History and Impact of the Evaluation procedure of the Leibniz Association

Leibniz Association

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Leibniz Association
2005-2010

Kiew, June 27, 2018

Gottfried Wilhelm Leibniz

Universal genius and name patron of the Leibniz Association

The Leibniz Association today (June 2018)

- **A STRONG PLAYER IN THE GERMAN SCIENCE (POLITICAL) SYSTEM**

By excellence in research, infrastructure and transfer (April 2018)

Topic	Year 2013	2015	2017
	Number / Amount		
Total No. of published papers	14.778	15.215	22.286
Graduate School participation	130	142	154
Junior Research Groups	146	190	169
Joint University Professorships	290	340	364
Third-party grants (Mio.)	349	369	424 (22,1%)
International Cooperations	3.704	4.471	4.851

BY A UNIQUE PROFILE AND MISSION

Max Planck Society

Focus on
basic research
centered on individuals

Fraunhofer Society

Focus on
applied research
centered on products

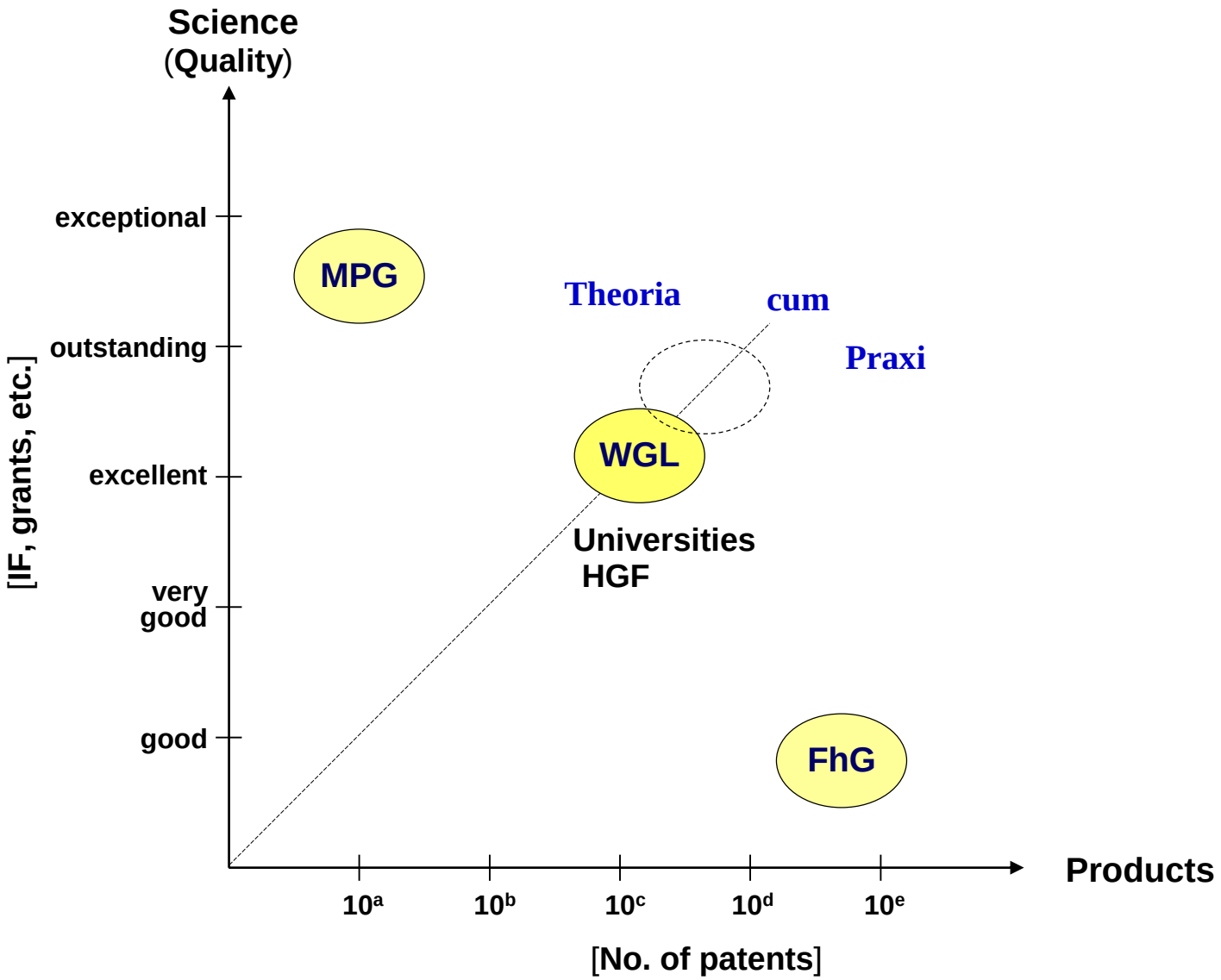
Helmholtz Association

Focus on
large-scale research
centered on programs

Leibniz Association

Focus on
strategic research
centered on themes

PROFILE OF THE LEIBNIZ ASSOCIATION



By multidisciplinarity:

Section A
Humanities and Educational Research (22 *institutes*)

Section B
Economics, Social Sciences, Spatial Research *(16 institutes)*

Section C
Life Sciences *(23 institutes)*

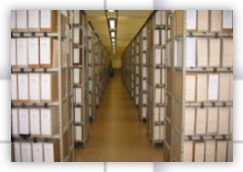
Section D
Mathematics, Natural Sciences, Engineering *(23 institutes)*

Section E
Environmental Research *(9 institutes)*

Leibniz Research Alliances

Biodiversity

Energy Transition



Education Research

Healthy Ageing

Bioactive Compounds and Biotechnology

Historical Authenticity

Science 2.0

Sustainable Food Production and Healthy Nutrition

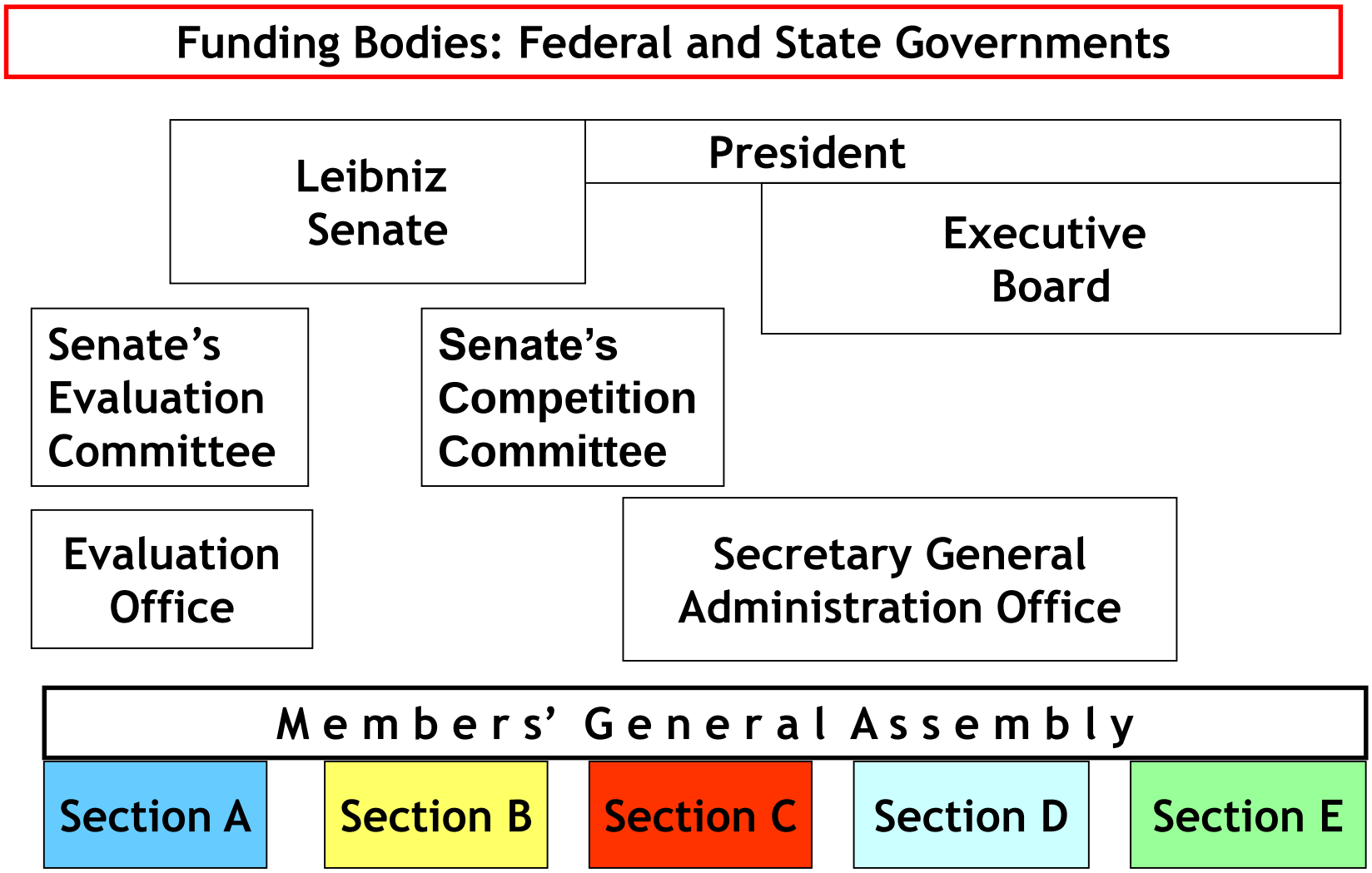
Crises in a Globalized World

Nanosafety

Health Technologies

Infections 21

By a unique organisational structure



By a unique organisational structure

- Institutes are financially and legally independent
- Decentralised structure
- Research topics are developed bottom-up
- Universities are priviledged partners (>300 joint appointments=professorships)
- Head office in Berlin, EU liaison office in Brussels

By Size:

In the year 2018

- 93 institutes
  - 70 research institutes
  - 15 research infrastructure facilities
  - 8 research museums
- 18,700 employees; 9,500 researchers
- Total annual budget of > € 1.8 billion
- Institutes distributed over all federal states of the FRG

By a particular „raison d'etre“

- Leibniz Institutes are jointly funded by the federal (50%) and by all 16 Länder governments (50%)

Raison d'etre

- Supra-regional significance
- Relevance to national science policy
- At least once every seven years: Assessment whether an institute still meets these requirements
- Evaluation and assessment as a fundamental asset of the Leibniz Association
- Funding decisions are taken in the „Joint Science Conference“ (GWK)

Result for the Leibniz Association

- Recognition by science, industry, society and politics
- Increased reputation
- Generation of the Nimbus „Leibniz“ (*theoria cum praxi*)


22. Jahrestagung
der Leibniz-Gemeinschaft
23. November 2016
Berlin
die beste
der möglichen
Welten
Leibniz
Gemeinschaft
2016
Leibniz-Gemeinschaft
Jahrestagung
Leibniz
Gemeinschaft
2016

The Leibniz Association today (June 2018)

- **A STRONG PLAYER IN THE GERMAN SCIENCE (POLITICAL) SYSTEM**

THIS WAS NOT ALWAYS THE CASE !

The Leibniz Association only 23 years ago

- In 1995, the Leibniz Association (Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz, WGL) was founded
- At that time the institutes did not dispose of
  - a convincing profile
  - supranational or even international significance and recognition
  - sciencepolitical acceptance
  - a unique selling point

Three major events formed the basis of the positive development of the Leibniz Association

1. Reunification of East and West Germany with growth of the total number of Leibniz Institute from 47 (1989) to 81 (1992)

2. Foundation of the Leibniz Association in 1995

3. Establishment of a particular Evaluation System assuring quality management in 2002

Evaluation History 1

- Until 1977, Federal States (Länder) and Government wanted to increase flexibility within the German institutional science system
- This demand emerged as Max Planck (too strong), Helmholtz (too big) and Fraunhofer (too applied) were largely independent of the influence of Federal States (Länder) and not "flexible"
- Flexibility meant opening an closing of institutes
- Therefore, a system (Leibniz!) was needed which exhibited flexibility and which allowed opening and closing of institutes
- Flexibility made evaluation constitutive

Evaluation History 2

- Until 1977, individual institutes were assessed by particular evaluation groups applying varying indication and rules
- Evaluation results and recommendations hat little or no consequences for institutes

Thus, a universal evaluation system, using generally accepted and transparent criteria, was lacking.

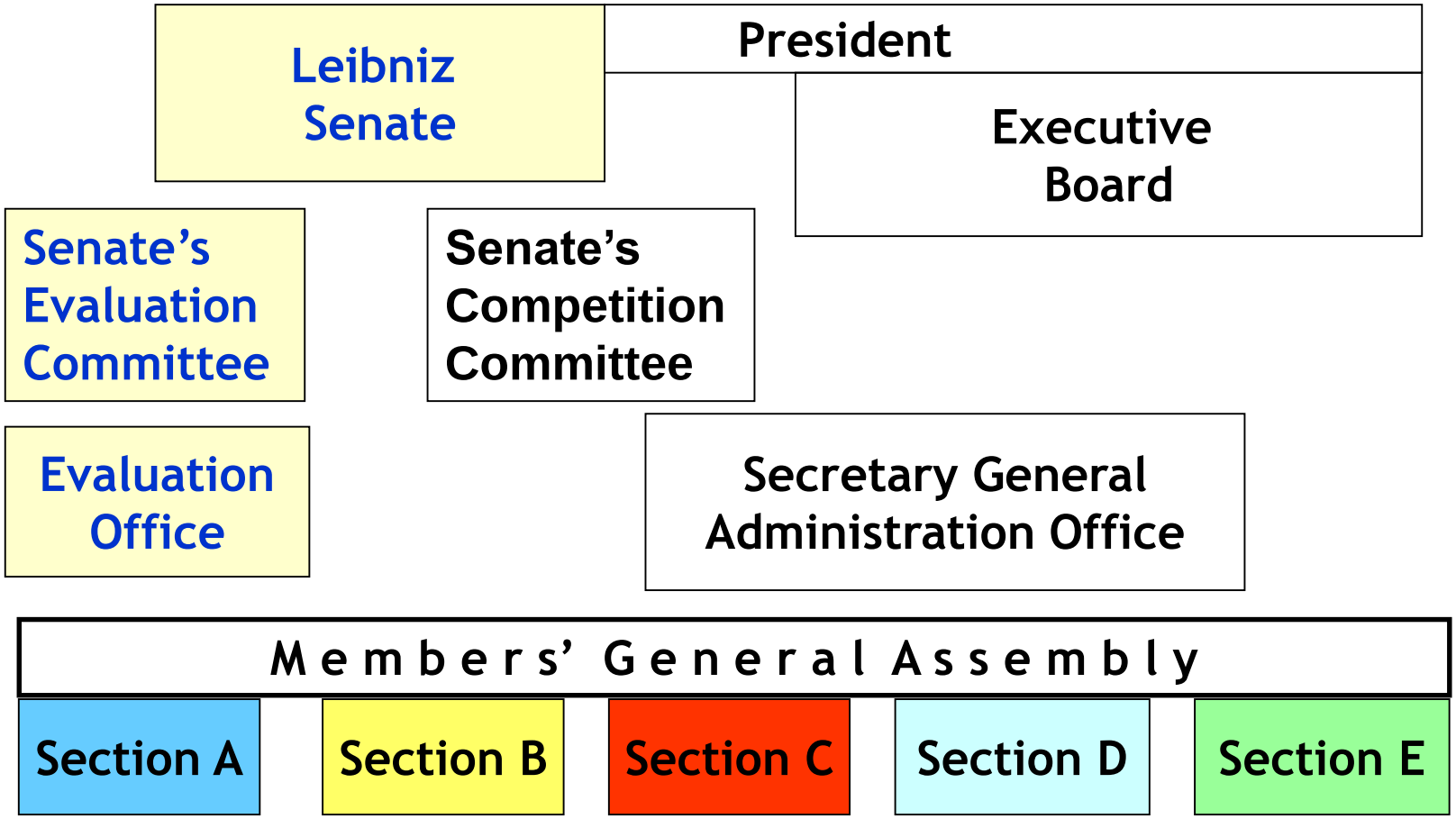
Evaluation History 3

- From 1977 on, evaluations of Leibniz Institutes were handled by the highest science-political organ of Germany, the **Science Council** (**Wissenschaftsrat**)
- The Science Council evaluated **all** Leibniz Institutes between the years 1977 and 2000
- During this phase 5 institutes were closed, 6 new ones opened
- **Overall result**
  - **The quality of research and infrastructure increased considerably**
  - **Trust in the capacity of the Leibniz Association to establish an evaluation culture was established**

Evaluation History 4

- In the year 2000, the Science Council proposed to hand the responsibility for the Evaluation procedure over to the Leibniz Association
- Subsequently, Leibniz had to implement the necessary bodies (Senate, Senate Evaluation Committee, Evaluation Office)
- In the year 2002 the Leibniz Association started with Leibniz-organized evaluations

Funding Bodies: Federal and State Governments



Yellow: Bodies involved in Evaluation

Evaluation History 5

- This event marked the start of a brilliant phase of the life of the Leibniz Association and its maturation.
- The institutionalized evaluation system developed into a unique selling point of the Leibniz Association

because

Universities:	no institutional, regular and systemic evaluation
Max Planck:	evaluation of individuals by own SAB without consequences
Helmholtz:	evaluation of programs (not institutes) with little consequences
Fraunhofer:	evaluation of programs

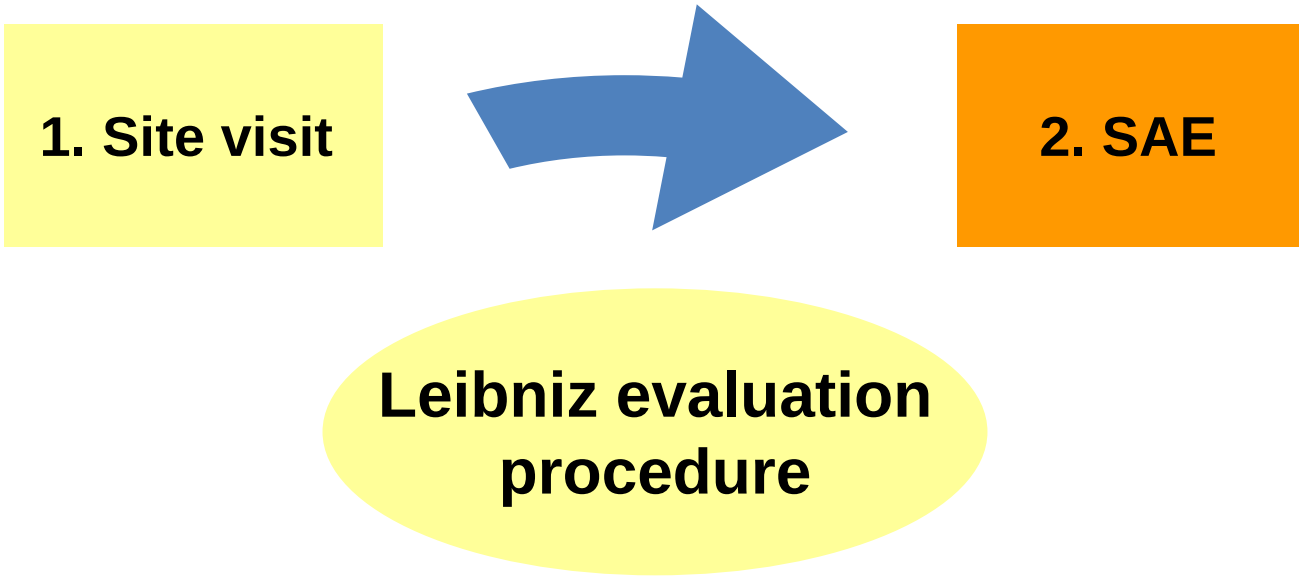
Steps of the Leibniz Evaluation System

1. Visit at Site

Leibniz evaluation procedure

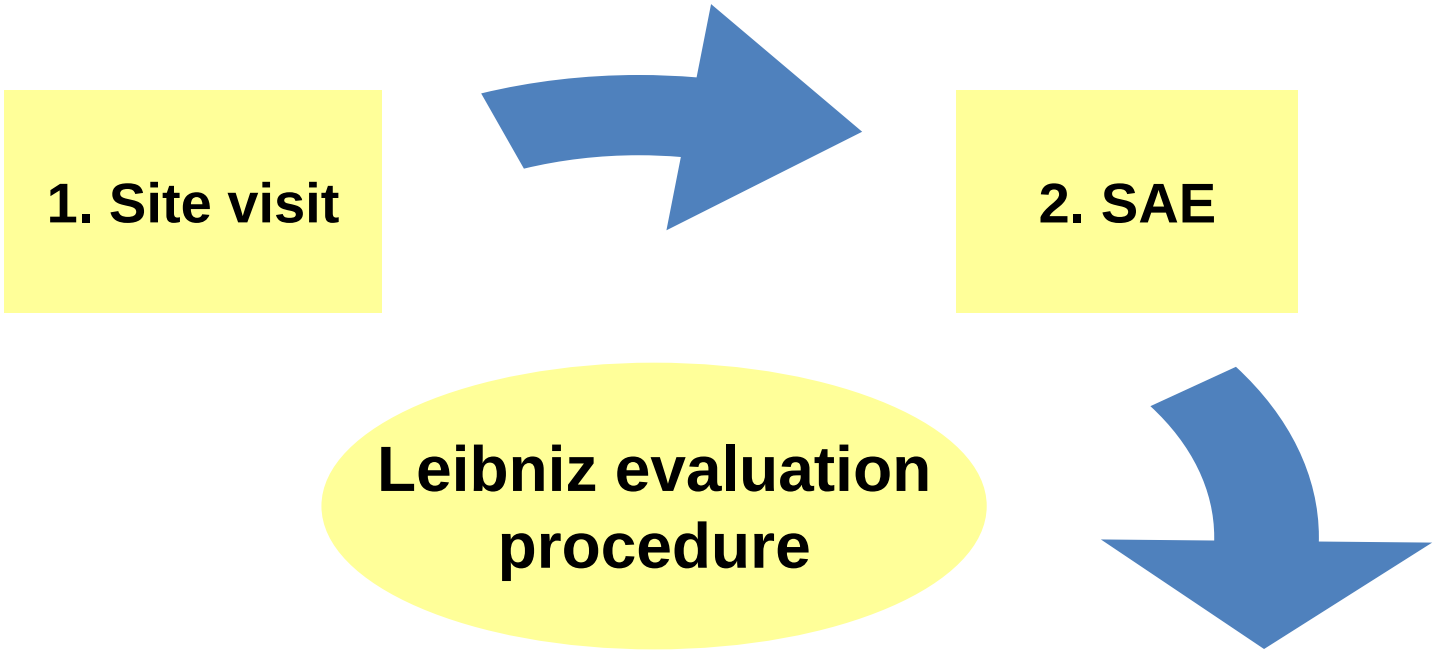
External evaluation group
= Peer reviewers + Representatives from federal and state governments; plus chairperson of (internal) Advisory Board

- Principle: Quality, Positioning in national and international scientitic community + Accomplishment of mission
- Task: Evaluation report



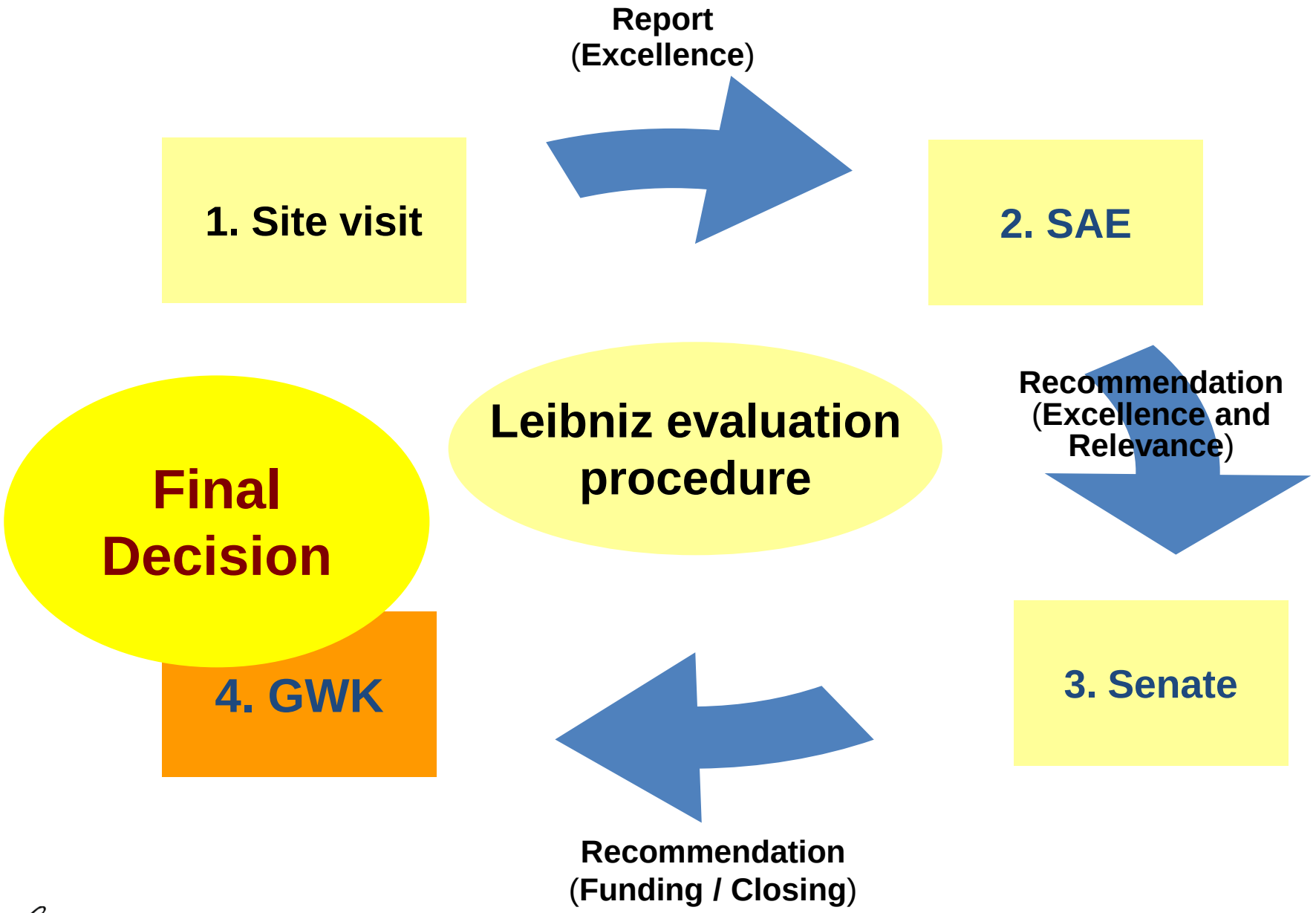
Evaluation Committee of the Senate ("Senatsausschuss Evaluierung", SAE)
= Peer Reviewers + Members of the Leibniz Senate
+ Representatives from federal and state governments

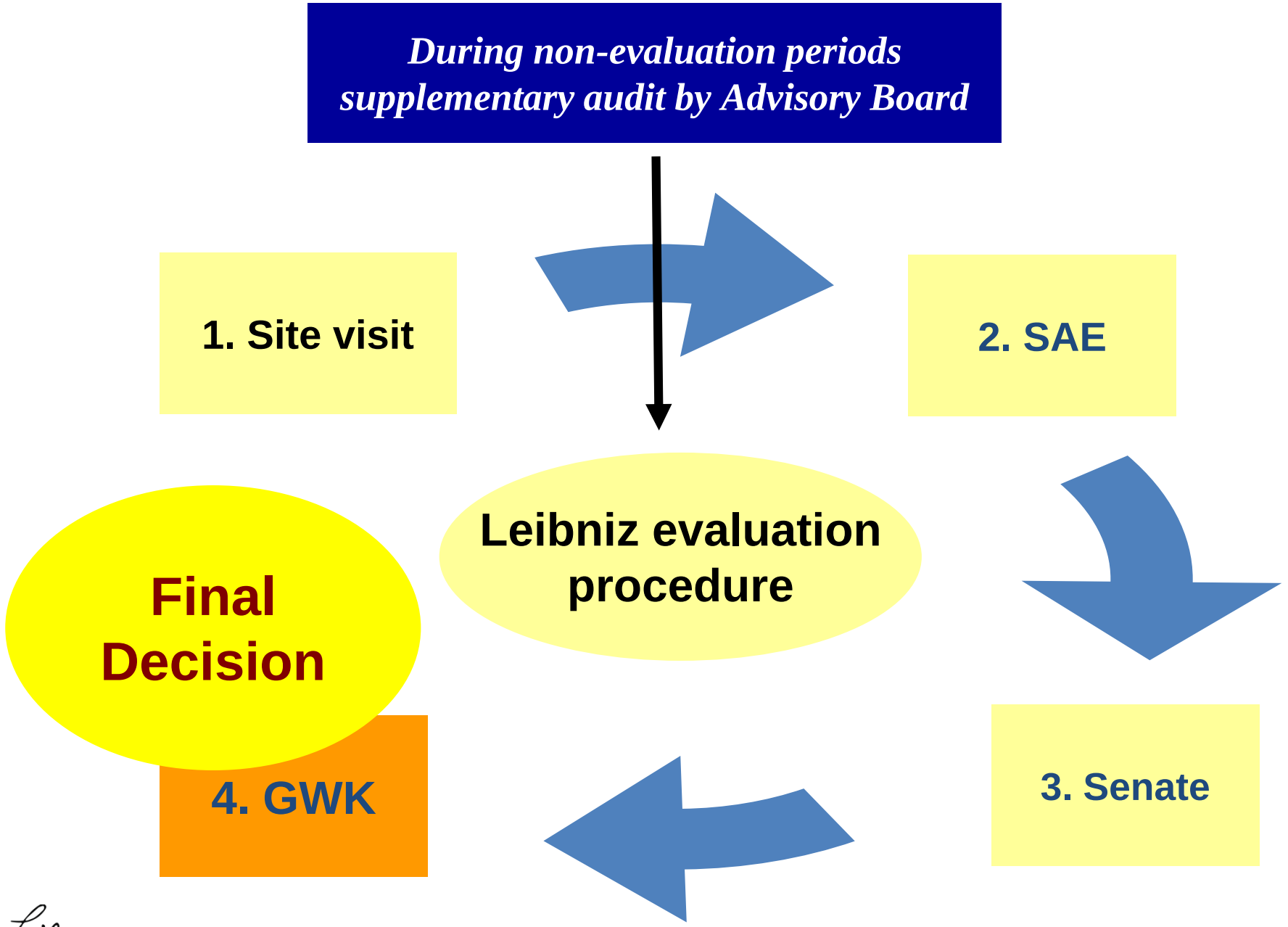
- Principle: Quality, Positioning in national and international scientitic community + Relevance of mission
- Task: Written Statement for the Senate



Senate = Peer reviewers + Members of German Research Organisations + Representatives from federal and state governments, Public figures

- Principle: Excellence, Relevance of Institution
  Scientific (social) impact
- Task: Recommendation (funding, closing)
  to the Joint Scientific Conference
  (Gemeinsame Wissenschaftskonferenz; GWK)


Report
(Excellence)
1. Site visit
2. SAE
Recommendation
(Excellence and
Relevance)
Leibniz evaluation
procedure
Final
Decision
3. Senate
4. GWK
Recommendation
(Funding / Closing)


During non-evaluation periods
supplementary audit by Advisory Board
1. Site visit
2. SAE
3. Senate
4. GWK
Leibniz evaluation procedure
Final Decision

Basic Principles

The evaluation of Leibniz Institutes is:

- Specific to the characteristics of an institute
- Regular: at least every seven years
- Independent:
  - Reviewers/Experts from Germany and abroad (peer review)
  - Leibniz Senate constituted only of external members
- Participative: Leibniz members play a defined and well balanced role

Participation

A paradigmatic change in the evaluation culture
(from guillotine mentality to a partnership attitude)

Changes of the Evaluation Process by the Leibniz Association

- Organization by Leibniz with the aid of exclusively **external** experts (Senate, Senate Evaluation Committee)
- Participation of Leibniz representatives (head of section)
- Participation of Scientific Advisory Board (chair)
- Possibility of objection by Institute against recommendations of senate

Evaluation: Future Developments 1

Recommendations of the "Evaluation of Evaluation group"

1. Group evaluation of institutes devoted to similar disciplines (e.g. economy, biodiversity, health) or of comparable character (e.g. museum, library)
2. Evaluation of individuals (CEO, Program Director)
3. Internationalisation of evaluation
   - English language
   - International Experts (> 50%)
   - Global standards

Evaluation: Future Developments 2

4. Application of qualitative indicators such as

- Science with sustainability
- Involvement of young researchers
- Success in transfer (business, communication)
- Success in translation
  (new diagnostics, therapeutic drugs)
- Quality management of data (reproductability)
- Open access publications
- Entanglement with nearby university

5. Evaluation of Administration

Summary

- Evaluation is a process of observing, analyzing, measuring and judging the quality, value and impact of scientific inventions as well as innovations in comparison with standards
- Evaluation by itself does not produce better science. But it helps to distinguish between excellent and average science.
- For the Leibniz Association the introduction of the evaluation process was essential for its development from a largely unkown assembly of instituts to an internationally recognized science organization


НАЦІОНАЛЬНА
АКАДЕМІЯ
НАУК
УКРАЇНИ
1918

- The National Academy of Science of Ukraine (NAS) is already now a highly estimated science organization harboring famous institutes, researchers and presidents
- The application of a rigorous evaluation system will undoubtly help to further augment the excellence and international standing of NAS
- Excellence will strenghten the sciencepolitical power of the NAS

- Science represents a major driving force for the political approach of Ukraine to the European Union
- Thus, the integration of a scientifically strong NAS into the European Research Area (ERA) would be an important step in the approach of Ukraine to the EU

The Presidents of the Leibniz Association greet all members of the National Academy of Science: "Let us join forces"

My wishes to NAS

- **Be excellent, strong, self-confident and proud.**
- **Use a Leibniz-like evaluation system as a means of establishing excellence.**
- **Join the European Research Area.**
- **Help to pave the way for your great country of Ukraine to become a full member of the EU.**

Good Luck and Thank you!

Leibniz Association

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