

Supporting the next generation of scientists in Africa: Key findings from a multi-country study

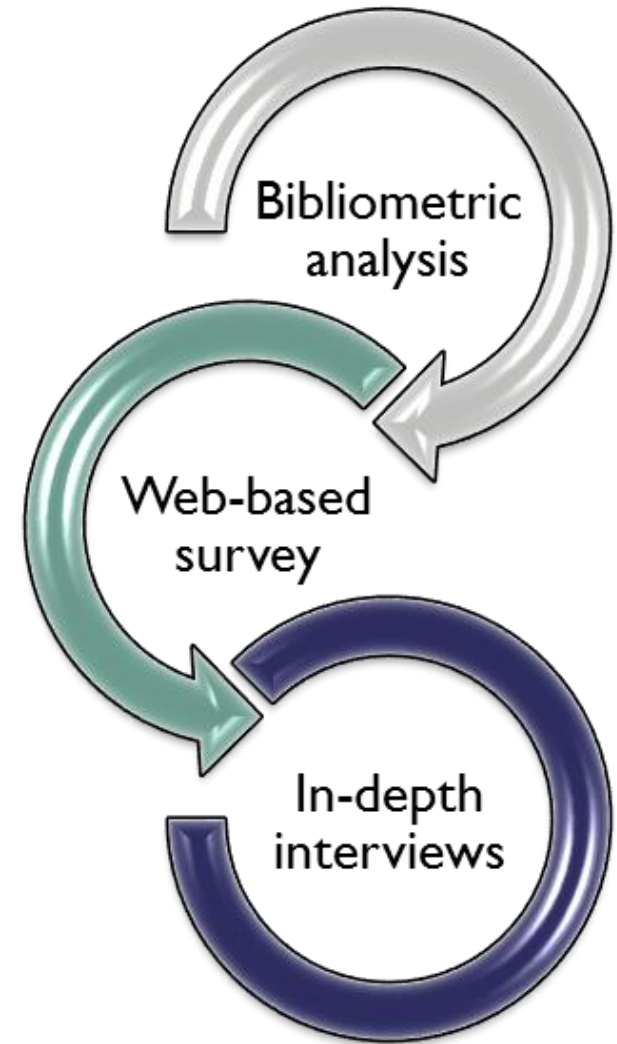
Heidi Prozesky
SciSTIP & CREST, Stellenbosch University

IYBSSD Closing Ceremony

15 December 2023

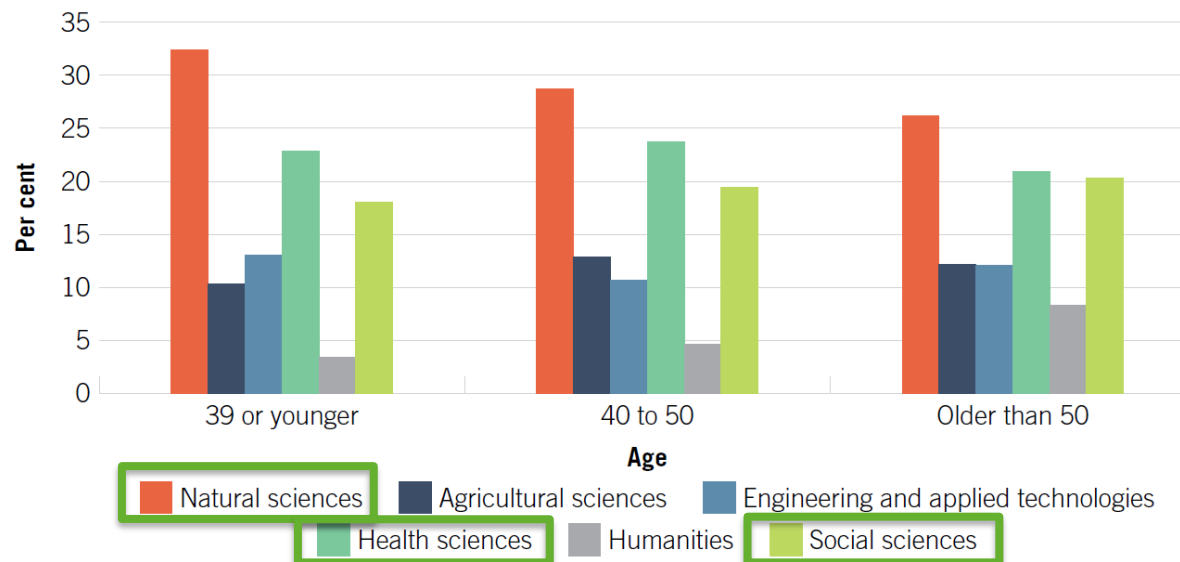
Primary project goal

To contribute to a better-informed discussion of how to improve current institutional policies in African countries to support career development of their researchers, and in particular of their young graduates



Young scientists defined as 39 years or younger

- Early-/mid-career
 - Most are in the HE sector (70%) where most (74%) hold the rank of lecturer/senior lecturer
 - 65% have a PhD
- Science domains

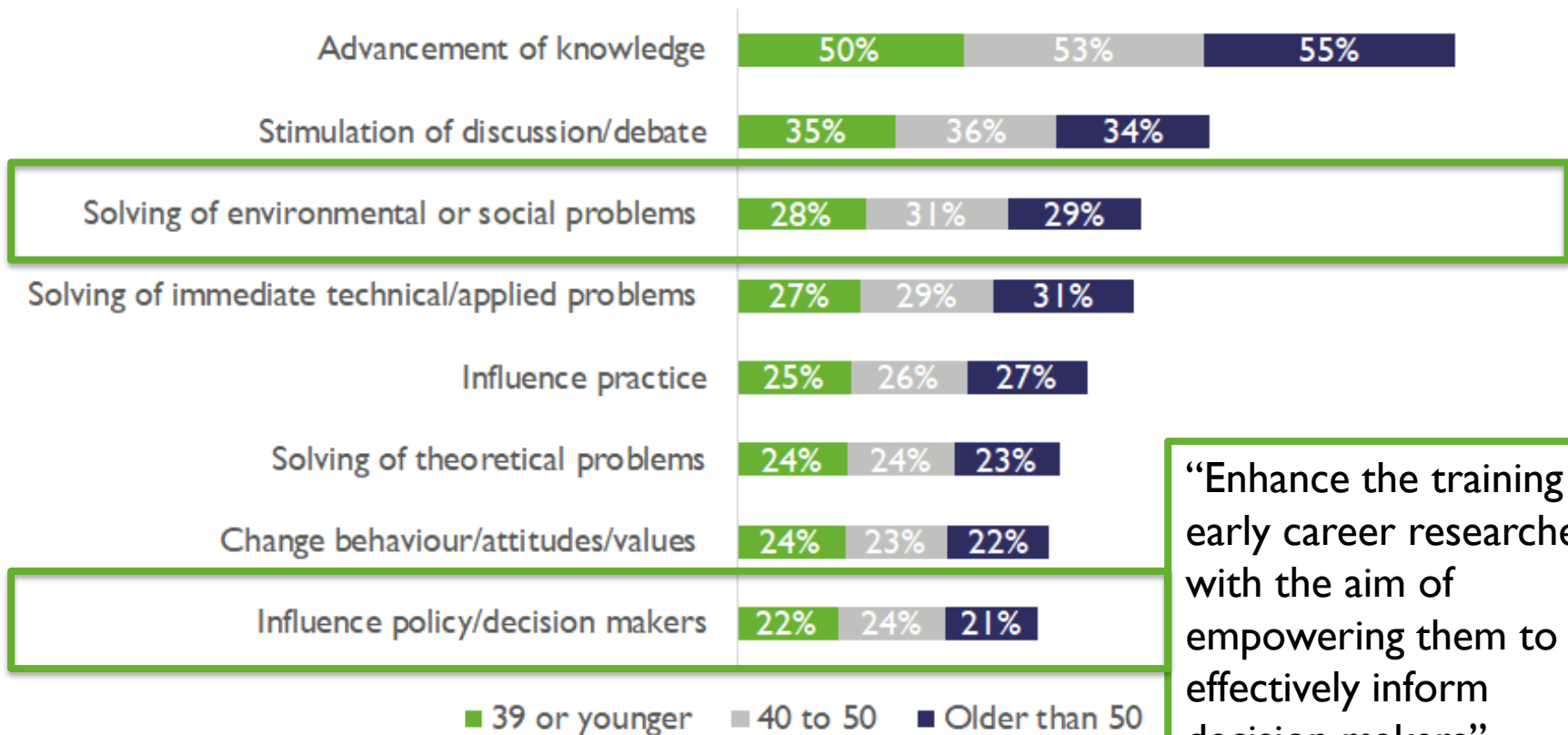


Point of departure

**A Call for Action from Young Academies:
Reaffirming the Role of Fundamental Sciences in Achieving Sustainable
Development through Enhanced and Equitable Support of
Fundamental Research and Early- to Mid-Career Researchers**

December 2023

Attaining value / outcome of research (% of respondents reported highly successful), by age



“Enhance the training of early career researchers, with the aim of empowering them to effectively inform decision makers”

The focus of the remainder of this presentation, aligned with the Call for Action

Call for Action

- To **empower** and **equitably support** early- to mid-career researchers in resource-limited countries
- **Lack of opportunities** for early- and mid-career researchers, especially in developing nations

Research questions

- How do young African scientists **differ** from their older counterparts in terms their **need** for empowerment and support?
- What are the **major** lack of opportunities to be addressed for young African scientists?

Respondents' perceptions of the impact of 10 challenges on their careers, by age

Challenges to their careers ...	Overall rank	Rank by age		
		39 and younger	40 to 50	Older than 50
Lack of research funding	1	1	1	1
Lack of funding for research equipment	2	2	2	2
Balancing work and family demands	3	6	3	3
Lack of mentoring and support	4	4	3	4
Lack of mobility opportunities	5	5	5	5
Lack of training opportunities to develop professional skills	6	3	4	6
Lack of access to library and/or information sources	7	7	6	7
Limitation of academic freedom	8	9	7	8
Job insecurity	9	8	8	10
Political instability or war	10	10	9	9

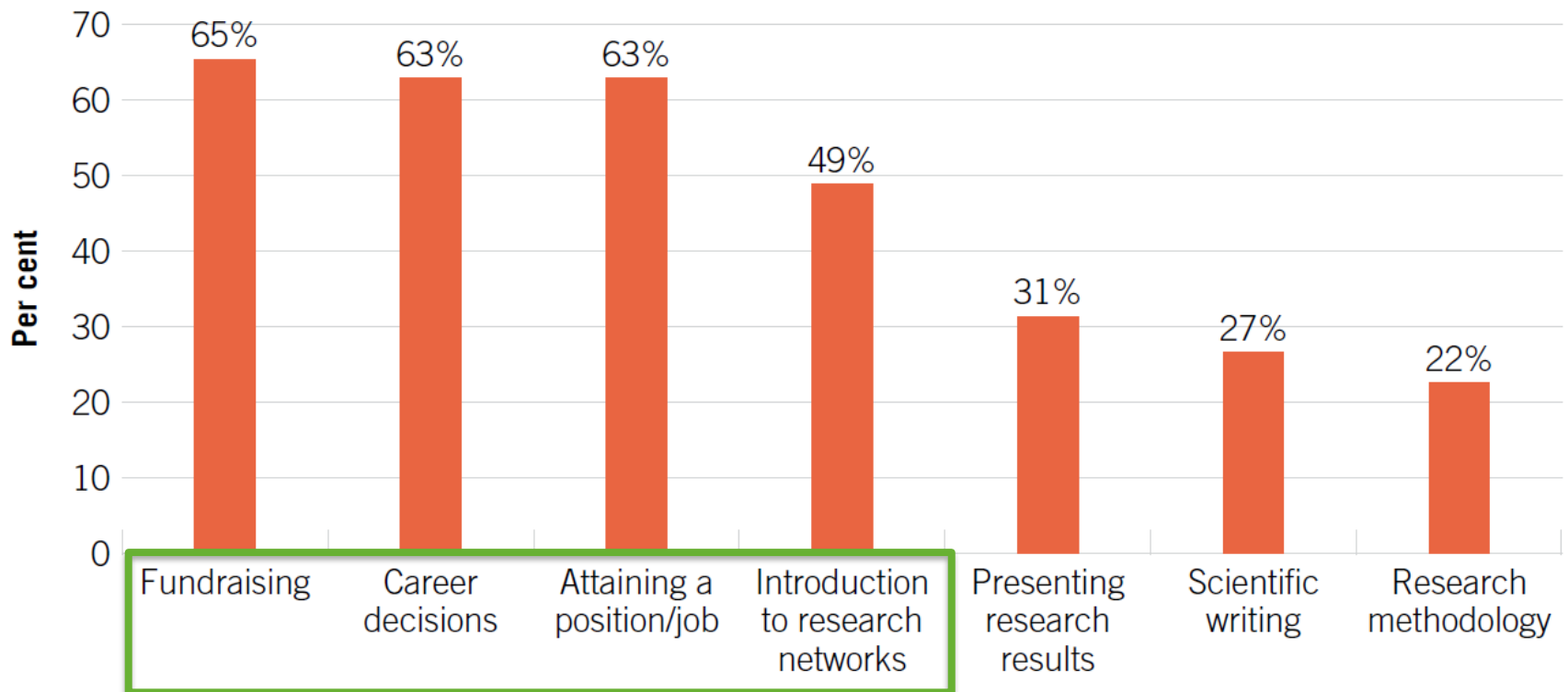
Reported amount of funding (US\$) received as primary recipient in preceding 3 years, by age

Age	Mean	Median	N
39 or younger	47 286.59	0	1 394
40–50	79 800.65	5 000	1 856
Older than 50	91 847.53	17 500	1 456
Total	73 896.62	5 000	4 706

- Inexperience as a major barrier to securing funding
 - Requirements of funders
 - Writing quality proposals (time consuming)
- Those who are unsuccessful, have no option but to use personal financial resources

CfA: “to develop a skilled workforce that can drive technological and scientific innovation”

Never/rarely received mentoring on specific issues (% of respondents younger than 40)

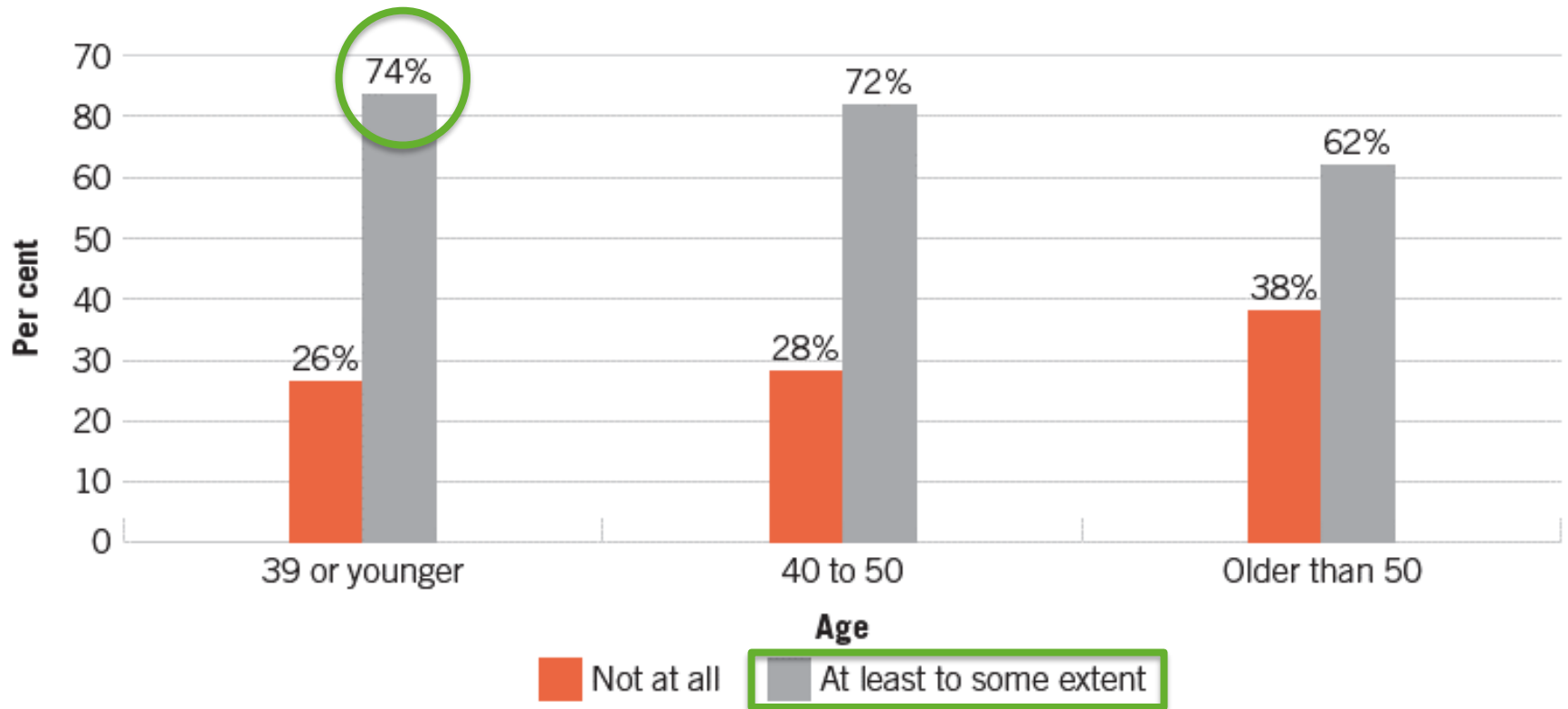


Lack of clarity on the requirements involved in pursuing a successful research career

- Many young African scientists tend to be first-generation academics
 - Understanding of university culture
 - Expectations and roles associated with their positions
- The struggle to find suitable mentors (brain drain, power differentials and competition)

37% of the respondents younger than 40 had an opportunity to **study and/or work abroad** in preceding 3 years

Negative impact of lack of mobility opportunities on career, by age



International collaboration

- Barriers to international collaboration
 - Inability to find partners
 - Lack of resources
 - Language barriers
 - Institutional barriers
- Negative experiences of international collaborations
 - Local institutions are the weaker partner
 - Loss of research autonomy
 - Unequal distribution of workload



Research funding

- Dedicated funds for early-career scientists
- Support in sourcing research funding



Mentoring and training

- More detailed, constructive feedback on unsuccessful grant proposals and rejected papers
- Formal mentoring programmes



Mobility

- More information and funding
- But encourage brain gain



Institutional environment conducive for research

- University and line managers (e.g., HoDs, deans)
- Senior academic staff



Thank you

Robert Bosch **Stiftung**

Acknowledgements: other members of the research team; technical and administrative support staff; and the scientists who took the time to complete the questionnaire and/or be interviewed

This work is based on research supported by the IDRC (Canada), grant number 107987-001; the Robert Bosch Stiftung (grant number 11.5F081.0006.0), and the National Research Foundation of South Africa (Grant No 91488).