Overview for Panel Members

Evaluation overview

David Black-Schaffer, Dean of Research

Faculty of Science and Technology, Uppsala University

2024 Research Quality and Renewal and Review of Base Research Financing

UPPSALA
UNIVERSITET

Doing two things at the same time:

#1 KoF: Research quality improvement ("Kvalitet och förnyelse")
- University-wide
- Directed by the university management
- **Process and quality**

#2 ÖB: Review of research resource allocation ("Översynen av Basanslag")
- Faculty-level
- Directed by ourselves
- Review and (possibly) re-allocate our **base research funding** (e.g., government funds)

Opportunities (and challenges) from doing them together:
- Save time: significant overlap in information, reflection, planning
- Better results: panel provides *input* to our internal prioritization process
- More engagement: resource allocation drives interest in quality work
- But: how do we discuss weaknesses if we fear missing resources?

UPPSALA
UNIVERSITET

#1 KoF: Research quality improvement

University-level
- **Process**: Infrastructure
- **Process**: Cross/multi-disciplinary
- (No panel involvement)

Faculty-level
- **Process**+**Quality**: **Research** and research environment
- **Process**: **Collaboration** with society
- **Process**: **Recruitment** and **career** support
- **Process**: **Research-teaching** connection

Output:
- Self-evaluations of strengths, weaknesses, opportunities
- External evaluation of research quality in an international context

Panel focus

#2 ÖB: Review of research resource allocation

Faculty-level

- **Quality**: Are we using government research funds (base funding) well?
- **Plans**: Priorities for the next 5 years

Output:

- Prioritized plans at each level

Some panel input

- Faculty decision on base funding (re-)allocation and new funding

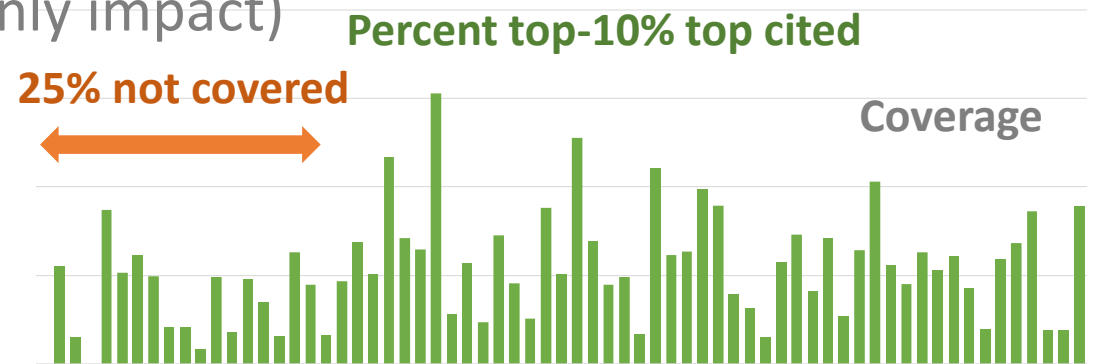Not the panel's role

UPPSALA
UNIVERSITET

Faculty goals: What do we want from this?

- Maintain and strengthen our **research**
  - Self-evaluation, panel input, developing plans

- Strengthen our **collegial culture**
  - Discussions at all levels, involving all research staff

- Improve our **internal understanding**
  - See and discuss how we are organized and work

- Improve our **resource usage**
  - Bottom-up prioritized plans

UPPSALA
UNIVERSITET

The panel's role: Help us do better

- **Research** (main focus), collaboration, recruitment/career, teaching/research

- Excellence (hard to define; need experienced panels)
    - **Scientific impact** (bibliometrics are not the only impact)
    - **Excellence grants** (ERC, KAW, VR)
    - Field-specific metrics (patents, tools)
    - Scientific breakthroughs

- Also organization and perspective

- Overall: We trust your expertise and experience

Percent top-10% top cited

25% not covered

Coverage

Timeline

- Spring-Fall 2023: Defining overall goals and timeline, faculty board approval

- January 2024: Self-evaluations and initial base data available to departments and programs
- 15 April 2024: **Program** self-evaluations due (program plans → departments)
- 15 May 2024: **Department** self-evaluations due (with plans)
- June-September 2024: **Panels** read self-evaluations
- 31 August 2024: **Panels** provide key questions to discuss during their visit
- October 2024: **Panel visits** and feedback
- Fall 2024: **Departments** prioritize plans → Sections → **Faculty**

- April 2025: Report to rektor
- Spring 2025: **Faculty** prioritization for funding
- Spring 2025: **Departments** and **programs** update plans
- September 2025: **Faculty** board approves budget
- January 2026: **Resource allocation changes take effect**

Summary: KoF & ÖB

Two Activities:

#1 KoF: Research quality improvement – **process** & **quality**

#2 ÖB: Review of research resource allocation – **quality** & **plans**

Faculty Goals:

- Maintain and strengthen our **research**
- Strengthen our **collegial culture**
- Improve our **internal understanding**
- Improve our **resource usage**

Challenges:

- Focus on the process and local possibilities, not money
- Discussing weaknesses without fear of losing out on resources

Panel:

- **Help us do excellent research**
- **Feedback and suggestions** on **research/collaboration/career/teaching connections**
- **Assess** our research **quality** in an international perspective
- Perspective on how we can better **organize** research

UPPSALA
UNIVERSITET

Faculty organization

David Black-Schaffer, Dean of Research

Faculty of Science and Technology, Uppsala University

2024 Research Quality and Renewal and Review of Base Research Financing

UPPSALA
UNIVERSITET

Uppsala University

- 50,000 students
- 7,700 employees
- 2,500 PhD students
- 5,200 publications/year
- 60 departments
- 8B SEK/year (710M EUR), 70% research
- 50% external research funding

- 3 Disciplinary Domains
    - Humanities and Social Sciences (Humsam)
    - Medicine and Pharmacy (Medfarm)
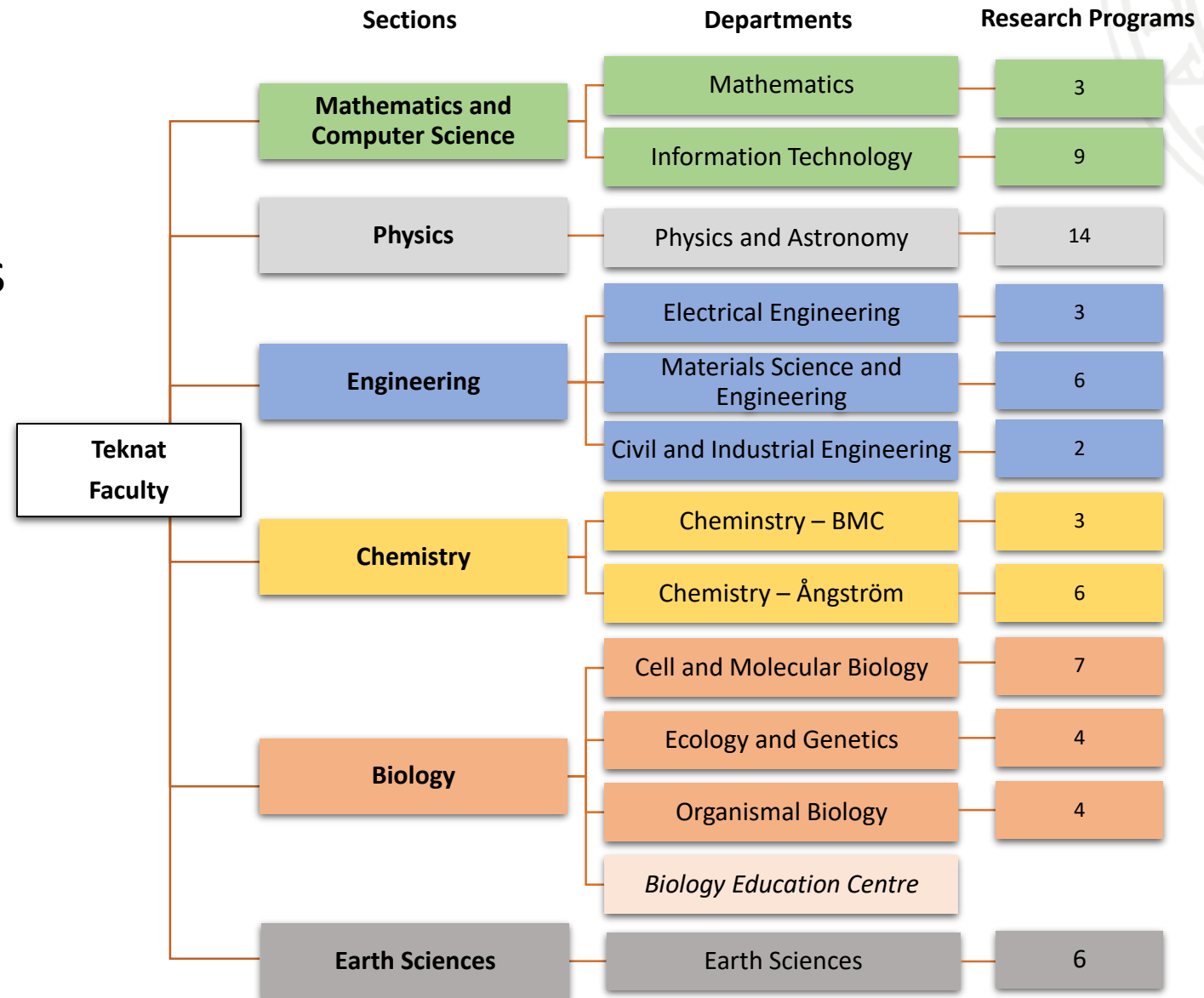   - **Science and Technology (Teknat)**

Teknat: The Faculty of Science and Technology

- Turnover: 2.7B SEK/year (237M EUR)
  - **32% internal government research**
  - **38% external grant**
  - **→ 70% research overall**
  - **20% government teaching**

- Staff: 2,422 FTEs
  - 1,487 (61%) Non-professor research staff
    - Teaching staff (Associate + Assistant Professors)
    - Researchers (PhDs, Postdocs, Researchers)
  - 212 (9%) Professors
  - 156 (6%) Technical staff
  - 186 (8%) Administrative staff

- Students
  - 6,002 Government funded (MSc/BSc/etc.)
 - 511 Fee-paying
  - 658 Third-cycle (PhDs)

Total Faculty Spending

UPPSALA
UNIVERSITET
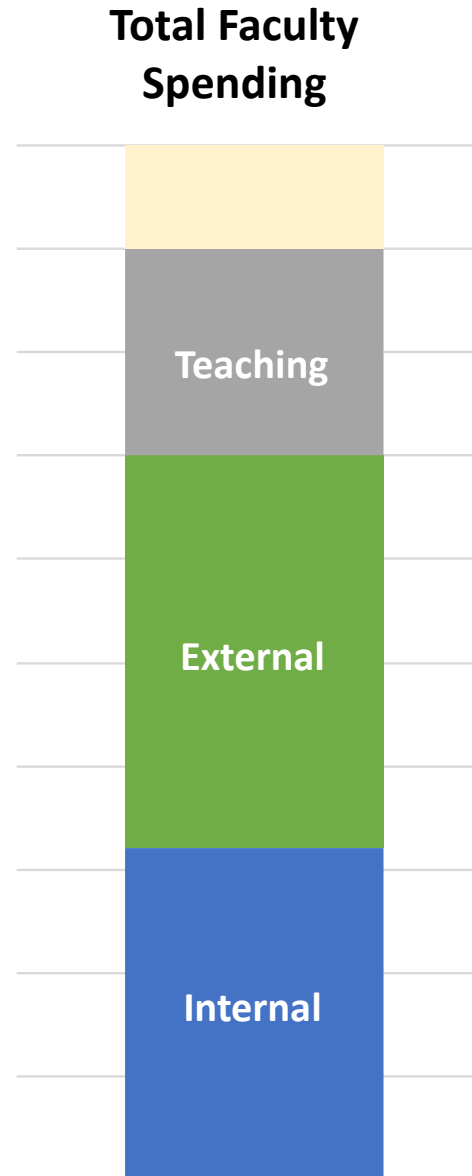
Faculty→Sections→Departments→Programs

- 6 Sections
- 12 Departments
- 67 Research Programs

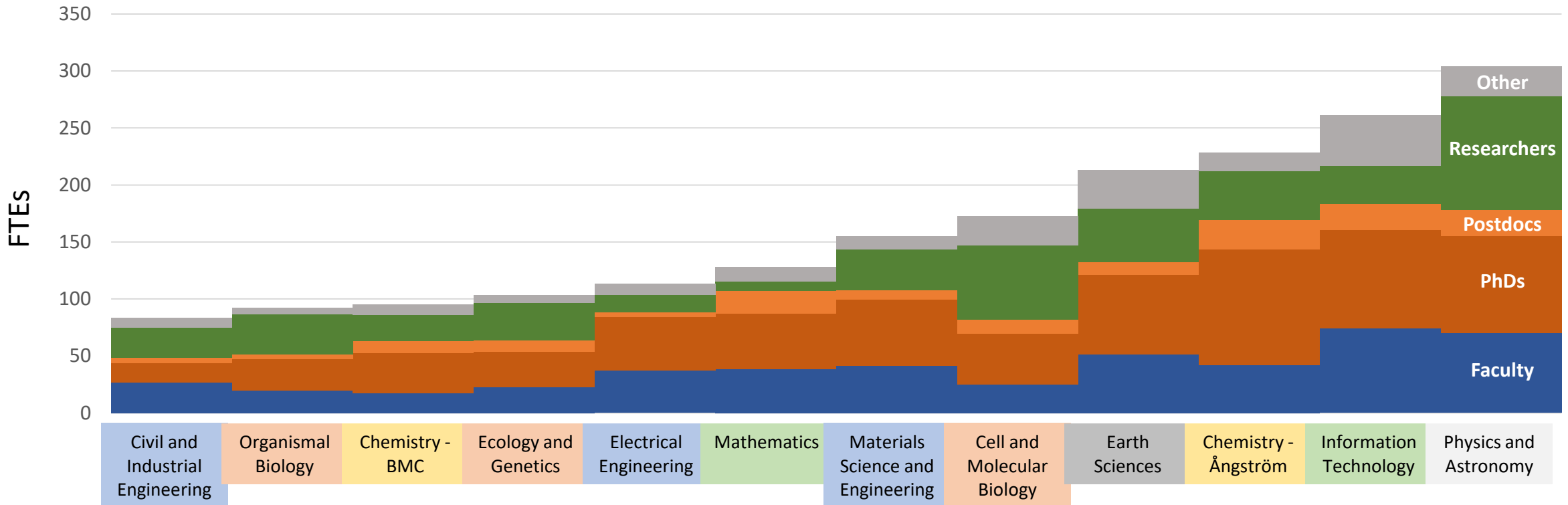| Sections	Departments	Research Programs
Mathematics and Computer Science	Mathematics	3
	Information Technology	9
Physics	Physics and Astronomy	14
Engineering	Electrical Engineering	3
	Materials Science and Engineering	6
	Civil and Industrial Engineering	2
Chemistry	Cheminstry – BMC	3
	Chemistry – Ångström	6
Biology	Cell and Molecular Biology	7
	Ecology and Genetics	4
	Organismal Biology	4
	Biology Education Centre	
Earth Sciences	Earth Sciences	6

Teknat Faculty

UPPSALA UNIVERSITET

Organization: Sections

- 6 Sections of roughly the same size

- Wide range of applied/basic research

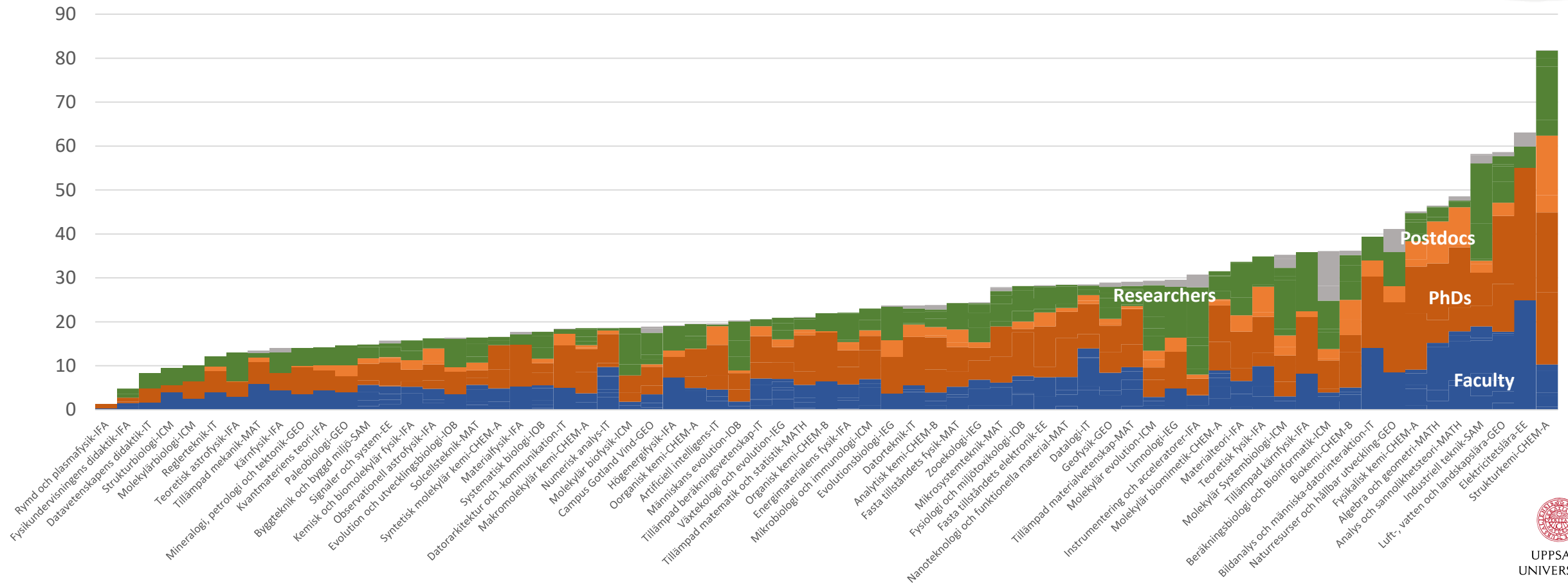- 1 panel per section (except Math and IT)
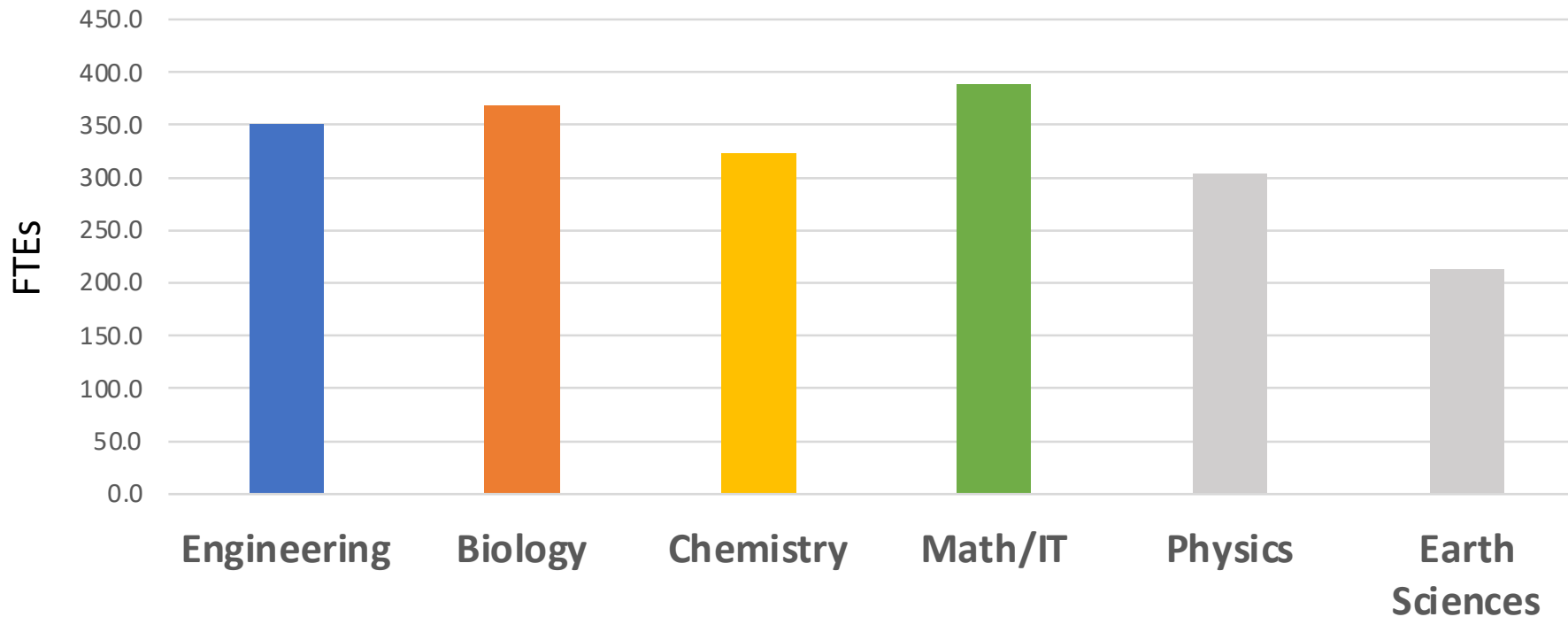
Organization: Departments

- 12 Departments
- Vary enormously in size and composition

Organization: Research Programs

- 67 Research Programs
- Vary enormously in size and composition

Why Research Programs?

- Departments are our leadership/management structures
- Research programs provide collegial research environments

- To provide critical mass in a research area
  - Enough **communality** that researchers can support each other
  - Enough **diversity** to be more than one research group
- Led by a Program Responsible Professor (**PAP**):
  - Research organization and quality (leads work for KoF/ÖB)
  - Research connection to education
  - Knowledgable about faculty plans and goals
  - Participate in faculty, section, and department planning
- Program should be:
  - **Large enough** to be **sustainable** (number of researchers and funding)
  - **Small enough** to work **collegially** on strategy and how to use resources
  - Have a good mixture of senior (tenured) and junior (non-tenured) researchers
  - Have an active seminar series for discussion
- Challenges:
  - Transition from "chaired" professors who controlled the resources to collegial programs
  - Different resources (internal and external and teaching)

UPPSALA
UNIVERSITET

Organization: Overall

6 Sections
- Representation on the **faculty board** and coordinate broader strategies
- **Not part of the line management** (no employment, financial, or legal responsibilities)
- Represented by a Section Dean, 3-year appointment, max 9 years, collegially chosen
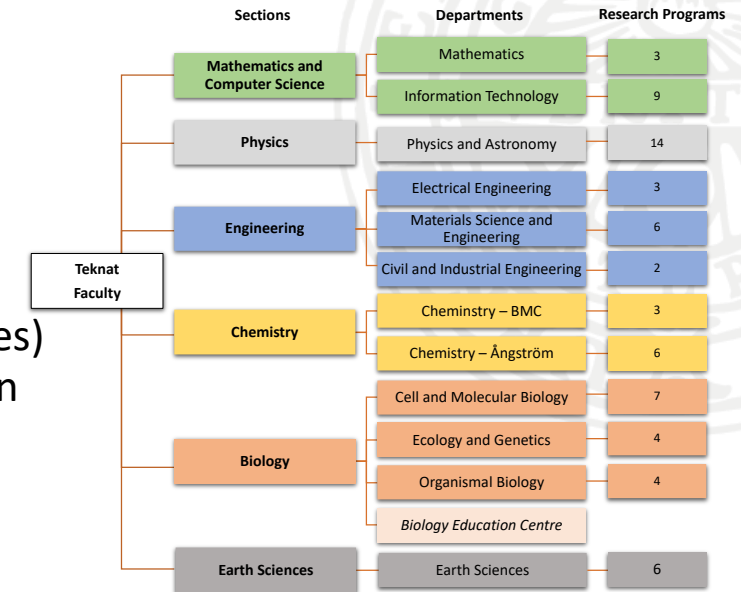
12 Departments
- **Administrative responsibility** for **employment, budgeting**, work place, etc.
- Divided into Divisions or Units for management
- Led by a Head of Department (**HoD**), 3-year appointment, max 9 years, collegially chosen

67 Research Programs
- Responsible for research strategy, quality, seminars, etc.
- Internal base research funding is assigned to Programs, but administratively controlled by Departments
- Led by a Program Responsible Professor (**PAP**), 3-year appointment, collegially chosen

We have parallel leadership + collegial structures
- **Departments/Divisions** have **overall and administrative responsibility** (budget, employment, legal, strategic)
- **Research Programs** have **collegial research responsibilities** (and are assigned internal base funding)
- This is a challenge: Who decides how to use the Program's internal base research funding?
  - Some departments have the **same** person in administrative and collegial research roles
  - Some departments **separate** administrative and collegial research roles

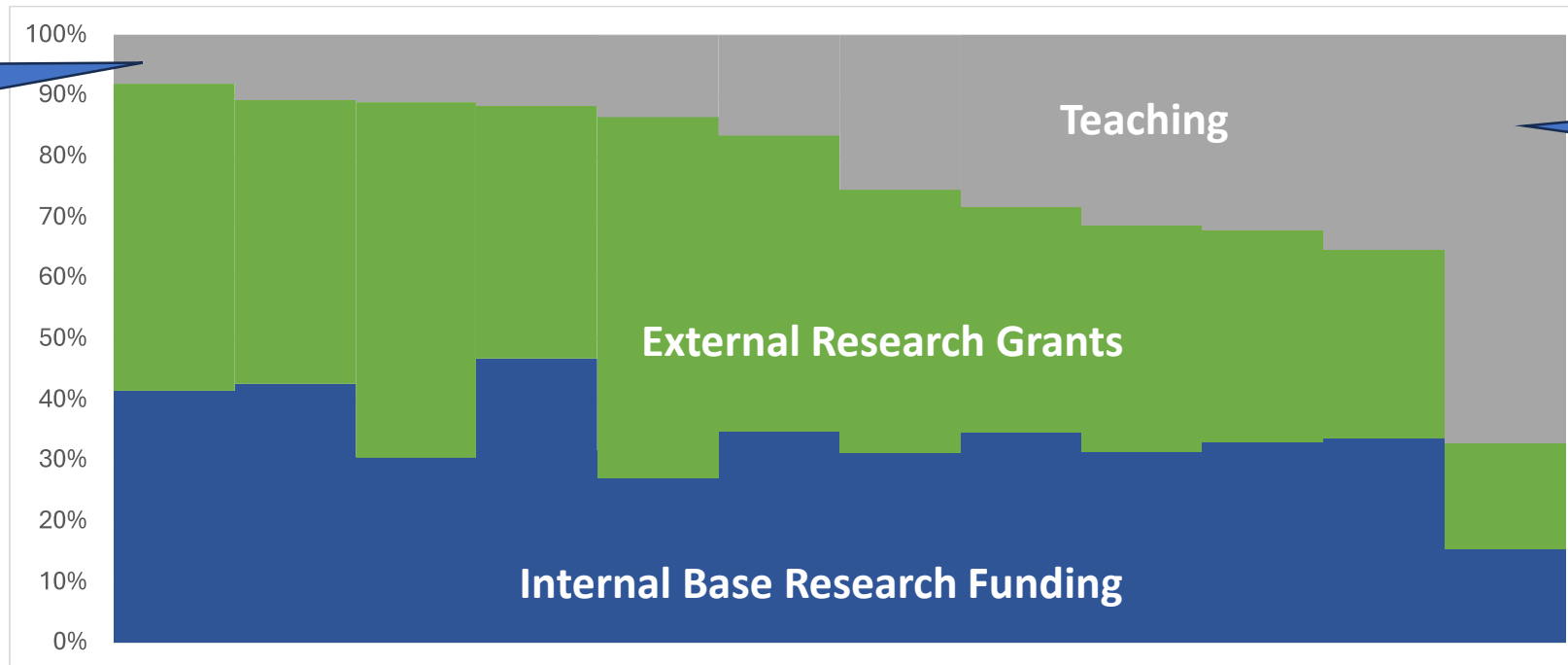| Sections	Departments	Research Programs
Mathematics and Computer Science	Mathematics	3
	Information Technology	9
Physics	Physics and Astronomy	14
Engineering	Electrical Engineering	3
	Materials Science and Engineering	6
	Civil and Industrial Engineering	2
Chemistry	Chemistry – BMC	3
	Chemistry – Ångström	6
Biology	Cell and Molecular Biology	7
	Ecology and Genetics	4
	Organismal Biology	4
	Biology Education Centre	
Earth Sciences	Earth Sciences	6

Teknat Faculty

Faculty funding

David Black-Schaffer, Dean of Research

Faculty of Science and Technology, Uppsala University

2024 Research Quality and Renewal and Review of Base Research Financing

UPPSALA
UNIVERSITET

Funding (Departments)

- Three main categories of funding:
  - **Internal** base research funding (from the government)
  - **External** research grants (in competition)
  - **Teaching** (only visible at department level)

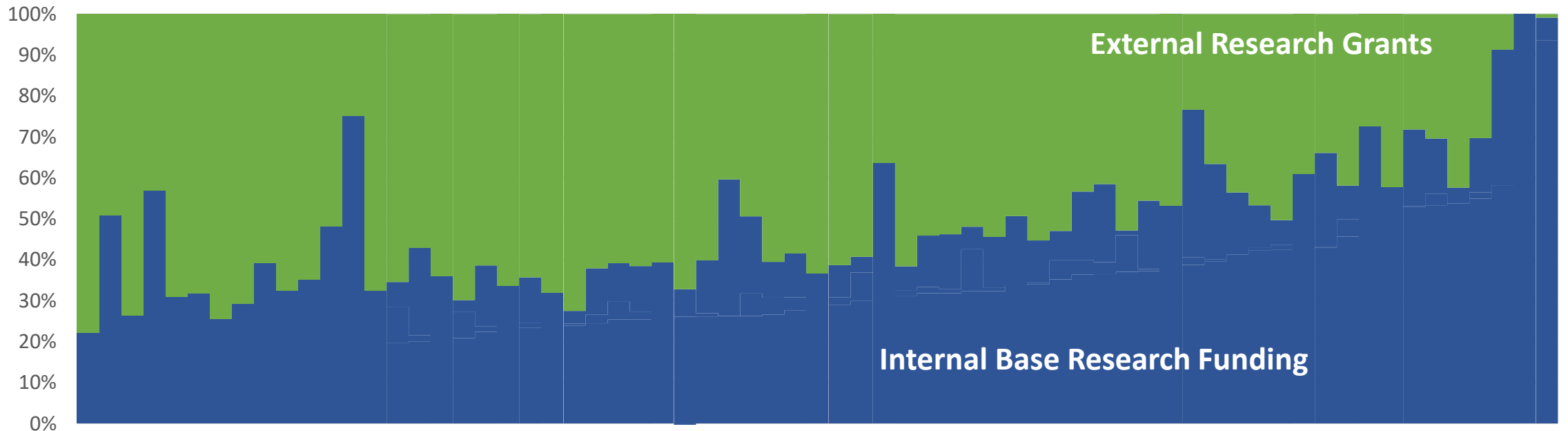- Varies enormously across <u>departments</u>

Funding (Research Programs)

- Three main categories of funding:
  - **Internal** base research funding (from the government)
  - **External** research grants (in competition)
  - **Teaching** (only visible at department level)

- Varies enormously across <u>research programs</u>:

Internal base (government) funding

- **Long-term** (60% of internal, <u>inflation adjusted</u>, rarely changed)
  - **FFFs** – Faculty Financed Research Funding (1 FFF=~2.4 postdocs/year, ~2.4M SEK in 2023)
  - SFOs - Strategic Research Areas: 15-year-old, essentially permanent government funding
- **Short-term** (40% of internal, year-to-year decisions)
  - **Department resources** – based on size and performance
  - **Co-financing** – for some grants, centers, etc., from the faculty or university

Short-term Internal Funding

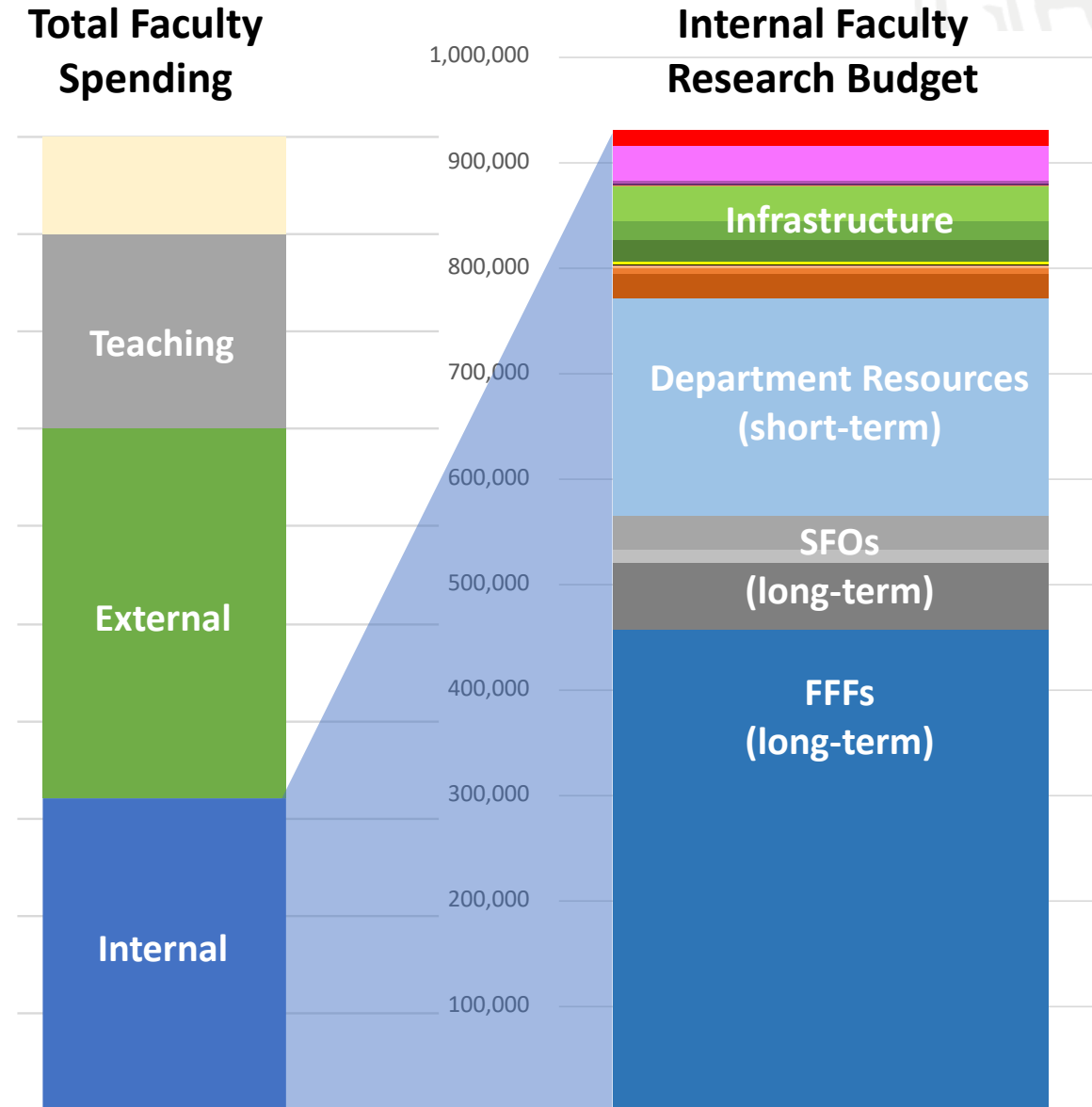Long-term Internal Funding (FFFs+SFOs)
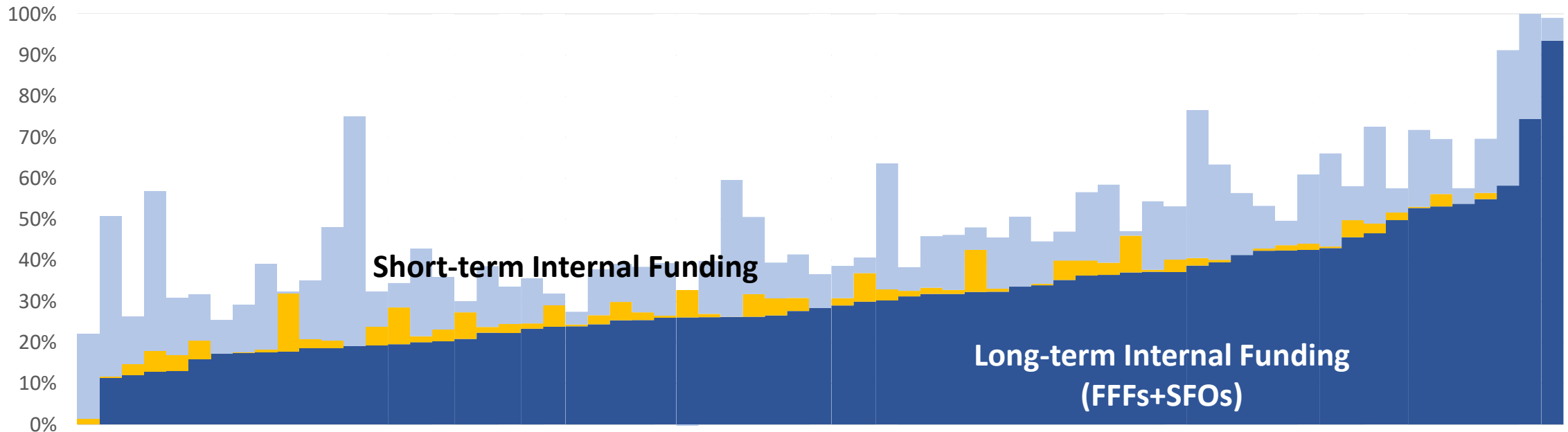
FFFs: Long-term Internal funding

- Assigned to the Research Programs
  - Mostly inflation protected
  - Very (very) static: only small changes every 5 years, leading to long histories
  - Transition from chaired professors "owning" FFFs 10 years ago to collegial programs
- Primary resource for:
  - Faculty salaries (long-term, stable)
  - Facilities and infrastructure (long-term, stable)
  - Co-funding (no large central pool)
  - Program shared activities (initiatives, recruitments, etc.)

UPPSALA
UNIVERSITET

Internal Research Overview

- Total Faculty Spending:
  - **32% internal** (base) research
  - **38% external** (competitive) research
  - **20% teaching**

- Internal Faculty Research:
  - 60% "locked" in long-term
  - Long histories
  - ÖB is how we adjust this
  - Only small adjustments in the past
  - Much of the focus of this process will be on getting more FFFs

Total Faculty Spending

Teaching

External

Internal

Internal Faculty Research Budget

1,000,000

900,000

Infrastructure

800,000

700,000

Department Resources (short-term)

600,000

500,000

SFOs
(long-term)

400,000

FFFs
(long-term)

300,000

200,000

100,000

UPPSALA UNIVERSITET

External research grants

- ~54% of total research funding is from external grants
- Major funding sources in Sweden:

Private Foundations	Swedish Funding Agencies
Beijers Foundation	Geological Survey of Sweden (SGU)
Carl Trygger Foundation	Swedish Agency for Innovation Systems (VINNOVA)
G Gustafssons stiftelse	Swedish Civil Contingencies Agency (MSB)
Olle Engkvist Foundation	Swedish Defence Research Agency (FOI)
Ragnar Söderberg Foundation	Swedish Energy Agency
Swedish Brain Foundation	Swedish Forest Agency
The Swedish Cancer Society	Swedish Foundation for Strategic Research (SSF)
Wallenberg Foundation (KAW)	Swedish Foundation for Strategic Environmental Research
Riksbankens Jubileumsfond	Swedish National Space Agency
	Swedish Research Council (VR)

Excellence-focused open research

European	
EU commission (H2020)	Swedish Transport Administration
European Research Council (ERC)	Swedish Research Council for Sustainable Development (FORMAS)
Marie Sklodowska-Curie (H2020)	Region Uppsala
	The Swedish International Development Cooperation Agency (SIDA)

UPPSALA
UNIVERSITET

Excellence grants

1. Open to all researchers in the faculty,

2. Fund researcher-chosen directions, and,

3. Have similar acceptance rates across all fields.

These grants can be used to evaluate research excellence across fields.

The faculty has an explicit goal to increase excellence grants, in particular ERC.

Main excellence grants for the faculty:

- Swedish Research Council (VR) Project Grants (**VR-Project**)

- European Research Council (ERC) Starting/Consolidator/Advanced/Synergy (**ERC**)

- Knut and Alice Wallenberg (KAW) Foundation Project and Scholar Grants (**KAW**)

Notes on excellence grants

- We have financial data on income from VR, ERC, and KAW
  - This includes **field-specific** grants (VR infrastructure, VR area-specific, KAW area-specific)
- Table 3.10 in the self-evaluation lists all excellence grants vs. field-specific to help
- Some fields have a much easier time applying for field-specific grants instead
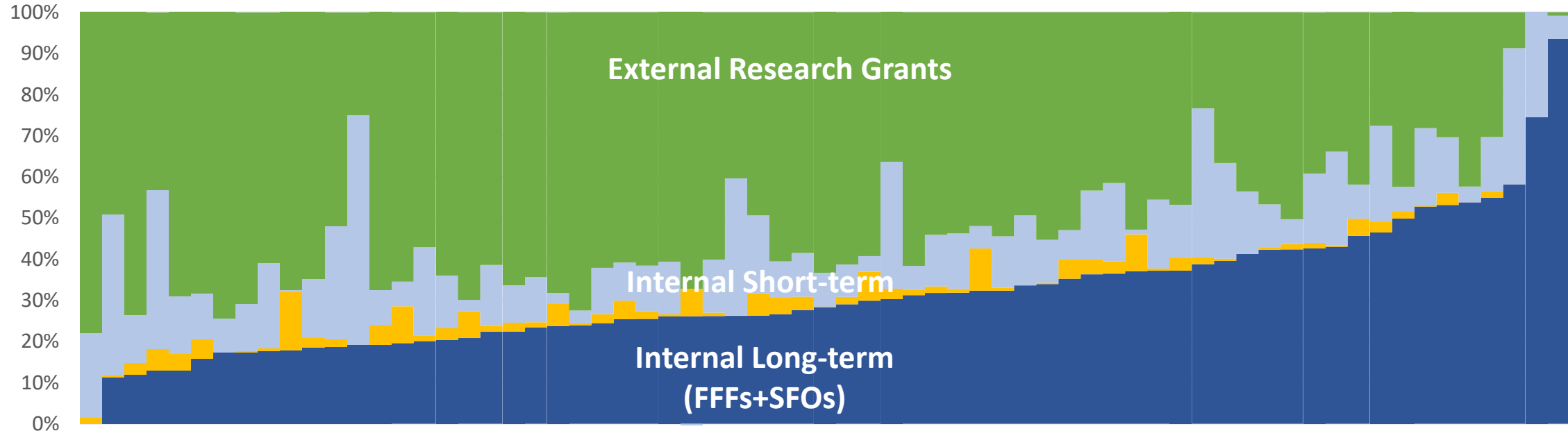

3.10 External funding sources

Motivation: This list complements the top external funding sources by providing consistent data for significant (>3M SEK) basic science grants available to all programs and by identifying the number of PIs vs. the total amount of funding. This is important as the absolute amount of money available to different fields varies enormously.

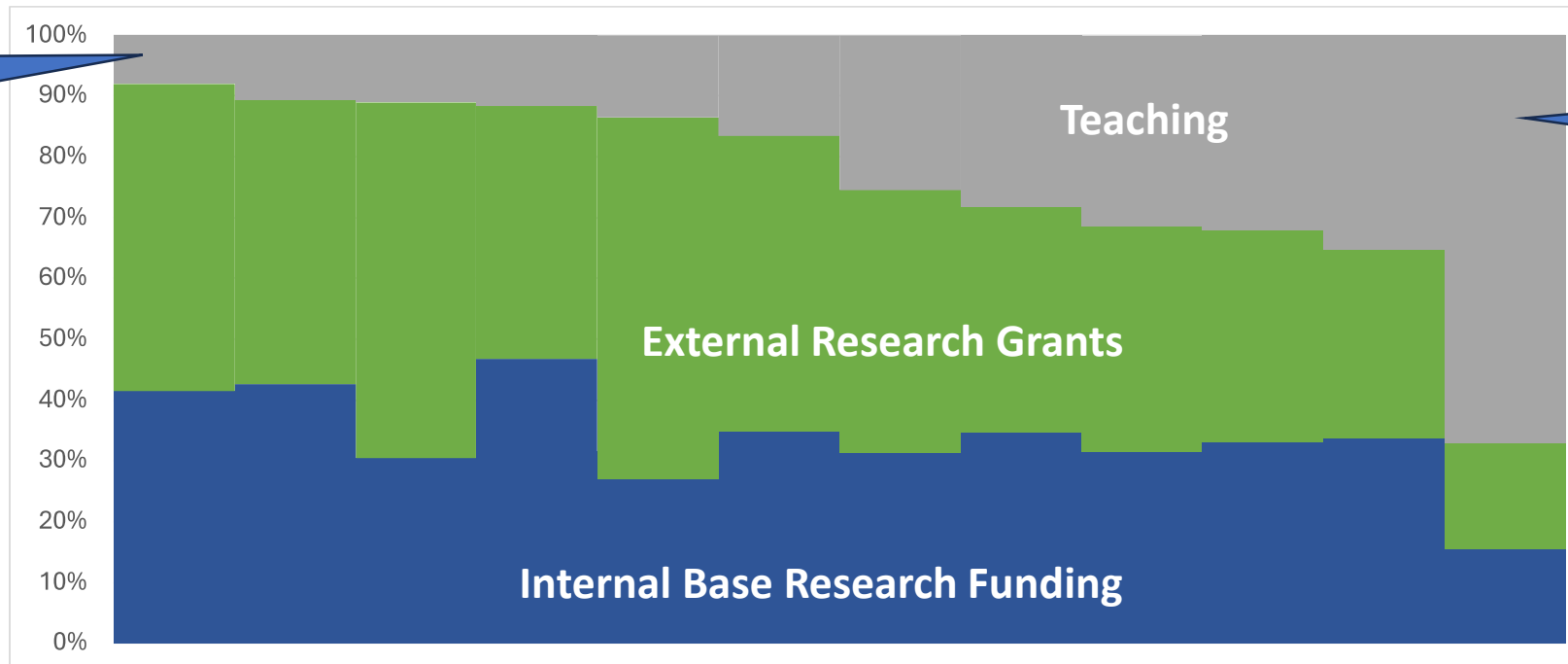| Grant	Number of awards to PIs in the program
Basic science grants (available to all fields in the faculty)	
ERC-StG, ERC-CoG, ERC-AdG, ERC-SyG	
KAW Project	
KAW Scholar	
WAF/WAFx	
VR Project	4
VR Starting	
Other grants (may include field-specific grants and Co-PIs)	
Uppsala kommun	1
Energimyndigheten	10
Trafikverket	1
Energiforsk	1
Svenska kraftnät	3
Vinnova	1
Vinnova	1 (Co-PI)
KK-stiftelsen	1 (Co-PI)
ÅF - forskningstiftelse	1
EU project	4 (Co-PI)
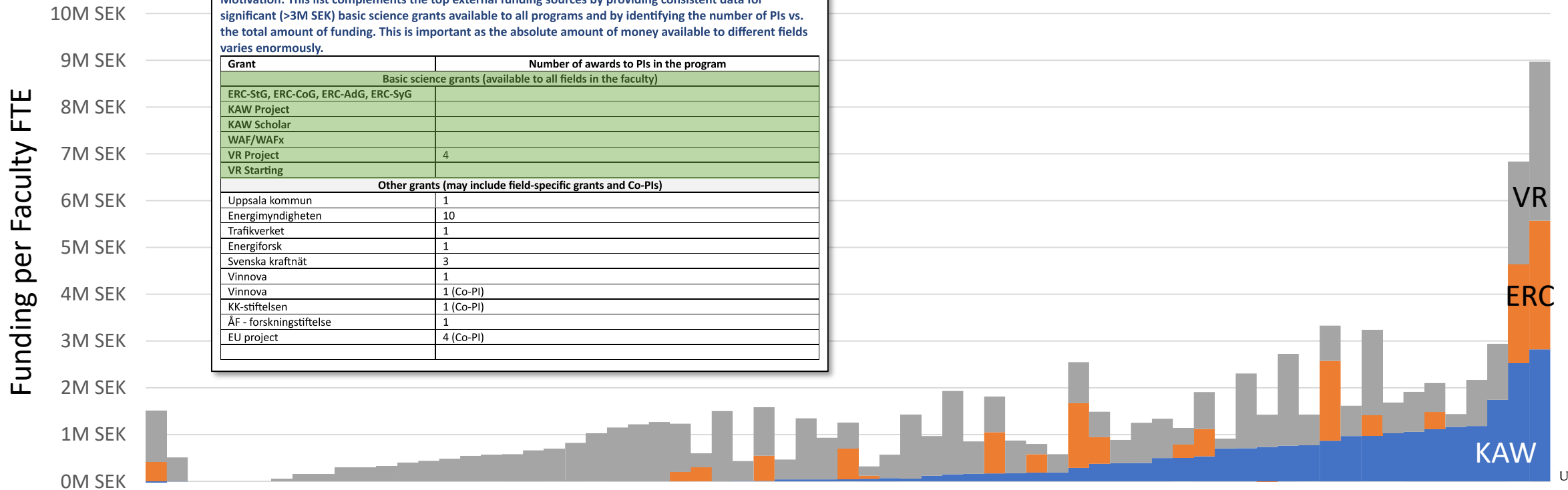
Different Funding across Research Programs

- Internal/External ratio and % Long-term varies enormously across programs
- Some fields have access to more external grants (applied, medicine, etc.)
- There is no "right" balance, but is should be sustainable and deliver good research

External Research Grants

Internal Short-term

Internal Long-term
(FFFs+SFOs)

UPPSALA
UNIVERSITET

Teaching

- All faculty are expected to teach (including Professors)
- **Teaching is organized at the department level** (not research program)
- Amount of teaching varies enormously across departments
- More teaching → easier to hire more people, but less time for research
  - Need teaching for tenure
 - Teaching supports part of salaries (faculty + PhD students)

8% teaching

67% teaching

Teaching

External Research Grants

Internal Base Research Funding

UPPSALA
UNIVERSITET

How faculty are funded

- Balance across **teaching**, **internal research**, and **external research**
- Balance varies across career stage and program
  - Assistant Professors are expected to have a good deal of research time
  - Associate Professors are generally expected to teach more
- Basic expectations: everyone teaches and does research
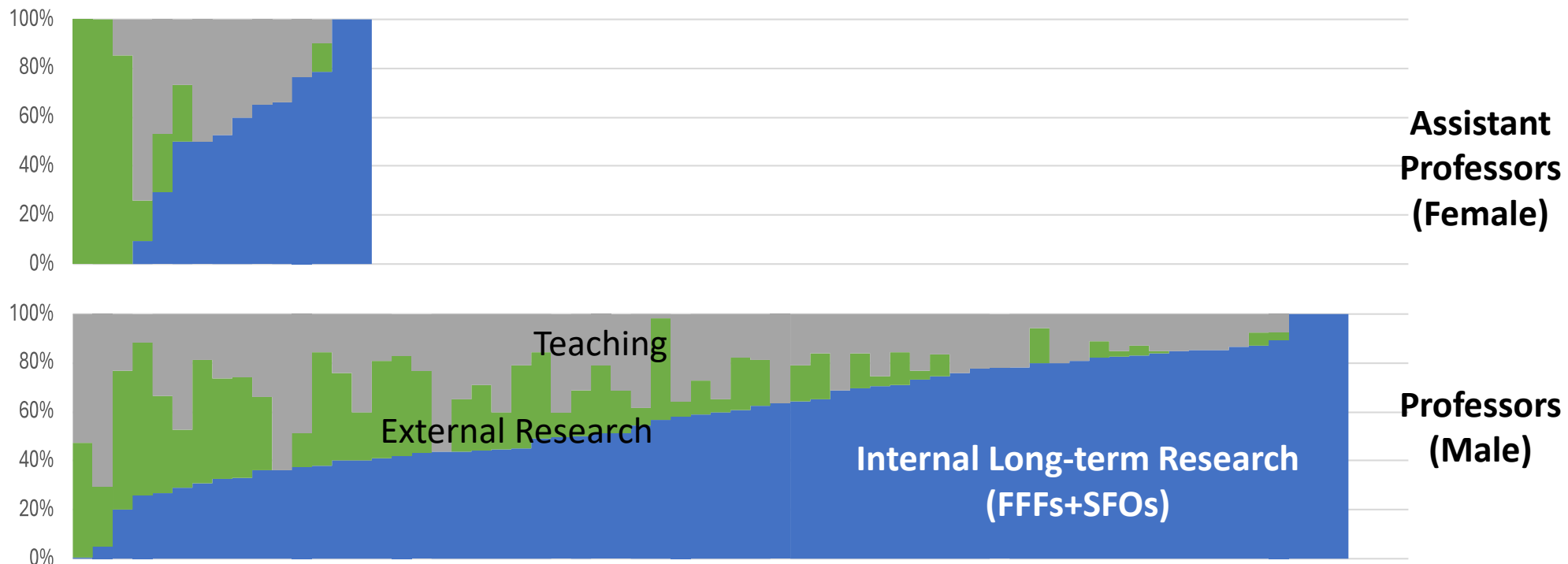
Summary: Funding

Funding
- Research-heavy: 32% base research / 38% external research / 20% teaching
- About 50/50 internal/external research

Challenges:
- Wide range of internal/external funding balances across programs
- Wide range of teaching/research balances across departments
- Wide range of how staff are funded between internal/external/teaching
- 60% of internal research "locked" into long-term (FFF/SFO) funding

Panel:
- How can we better use our internal funding?
- How can we handle the diversity of internal/external and teaching/research balances?
- How can we encourage and increase excellence grants?

UPPSALA
UNIVERSITET

The role of the panels

David Black-Schaffer, Dean of Research

Faculty of Science and Technology, Uppsala University

2024 Research Quality and Renewal and Review of Base Research Financing

UPPSALA
UNIVERSITET

Timeline

- Spring-Fall 2023: Defining overall goals and timeline, faculty board approval

- January 2024: Self-evaluations and initial base data available to departments and programs
- 15 April 2024: **Program** self-evaluations due (program plans → departments)
- 15 May 2024: **Department** self-evaluations due (with plans)
- June-September 2024: **Panels** read self-evaluations
- 31 August 2024: **Panels** provide key questions to discuss during their visit
- October 2024: **Panel visits** and feedback
- Fall 2024: **Departments** prioritize plans → Sections → **Faculty**

- April 2025: Report to rektor
- Spring 2025: **Faculty** prioritization for funding
- Spring 2025: **Departments** and **programs** update plans
- September 2025: **Faculty** board approves budget
- January 2026: **Resource allocation changes take effect**

June-September: Before the visit

- June: All evaluation material available online
- June: **Startup zoom meeting**
  - Discuss how to work and program/department leads
  - Led by the panel chair with the host to answer questions
- Summer: **Read <u>all</u> program self-evaluations**
  - Take notes in the provided evaluation forms
  - Identify questions to dicusss at the visit
- Summer: **Read <u>all</u> department self-evaluations**
  - Take notes in the provided evluation forms
  - Identify questions to discuss at the visit
- September: **Visit preparation zoom meeting**
  - Choose questions for programs and departments and give them to the host
  - Prepare for visit discussions

October: On-site visit

- **Travel to Uppsala:** Monday, September 30 (Tuesday, October 1 for the Mathematics panel)

- **On-site program:** Tuesday-Thursday for panel members, panel chair stays for Friday

- **Meeting with programs**: 30 or 40 minutes (focus on research)

- **Meeting with departments**: 1 or 2 hours (collaboration, careers, and teaching connections)

- **Department Chairs and Hosts**: 1 hour (section-wide and cross-department)

- **Junior researchers**: 40 minutes

- **Extra time for panel reflection/writing:**
  - 15/30 minutes after each program/department
  - 1-2 hours every evening (optional)
  - 4 hours at the end on Thursday for report writing

- **Faculty Board and panel chairs**: 4 hours on Friday (faculty-wide and cross-section)

UPPSALA
UNIVERSITET

The role of the panels

- **Read and evaluate self-evaluations and base data**

- Provide input on **strengths** and **weaknesses**

- Identify **opportunities** and **propose developments** based on the faculty goals

- Identify **possible future initiatives** among the forward-looking proposals and assess their potential for enhancement and feasibility

- Identify **possible organizational changes** that have great potential to strengthen the faculty's research and have a clear impact on its activities

- Provide an **assessment of the research quality**

- On site: **ask important questions**, provide feedback on overall organization and **produce a summary report**

UPPSALA
UNIVERSITET

Be a critical friend

- Provide **constructive feedback**
  - Use your own experience to make suggestions
  - Don't be afraid to tell us what we should consider not doing
- Give us an **honest evaluation of our research quality**
  - Even if it hurts
  - Look for positives, but if you don't find them, then say so

- Identify **big-picture issues/opportunities** we miss or dismiss (particularly cross-department/cross-section)
  - Help us move from a money-focus to a quality-focus
  - Help us see if our historical way of doing things or organizing could be holding us back

- Ask **hard questions**, even if you don't have the answers
  - Helping us gain a new perspective is probably the most valuable contribution the panel can provide

UPPSALA
UNIVERSITET

Try to avoid

- Criticizing when suggesting a way forwards would work as well
  (But do not hold back if we are really doing a bad job.)

- Singling out individuals or small groups

- Telling us what to do or how to prioritize
  (unless you see a serious issue or are asked)

UPPSALA
UNIVERSITET

Confidentiality and trust

- **All final documents are public record by Swedish law**

- All working documents are private

- We will provide help to make sure there is nothing inappropriate in the final report

UPPSALA
UNIVERSITET

The role of the host

Before the on-site visit

- Answer section-specific questions from panel members and chair
- Collect sepecific questions to send to the programs & departments before the on-site visit

During the on-site visit

- Be a neutral observer
- Answer sections-specific questions and handling any misunderstandings
- Participate during the panel interviews
- Leading the meeting with all heads of departments and panel during the final discussion
- Participating in the meeting with the Faculty board and panel chairs on Friday

The role of the panel chair

Organize the panel's preparatory work

- Assign (if so desired) lead readers for each program
- Collect questions from the panel members to the programs/departments
- Make sure the draft panel evaluations enable good on-site discussions
- Bring panel questions to the Host

Run the on-site meetings

- Program/department meetings: The Host will organize them and are there to help if needed
- Report writing: summarizing input and formulating it together with the panel
- Raise section/faculty-wide questions/issues with the faculty

UPPSALA
UNIVERSITET

When filling in the evaluation forms…

- Do not try to "find" answers to every question: tell us if you do not have enough information

- Use the full scale for evluations: be honest first, and nice second

- Use external information and your own experience in evaluating, but try to treat all programs and departments fairly

- Use the provided forms for taking notes before the interviews (easier to write the final reports)

- Use as much space as you want

Getting help

- Your Host is your first point of contact
  - Questions about the sections/departments/programs
  - Questions about the Swedish research environment/university/etc.
- You can email the faculty support teknat-kof@uu.se
  - Administrative questions
  - Details on Base Data
- Travel/accomodations contact kof24@akademikonferens.se