

Proposal to Improve Underrepresented Nationalities and Gender in MPA Recruitment for CERN IT Department

25 by 25 Initiative

Date: 17th February 2022

Version: 2.1

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Changelog

Version	Date	Changes	Author
0.1	21.01.2022	First version with sections and preliminary contents	M. Alandes
0.2	24.01.2022	Add section on incentives and evaluation	E. Sindrilaru
0.3	24.01.2022	Add Timeline and Appendix with Statistics	M. Alandes
1.0	27.01.2022	Document reviewed internally and ready for external feedback	E. Sindrilaru M. Alandes
2.0	09.02.2022	Address M. Marquina's feedback. Added target candidate profile. Take into account member state contributions in the under-representation criteria. Add note on the need to align with HR for target nationalities.	E. Sindrilaru M. Alandes
2.1	17.02.2022	Add Risk Analysis	M. Alandes

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Executive Summary

The following proposal aims at increasing underrepresented nationalities and gender in the pool of candidates for MPA programs in the IT department. The proposal is to organise a pilot exercise where presentations will be carried out by volunteer members of the IT department in universities from underrepresented countries. An analysis of the following round of MPA recruitment after this exercise will assess whether there is an actual increase of underrepresented nationalities and gender in the pool of candidates.

Acknowledgements

Thanks to Miguel Marquina for sharing his expertise and insights on the existing MPA programs and for a fruitful exchange that ended up with this proposal.

Introduction

The « 25 by '25 » initiative at CERN started on April 2021 with the aim of boosting nationality and gender diversity within the CERN Staff and Fellow population over the next five years. Each department at CERN is contributing to the initiative with two Focal Points who are responsible for liaising with the D&I Program. In IT, the Focal Points are Elvin Sindrilaru from the ST Group and Hannah Short from the CDA Group. Maria Alandes Pradillo, also from the CDA Group, is the interim focal point replacing Hannah Short from January to June 2022.

Elvin and Maria exchanged with Miguel Marquina, who is the IT representative for all the MPA hiring committees, and came up with this proposal to improve underrepresented nationalities and gender in MPA recruitment for CERN IT Department.

Proposal

In order to increase the candidate pool of students applying for the different MPA programmes, we propose to organise a series of presentations in underrepresented countries. These presentations will give a short overview of CERN, IT Department and will portray the work of computing engineers in IT. The presentations will also include information on the existing MPA programs, encouraging students to participate.

In order to also increase the number of female candidates, these presentations should be also shared with female computer engineers in IT and should highlight the fact that CERN is interested in recruiting more female engineers.

Target Nationalities

For the first pilot exercise, we would like to propose the following list of nationalities that are in line with the feedback provided by HR for underrepresented nationalities in a recent MPA recruitment committee:

- Germany
- Denmark
- Israel
- United Kingdom
- The Netherlands
- Norway
- Sweden

In any case, the list of countries should be agreed with HR so we are aligned with any HR recruiting strategy to improve underrepresented nationalities and gender.

Target Universities

The presentations will be carried out in several universities of the targeted countries where there are studies on Computer Science. The universities will be selected based on their number of students, trying to reach out the maximum number of people. In order to select the universities, we will gather feedback from:

- HR Talent and Acquisition group, who may already have some existing contacts
- Alumni network, who could also help with liaising with CERN Alumni with a computer engineer profile
- IT staff from the relevant countries who may have contacts with their home universities

Target Candidate Profile

It is important to define a clear profile of the students or graduates that will be targeted by these presentations. When universities are selected and contacted, we should have a clear idea of which candidates we are interested in, depending on the moment of the year and the upcoming recruitment deadlines for the different student and graduate programs. Taking this into account, we may want to focus on a general presentation addressed to all students, or focus on last year students and post-graduates who may be collaborating with the university.

For the first pilot exercise, we would recommend to start by addressing all students via general presentations, and after gathering some experience, redefine this approach if needed, targeting students at specific moments of their degree (like last year students) or with a specialisation on specific computer science areas.

Volunteers in IT

The presentations will be carried out by IT staff who are interested in helping out with this exercise. The profile should be computer engineers working in IT who have good communication skills and are able to deliver a presentation in the mother tongue of the targeted countries. A call for volunteers will be organised to identify the people willing to participate in this exercise.

Presentations

The IT Focal Points will prepare some material to be reused by the volunteers. This material will be reviewed by relevant people in the department and HR so it contains relevant information regarding CERN and IT Department but also about the MPA programs, in terms of deadlines, recruitment procedures, etc.

Proposed incentives

The efforts made on a voluntary basis by the members of the IT department should be encouraged by the management and also acknowledged and recognised as part of the formal appraisal process.

The IT management could set up a scheme where one extra day or half a day of holidays can be given out to volunteers that are willing to deliver in-person presentations to universities or academic institutions in their home countries - once the health situation will allow such activities. In the meantime, but also as a general rule, Zoom presentations and online events should be preferred as this would considerably lower the costs and commitment for the IT Department.

A record of all the given presentations and contacts with academic institutions should be kept so as to avoid any abuse of this scheme and also ensure the efforts are concentrated in areas which would benefit the most.

Impact Evaluation

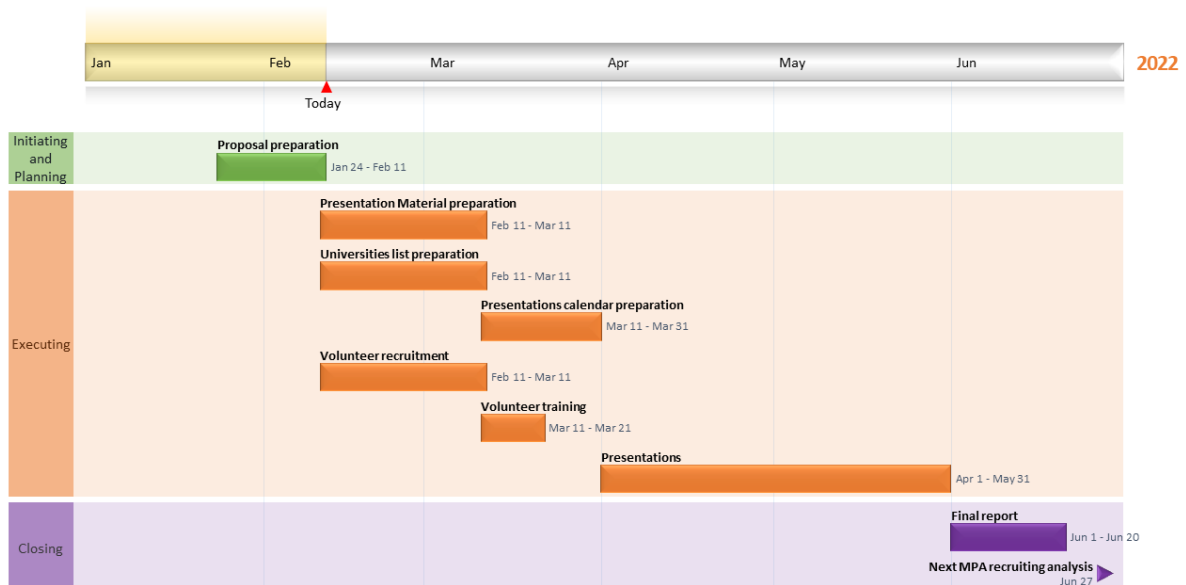
Given the current selection process, an evaluation of the effectiveness of this scheme should be performed on an annual basis. The evaluation should include both a quantitative assessment that can be performed based on the provided statistics from the HR department, but also a qualitative assessment based on an annual survey that would include all the IT members involved in the recruitment process concerning MPAs.

For the first pilot exercise, we propose to do an assessment after the first round of presentations, whenever the following MPA program takes place. This assessment should help doing a recommendation to repeat this exercise in the future.

In order to perform a quantitative assessment, we would need to collect the following statistics for the MPA programs just before and after the presentations take place:

- Nationality and gender statistics for MPA programs applications.
- Nationality and gender statistics for MPA programs short lists.
- Nationality and gender statistics for MPA programs selections.

Proposed Timeline



Risk Analysis

Risk ID	Description	Category	Probability	Impact	Approach	Action
1	Not enough IT volunteers	Organisational	Medium	High	Avoid	Management should stress the importance of contributing to '25 by 25' initiative. Individual efforts should be recognised and valued in MERIT.
2	Not enough universities	Organisational	Low	High	Share	Strengthen the collaboration with HR, Alumni network and IT colleagues to identify relevant universities/computing science schools for future exercises
3	No interest from contacted universities	External	Low	High	Reduce	Identify motivated people within the universities and get support from HR, Alumni and IT colleagues to strengthen the links with these collaborators
4	Presentations are attended by a small number of students	Organisational	Low	High	Avoid	Consider a registration mechanism via Indico to monitor the number of registered students and work with the contact person to make sure enough publicity has been made within the university
5	No increase of underrepresented nationalities in the candidate pool	External	Medium	High	Share	Work with HR and university contacts to understand the reasons and propose corrective actions and improvements for future exercises

Appendix - Nationality and Gender Statistics in CERN IT Department

The following statistics were provided by the D&I Program to IT Focal Points in June 2021.

	Country	ISO	Fellow		Staff	
			Head Count	% Head Count	Head Count	% Head Count
CERN Member States	Austria	AT			2	0.92%
	Belgium	BE			4	1.83%
	Bulgaria	BG			2	0.92%
	Czech Republic	CZ	2	2.11%	2	0.92%
	Denmark	DK			1	0.46%
	Finland	FI	3	3.16%		
	France	FR	7	7.37%	44	20.18%
	Germany	DE	3	3.16%	13	5.96%
	Greece	GR	18	18.95%	8	3.67%
	Hungary	HU	2	2.11%		
	Israel	IL				
	Italy	IT	11	11.58%	27	12.39%
	Netherlands	NL	1	1.05%	4	1.83%
	Norway	NO			2	0.92%
	Poland	PL	3	3.16%	17	7.80%
	Portugal	PT	5	5.26%	8	3.67%
	Romania	RO			8	3.67%
	Serbia	RS	2	2.11%		
	Slovak Republic	SK	4	4.21%	4	1.83%
	Spain	ES	14	14.74%	33	15.14%
Sweden	SE	1	1.05%	2	0.92%	
Switzerland	CH			13	5.96%	
United Kingdom	GB	2	2.11%	22	10.09%	
Pre-stage to membership	Cyprus	CY				
	Estonia	EE				
	Slovenia	SI				
Associated Member States	Croatia	HR				
	India	IN	8	8.42%	1	0.46%
	Latvia	LV				
	Lithuania	LT	4	4.21%		
	Pakistan	PK	2	2.11%		
	Turkey	TR	1	1.05%		
Ukraine	UA	2	2.11%	1	0.46%	
TOTALS			95		218	

Table 1 – Fellows and Staff in IT Department by Nationality - June 2021

We should define the criteria for a country to be underrepresented in the context of this exercise:

- Is underrepresentation defined based on applied, short listed or selected candidates of the latest MPA program? Or do we also take into account staff members for those countries?
- Are we taking into account only CERN member states or also associate member states?
- Should we define the target countries as the collection of all underrepresented countries per program? Or should we focus only on one of the programs to start with?
- What is underrepresented? No head count at all or under a certain % of head count?

All these questions should be addressed and a clear criteria should be defined and agreed with IT management.

Other aspects that should be also considered is the proportion of member state contribution, as reflected in the diagram below.

Nationality: % MPEs with respect to Member State contributions

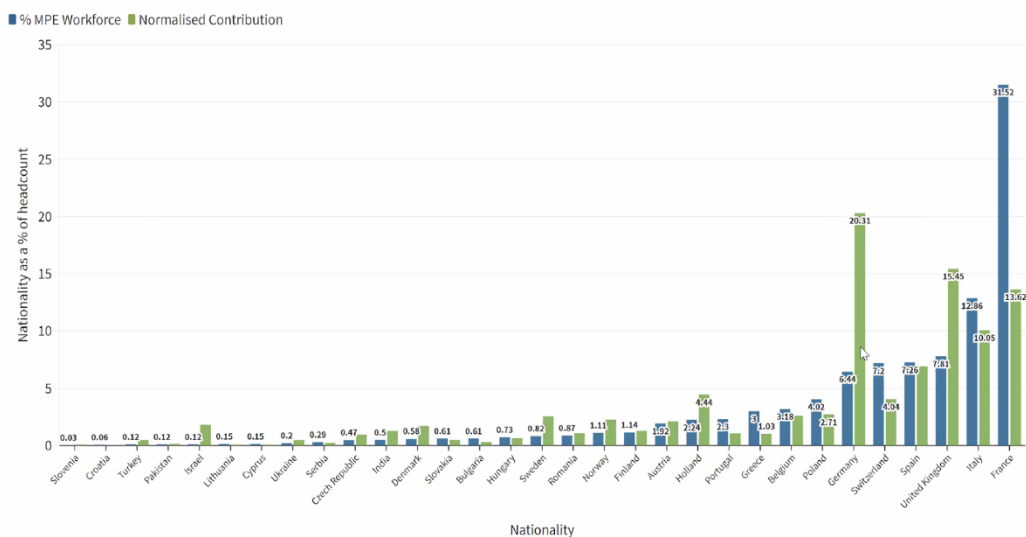


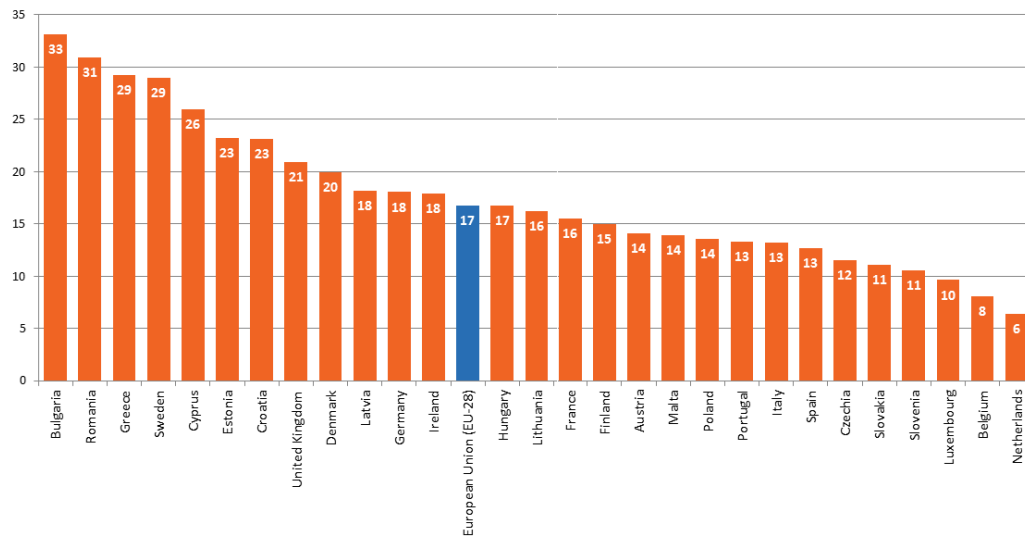
Figure 1 - %MPEs with respect to Member State contributions

Regarding gender, the following statistics are available from D&I Program:

- In June 2021, 14.7% of fellows were women
- In June 2021, 14.2% of staff were women

We have looked at Eurostat statistics where we find % in ICT female students and ICT specialists in the workforce. These numbers can be helpful to understand possible mismatch with % of females in IT and help us define a better recruiting strategy:

Proportion of ICT students who are female, 2016
(%)



ec.europa.eu/eurostat

Figure 2 - Source: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20190425-1>

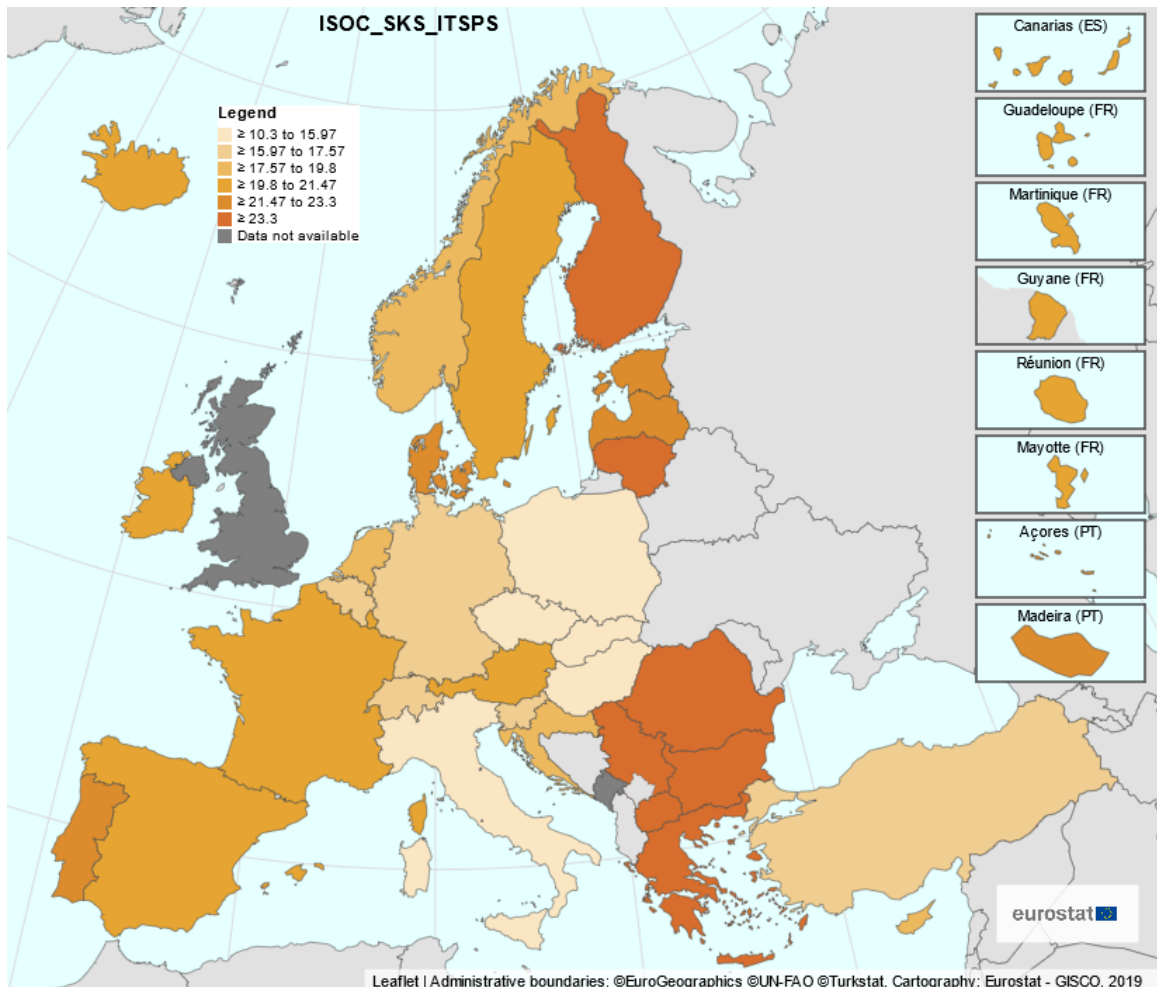


Figure 3 - % of Female ICT specialists in 2020 - Source: https://ec.europa.eu/eurostat/databrowser/view/ISOC_SKS_ITSPS/default/bar?lang=en&category=loc.isoc_sk.isoc_sks.isoc_skslf -