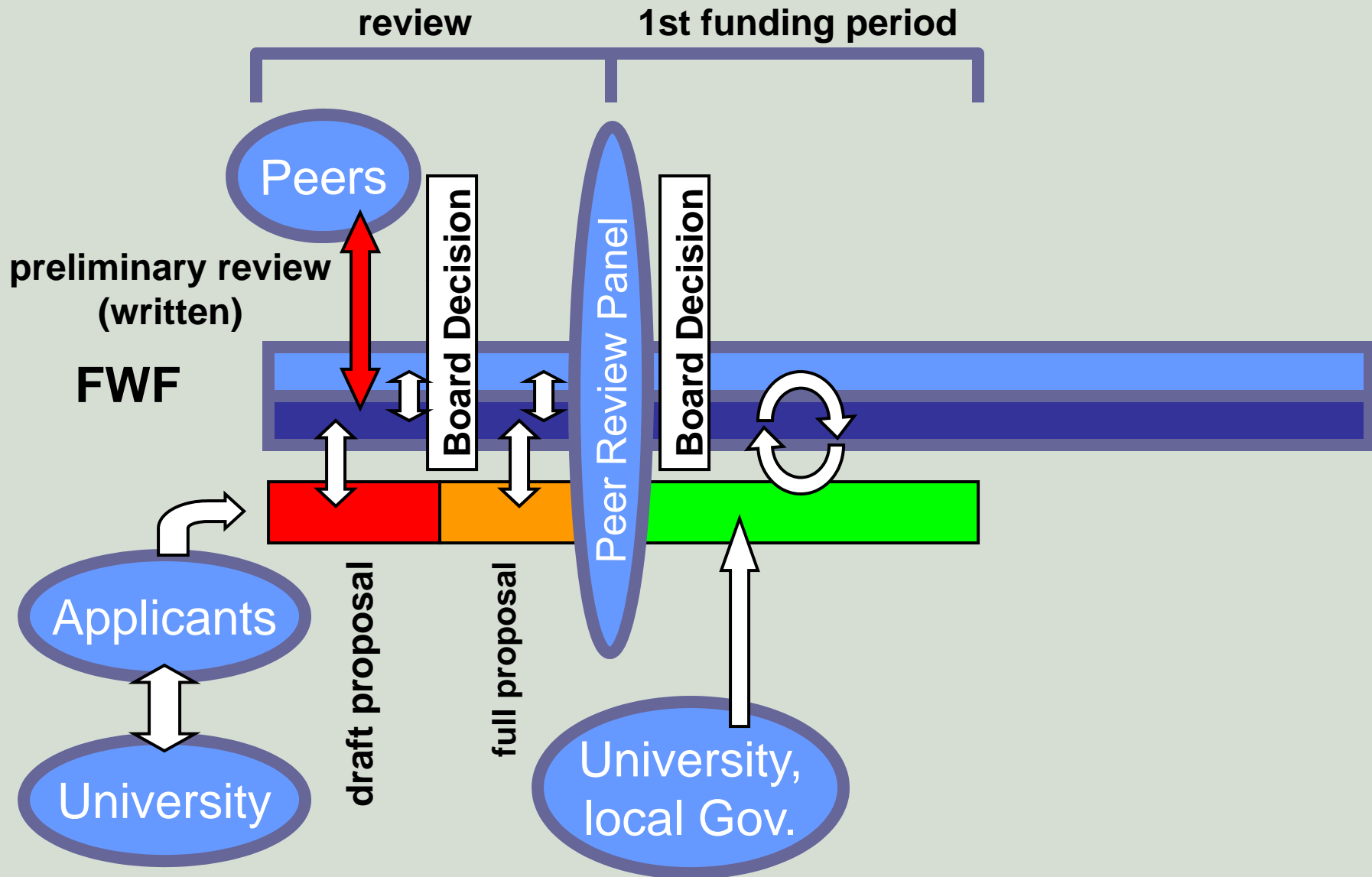




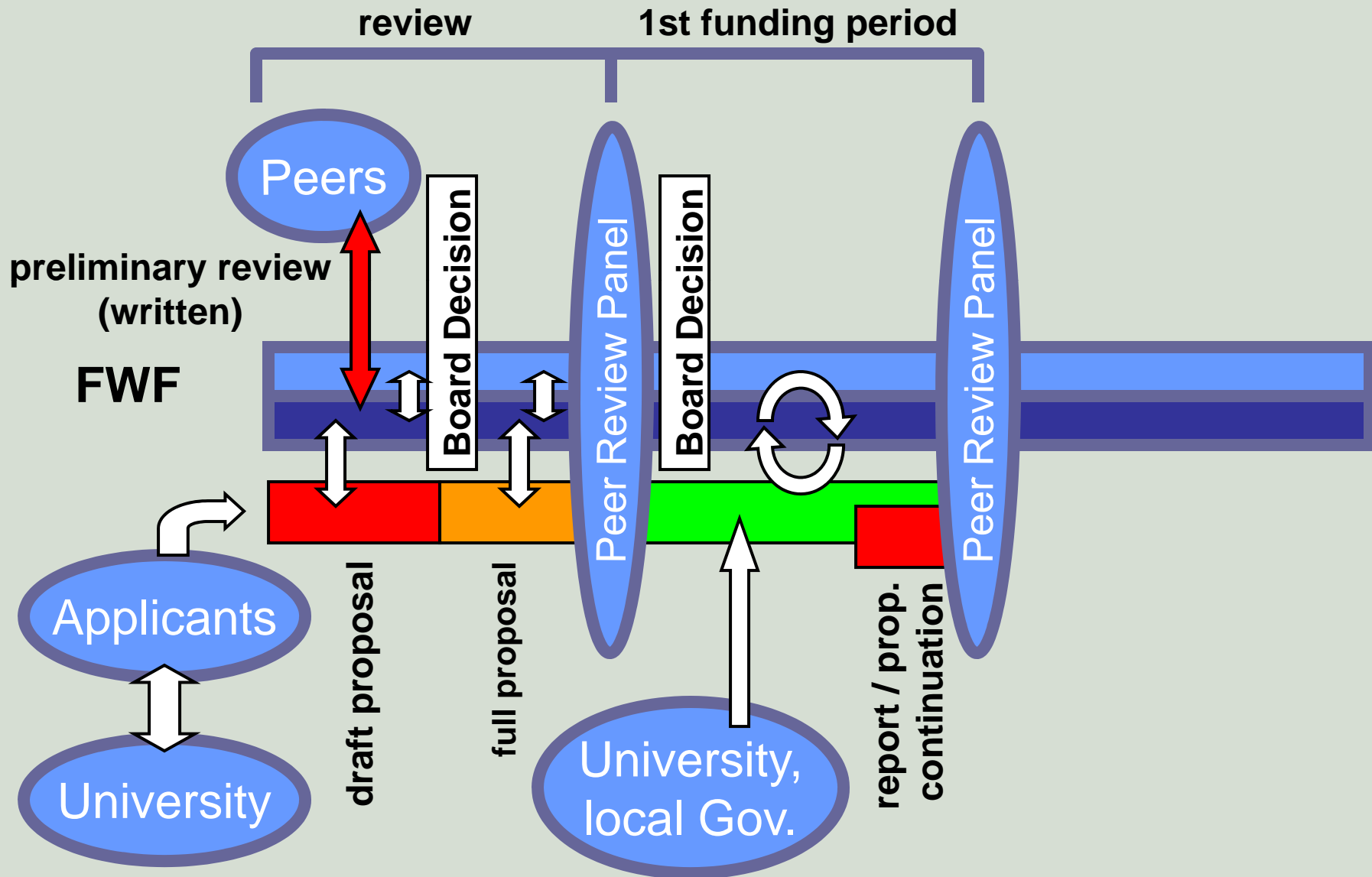




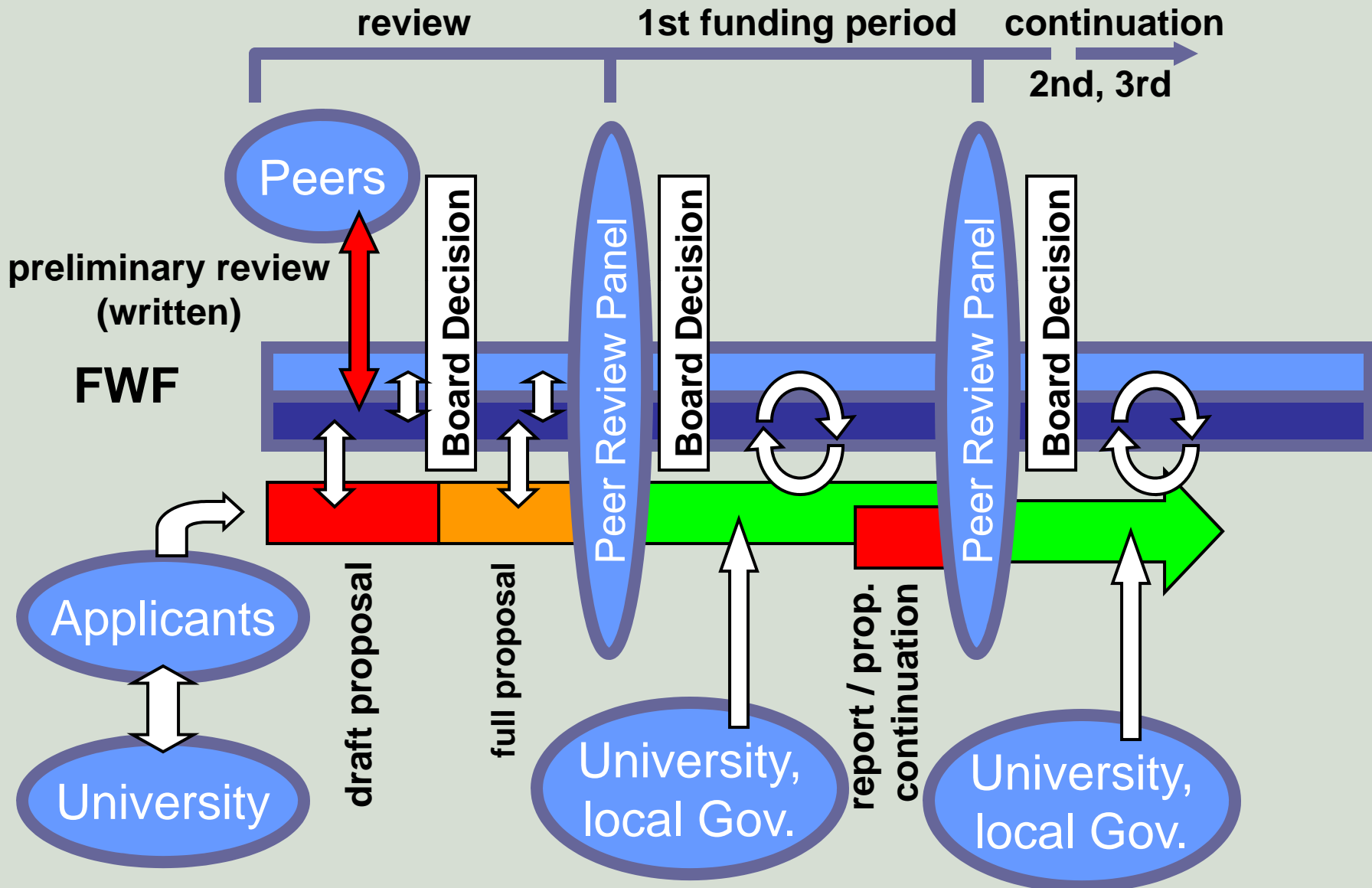
# Multi-step evaluation of research networks



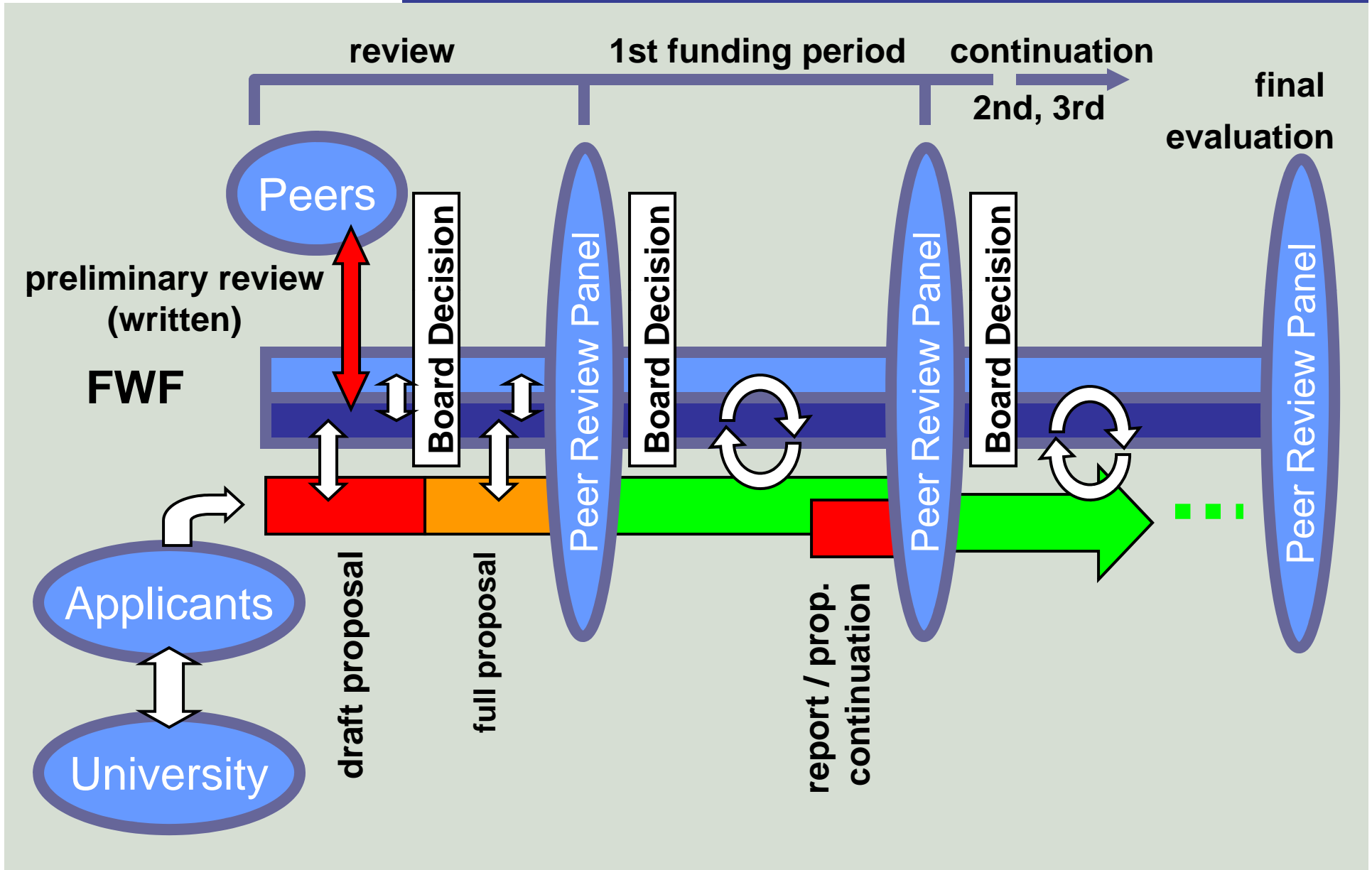
# Multi-step evaluation of research networks



# Multi-step evaluation of research networks



# Multi-step evaluation of research networks



## What does “flexibility” mean?

- Overall budget + 5% “general project costs” (since 2003)
- no requirement for annual reports (only accounting)
- removal of the 6-year limit for “independent scientists” (2004)
- removal of the limit of 2 projects per project leader (2005)
- Senior Postdoc salary for experienced “independent scientists” (since 2005)
- extension of the length of time calculated for children: 3 years per child (since 2005)

- annual accounts and brief (one page) progress report
- comprehensive report at the conclusion of the project, consisting of 5 parts (a total of ca. 2,400 words or 4 pages):
  - **subjected to peer review (1 ex-ante reviewer)**
- 1. **summary for PR work (German and English)**
- 2. **brief project report**
  - 2.1. report on the scientific work
  - 2.2. personnel development – importance of the project for the scientific careers of those involved (including the project leader)
  - 2.3. effects of the project outside the scientific field
- 3. **Information on project participants**



## **4. Attachments → for peer review and data collection**

### **List 1.a. scientific publications**

(the publication list must mention for each work: all authors; full title; series/journal title; year; volume; and page numbers.)

### **List 1.b. publications for the general public and other publications**

### **List 2 project-related participation in international scientific conferences**

### **List 3 Development of collaborations (national, European, international)**

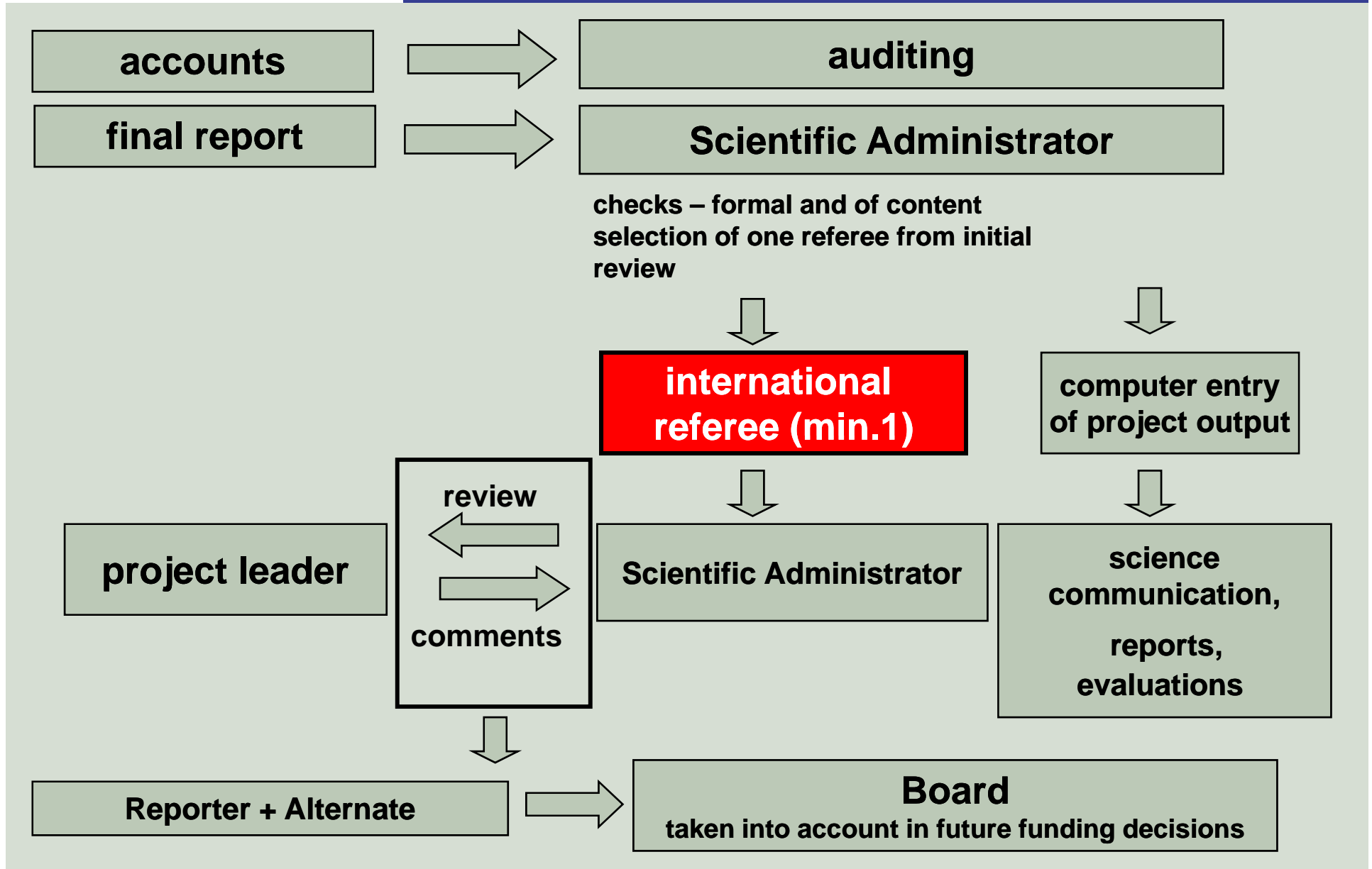
### **List 4 “Habitations” (professorial qualifications) / PhD theses / diploma theses**

### **List 5 Effects of the project outside the scientific field (where appropriate)**

### **List 6 Applications for follow-up projects**

## **5. Feedback about Work with the FWF**

## Closing of the project



## **Reviewers are asked to comment on:**

1. the scientific success of the project;
2. the development of human resources in the course of the project;
3. effects beyond the scientific field (in the sense of applications in or impacts on social, cultural, ecological, medical, economic and/or technological areas);
4. the running of the project with regard to use of available resources; and
5. the future perspectives of the research work.

Evaluation der Förderung (P19004-N18 - 19.10.2007)

Evaluierung

Zusammenarbeit mit dem FWF

Antragsrichtlinien	Verfahren	Projektbegleitung	Berichte/Prüfung/Verw.
Umfang <input type="checkbox"/>	Beratung <input type="checkbox"/>	Verfügbarkeit <input type="checkbox"/>	Aufwand <input type="checkbox"/>
Übersichtlichkeit <input type="checkbox"/>	Verfahrensdauer <input type="checkbox"/>	Ausführlichkeit <input type="checkbox"/>	Transparenz <input type="checkbox"/>
Verständlichkeit <input type="checkbox"/>	Transparenz <input type="checkbox"/>	Verständlichkeit <input type="checkbox"/>	PR/Verwertung <input type="checkbox"/>
		Finanzverkehr <input type="checkbox"/>	

Projektevaluierung

Humanressourcen (Liste 4)			weiterreichende Effekte (Liste 5)		
	lfd.	abg.			
Berufungen	<input type="checkbox"/>	<input type="checkbox"/>	wiss. Veranstaltungen	<input type="checkbox"/>	
Habilitationen	<input type="checkbox"/>	<input type="checkbox"/>	Würdigungen/Preise	<input type="checkbox"/>	
Dissertationen	<input type="checkbox"/>	<input type="checkbox"/>	Patente/Lizenzen	<input type="checkbox"/>	
Diplomarbeiten	<input type="checkbox"/>	<input type="checkbox"/>	sonstige Resultate	<input type="checkbox"/>	
sonstige	<input type="checkbox"/>	<input type="checkbox"/>	Auswirkungen	<input type="checkbox"/>	
			Folgeaktivität/FWF	<input type="checkbox"/>	
			Folgeaktivität/national	<input type="checkbox"/>	
			Folgeaktivität/international	<input type="checkbox"/>	

Fachtagungen (Liste 2)		wichtigste Kooperationen (Liste 3)			
		Name	N	E	D
Invited Lectures	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lectures	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Posters	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anderes	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Publikationen...

**Publikationen zur Förderung/Neu**

Typ	Name	Jrnl./Verl.

Erfasst am: 19.10.2007    Typ:

Autor:

Erschein.ort:     Jahr:     Seite(n):

Langtitel:

zus. Daten bei Journalen

Volume:

Journal:  ?

zus. Daten bei Monographien

ISBN:     Nr. Auflage:

Verlag:  ?

**mehrfache Bearbeitung**       

**Auswahl**

Wählen Sie ein Journal aus

Name	Ort
ACTA BIOLOGICA CRACOVENSIA SERIES	
ACTA BIOLOGICA HUNGARICA	
ACTA BIOQUIMICA CLINICA LATINOAMERI	
ACTA BIOTECHNOLOGICA	
ACTA BIOTHEORETICA	
ACTA BOTANICA GALLICA	
ACTA BOTANICA SINICA	
ACTA CARDIOLOGICA	
ACTA CHIMICA SINICA	
ACTA CHIMICA SLOVENICA	
ACTA CHIROPTEROLOGICA	
ACTA CHIRURGICA BELGICA	
ACTA CHIRURGICA ITALICA	

500 Datensätze gefunden, mehr Daten sind verfügbar.

ca. 10.000 Scientific Journals

## Evaluations commissioned by FWF

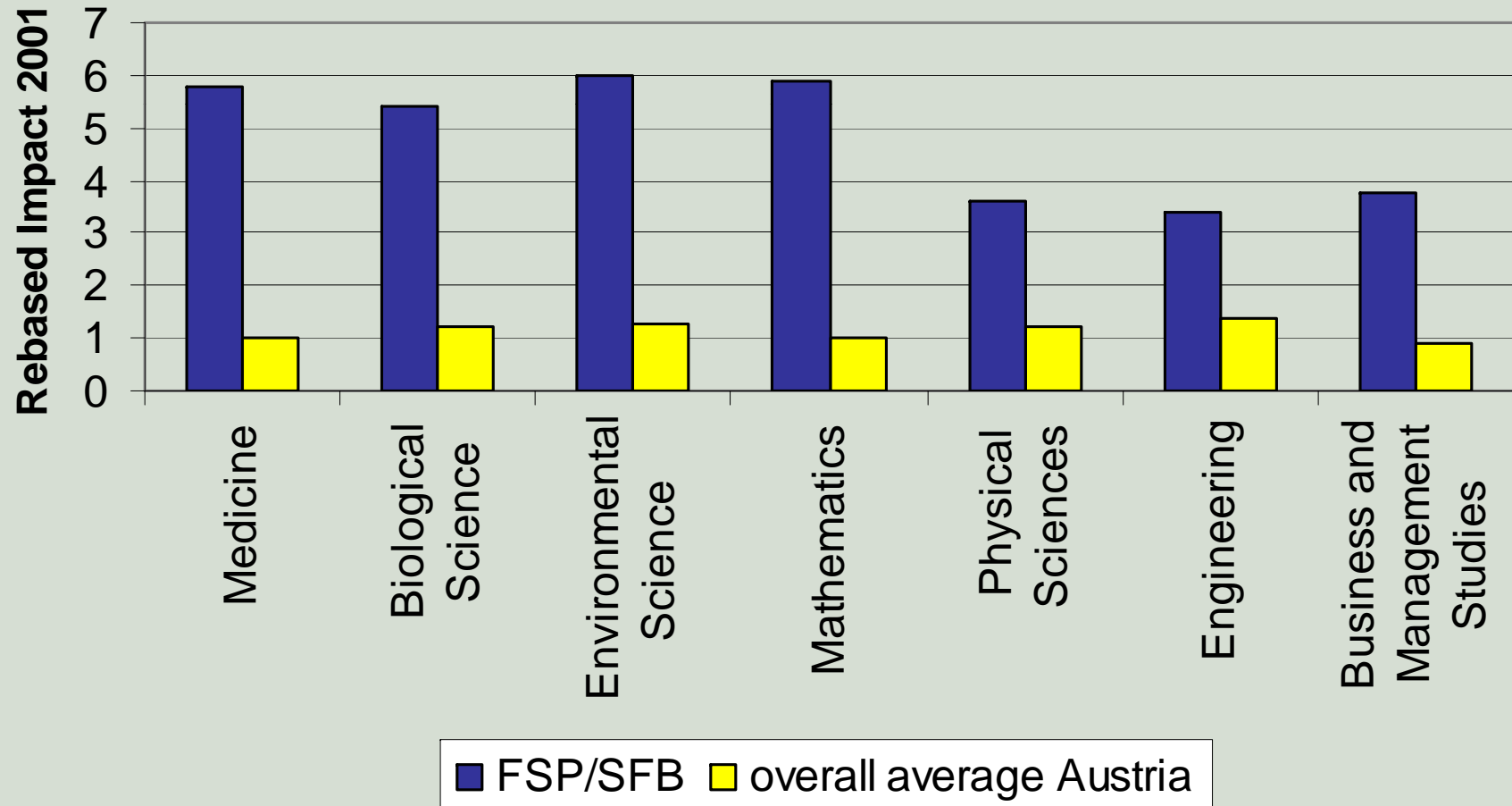
- **FWF-survey of Austrian Scientific Community (2002)**
- **Evaluation of FWF-Research Networks (2004)**
- **Evaluation of the performance of stand-alone projects incl. bibliometrics (2006)**
- **Evaluation of Mobility Programmes (2006)**

## External evaluations

- **Evaluation by the Austrian General Accounting Office (2003)**
- **International Evaluation of FWF (2004)**
- **Evaluation of START-/Wittgenstein Programmes (2006)**
- **Evaluation of Impulseprojects (2007)**

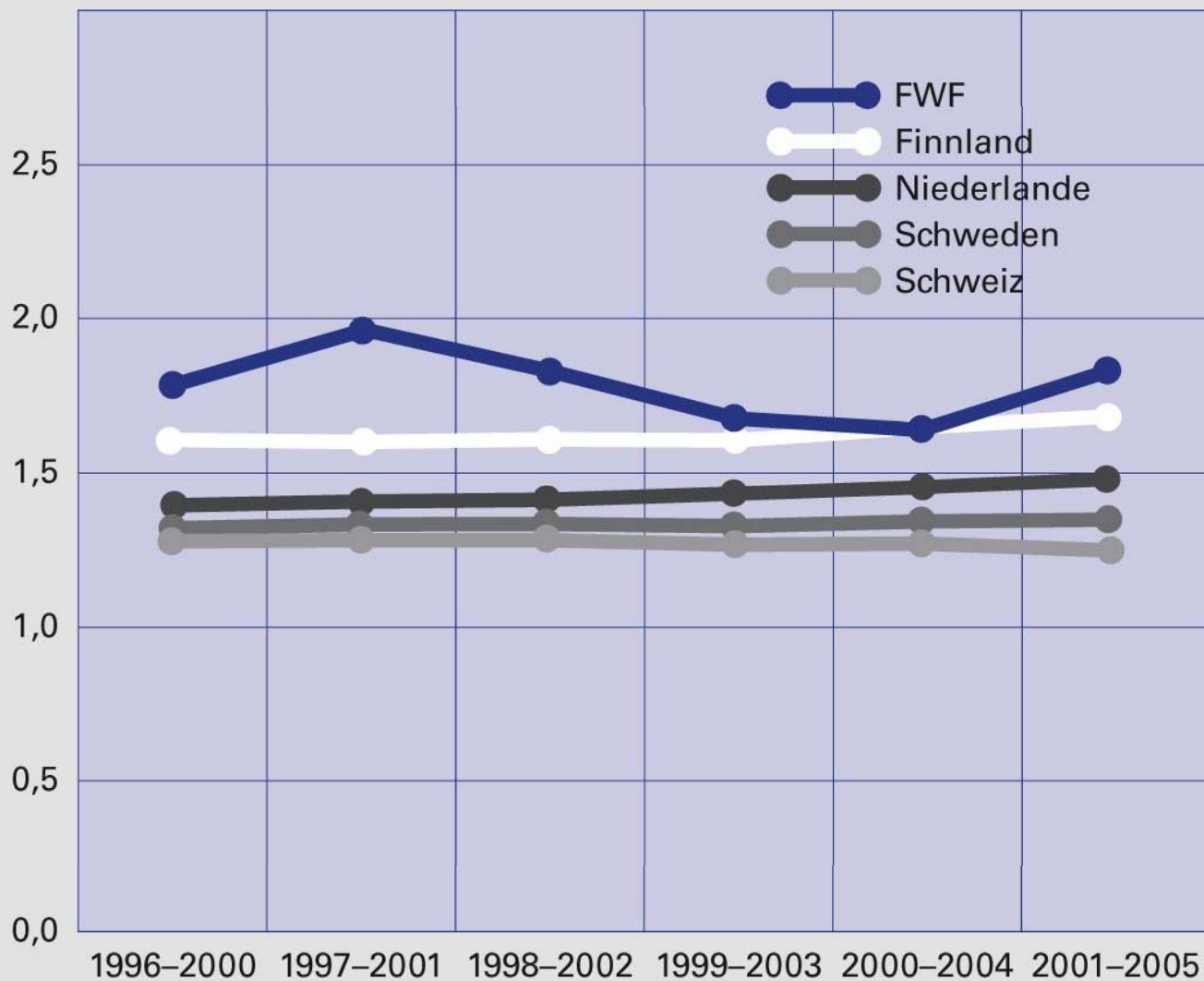
# **Selected results**

**Publications Austria and FWF-Priority Research Projects**

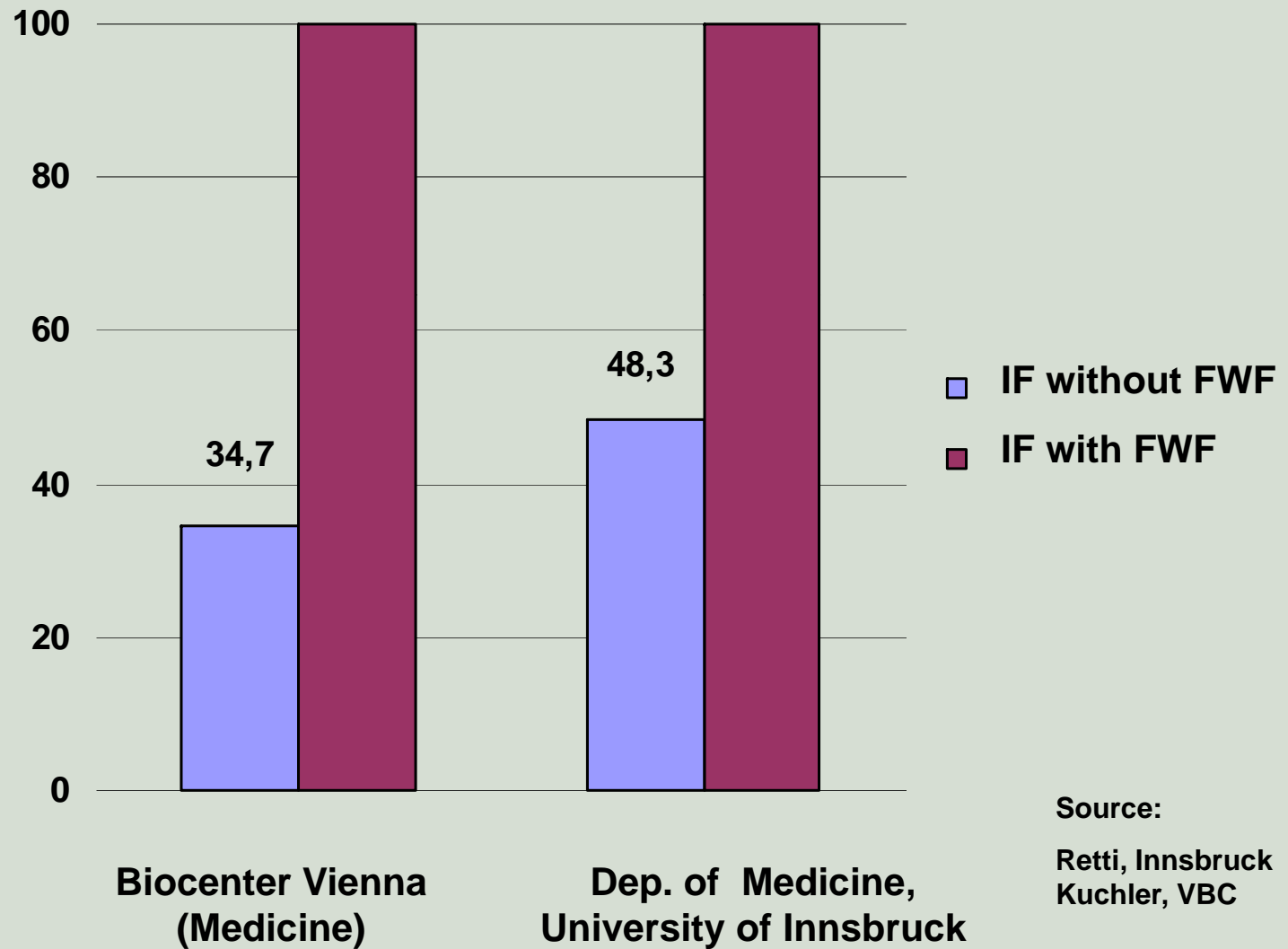




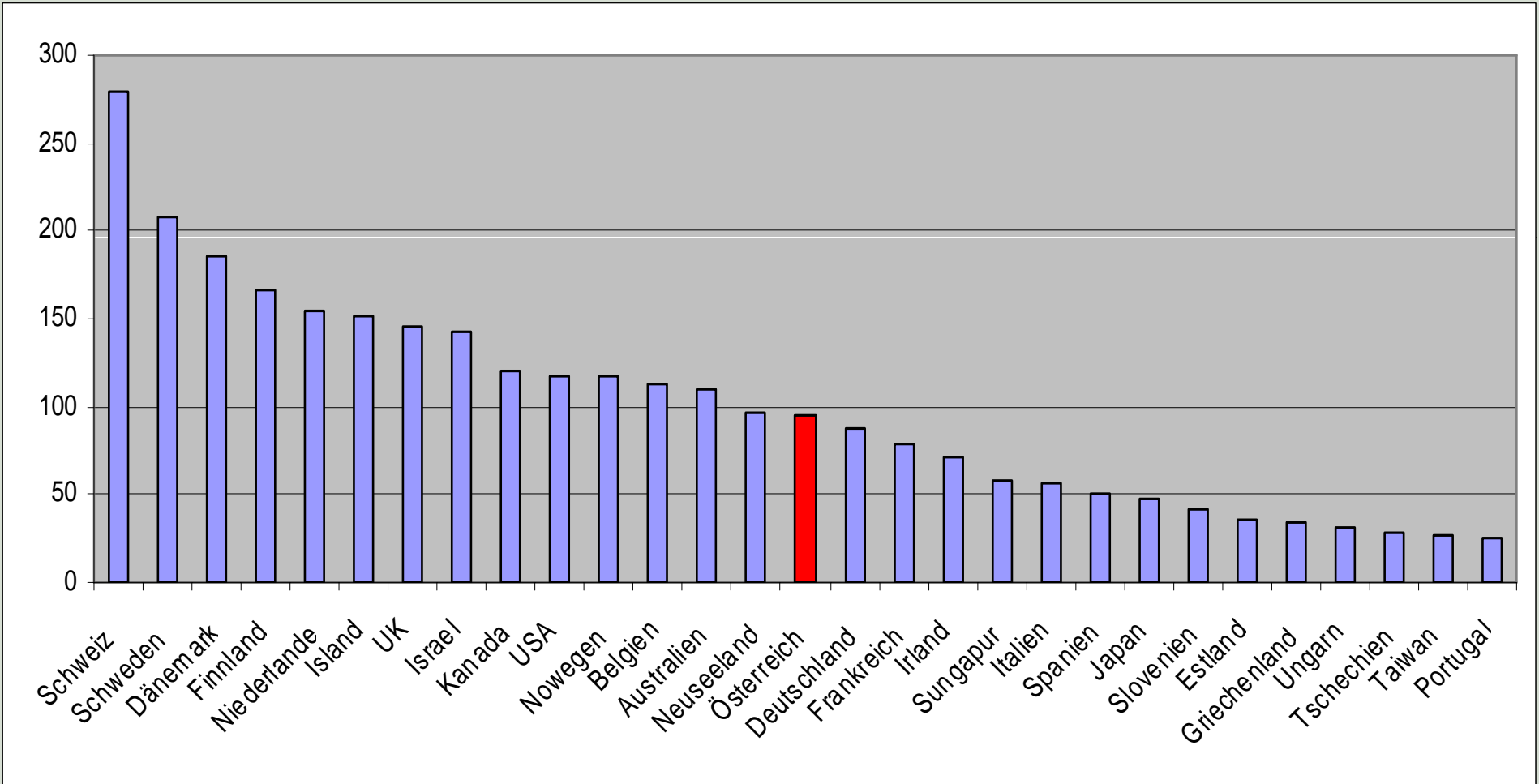
# Bibliometrics of Stand Alone Projects



**Impact with/without FWF funding in %**



# Citations per 1000 inhabitants



## **E.Schroedinger Fellowship (outgoing programme, started: 1985)**

### **Strengths**

- Highly effective
- 15 years after grant more than 50%: full professors
- Immediately after fellowship more than 80% at least project-leader
- 88% have ongoing contacts/collaborations with host
- Publication-Output: in average 4,2 publications in peer-reviewed journals

## Weaknesses:

- Duration: especially for natural scientists 2 years are not sufficient
- Critical return-phase  
no forum to discuss, no interesting jobs,
- **Consequences:**
- Possibility to apply for research project for 3 years, 2 to be spent abroad, the final year in Austria

## **Lise Meitner (incoming programme, started 1997)**

### **Strengths**

- In 87% of the grants new research areas have been opened or partly opened thanks to the stay of the Meitner fellow
- More than 50% achieved objective of international networking for the institute
- In 95% of the cases applicants and Co-applicants have ongoing contacts
- Publication-output: in average 4,6 publications in peer-reviewed journals

- **Weaknesses:**
  - Duration of the funding (extension for 2nd year only with external evaluation)
  - No support for keeping long term relations
  
- **Consequences:**
  - Applications possible for 24 months
  - Alumni-Club / Internet portal for Meitner fellows

**Main Results:**

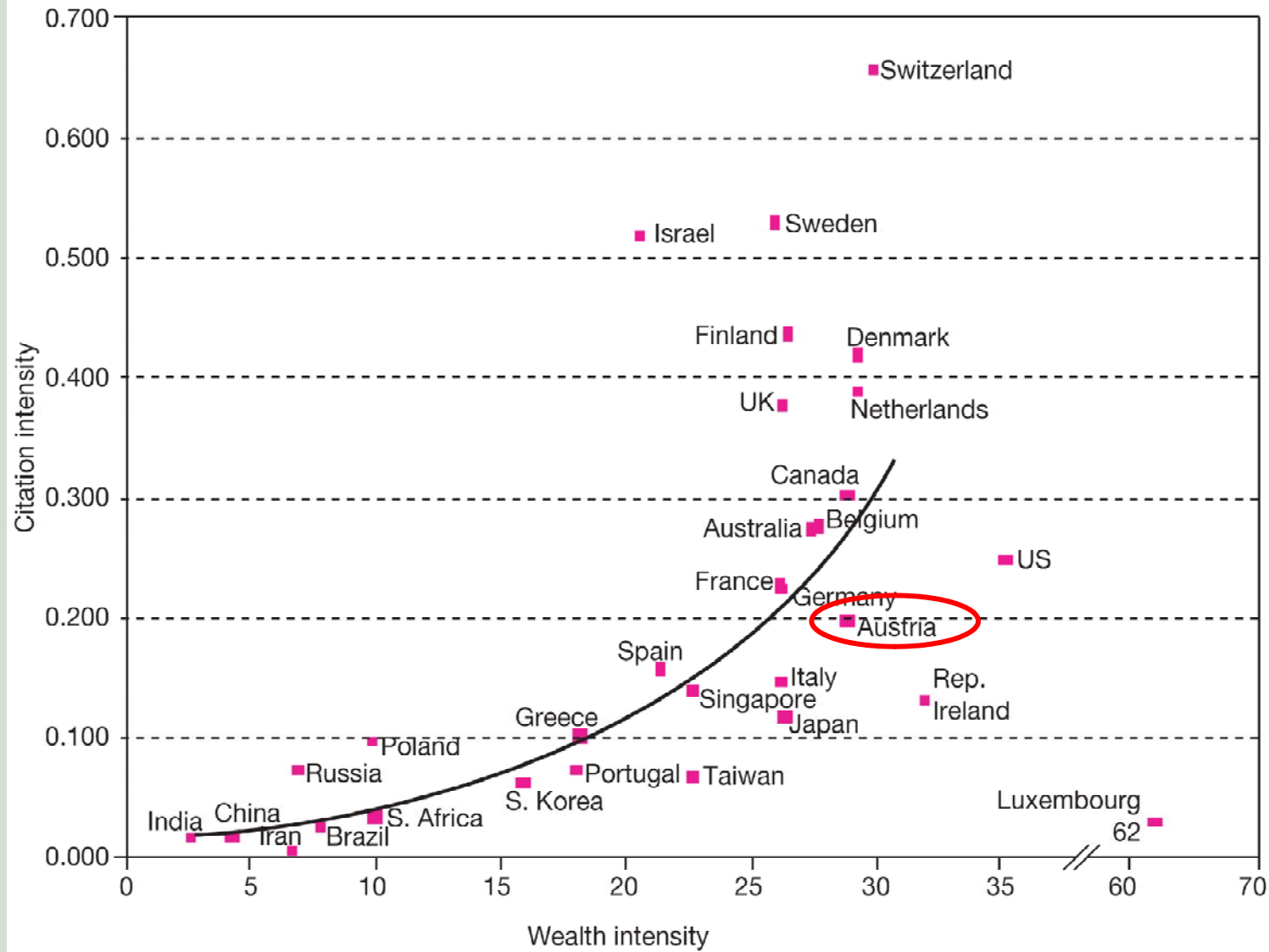
- **FWF is Austria's most important funding institution for basic research (mainly on universities)**
- **funding is highly effective and supports the development and concentration of high-quality scientific potential as well as the careers of individual scientists**
- **Procedures (peer – review, decisions, evaluation) are effective and show no bias**

**Suggestions:**

- **Extension of FWF's role in the NIS (Agency function, strengthening of strategic and analytical capacities)**
- **Continuation of FWF's core business, streamlining of portfolio, open to thematic programmes**
- **Significant increase of FWF's budget, financing of overheads (increasing the competitive share of university financing)**
- **Streamlining of governance structures, modification of procedures according to new challenges**



# Economic and Scientific Wealth



- keeping high proportion of stand-alone projects  
innovation-core in research funding
- financing of project-overheads  
performance dependent share of university budget  
**goal:** 20% of direct project costs in 2007, increasing to 50% by  
2009
- increase of Priority Research Projects  
Basis for new programme „**Clusters of Excellence**“
- increase of funding for „Talents“  
young researchers, excellent investigators, mobility, female  
scientists, **doctoral programmes „plus**“
- insist on an increase of budget (9% p.year)

- **August 2005: Austrian Council for Research and Technology Development, „Strategy 2010“:**  
Development and Implementation of an „Excellence Strategy on **all Levels and in all Sections** of the NIS
- **December 2005, FWF:**  
Draft of a new funding Programme „Clusters of Excellence“
- **November 2006, FWF (bm:wf):**  
„Excellence **Initiative** in Science“
- **December 2006:**  
Start of the development of funding programmes

- 1) Extension and flexibilization of existing funding instruments**  
(e.g.: increased FWF funding, extension of funding programs for women in science)
- 2) Implementation of support mechanisms for positive developments**  
(e.g.: financing of overheads)
- 3) New Structures and Funding Mechanisms**  
(e.g.: Clusters of Excellence, Doctoral Programmes „plus“)

# Excellence Initiative - Model

