



View of a student

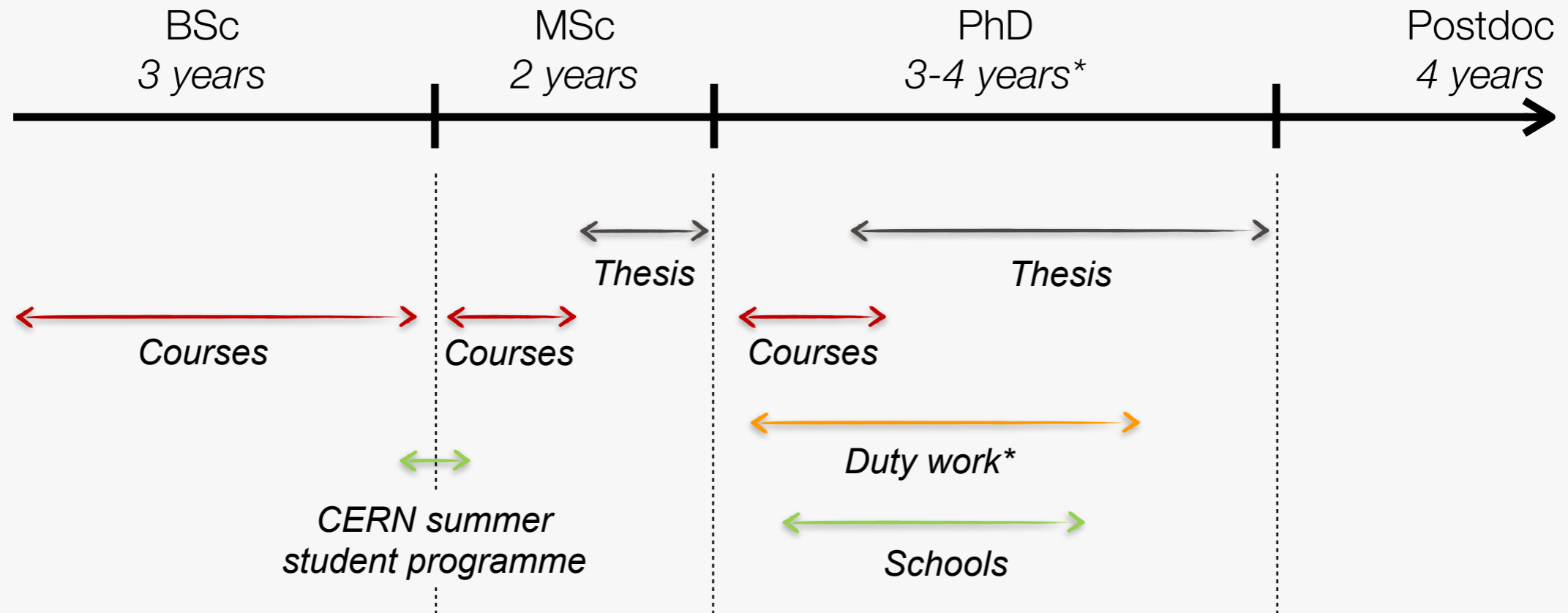
R-ECFA meeting in Oslo,
2 Oct 2015

Steffen Mæland



The path to PhD and beyond

Standard timeframe:



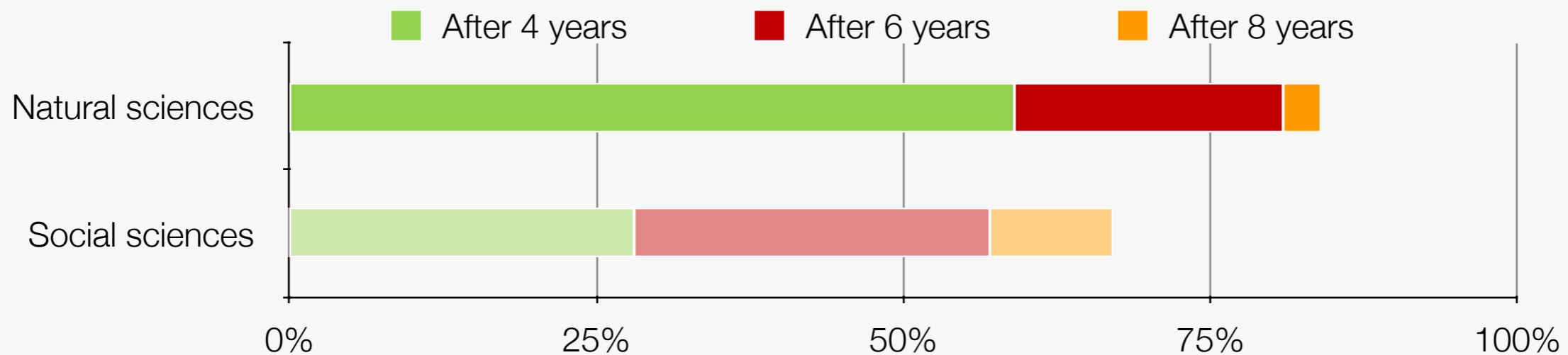
* 3 years w/o duty work

- Some specialisation starting at last year of BSc
- QFT, detector physics, etc. typically at first year of MSc
- Summer student programme at CERN quite popular

PhDs in maths and sciences (2007-2009)

A few key numbers about completed PhDs in all of natural sciences [1]:

- Average age at graduation: 33.4
(in social sciences: 40.8)
- Average time from thesis submission to defence: 3 months
(social sciences: 6 months)
- Percentage of stipendiaries started in 2002-2003 having defended their thesis after 4/6/8 years:

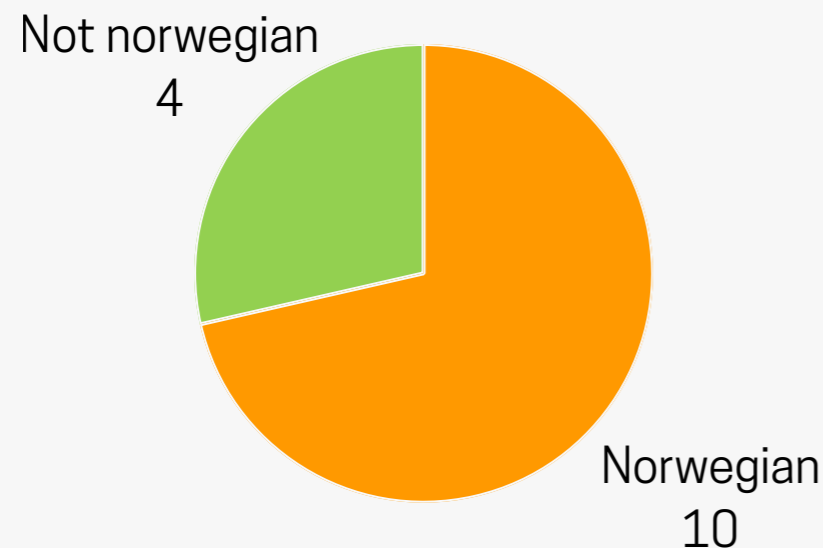


[1] NIFU: [Stipendiater og doktorgradsgjennomføring](#), Rapport 29/2012, Published August 15, 2012

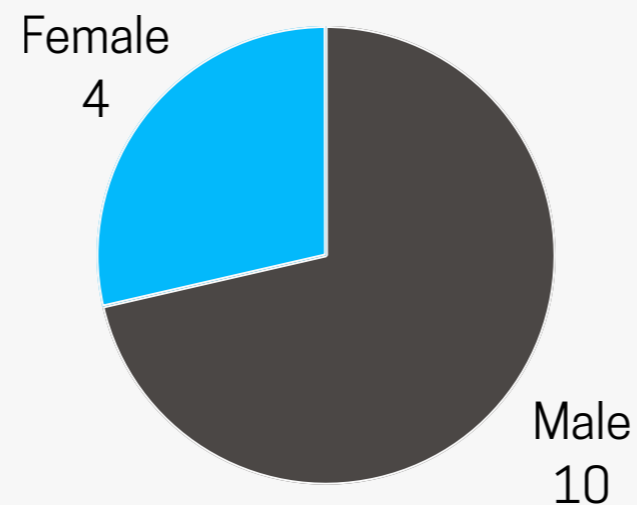
PhD student survey

- Performed a survey among current and recently graduated (< 3 yrs) PhD students in HEPP and HENP
- 14 answers (8 active, 6 graduated)
- General demographics:

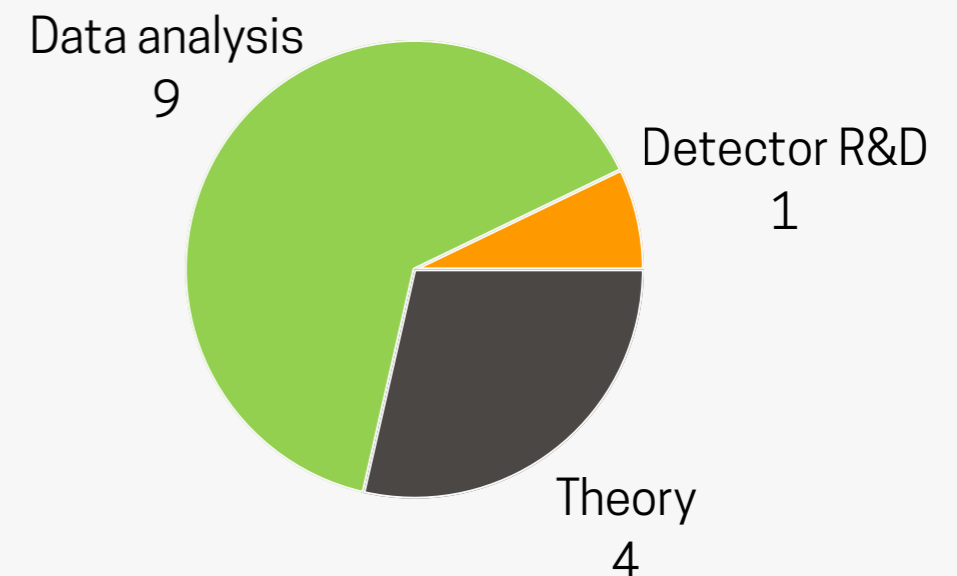
Nationality:



Gender:



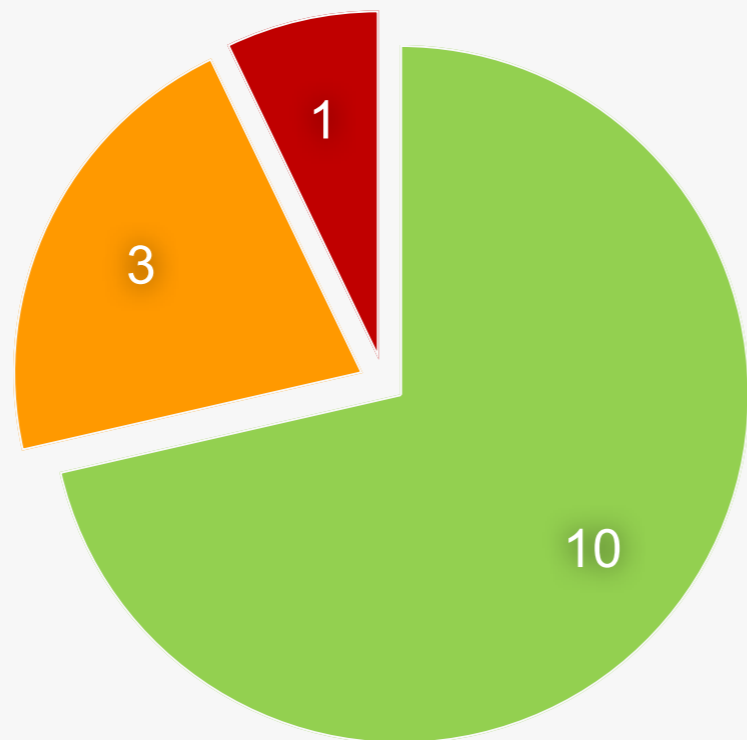
Field:



↗
In 2014, majority of all graduated PhDs were women [2]
(seems not to apply to HEPP yet)



What was the main reason for applying for your PhD position?



- Really determined on doing a PhD
- Project seemed interesting
- Had nothing else to do
- Other

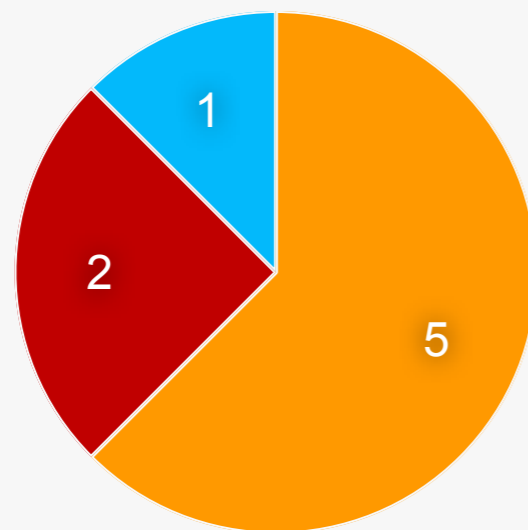
Career

Student survey



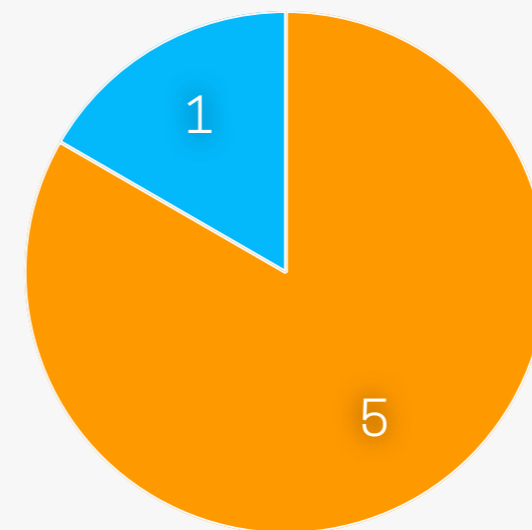
Where would you like to work after finishing?

(active students)



Where are you working now?

(graduated students)



- Academic research
- Private-sector research
- Industry / not research

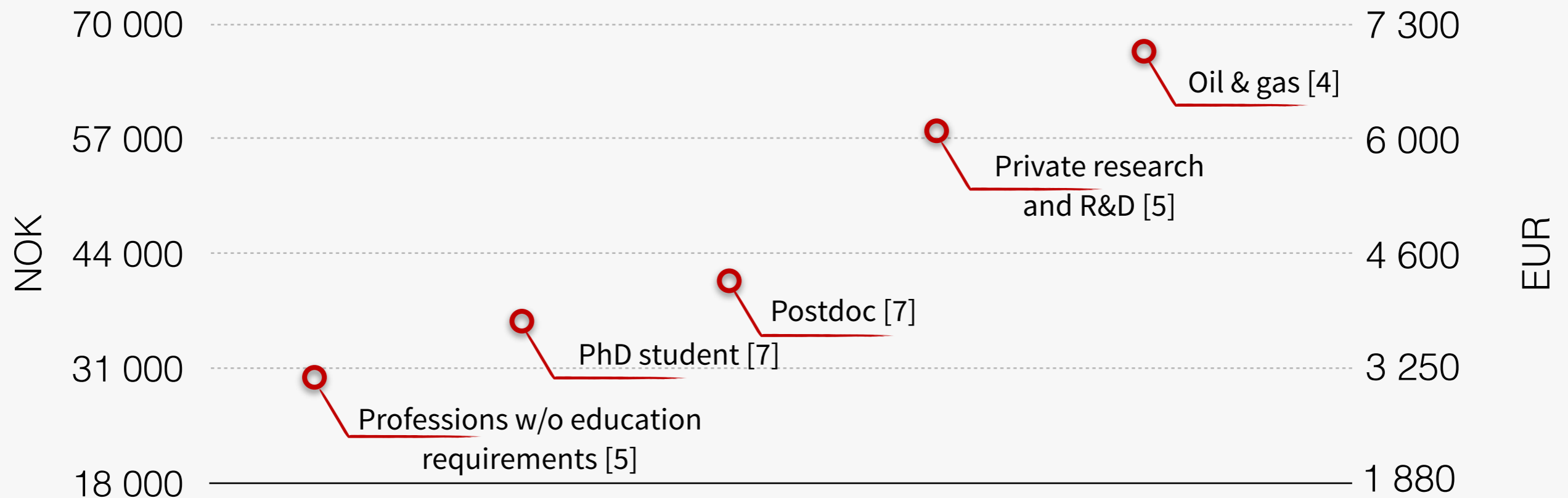


Mostly no strong feelings about this one (answering “*I don’t know*” was deliberately not allowed as an option)

However, a career in academic research is clearly preferred.

Career and salaries

Average monthly salaries in Norway in 2014



SSB report (2007) [6]: “*The economic incentive to begin an education within research [in natural sciences] is clearly weak*”

...but a PhD starts to pay off after ~7 years.

[3] SSB: [Lønn, alle ansatte, 2014](#). Published March 20, 2015.

[4] SSB: [Lønn for ansatte i olje- og gassutvinning og bergverksdrift](#). Published December 12, 2014

[5] SSB: [Lønn for ansatte i faglig, vitenskapelig og teknisk tjenesteyting](#). Published November 19, 2014

[6] SSB: [Forskerrekruttering og opptrappingsplanen](#). Estimerte lønnsprofiler for utvalgte utdanninger på master- og doktorgradsnivå. Published July 8, 2007

[7] Regjeringen.no: [Lønnstabeller for arbeidstakere i staten](#). Published May 1, 2014

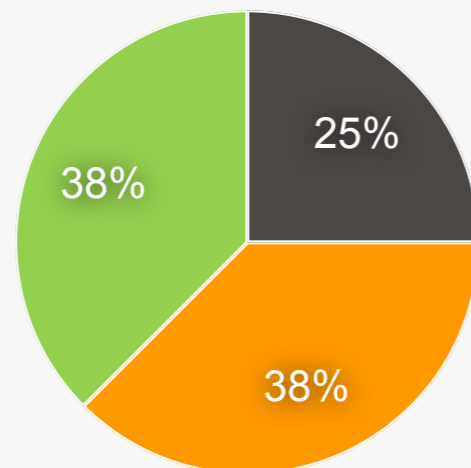
Career and relocation

Student survey

Production of PhDs at each institute > number of postdoc positions.
The inevitable question:

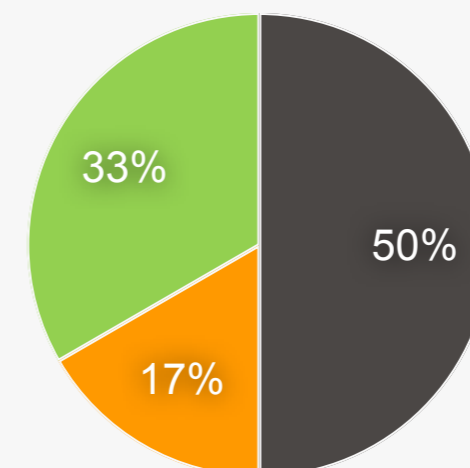
🗣️ *How willing are you to relocate?*

(active students)



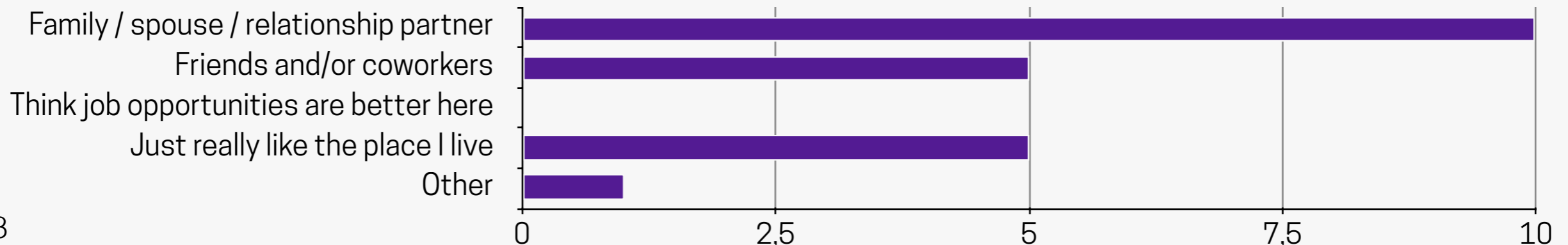
🗣️ *Did you have to relocate?*

(graduated students)



● Out of Norway
● Another city in Norway
● Same city

🗣️ *Which factors limit your ability or wish to relocate?*

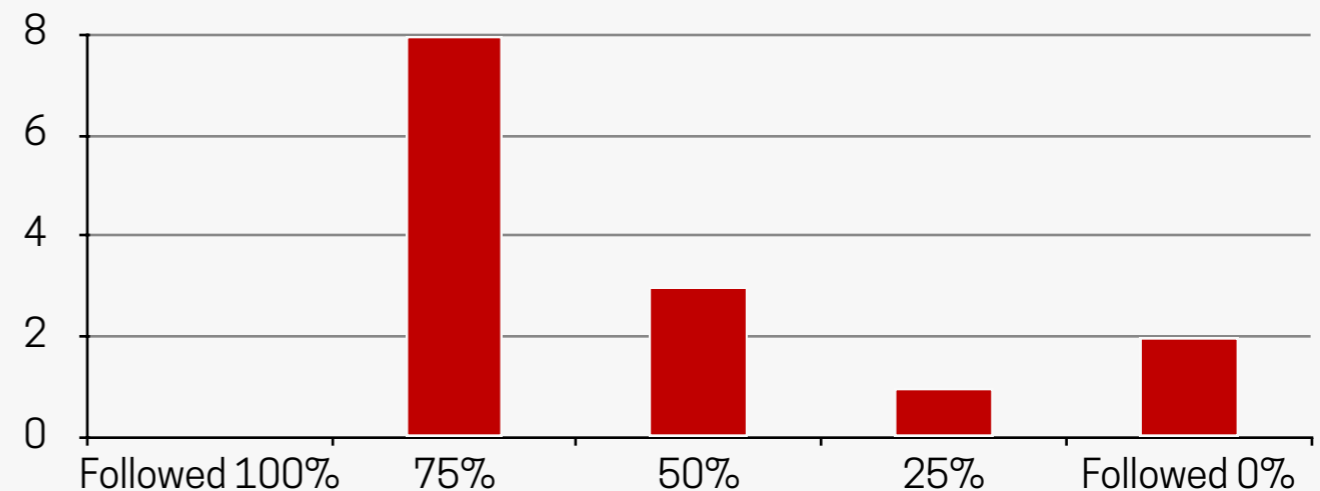


Thesis topic

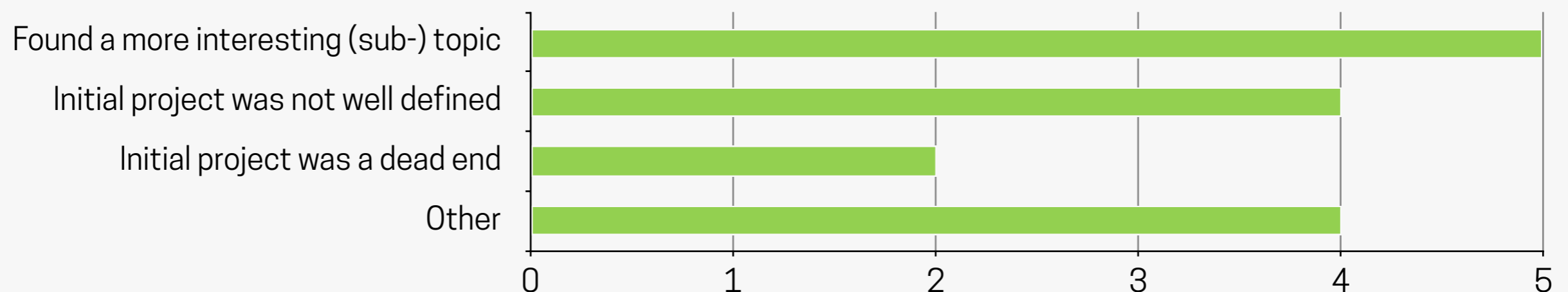
Student survey

Admission to the PhD program requires submitting a 3-10 page project description within 3 months after starting date.

Q: *Have you followed your initial project description, or deviated off to other projects?*

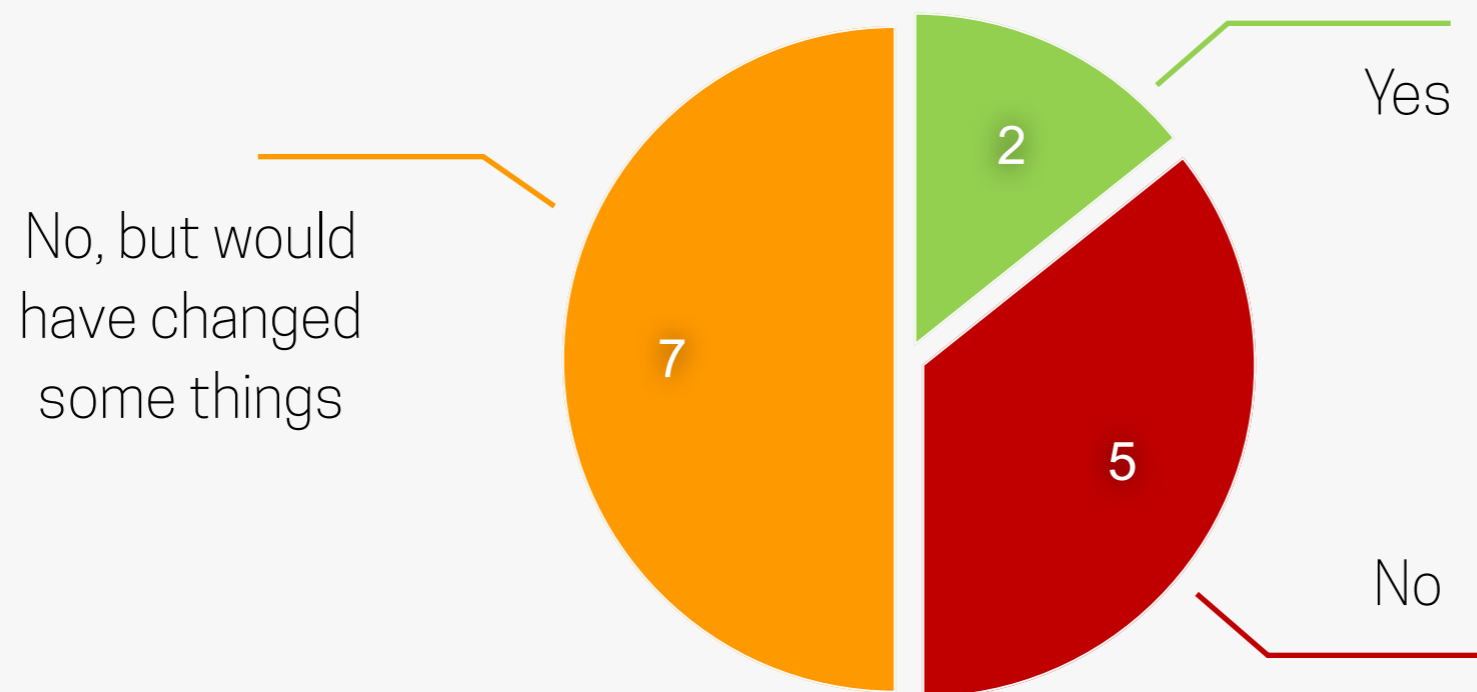


Q: *If doing or having done work not included in original project, what was the reason for doing so?*





Given the possibility to start over, would you have wanted to work on a different topic?

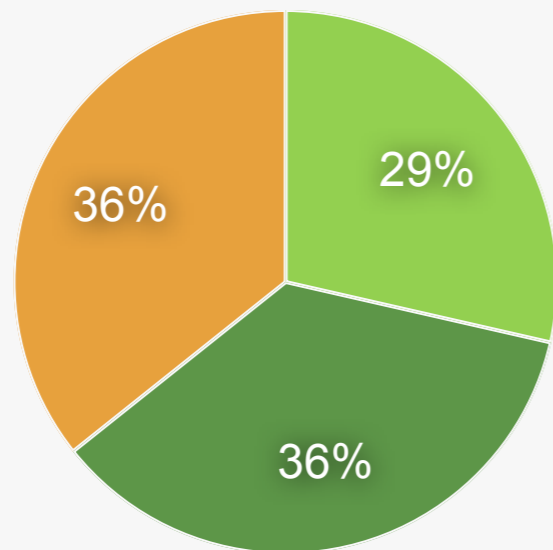


Supervision

Student survey



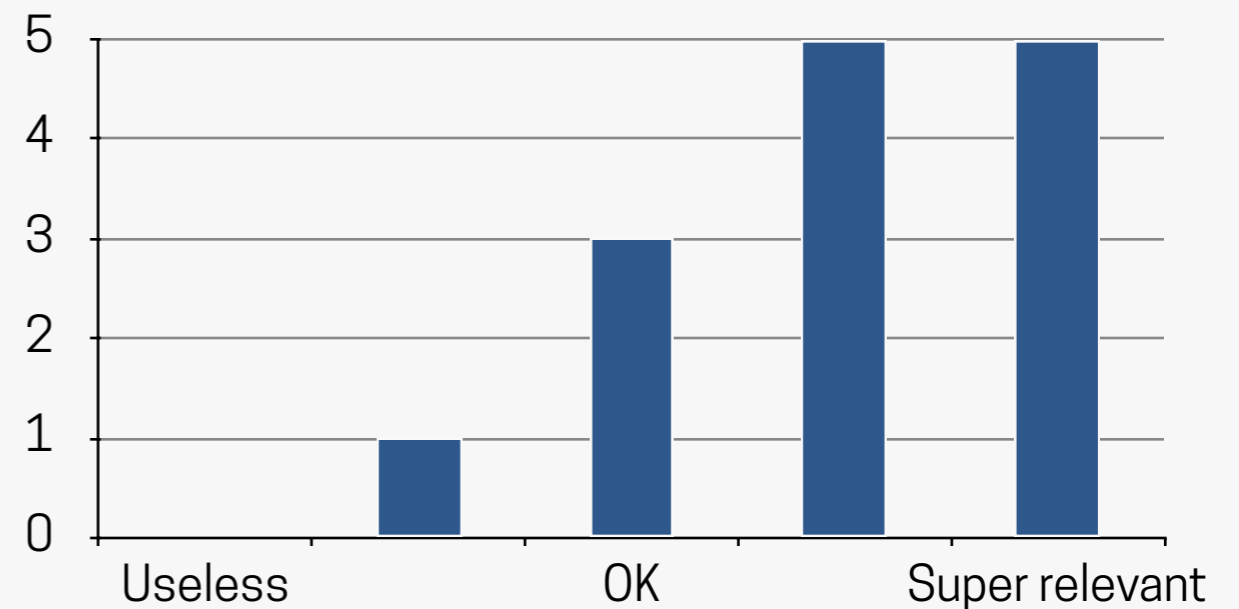
How often do you communicate with your primary supervisor?



● Daily ● Weekly
● Monthly ● Never



How relevant is the advise and feedback you receive?

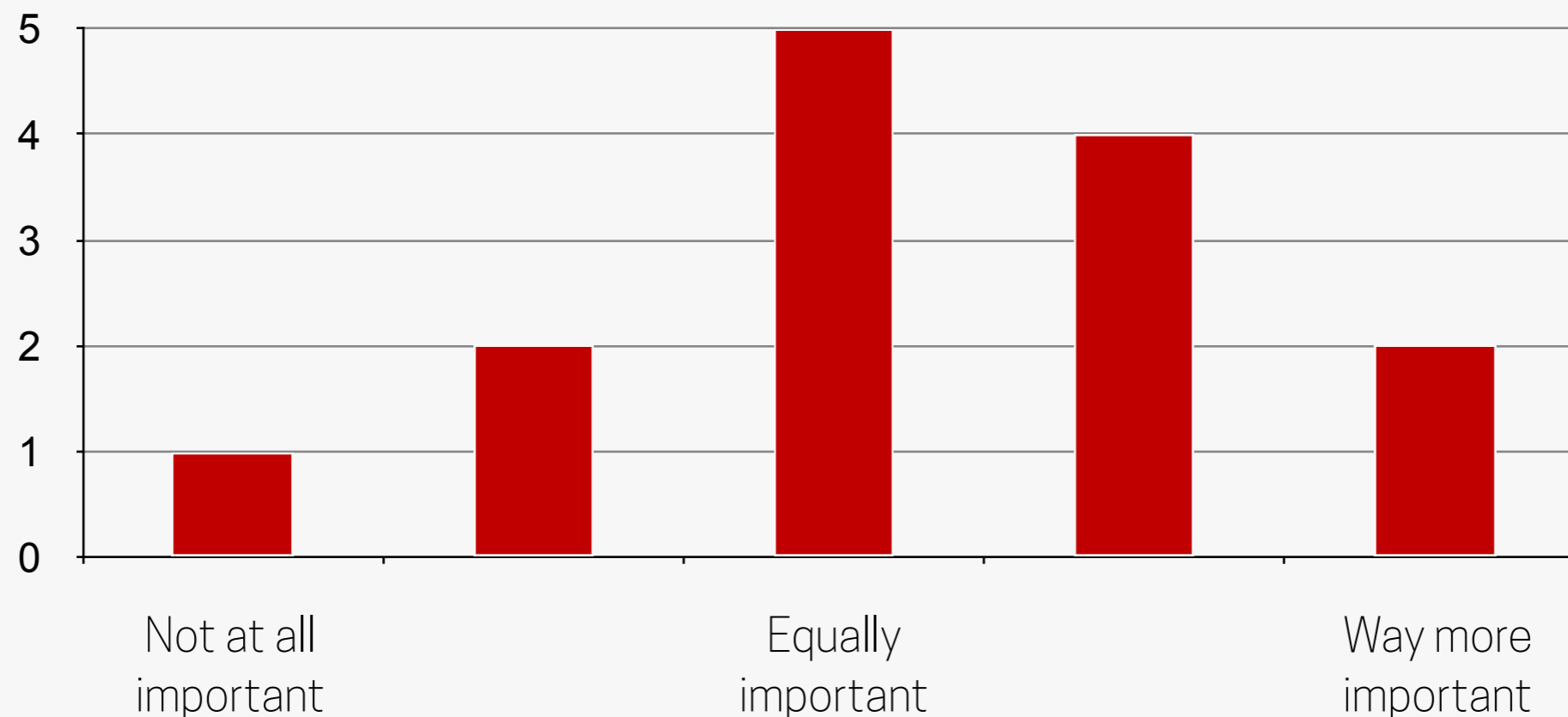


Supervision

Student survey



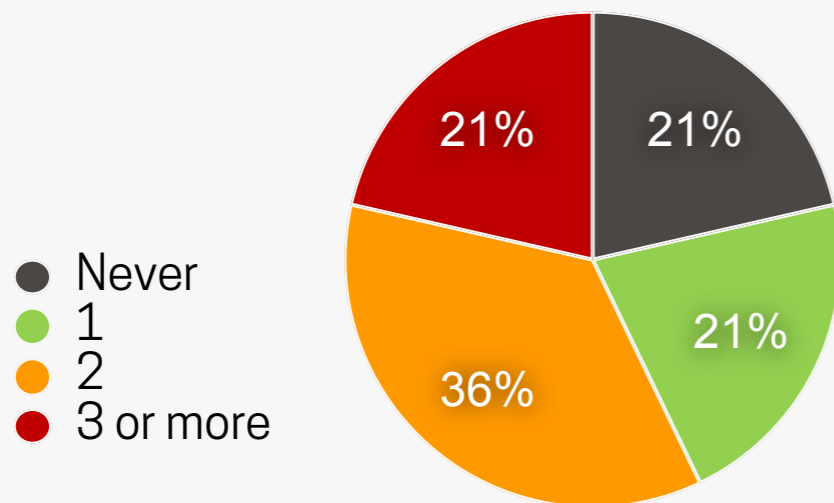
Would you say that the input from other coworkers in your group or collaboration is more important for your work than that of your supervisor(s)?



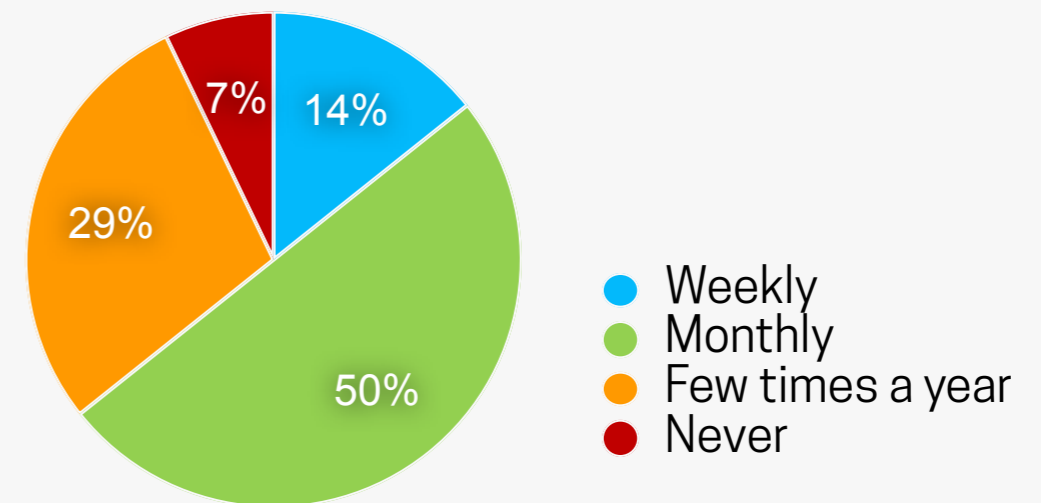
Collaboration

Student survey

Q: How often have you (or are you planning to) presented at international conferences?



Q: How often do you present at group meeting or other informal events?



Funds for travelling and participation at conferences usually not a problem

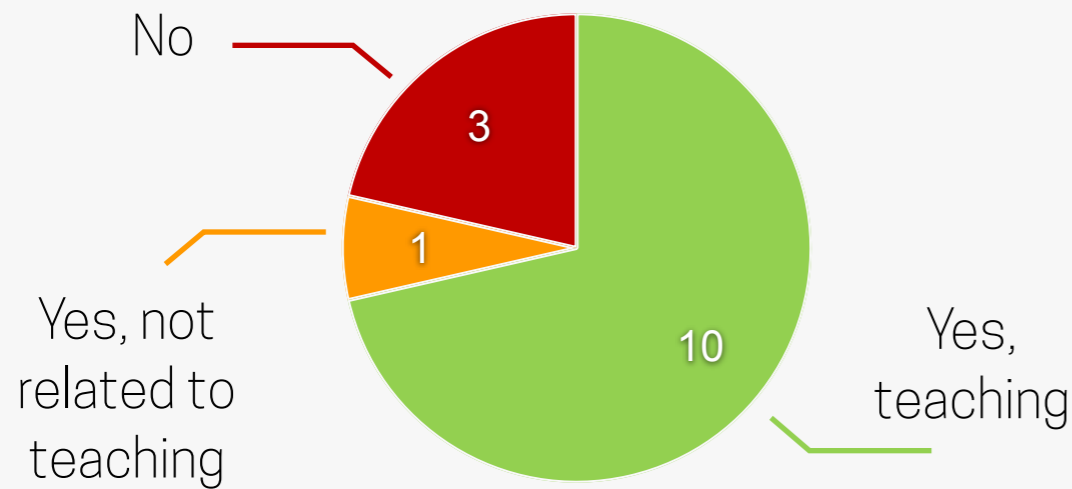
For group meetings, Vidyo and Skype are the major workhorses

Duty work

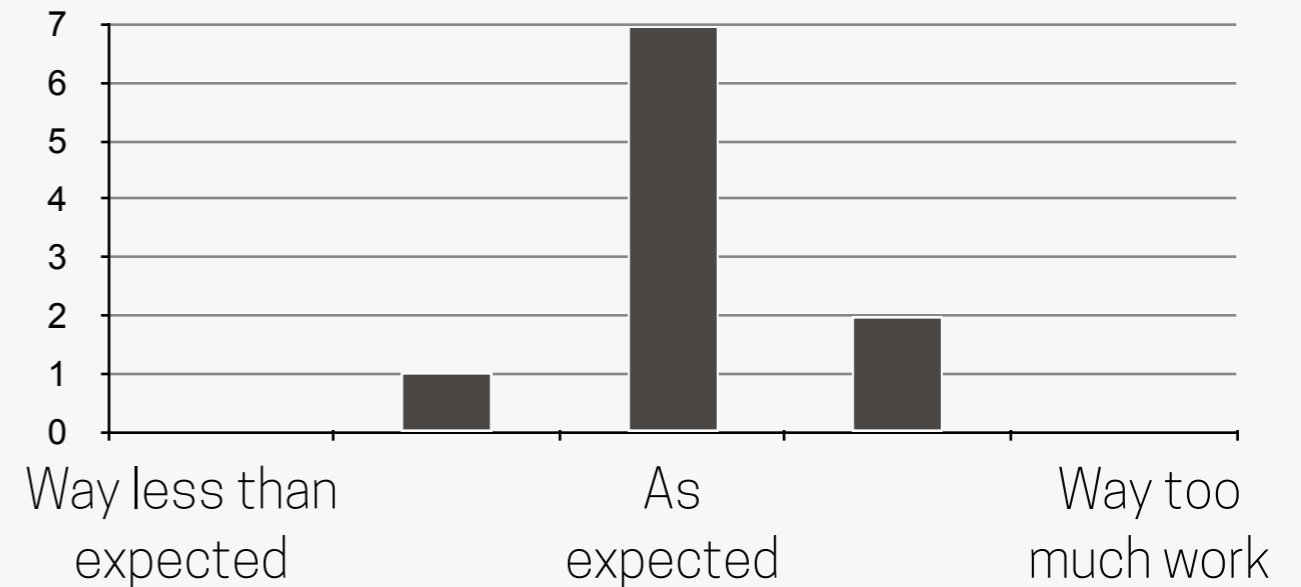
Student survey



Does your position include duty work?

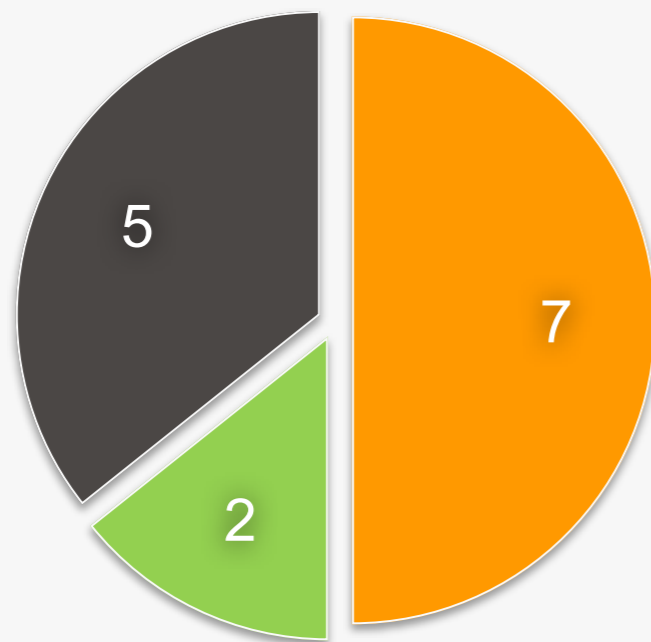


Do you consider the work load reasonable?



- Duty work intended to constitute 25% load
- Majority of duty work is related to helping students with exercises
- BSc-level courses mostly taught in Norwegian, so Norwegian PhD students are assigned to these
- MSc-level courses are taught in english, so all PhDs can be assigned
- Other duty work typically involve maintaining computing facilities

Q: How have you / are you planning to distribute the 30 mandatory credits?



- Mostly full-semester courses
- Mostly short research schools, summer schools
- Mostly other credit-awarding work
- Even distribution of the above options.

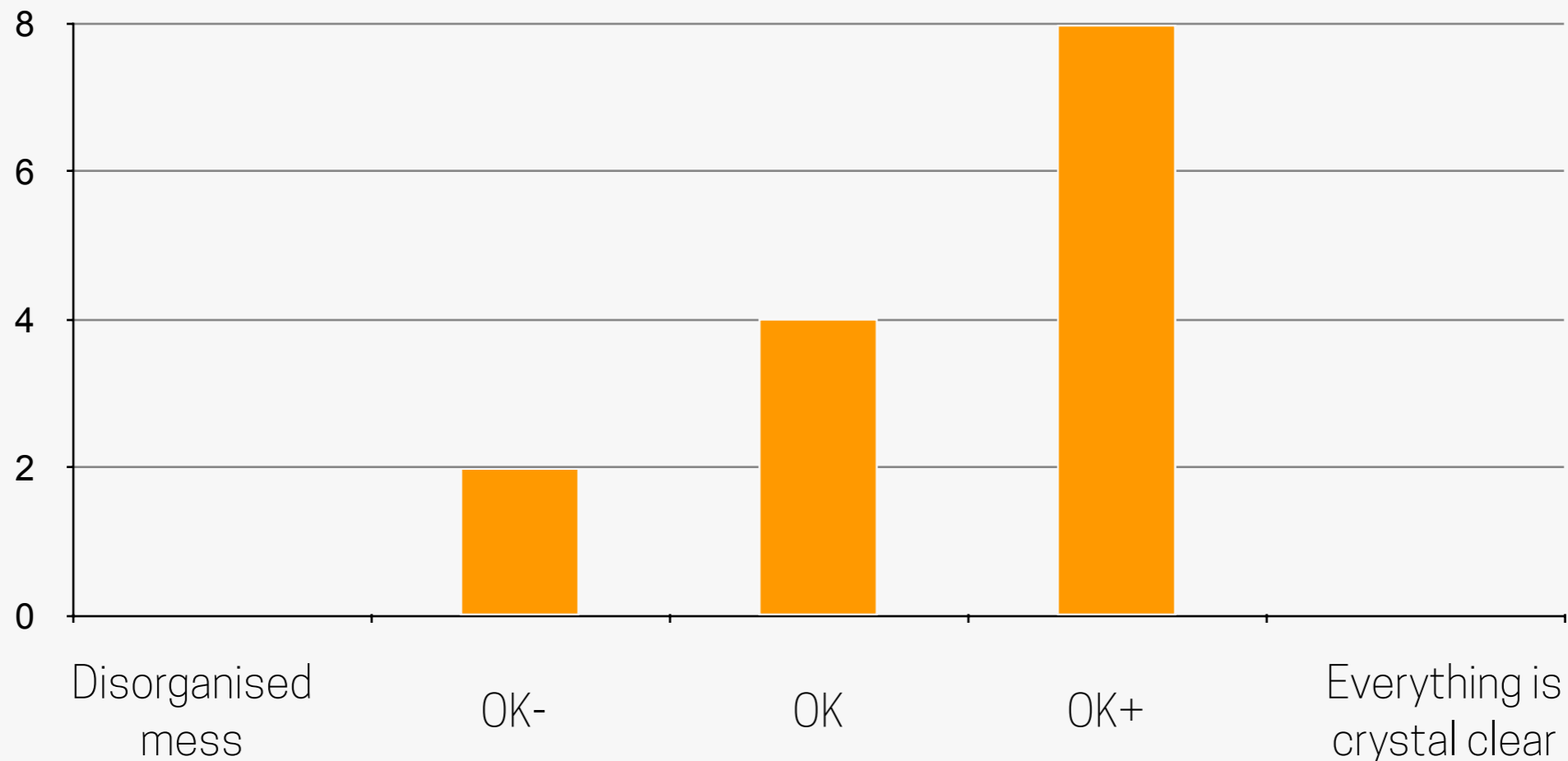
- One full-semester course give 10 credits
- Research schools typically 4-6 credits
- Talk at international conference: 2 credits
- Outreach: 1-2 credits

General view: PhD formalities

Student survey

Q: *What is your general view of the formal part of the PhD program?*

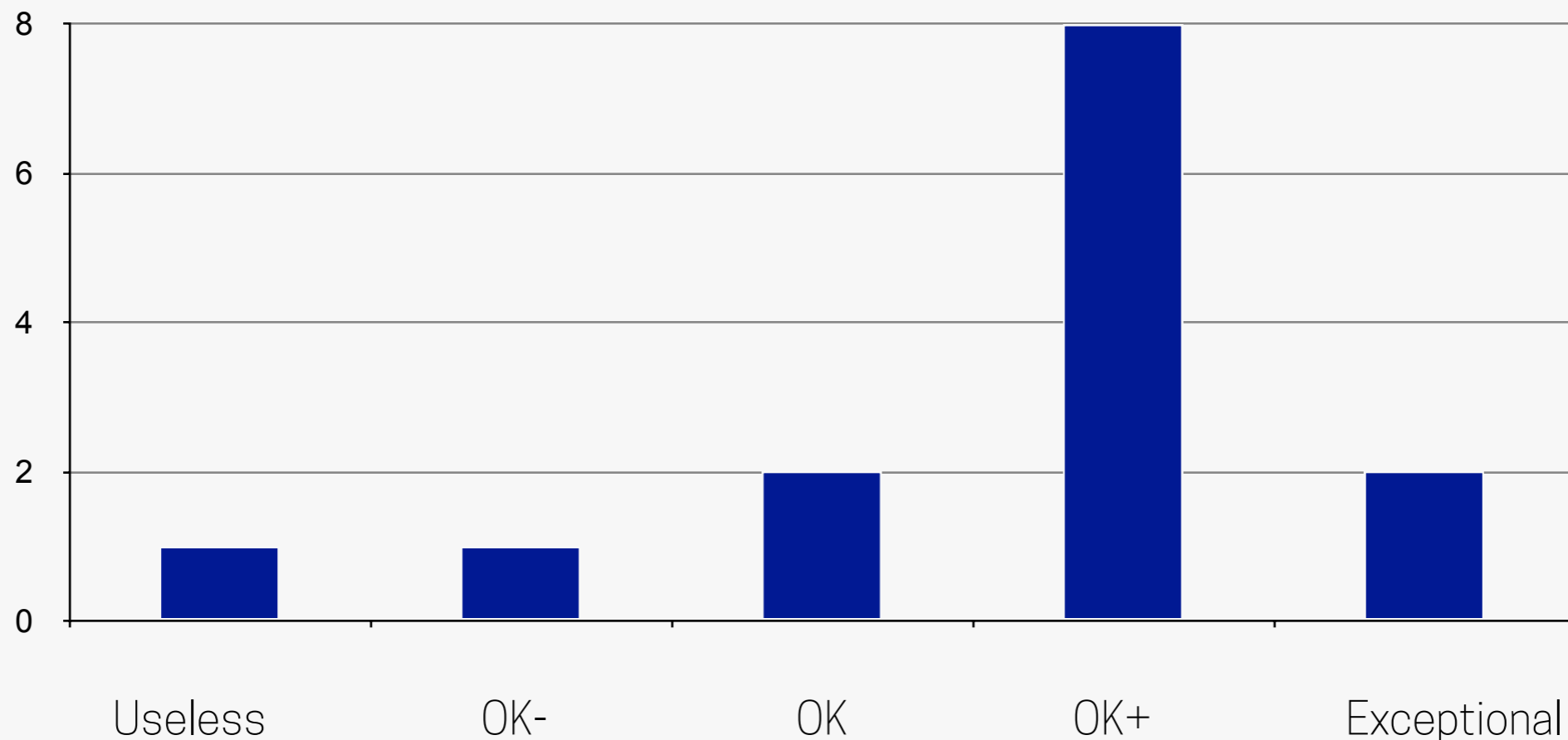
General impression of the structure of mandatory things — courses, duty work, deadlines, applications, info, etc.





What is your general view of the physics part of the PhD program?

General impression of the quality and value of your work, and also of your group and institute

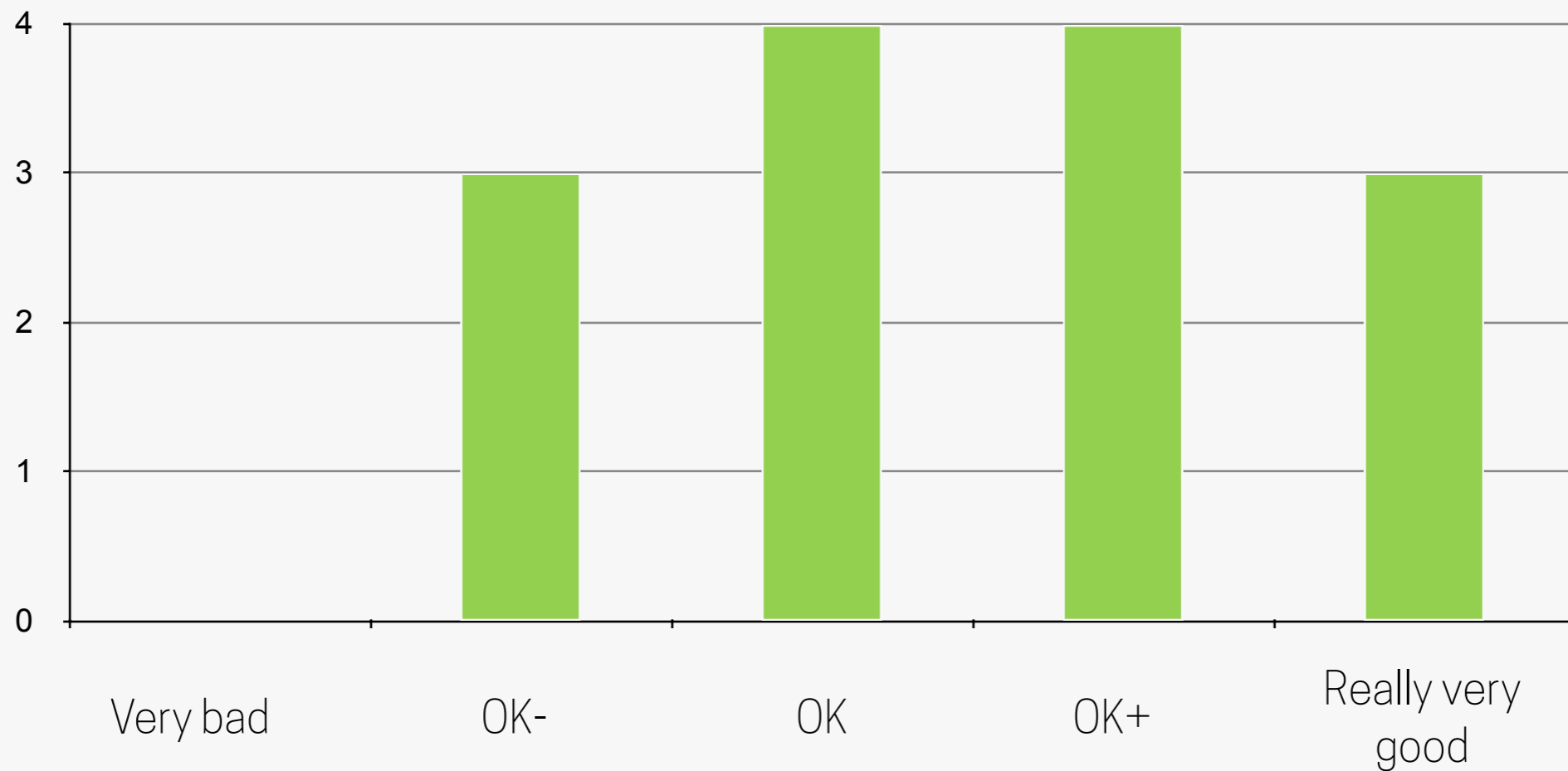


Social content

Student survey



What is your general view of the social situation at your institute?



Additional comments

Student survey

Some of the comments received:

- *I took all the relevant physics courses during my MSc, now I'm taking peripheral courses just to get the credits*
- *I may not have put enough effort in improving the social situation in my group, but neither did anyone else*
- *None of my experimentalist colleagues wants to discuss Lagrangians with me*
- *The [software] tutorials we've had at Geilo were really useful and I think we should have these more often*

Summary

- Typical evolution of HEPP PhD students:
 1. Start out motivated
 2. Then begin to question the value of their work and the meaning of life
 3. ... But still want to continue in academia.
- Having to relocate after graduating often a major concern
- Duty work is considered to be all right

(In fact, that extra year is nice to have)
- ECTS credit requirement not always fulfilled in a useful way
- With majority of students involved in large collaboration, the supervisor role is changing
 - Still, the quality of supervision is considered very good.

Backup



Funding

Q: *Who is funding / funded your PhD?*

