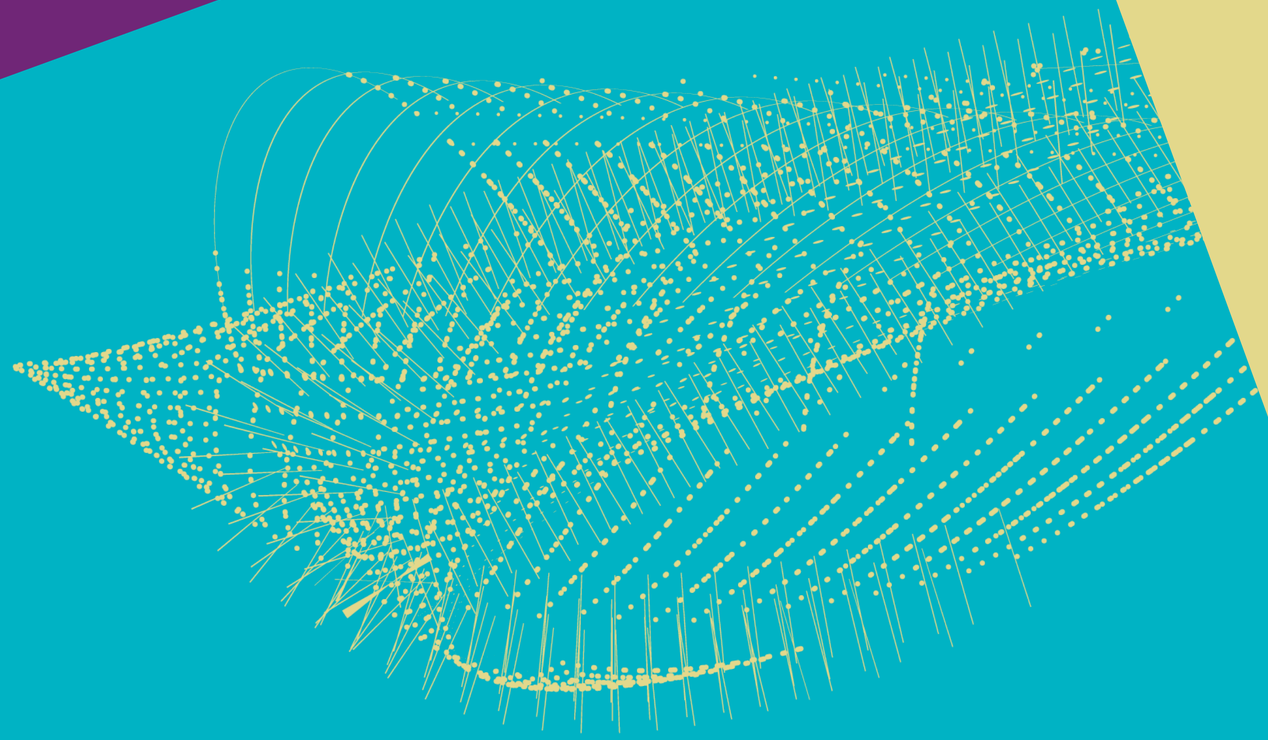
Nikhef



QUESTIONNAIRE 2020

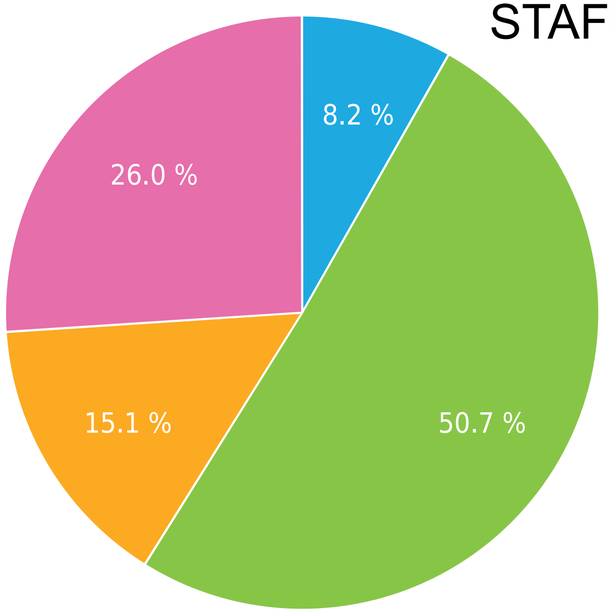
Charles Timmermans

GENERAL

TIME TO COMPLETE QUESTIONNAIRE

Average Time of Completion

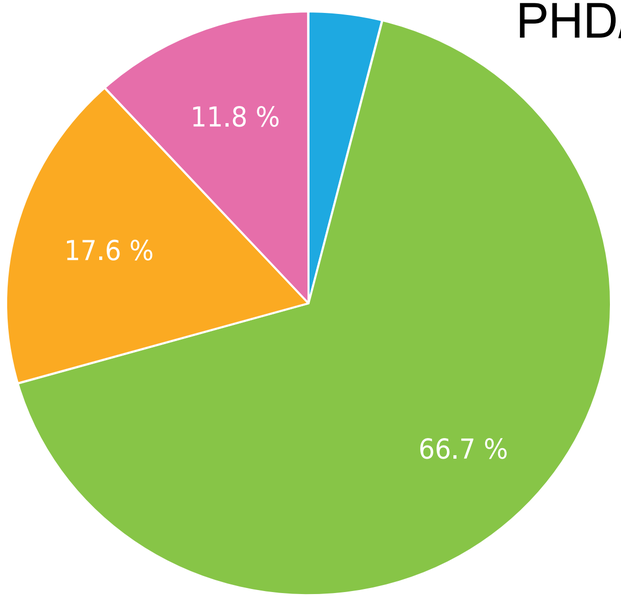
STAFF



- 5-10 min. (8.2 %)
- 10-30 min. (50.7 %)
- 30-60 min. (15.1 %)
- >60 min. (26.0 %)

Average Time of Completion

PHD/POSTDOC



- 5-10 min. (3.9 %)
- 10-30 min. (66.7 %)
- 30-60 min. (17.6 %)
- >60 min. (11.8 %)

Are you employed by NWO or a University

STAFF

Single choice, answers 73x, unanswered 0x

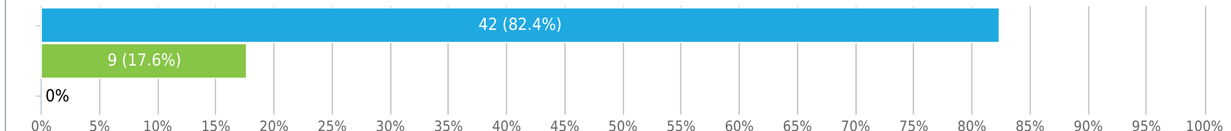
Answer Choices	Responses	Ratio
NWO	30	41.1 %
University partner (UU, RU, RUG, UM, UvA, VU)	43	58.9 %
Other	0	0 %

Are you employed by NWO or a University?

PHD/POSTDOC

Single choice, answers 51x, unanswered 0x

Answer Choices	Responses	Ratio
NWO	42	82.4 %
University partner (UU, RU, RUG, UM, UvA, VU)	9	17.6 %
Other	0	0 %

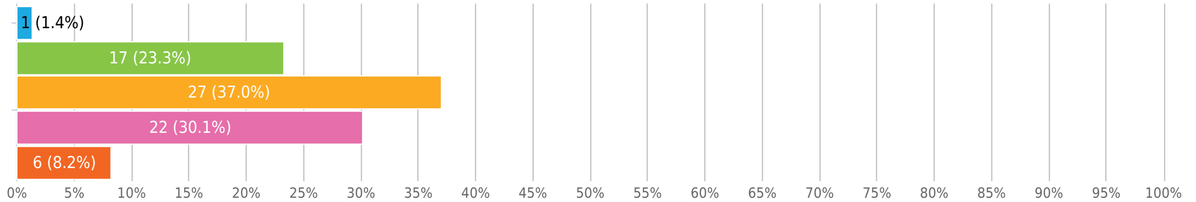


What is your age

STAFF

Single choice, answers 73x, unanswered 0x

Answer Choices	Responses	Ratio
20 - 30 years	1	1.4 %
31-40 years	17	23.3 %
41-50 years	27	37.0 %
above 51 years	22	30.1 %
do not want to tell	6	8.2 %

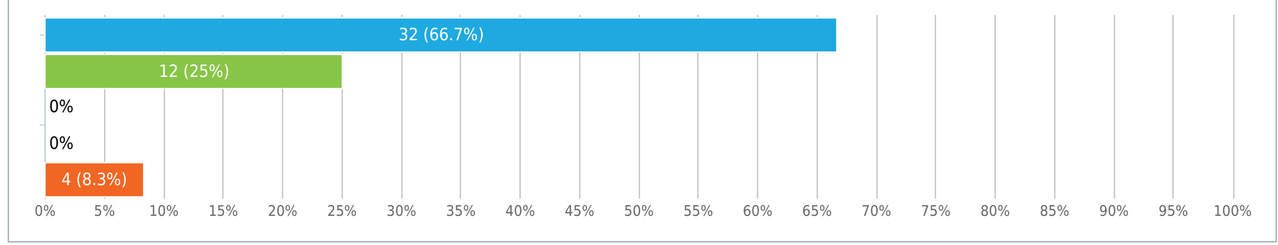


(Optional) What is your age?

PHD/POSTDOC

Single choice, answers 48x, unanswered 3x

Answer Choices	Responses	Ratio
20 - 30 years	32	66.7 %
31-40 years	12	25 %
41-50 years	0	0 %
Above 51 years	0	0 %
Rather not say	4	8.3 %

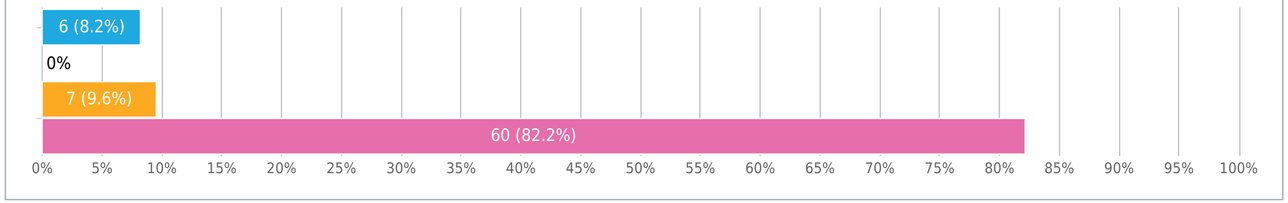


What is your professional status

STAFF

Single choice, answers 73x, unanswered 0x

Answer Choices	Responses	Ratio
Non-scientific	6	8.2 %
PhD student	0	0 %
Researcher with a PhD - temporary contract	7	9.6 %
Researcher with a PhD - permanent contract	60	82.2 %

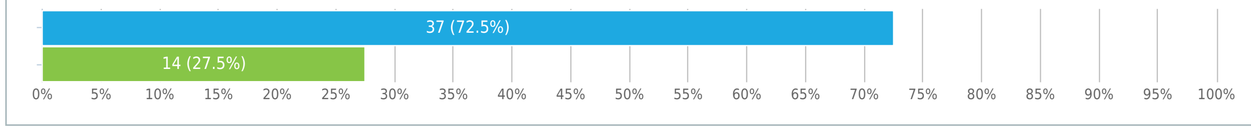


What is your professional status?

PHD/POSTDOC

Single choice, answers 51x, unanswered 0x

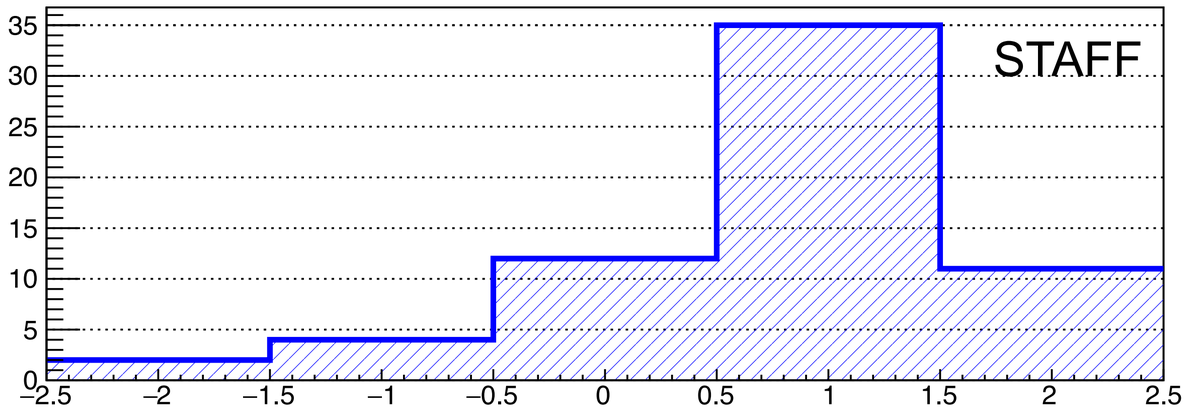
Answer Choices	Responses	Ratio
PhD student	37	72.5 %
Postdoc	14	27.5 %

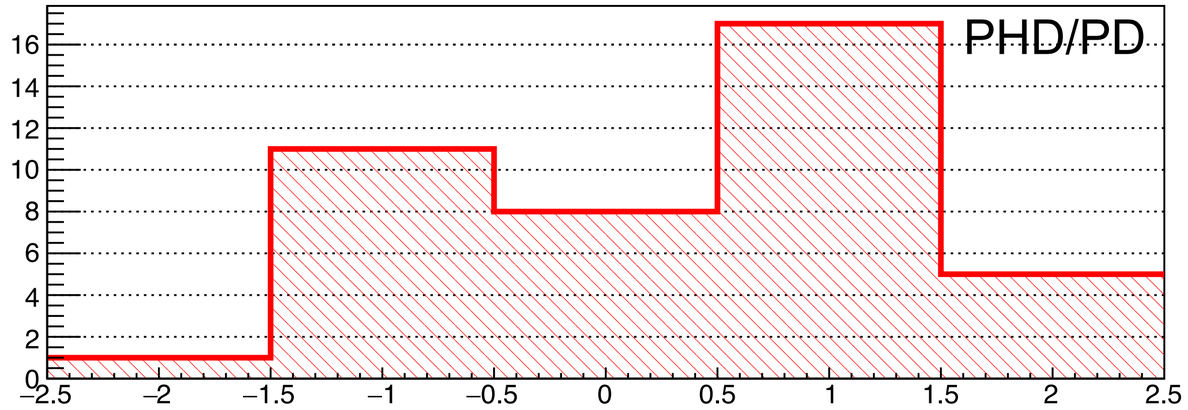


NIKHEF PERFORMANCE

PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

COOPERATION BETWEEN EXPERIMENTS AND THE THEORY GROUP



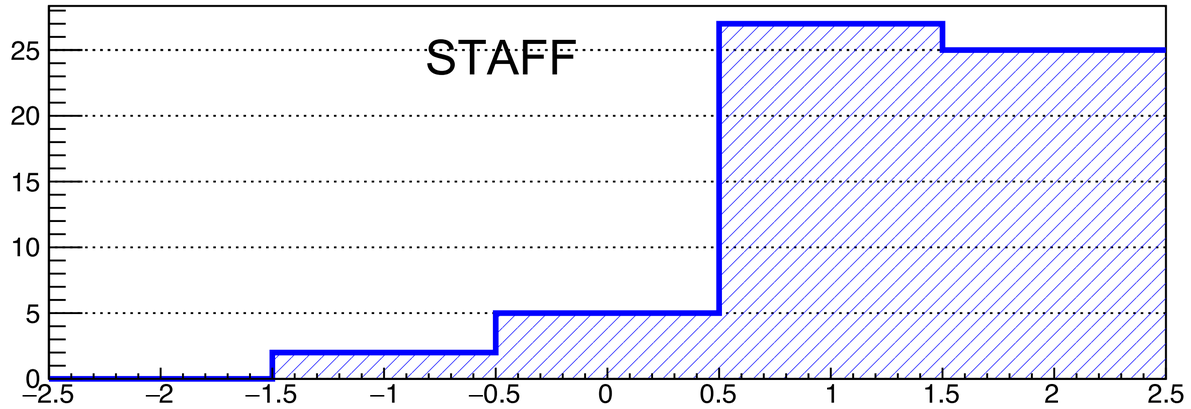


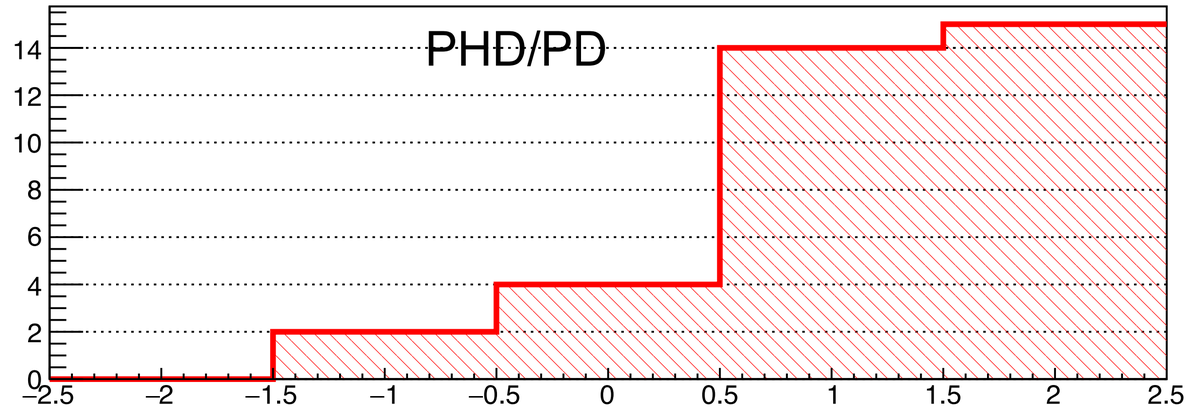
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

EXPLOITATION OF THE EXPERTISE IN OUR TECHNICAL DEPARTMENTS BY THE EXPERIMENTS

Staff:

- 14 “no opinions”, 11 are employed by universities



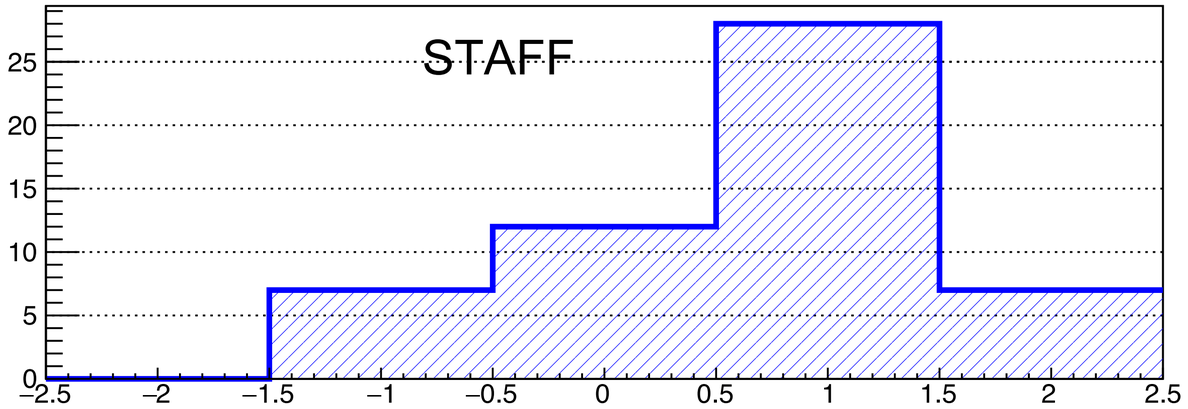


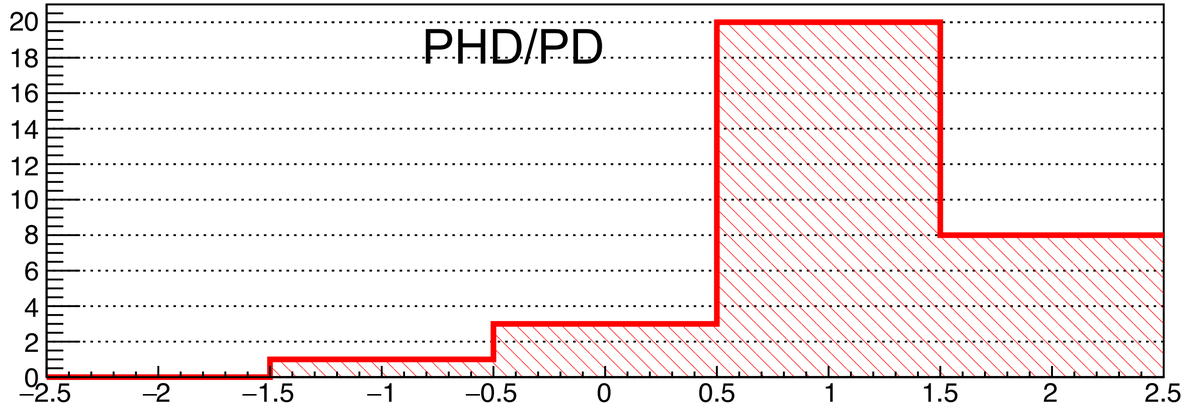
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

ACQUISITION OF EXPERTISE IN THE TECHNICAL DEPARTMENTS BASED ON THE NEEDS EXPRESSED BY THE EXPERIMENTS

Staff:

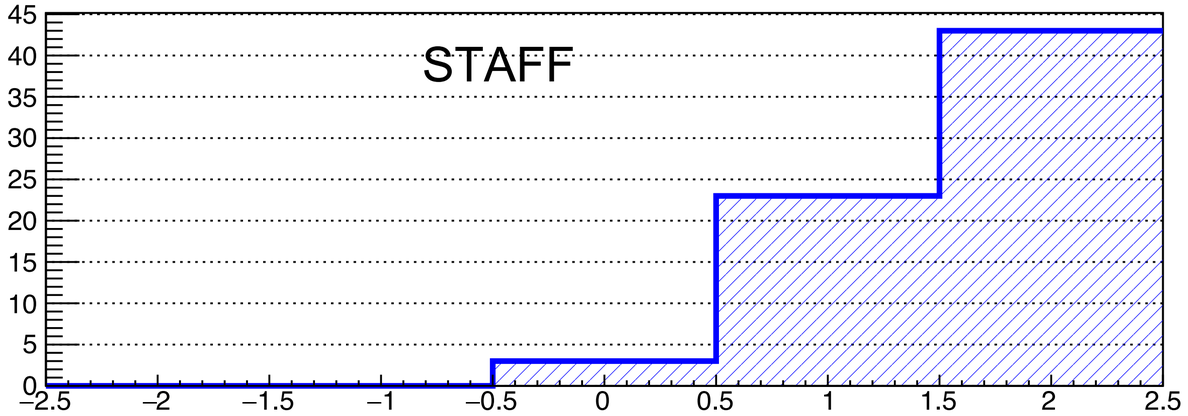
- 19 “no opinions”,12 are employed by universities
- 7 “negative”, 6 are employed by universities

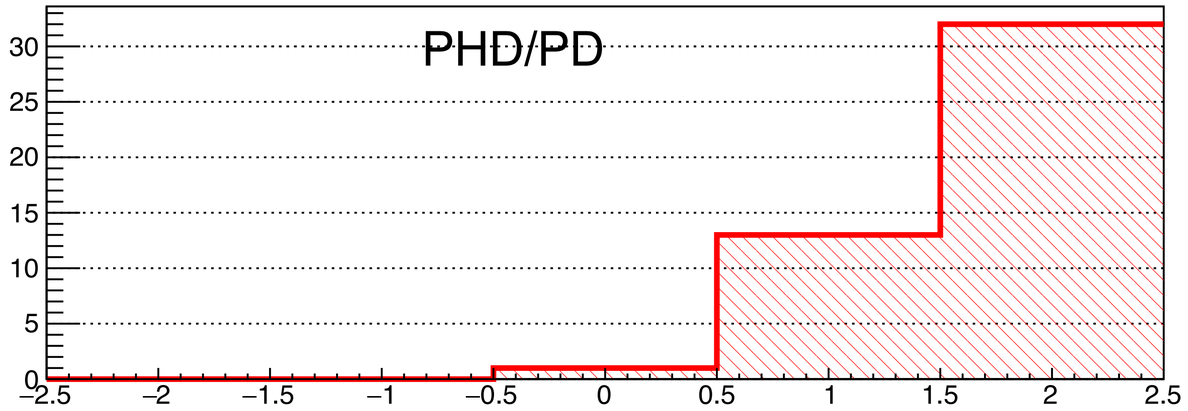




PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

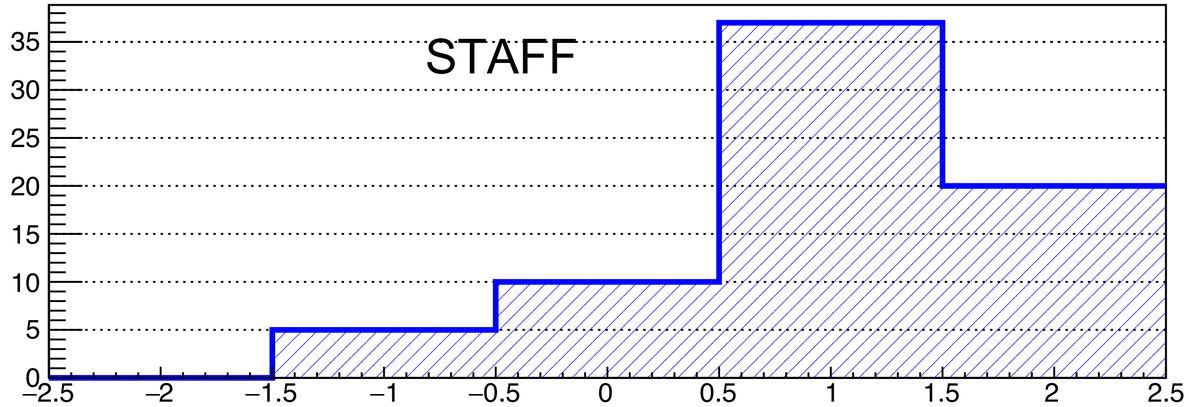
PARTICIPATION IN HIGH-IMPACT EXPERIMENTS

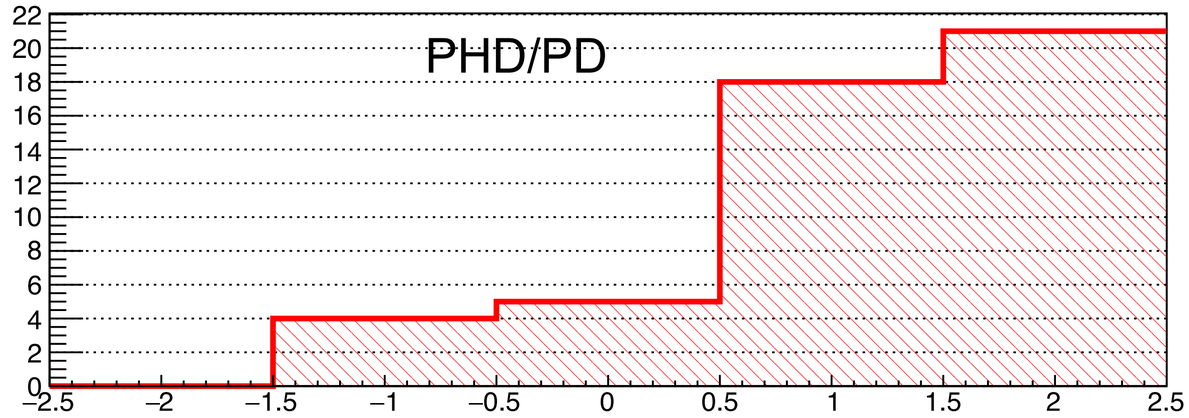




PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

SOCIAL/INTELLECTUAL AND SCIENTIFIC ATMOSPHERE/DISCUSSIONS



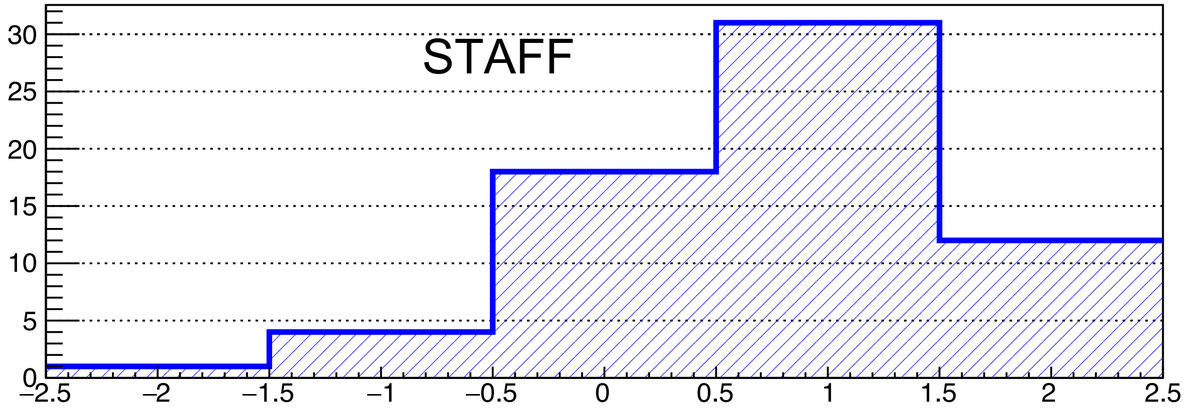


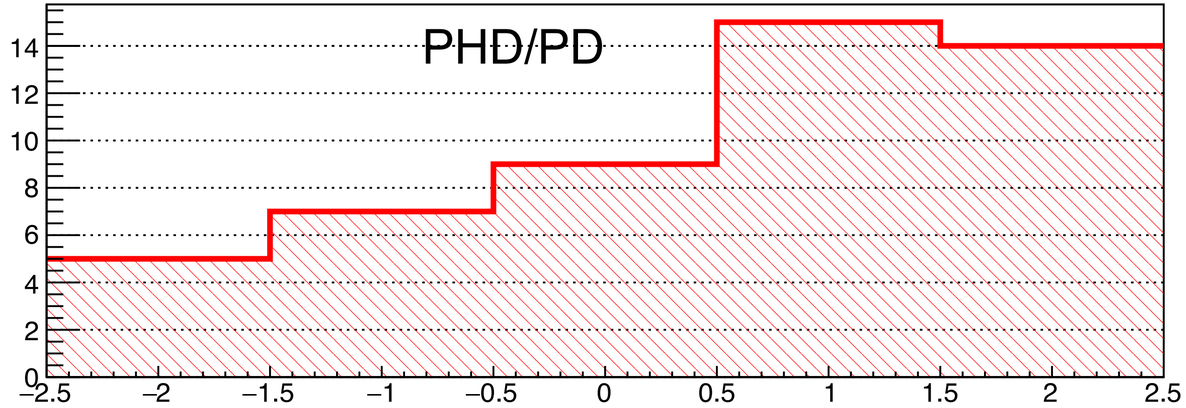
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

MENTORING OF JUNIOR SCIENTISTS (PHD/POSTDOC)

PhD/PostDoc:

- 12 negative, 8 are in the final year.
  PhD: 3-4 years, Postdoc: 2-3 years

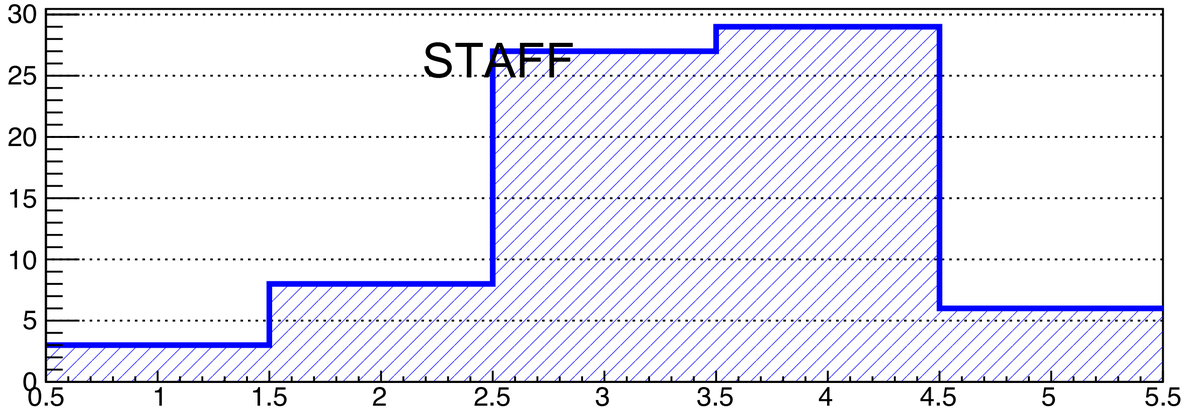


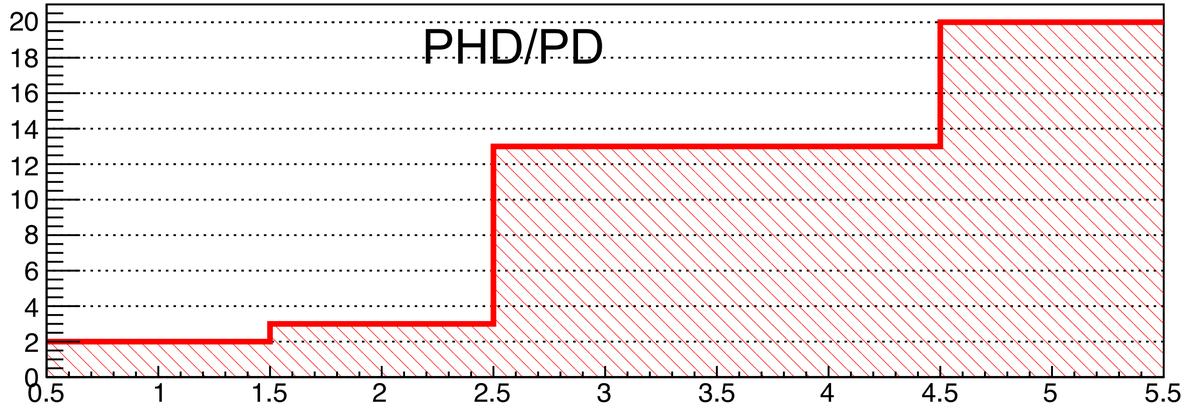


WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

MENTORING YOUNG SCIENTISTS

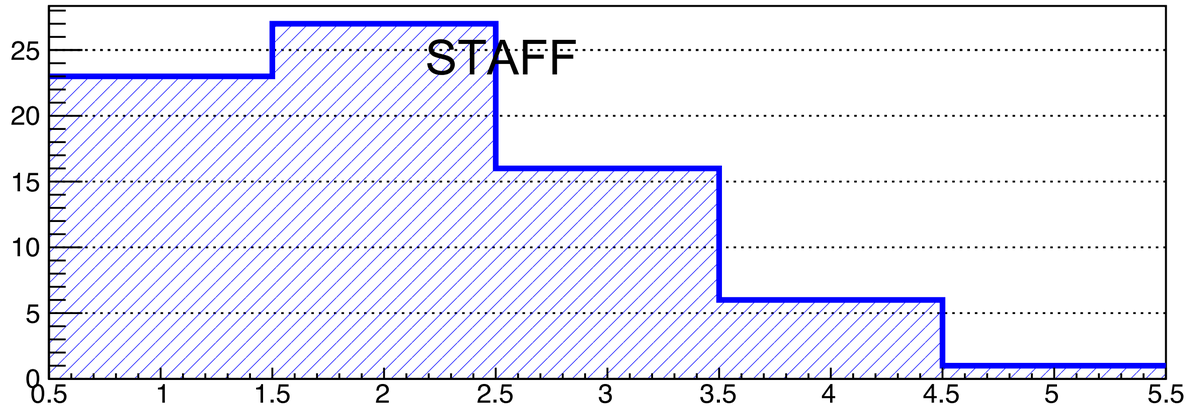
Note that the performance of Nikhef was positively rated

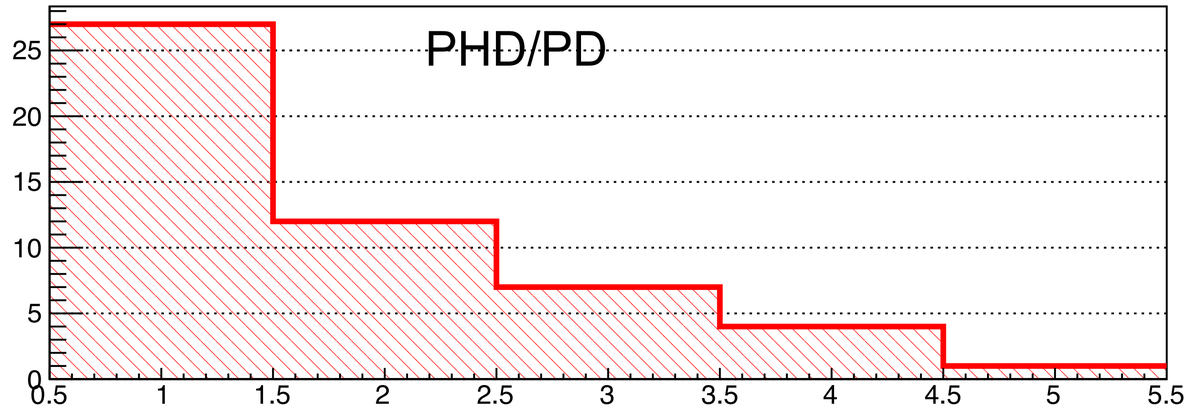




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

SHORTEN THE DURATION OF PHD RESEARCH





PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

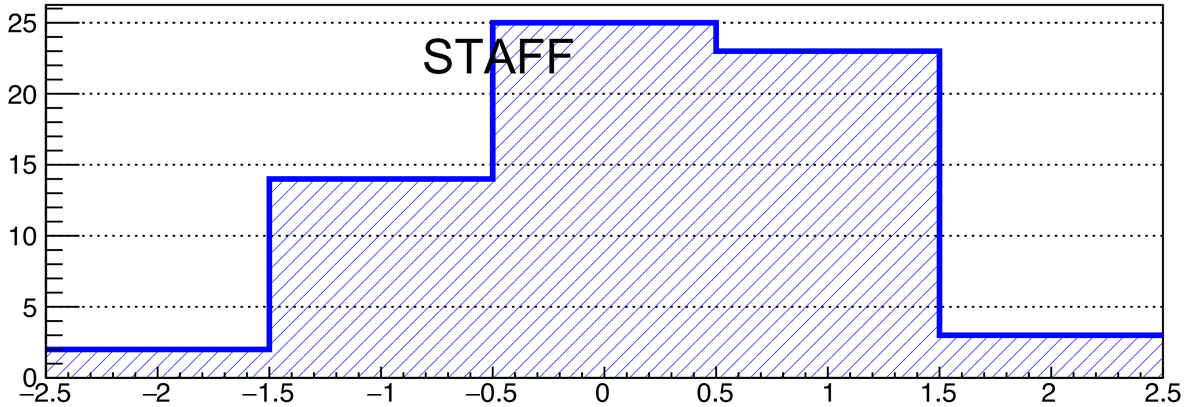
CAREER PERSPECTIVE

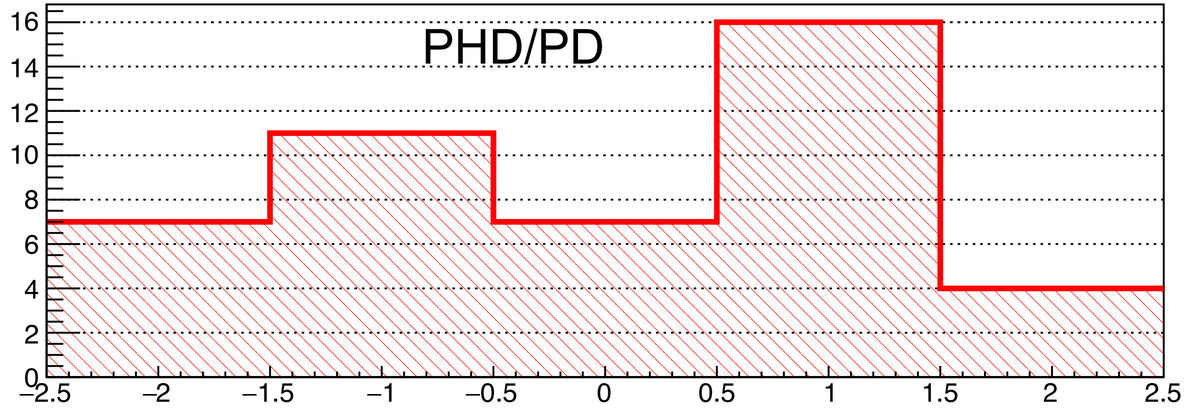
Staff:

- NWO staff average -0.14
- University staff average 0.39

PhD/PostDoc:

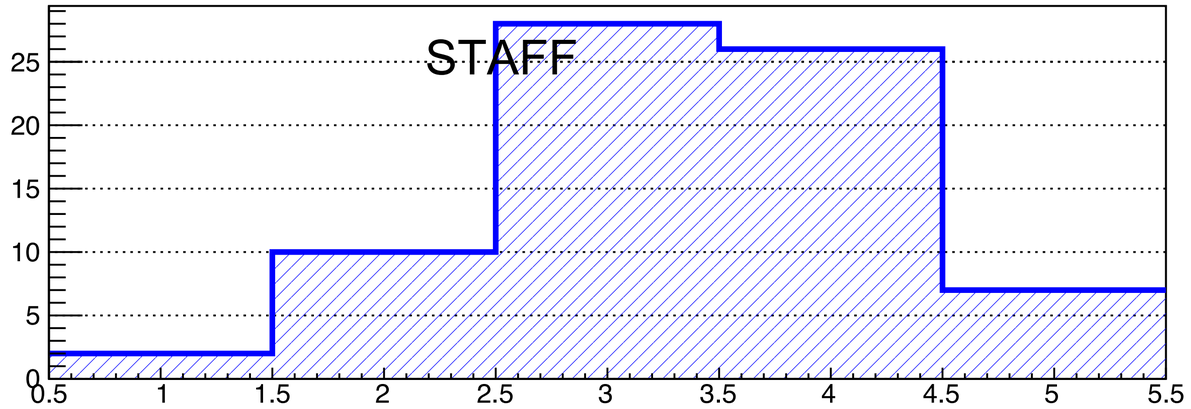
- Negative: 14 PhD, 4 Postdocs
- Positive: 12 PhD, 8 Postdocs

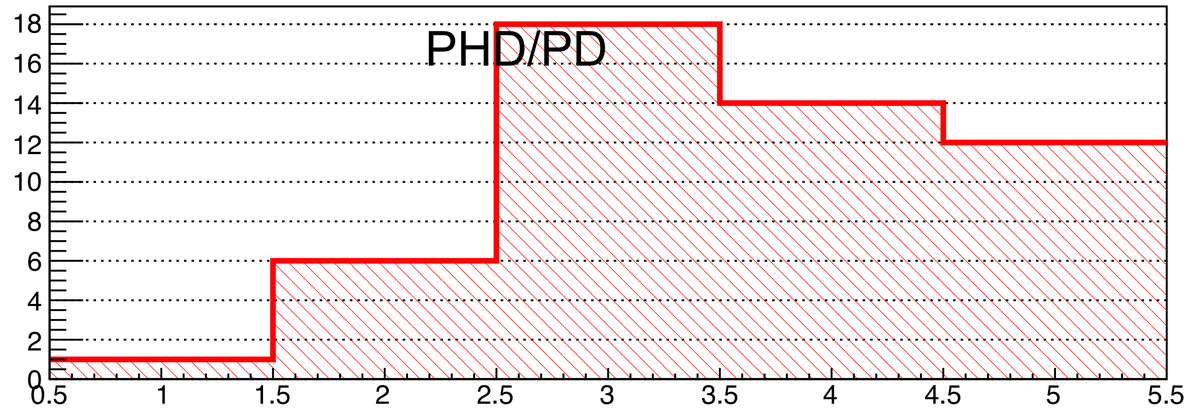




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

CAREER SUPPORT



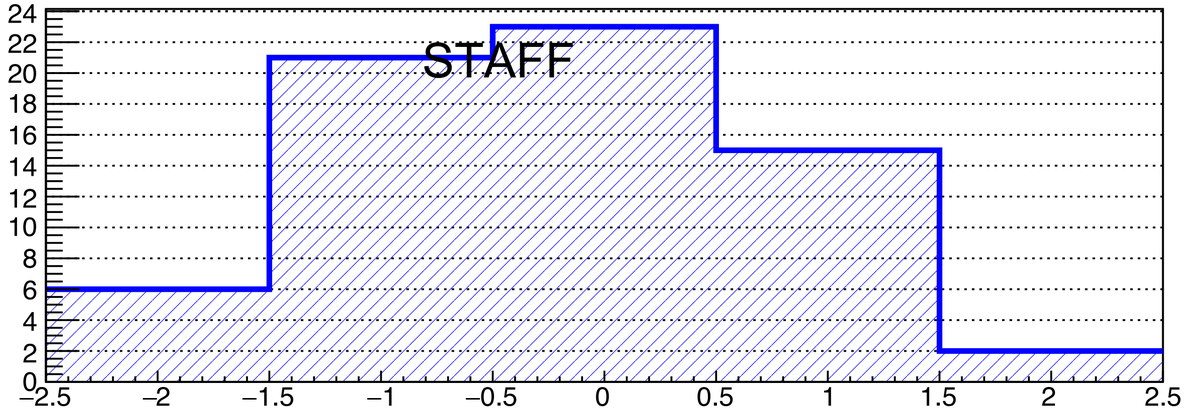


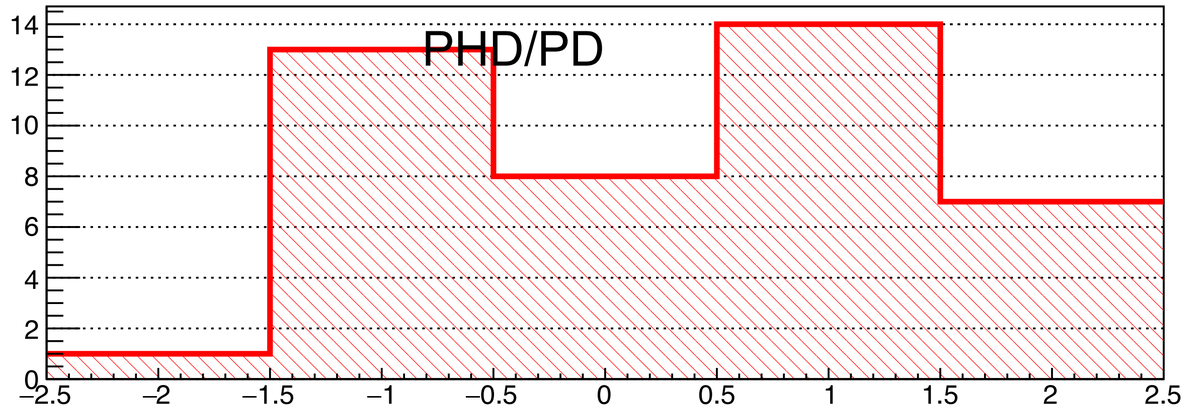
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

DIVERSITY

PhD/PostDoc:

- 14 negative: 8 male, 2 female
- 21 positive: 16 male, 3 female
- Questionnaire: 10 female, 34 male, 7 no info



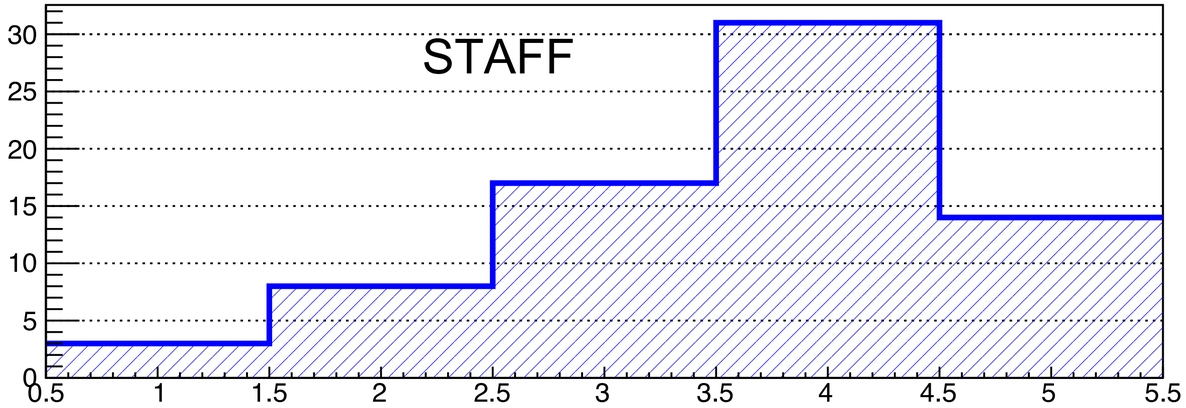


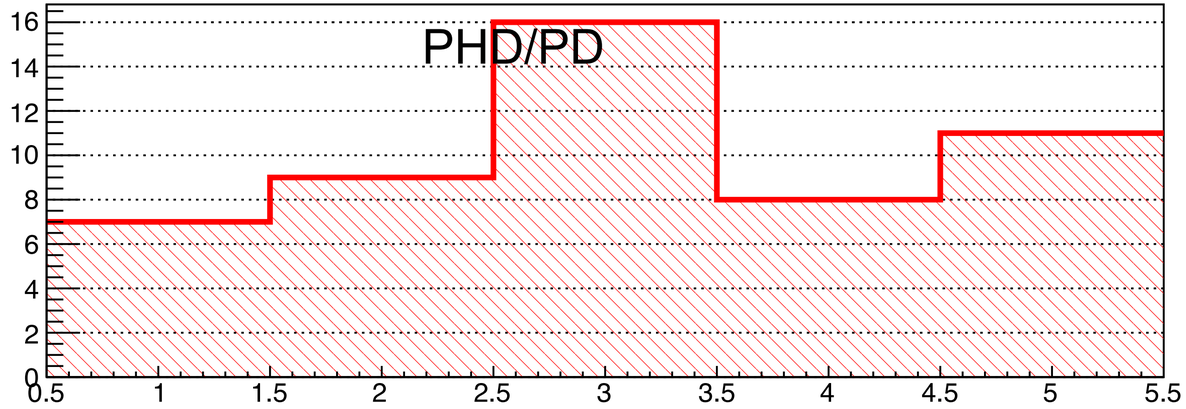
WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

DIVERSITY

PhD/PD:

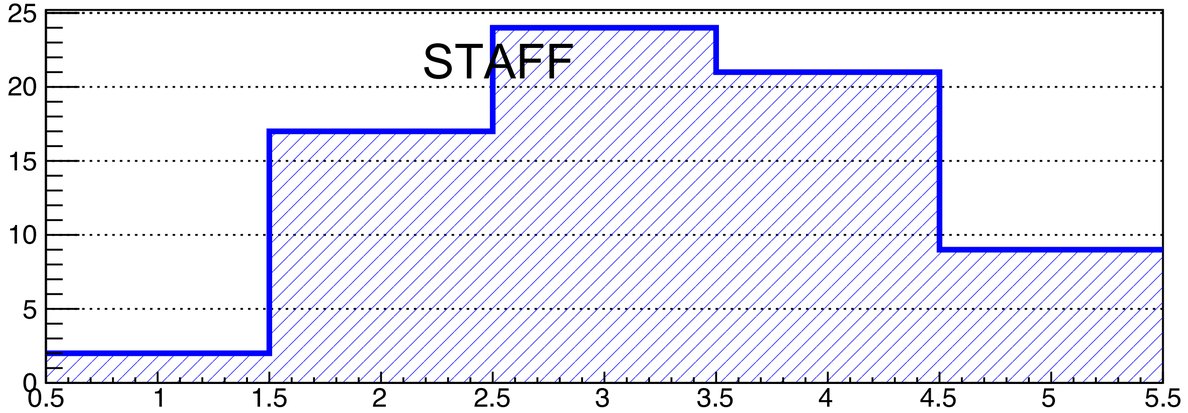
- Mainly centered around 3.0
- 11 responses at ‘5’: 3 female 6 male

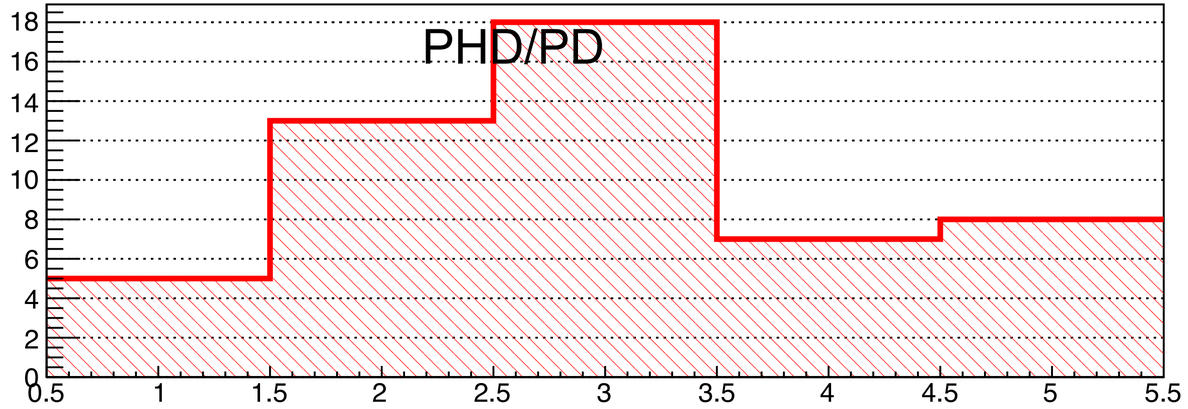




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

CAPABILITIES TO ATTRACT THE BEST PEOPLE



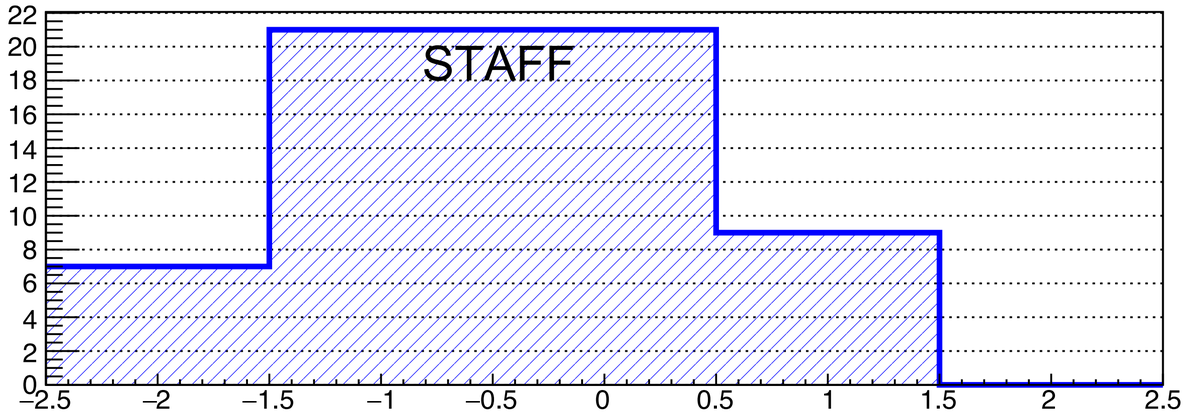


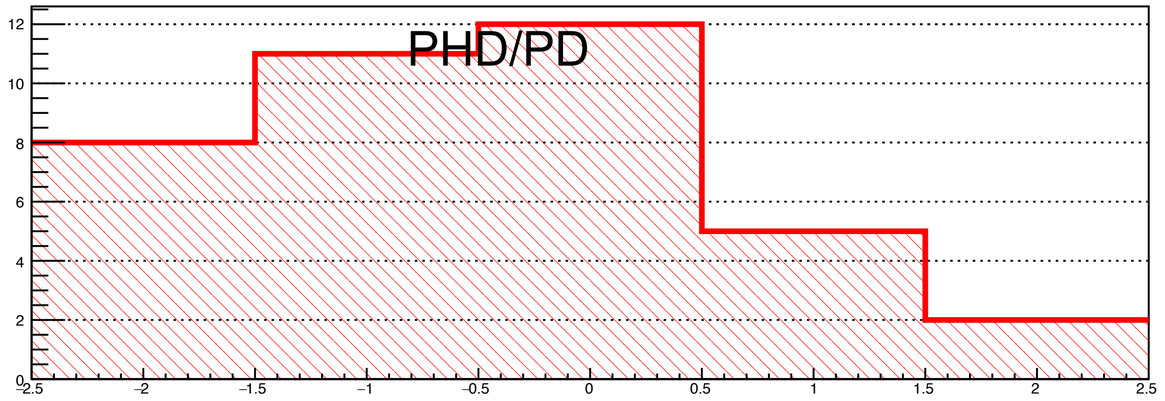
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

MEASURES TO INCREASE ENVIRONMENTAL SUSTAINABILITY

Staff:

- NWO staff average -0.65
- University staff average -0.28



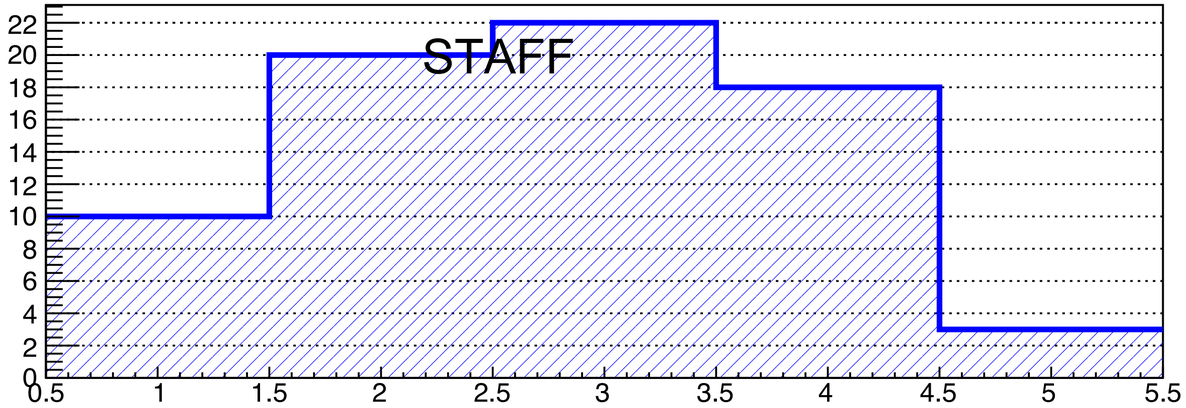


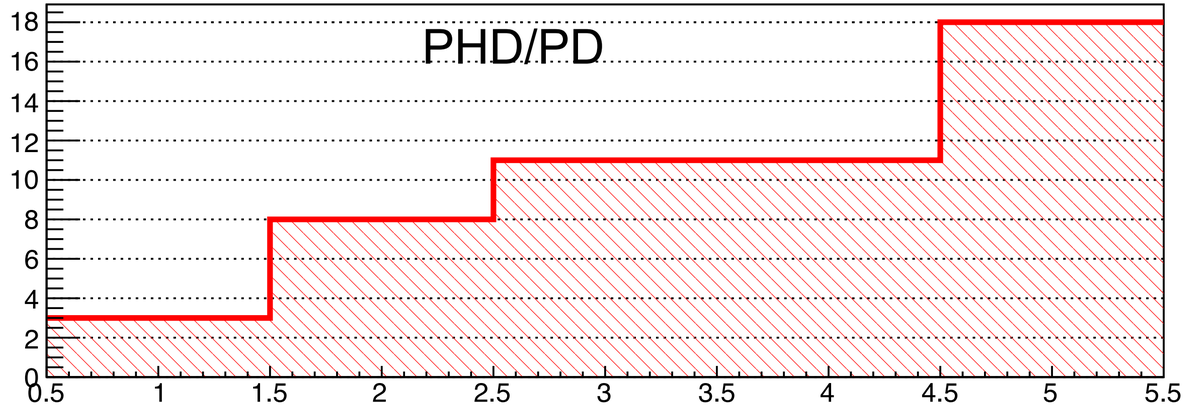
WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

MEASURES TO INCREASE ENVIRONMENTAL SUSTAINABILITY

Staff, remember the performance of Nikhef:

- NWO staff average -0.65
- University staff average -0.28



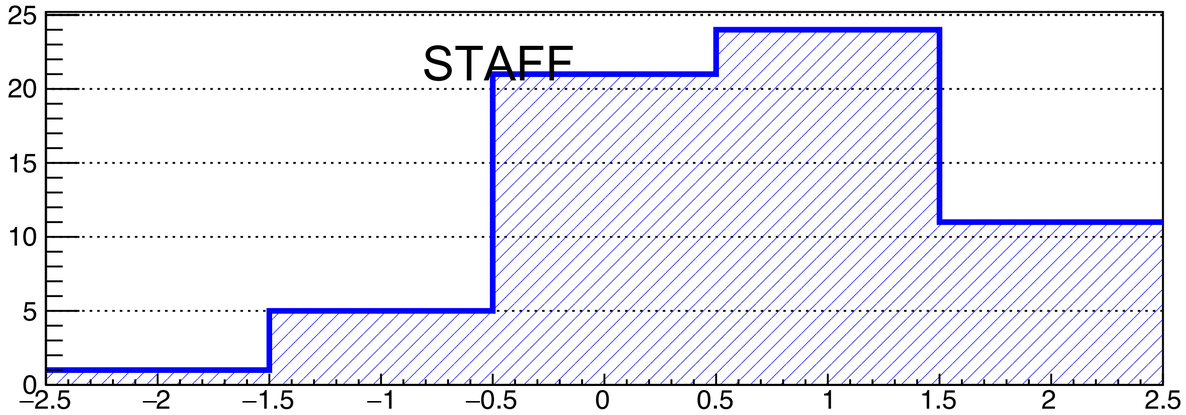


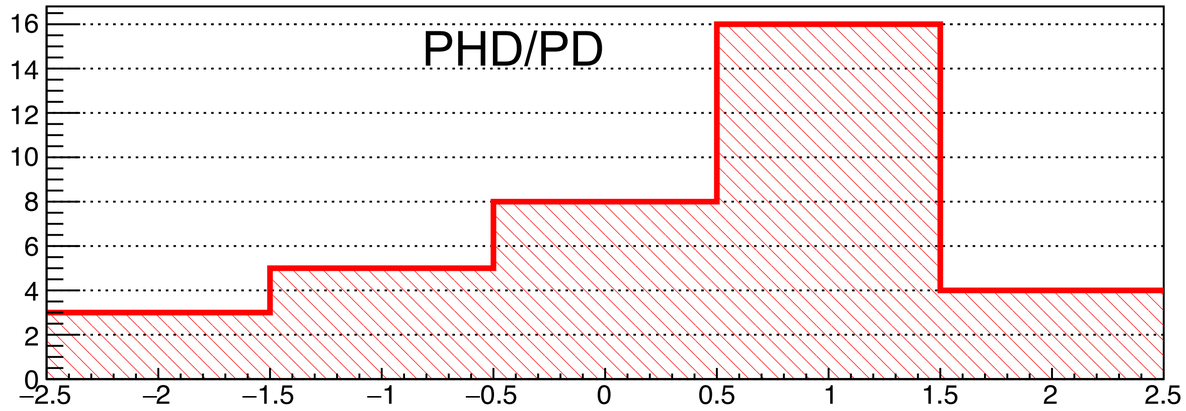
PLEASE RATE THE CURRENT **PERFORMANCE** OF NIKHEF IN THE FOLLOWING TOPICS
(-2: VERY WEAK, 0: AVERAGE, +2: VERY STRONG):

OUTREACH TO SCHOOLS AND STUDENTS

Staff:

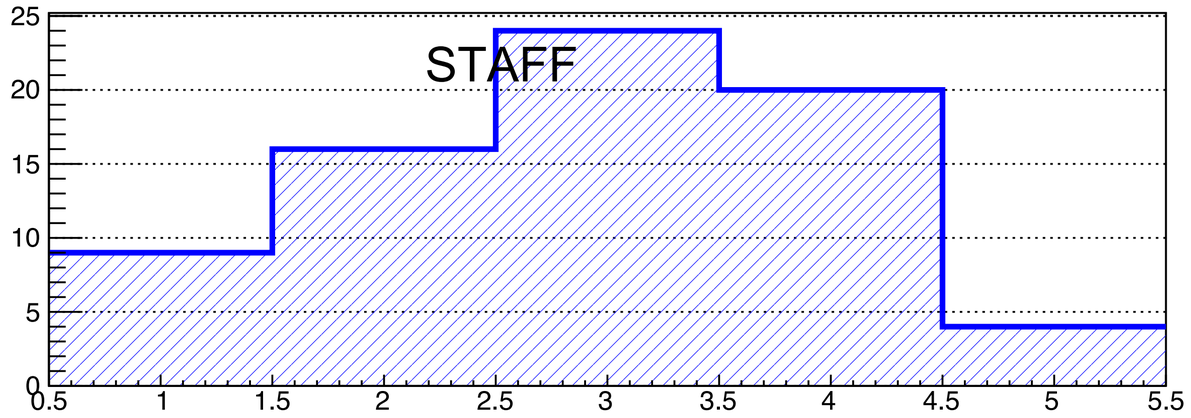
- 11 “no opinions”,10 are employed by universities

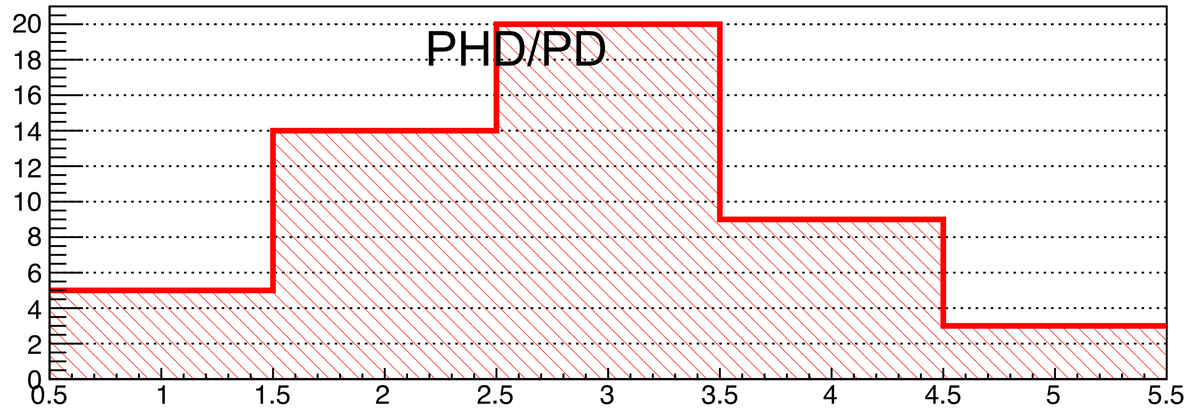




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

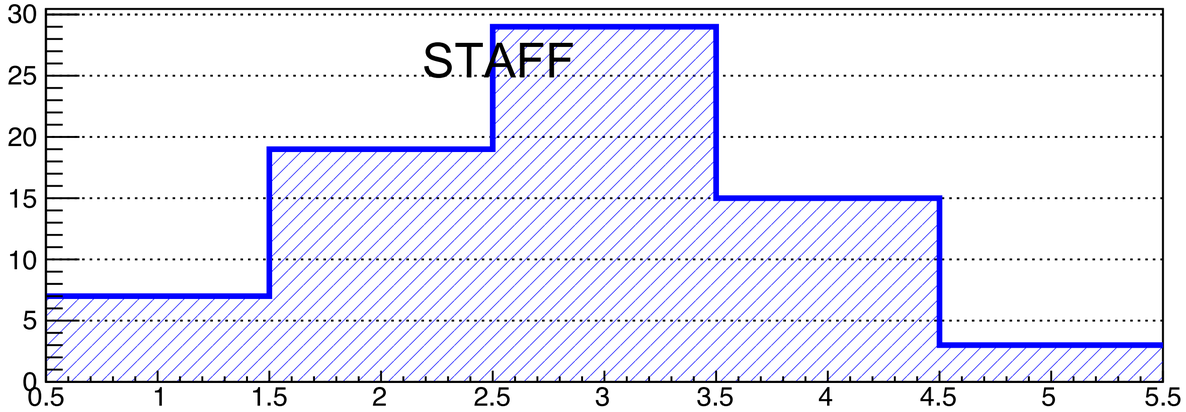
OUTREACH TO NON-HEP SCIENTISTS

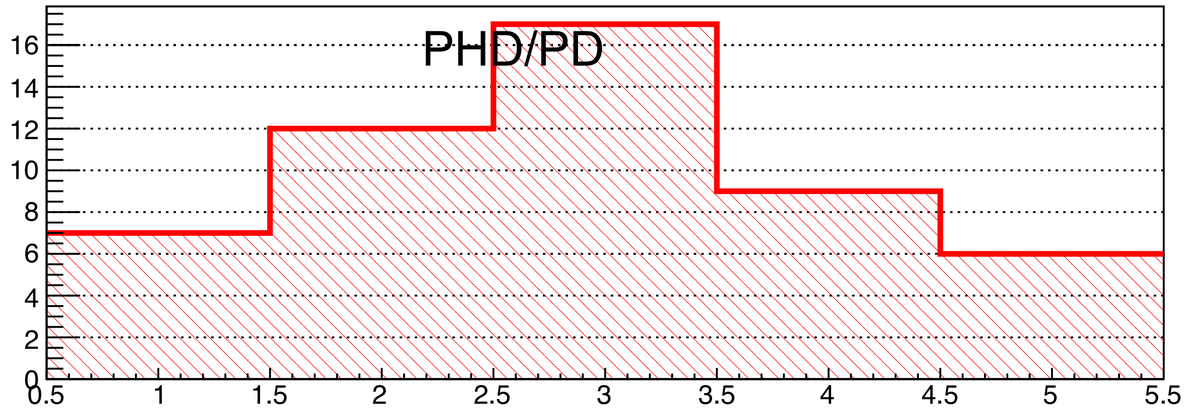




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

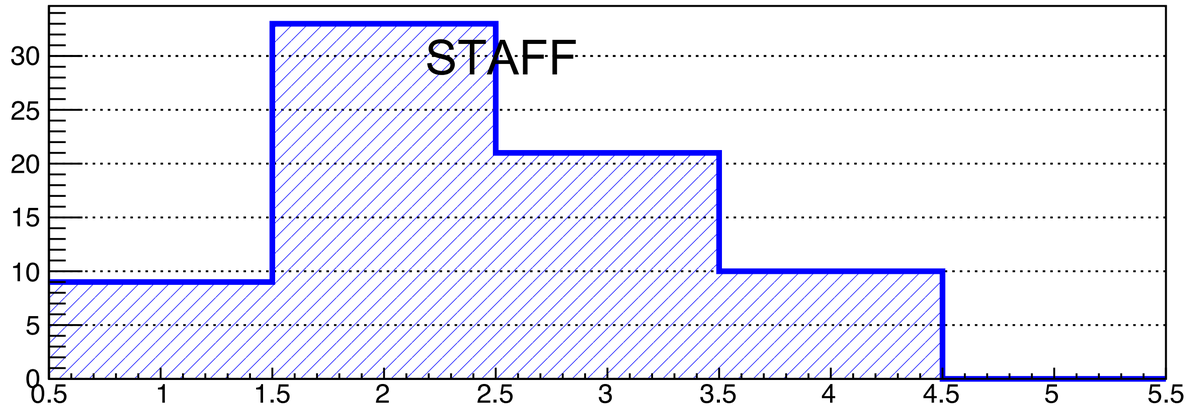
OUTREACH TO NON-SCIENTISTS

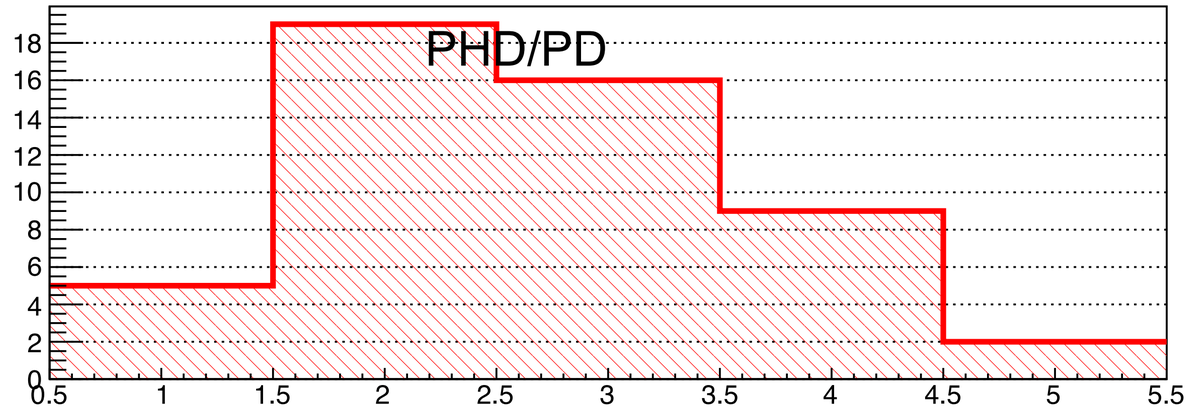




WHERE SHOULD NIKHEF **IMPROVE** (1=VERY LOW PRIORITY, 5=HIGH PRIORITY)?

SOCIETAL IMPACT





MOTIVATION AND DRIVE

MOTIVATION

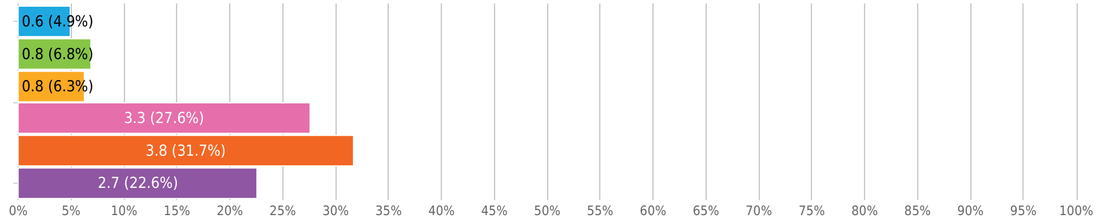
What is your motivation to work at Nikhef?

STAFF

Rating scale, answers 73x, unanswered 0x

Assign: 12 coins

Answer	Average	Ratio
My salary	0.6	4.9 %
Provides fame & appreciation	0.8	6.8 %
Its societal relevance	0.8	6.3 %
Being part of the community, academic culture	3.3	27.6 %
It is fun and satisfying	3.8	31.7 %
It fits my competences	2.7	22.6 %



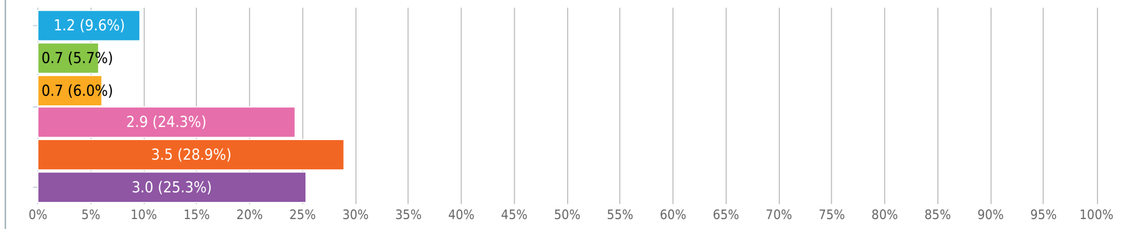
What is your main motivation to work at Nikhef?

PHD/PD

Rating scale, answers 51x, unanswered 0x

Assign: 12 coins

Answer	Average	Ratio
Salary	1.2	9.6 %
Provides fame & appreciation	0.7	5.7 %
Its societal relevance	0.7	6.0 %
Being part of the community, academic culture	2.9	24.3 %
It is fun and satisfying	3.5	28.9 %
It fits my competences	3.0	25.3 %



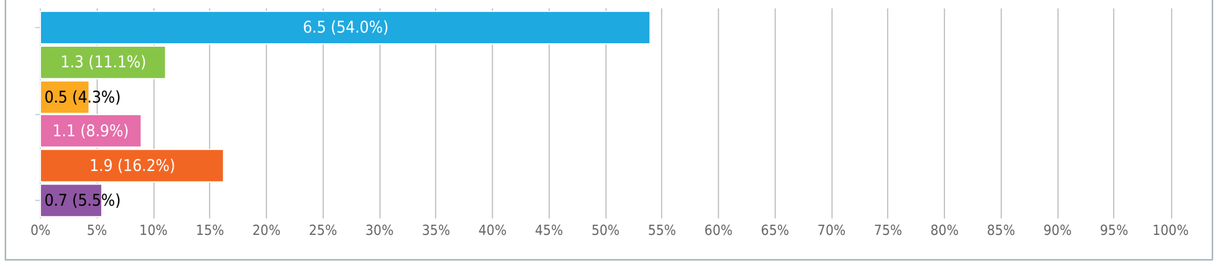
INTRINSIC DRIVE

What is your intrinsic drive to work at Nikhef STAFF

Rating scale, answers 73x, unanswered 0x

Assign: 12 points

Answer	Average	Ratio
Science curiosity	6.5	54.0 %
Hardware development	1.3	11.1 %
Software development	0.5	4.3 %
Organization, management	1.1	8.9 %
Teaching, outreach	1.9	16.2 %
Societal impact	0.7	5.5 %

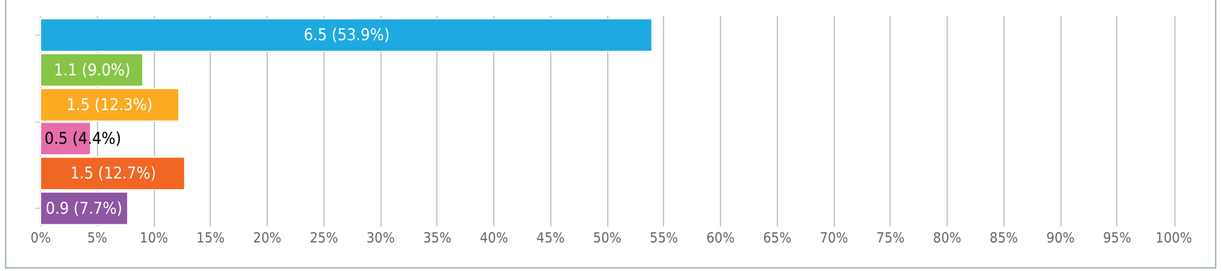


What is your intrinsic drive to work at Nikhef? PHD/PD

Rating scale, answers 51x, unanswered 0x

Assign: 12 points

Answer	Average	Ratio
Science curiosity	6.5	53.9 %
Hardware development	1.1	9.0 %
Software development	1.5	12.3 %
Organization, management	0.5	4.4 %
Teaching, outreach	1.5	12.7 %
Societal impact	0.9	7.7 %



WHAT IS YOUR MOTIVATION TO WORK AT NIKHEF?

YOUR MOTIVATION

It's a fun and satisfying place to work.

"Cutting edge fundamental science in an inspiring and thriving environment, close connection between theory and experiment, tightly-knit national community"

"First of all, the offered job fit my personal scientific career plan. Previously, I hadn't really known much about Nikhef. But I'm very happy to say that I get the impression of an exciting, well organized research organisation and have so far only met extremely helpful and capable people."

Nikhef provides the infrastructure required to have impact on large scale projects (universities are not good for that) while providing the link to the more academic activities in the universities.

Making a visible impact in a big experiment.

"Nikhef provides a great network with world-leading experts in different fields of particle physics. It is a lively place, with many young people where many discussions take place; this makes Nikhef a very inspirational place with excellent career opportunities."

"great institute, good atmosphere"

"Collegial atmosphere, but also driven to excel in research. The connection to universities is both highly important and stimulating."

YOUR MOTIVATION

"Interest in the flavour puzzle and fundamental physics, (inter!)national impact, collaboration with various groups, and the open culture."

Provides me the means to answer some of the physics questions I ask myself

satisfy scientific curiousity

being at the forefront of particle physics research in the Netherlands

Contributing to world leading science that drives human curiosity: notably top notch big facilities like at CERN.

Stimulating and well-established research environment with collegial atmosphere.

One day being part of a discovery that will give us a new insight on how Nature works.

I am curious about the ultimate constituents of nature and their interactions and about the evolution of the universe.

Nikhef provides an excellent environment to perform curiosity driven research. It gives its employees a lot of freedom to work on the scientific topics of their own interests. This combined with the in-house expertise and supporting departments makes that Nikhef is one of the best places to work

"Challenging work, freedom to pursue interests, interactions with students. I want to understand nature."

YOUR MOTIVATION

"It is an interesting and challenging environment with rather diverse (although that could become more diverse), stimulating and pleasant people to work with."

Coordinates all of particle physics in the Netherlands

Exploring the unknown and in my opinion most fundamental questions regarding our non-living (i.e. excluding life/biology) Universe. Experimentally and theoretically. If I would be 40 years younger: I would pursue a career in fundamental biology i.e. origin and working of life.

"Curiosity about the nature of our universe, its contents, its origin, the relation between elementary particles and the first seconds of the universe, space and time. Desire to learn and to teach to others. Desire to construct something and see it grow and work (e.g. a hardware project)."

"Enables collaboration between select group of physicists in high-energy physics theory, experiment and computing, both at Nikhef and at surrounding universities. One-of-a-kind place for doing research."

scientific curiosity and capability to realize experiments

"The search for beyond-the-standard-model physics using small-scale precision experiments is a non-traditional approach in particle physics. With the recently developed state-of-the-art techniques from atomic, molecular and optical physics the potential impact of this approach has increased tremendously. I am motivated to work on this promising approach and to highlight its potential impact. By strengthening and focussing our efforts on a national scale within the Nikhef collaboration, and making strong international alliances, our research in this field will have a global impact!"

YOUR MOTIVATION

"I am a member of one of the University partners, and my research is a good fit to the work done at Nikhef."

Being a little part in helping the hardware developments forwards towards answering the fundamental questions about nature.

Finding out how nature works: curiosity and intellectual challenge both play an important role.

"Stimulating scientific atmosphere, network place / hub for meetings, interaction, collaborations etc both within one field and between fields."

"""That I may understand whatever binds the world’s innermost core together""(J.W von Goethe, Faust)
Scientific curiosity."

"By grouping many experiments under one roof, Nikhef has a critical size that allows it to have excellent mechanics/electronics/R&D departments and thereby play a leading role in the detector construction. This in turn leads to significant roles in the experiments themselves."

It is exciting to work at the unknown and forefront of science in an excellent lab

excellent national coordination of forefront science. Crossfurttalization between physics sub-fields

Access to other experts in the field

YOUR MOTIVATION

Inspiring environment to do research and contribute to the puzzle of understanding nature

Fundamental science. Creative environment. Teaching.

Frontier of fundamental science

Individual university groups are typically too small to allow for a visible participation in large collaborations; Nikhef offers the facilities for an effective participation.

"Nikhef is a leading laboratory at the field of particle physics and provides expertise in multiple interesting subjects, ranging from physics analysis and statistics to hardware development."

nice and stimulating working environment that provides the freedom to develop own ideas and all facilities to do so. Exchange with theorist and possibility to build hardware necessary for project development. Possibility of getting personas grants.

The ability to provide contributions to HEP that have real impact on the field.

"Nikhef provides rich and diverse scientific environment, enabling major contributions to fundamental science on an international scale."

"Nikhef is a wonderful congregation of different communities where knowledge is easily shared among all. The small scale of the institute really gives one a sense of one community moving forward at many frontiers of science, unlike at large-scale institutes where each group works on its own."

YOUR MOTIVATION

Still curious about how the universe works

Nikhef (incl. partner universities) is large enough to impact and contribute to Big Science instrumentation and hence scientific discoveries in global particle and astroparticle physics experiments via the different science programs.

Doing science with enthusiastic colleagues. Scientific groups at Nikhef are large enough to have impact in an experiment.

Opportunity to work with excellent people on interesting topics in physics

I like to work on something that advances our fundamental understanding of the world.

Nice community with excellent scientists in several different sectors

"As AMO physicist, my motivation to be part of Nikhef is to better understand the current problems in particle physics and hopefully be part of solving them."

"It is an amazing place with the right variety of research topics and an really excellent infrastructure (engineering, workshops etc)."

World class institute where many competences come together; great colleagues and many possibilities to learn and contribute.

Nikhef is unique and lots of technological chalanges. All projects are different and in some way always complex.

YOUR MOTIVATION

In my current position I can contribute to the development of technologies for both fundamental research and for applications outside the field of HEP.

Nikhef offers me a broad range of opportunities to fulfil my curiosity and discover physics beyond the SM -- be it using LHC data (for the next few years) or elsewhere.

"I worked in nuclear, high-energy, and gravitational-wave physics and Nikhef is one of the best institutes in the world to work in these fields; the scientific environment at Nikhef beats almost any university due to the large concentration of experts and the technical support enables one to contribute at the top level to experiments in these fields."

Excellent scientific institute and proud to be part of it

Contribute to our understanding of nature at the smallest and largest scale.

"Scientific focus in research groups with good support from the mechanical, electronics and computing departments. There is a strong community at the institute, with good scientific and personal contacts between the research groups."

"Driven by my vast of passion in fundamental physics research, I found Nikhef best for me to continue my scientific ambition. It has a good composition and ambience to encourage people on detector R&D and different physics topics."

Different interesting fundamental science questions being pursued in an inspiring environment offering and connecting a large amount of expertise in hardware/software/data analysis/theory

Institute with excellent scientific profile and reputation.

YOUR MOTIVATION

It dropped dramatically after the last question. Science shouldn't be a popularity contest. It is nonsense to try to rank one sub-area as most important. Innovative research is what is going to move us forward and that happen in any of the sub-fields listed.

Nikhef is a good place to work on one of the most exciting questions: the physics and origin of the highest-energy particles in Nature

"Nikhef is a exciting place to work:many discussions, many ideas, many inputs to learn and to grow."

"I very much enjoy the scientific pollination that occurs at Nikhef, leading to new ideas and new insights. In addition, I very much like the social aspect of Nikhef, too. I very much enjoy being allowed to be affiliated with Nikhef."

Hope that the Einstein Telescope will be build in the Netherlands/Germany/Belgium.

"not so relevant, I work in engineering. I am in general interested in the technologies and outcome of physics research experiments."

Beyond the Standard Model and the early Universe.

I like it. I love it!

BACKUP

PHD/PD ONLY - NATIONALITY

(Optional) What is your nationality?

Text answer, answers 39x, unanswered 12x

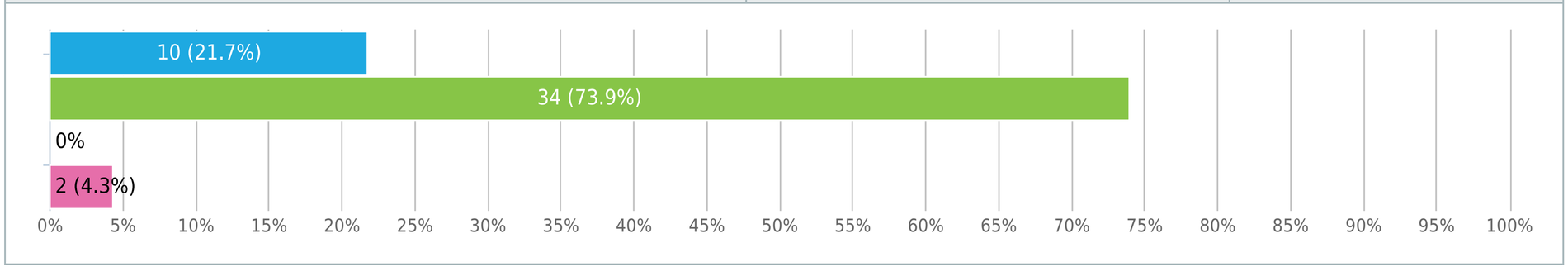
- (14x) Dutch
- (2x) Swiss
- Irish
- Netherlands
- (2x) Indian
- Ukrainian
- United Kingdom
- Chile
- (6x) Italian
- Danish
- Romanian
- italian
- (2x) Spanish
- Nederlander
- (3x) British
- Ukraine

PHD/PD ONLY - GENDER

(Optional) What is your gender?

Multiple choice, answers 46x, unanswered 5x

Answer Choices	Responses	Ratio
Female	10	21.7 %
Male	34	73.9 %
Extra answer	0	0 %
Rather not say	2	4.3 %

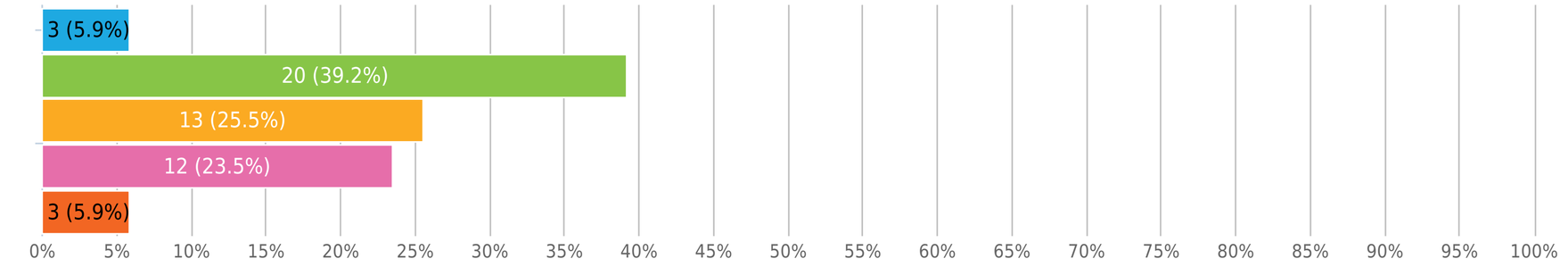


PHD/PD ONLY – TIME@NIKHEF

How long have you been working for Nikhef up to now?

Multiple choice, answers 51x, unanswered 0x

Answer Choices	Responses	Ratio
0-1 year	3	5.9 %
1-2 years	20	39.2 %
2-3 years	13	25.5 %
3-4 years	12	23.5 %
4+ years	3	5.9 %

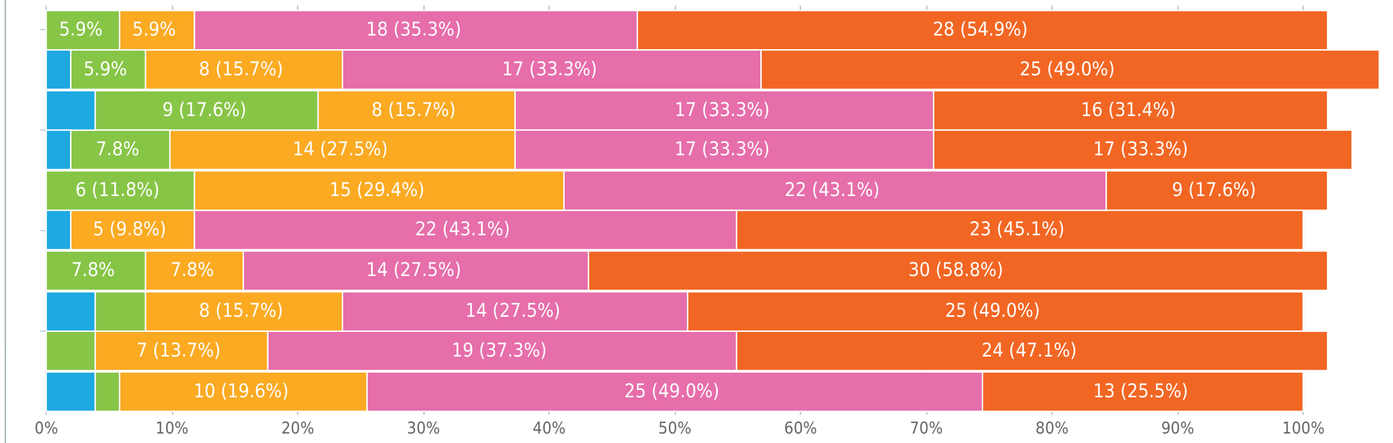


PHD/PD ONLY – WELL-BEING

How satisfied are you concerning (1 = very unsatisfied, 5 = very satisfied)...

Matrix of multiple choices, answers 51x, unanswered 0x

Answer	1	2	3	4	5
The topic of your research?	0	3 (5.9 %)	3 (5.9 %)	18 (35.3 %)	28 (54.9 %)
Your supervisor?	1 (2.0 %)	3 (5.9 %)	8 (15.7 %)	17 (33.3 %)	25 (49.0 %)
The amount of time your supervisor invests in you?	2 (3.9 %)	9 (17.6 %)	8 (15.7 %)	17 (33.3 %)	16 (31.4 %)
The amount of support you receive	1 (2.0 %)	4 (7.8 %)	14 (27.5 %)	17 (33.3 %)	17 (33.3 %)
Your work load?	0	6 (11.8 %)	15 (29.4 %)	22 (43.1 %)	9 (17.6 %)
Nikhef as an institute?	1 (2.0 %)	0	5 (9.8 %)	22 (43.1 %)	23 (45.1 %)
The working atmosphere at Nikhef?	0	4 (7.8 %)	4 (7.8 %)	14 (27.5 %)	30 (58.8 %)
Travel opportunities?	2 (3.9 %)	2 (3.9 %)	8 (15.7 %)	14 (27.5 %)	25 (49.0 %)
Salary?	0	2 (3.9 %)	7 (13.7 %)	19 (37.3 %)	24 (47.1 %)
Learning opportunities?	2 (3.9 %)	1 (2.0 %)	10 (19.6 %)	25 (49.0 %)	13 (25.5 %)

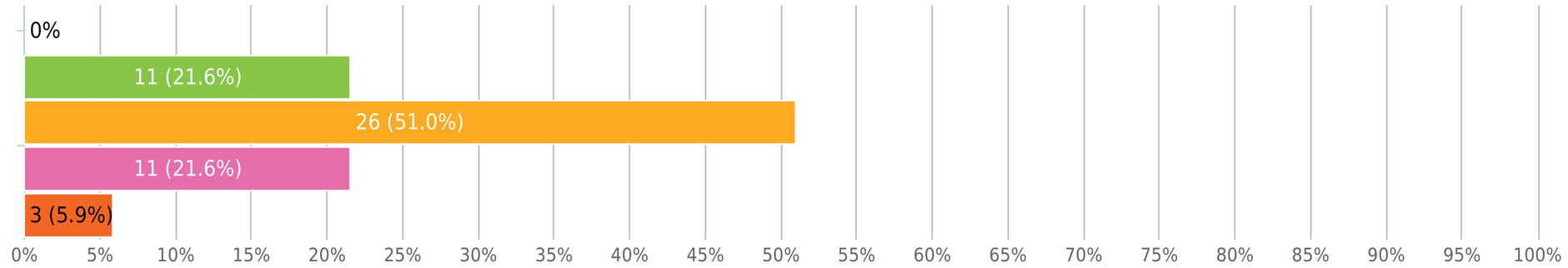


PHD/PD ONLY - WELL-BEING

How many hours do you work per week?

Single choice, answers 51x, unanswered 0x

Answer Choices	Responses	Ratio
<30	0	0 %
30-40	11	21.6 %
40-50	26	51.0 %
50-60	11	21.6 %
60+	3	5.9 %



PHD/PD ONLY – FUTURE CAREER

Answer Choices	Responses	Ratio
Postdoc in high-energy physics	26	52 %
Postdoc outside of high-energy physics	7	14.0 %
Data Science	21	42 %
Finance	3	6 %
IT	5	10 %
Consultancy	5	10 %
Education	8	16 %
Science Communication	6	12 %
I don't know (yet)	26	52 %
Other, namely:	5	10 %

- Professor in high-energy physics (why is this not an option?)
- Space Industry
- Academic staff in high-energy physics
- Space engineering, space science
- Staff position in high-energy physics