

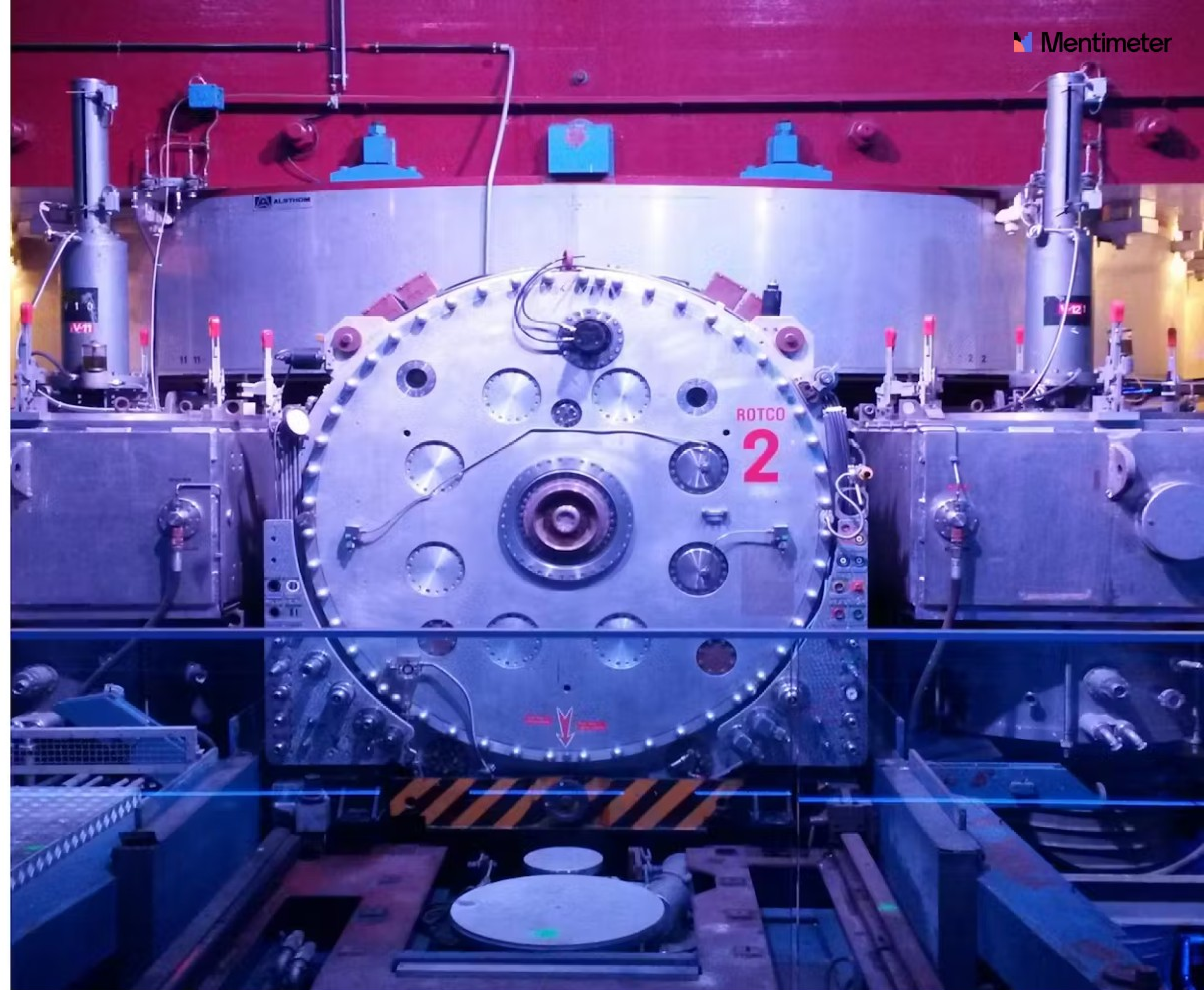
# Mind spinning. Feet standing still.

Shedding light on invisible  
differences.

**Louise Carvalho**

Diversity & Inclusion Programme Leader,  
CERN

Physics Days 2025, University of Oulu  
27 March 2025



Synchrocyclotron: CERN's first particle accelerator, built 1957



# Overview



CAN YOU GUESS?



CERN: WHERE  
WHAT  
WHO



OUR FIRST  
DIVERSITY TARGET



OVER TO YOU:  
MENTIMETER POLL



IN-GROUP / OUT-  
GROUP  
WHERE ARE YOU?



NEURODIVERSITY  
INCLUSION



TAKEAWAY  
MESSAGE



EXTRAS



# “Conseil Européen de la Recherche Nucléaire”: CERN European Organization for Nuclear Research



World's largest laboratory for particle physics

Our goal: to understand the most fundamental particles and laws of the universe





# Science for Peace

founded in 1954 with 12 European Member States



## 24 Member States

Austria – Belgium – Bulgaria – Czech Republic  
Denmark – Estonia – Finland – France – Germany –  
Greece Hungary – Israel – Italy – Netherlands –  
Norway – Poland – Portugal – Romania – Serbia –  
Slovakia Spain – Sweden – Switzerland – United  
Kingdom

## 3 Associate Member States in the pre-stage to membership

Cyprus – Slovenia

## 8 Associate Member States

Brazil – Croatia – India – Latvia – Lithuania –  
Pakistan – Türkiye – Ukraine

## 6 Observers

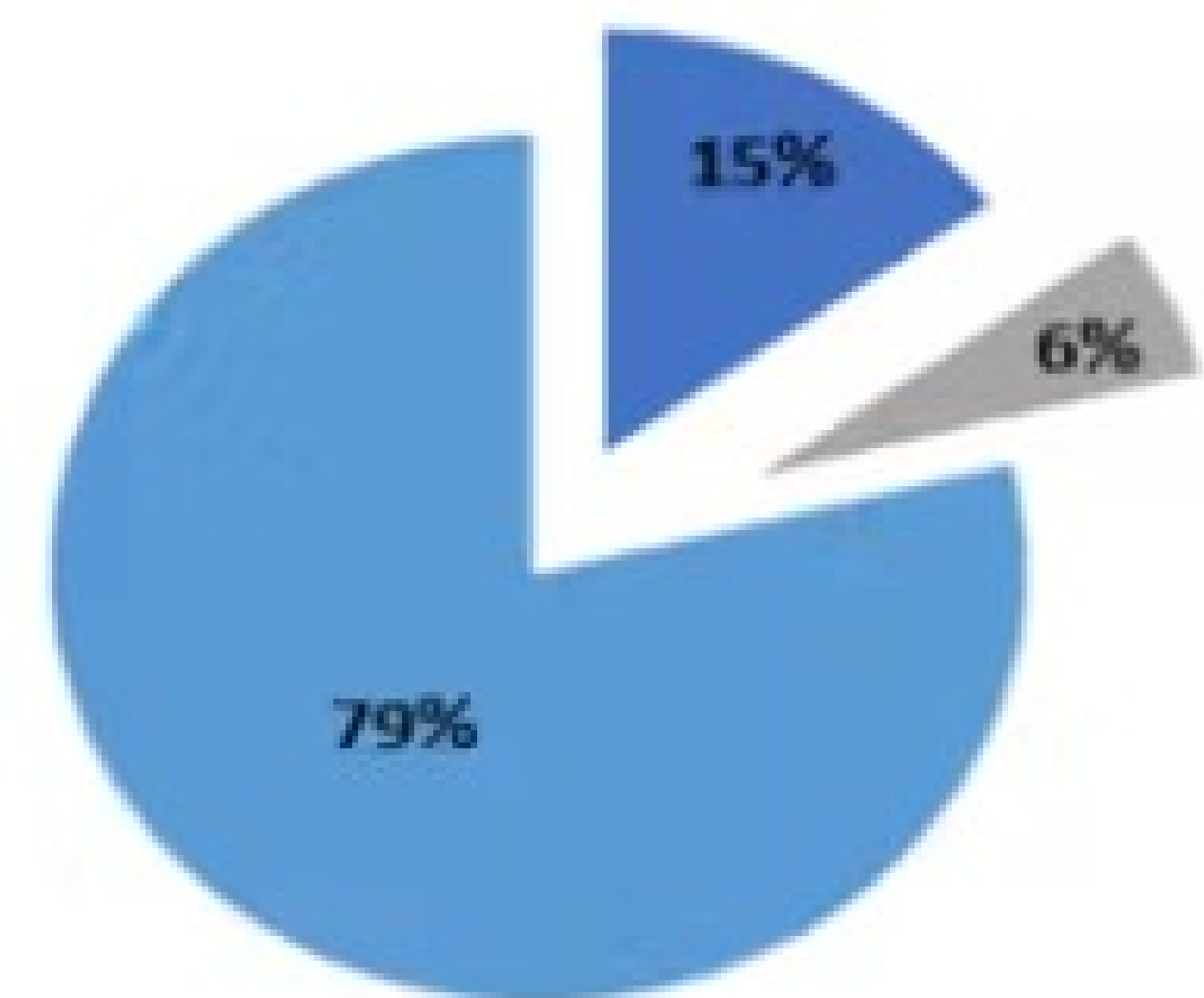
Japan – USA + European Union – UNESCO  
JINR (currently suspended)

CERN's annual budget  
is 1200 MCHF (equivalent  
to a medium-sized European  
university)

Over 110 nationalities

### CERN population

- ~ 2700 Staff Members
- ~ 1000 Fellow & Graduates
- ~ 14000 Associate Members of the Personnel



## Around 50 Cooperation Agreements with non-Member States and Territories

Albania – Algeria – Argentina – Armenia – Australia – Azerbaijan – Bangladesh – Belarus – Bolivia  
Bosnia and Herzegovina – Canada – Chile – Colombia – Costa Rica – Ecuador – Egypt – Georgia – Honduras  
Iceland – Iran – Jordan – Kazakhstan – Lebanon – Malta – Mexico – Mongolia – Montenegro – Morocco – Nepal  
New Zealand – North Macedonia – Palestine – Paraguay – People's Republic of China – Peru – Philippines – Qatar  
Republic of Korea – Saudi Arabia – Sri Lanka – South Africa – Thailand – Tunisia – United Arab Emirates – Vietnam

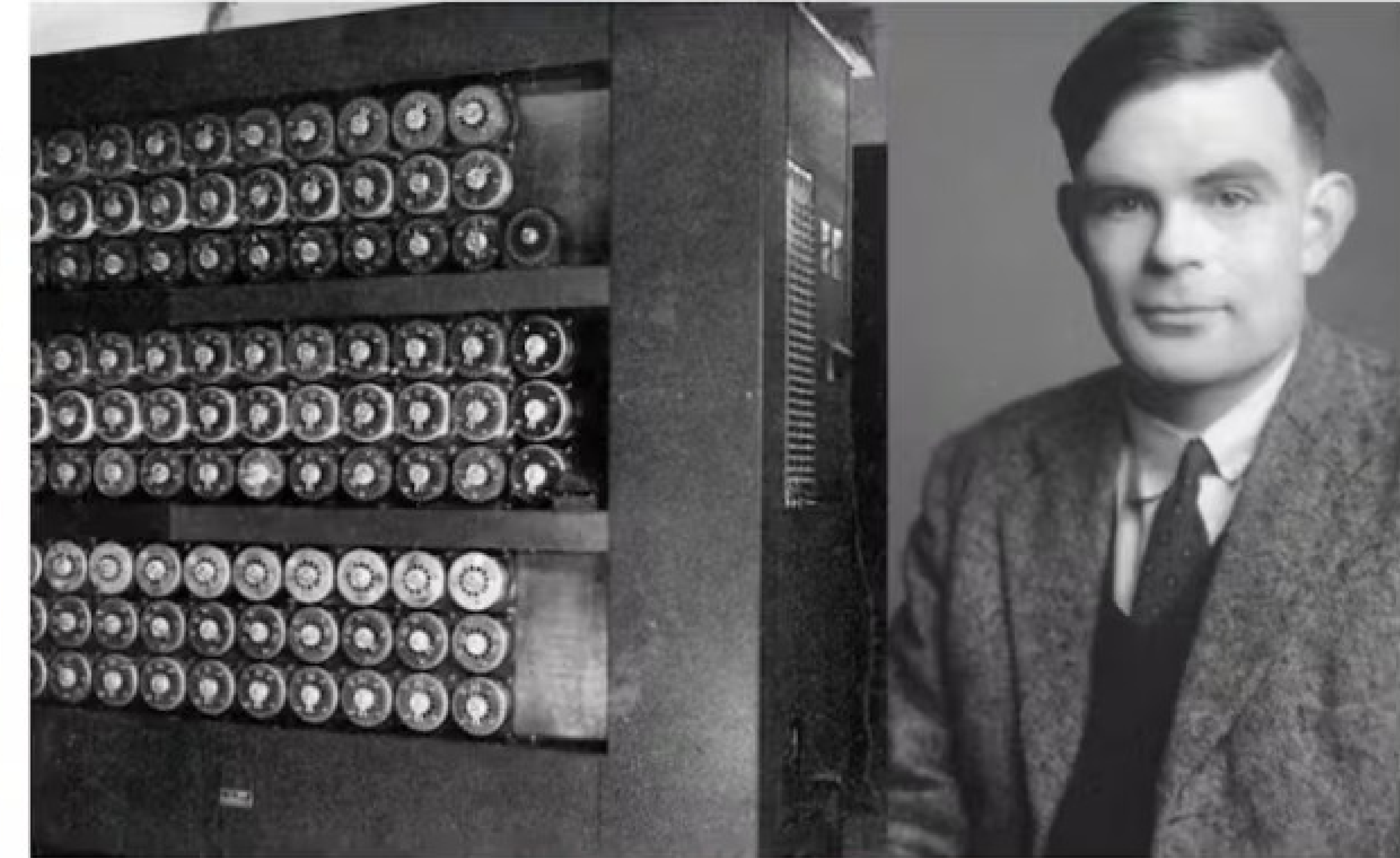


# diversity IS excellence

LGBTQ+ inclusion

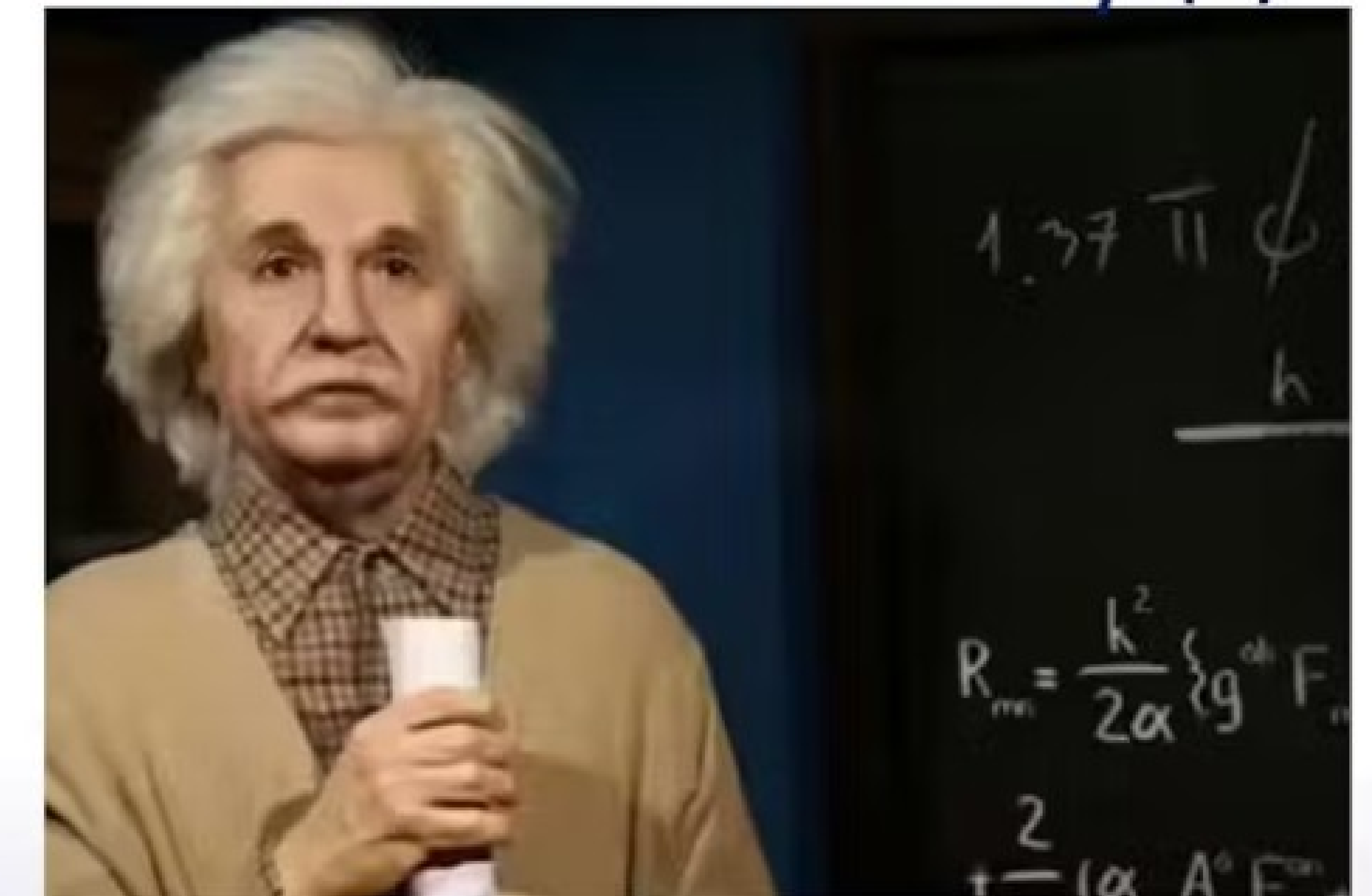
Accessibility & Inclusion

Nationality & Gender diversity



→ Alan Turing

Neurodiversity (?)



→ Albert Einstien



→ Stephen Hawking



→ Maria Salomea Skłodowska-Curie



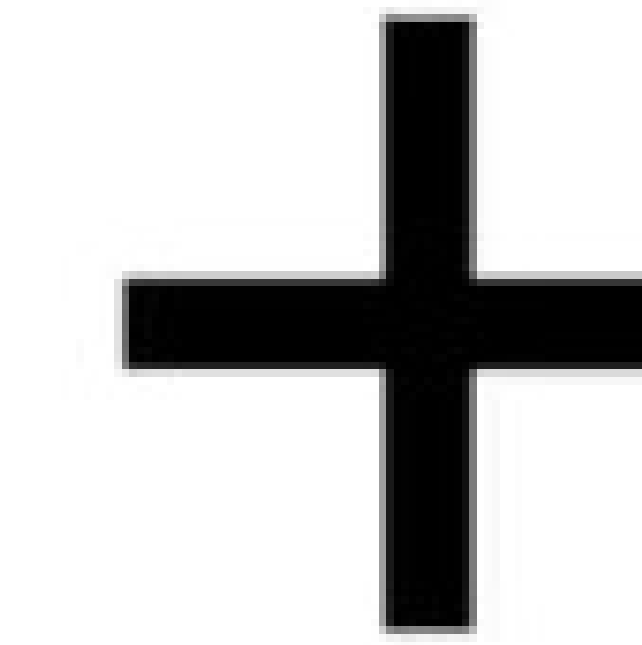
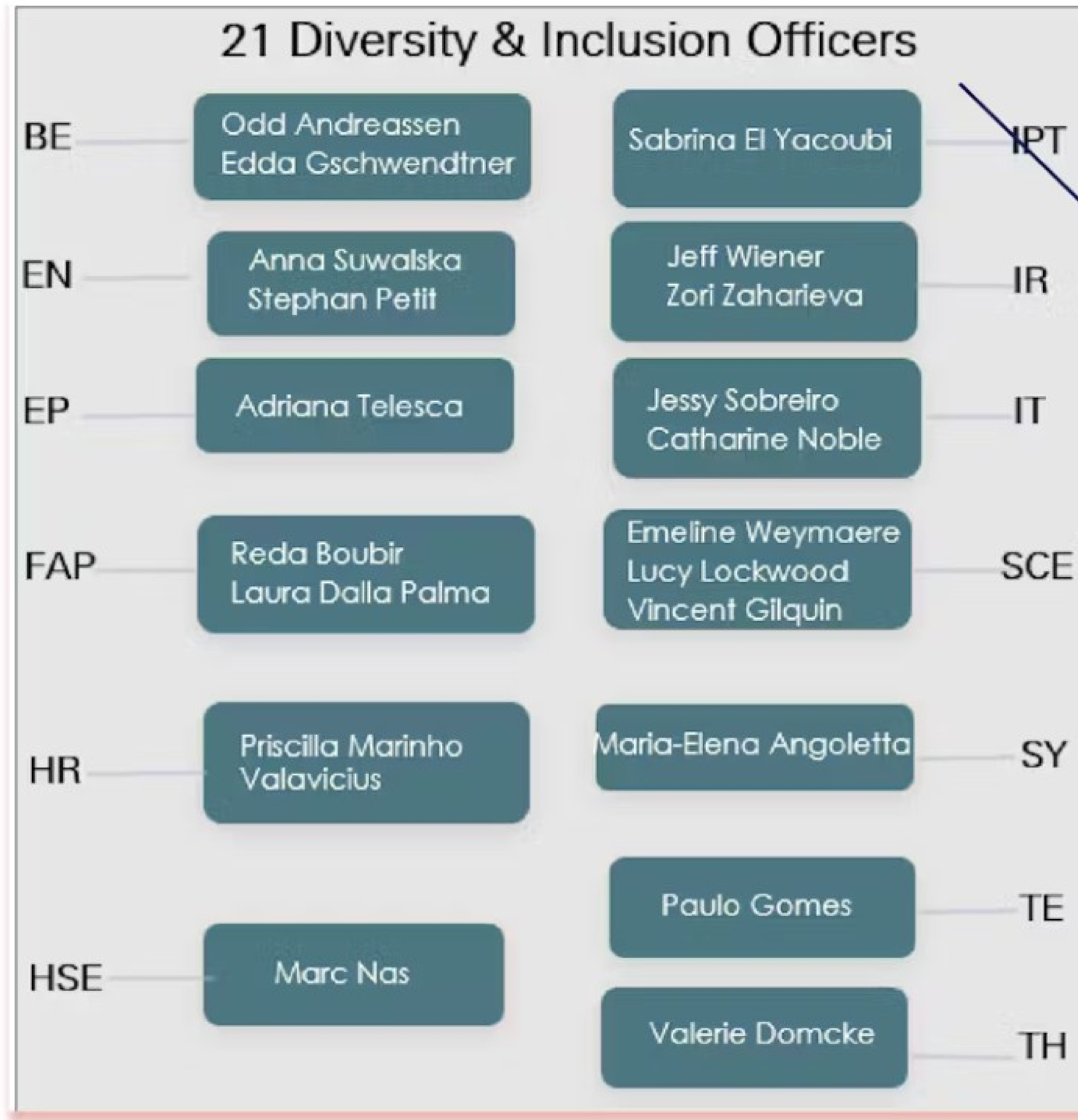
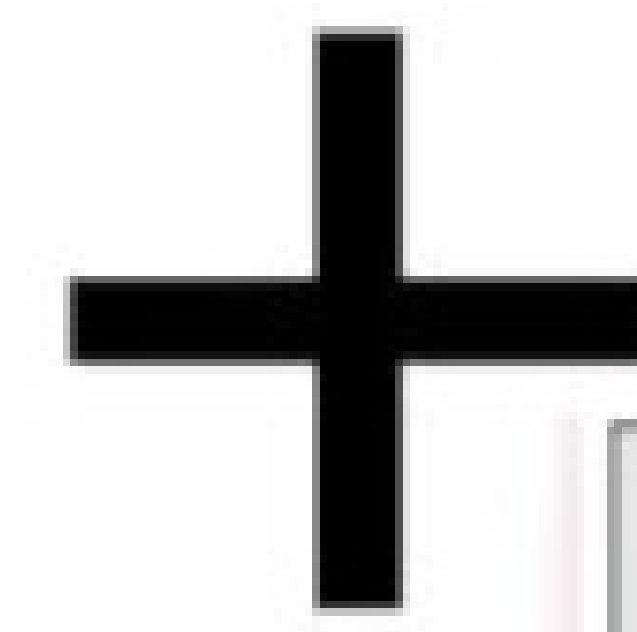
# Diversity & Inclusion Programme: since 2012



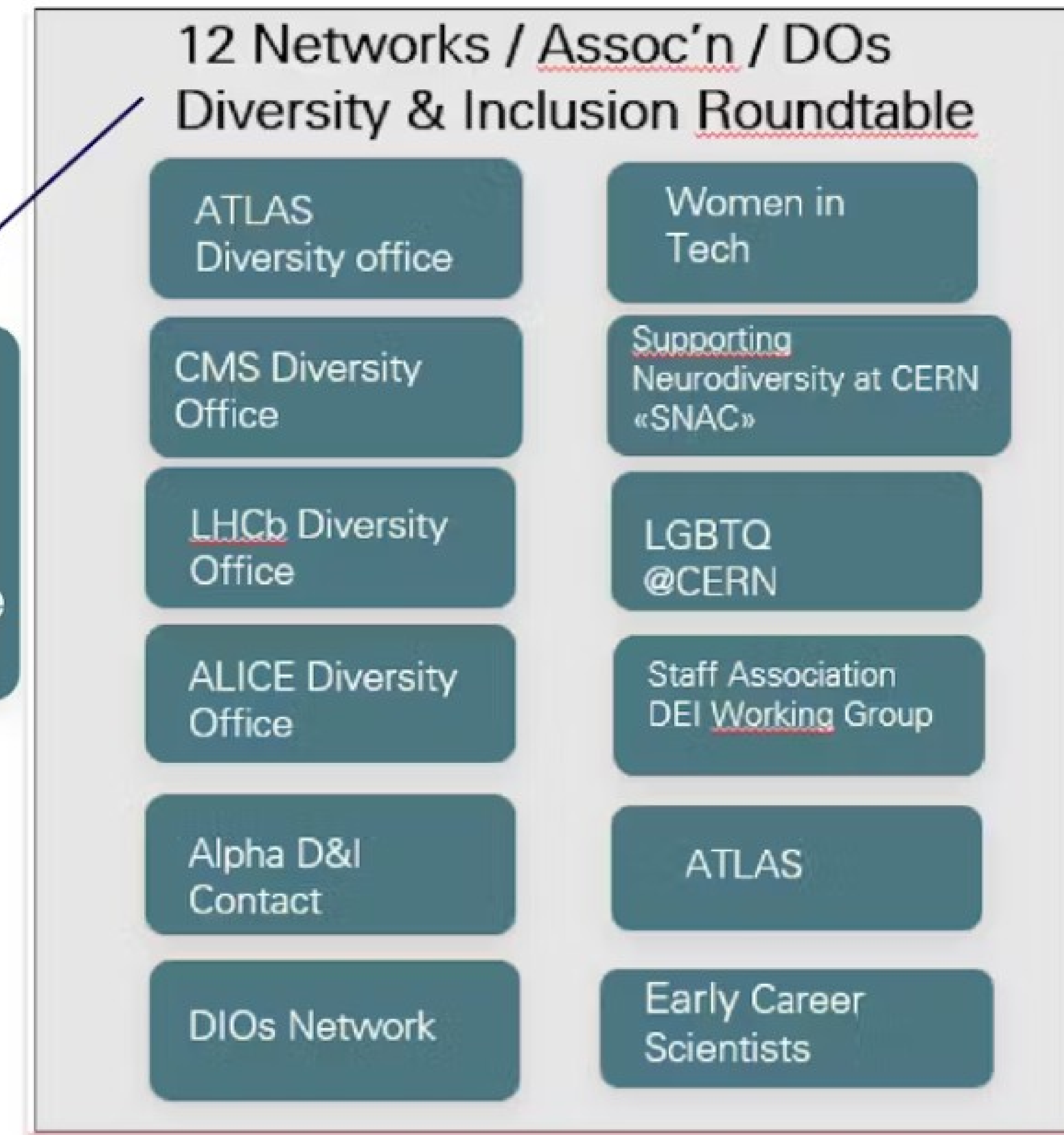
**Louise Carvalho**  
D&I Programme Leader  
(+ Legal Adviser, HR)



D&I Officer  
Under recruitment



Chair:  
D&I  
Programme





# Diversity @CERN Volunteer Networks

## WIT

supporting advocating for  
women in STEM

### ACTIVITIES:

- guest talks
- weekly news
- mentoring
- gender diversity initiatives

wit-matters@cern.ch



## LGBTQ+

fostering LGBTQ+  
inclusion

### ACTIVITIES:

- weekly lunch, R1 behind Grab N Go, Tues @12h: join us!
- events: LGBTQ in STEM day, Geneva Pride

lgbtq.secretary@cern.ch



## SNAC

"Supporting Neurodiversity  
at CERN"

### ACTIVITIES:

- webinars
- social meet-ups
- share experiences
- policy proposals

neurodiversity.contact@cern.ch



## DISABILITY

supporting persons with  
(in)visible disabilities

### ACTIVITIES:

- seminars
- take part in disability studies
- accessibility advice

contact-disability@cern.ch



CERN Diversity Networks aim to:

- promote a respectful, inclusive, and discrimination-free workplace
- foster awareness of equal opportunities
- offer resources and a platform for work-related discussions

→ Scan the QR code to learn more!



**GENDER target**  
(aspirational)

**GOAL**  
With a particular focus on **women in STEM**:

from 21% in 2020 → 25% in 2025

**OUR VISION**  
scientific excellence through diversity and inclusion

**OUR GOAL**  
to increase the nationality and gender diversity of Staff & Fellows (“MPE”) population by end-2025

25 by '25

Accelerating diversity at CERN

**NATIONALITY indicator**  
(not a cap, not a quota)

**GOAL**  
With a particular focus on under-represented MS and a **more balanced return** by 2025:

address nationality clusters > 25%

and increase our conscious efforts toward nationality diversity in recruitment & retention

## Success Factors:

### Management

- Enlarged Directorate endorses 25by'25 Strategy (2021)
- Dept Heads appoint D&I Officers (DIOs)
- Dept Heads approve Fitness Plans
- Introduces “Conscious Hiring” (nationality)
- Mandatory training: inclusive leadership
- Dept Heads communicate 25by'25 updates

### D&I Programme

- Stakeholder engagement
- Lead & support DIOs
- Implements 1st D&I Review Exercise (2021)
- Workshop: Transforming Bias
- Workshop: Inclusive Language
- Theatre Forum on sexism
- Nationality clusters deep dive

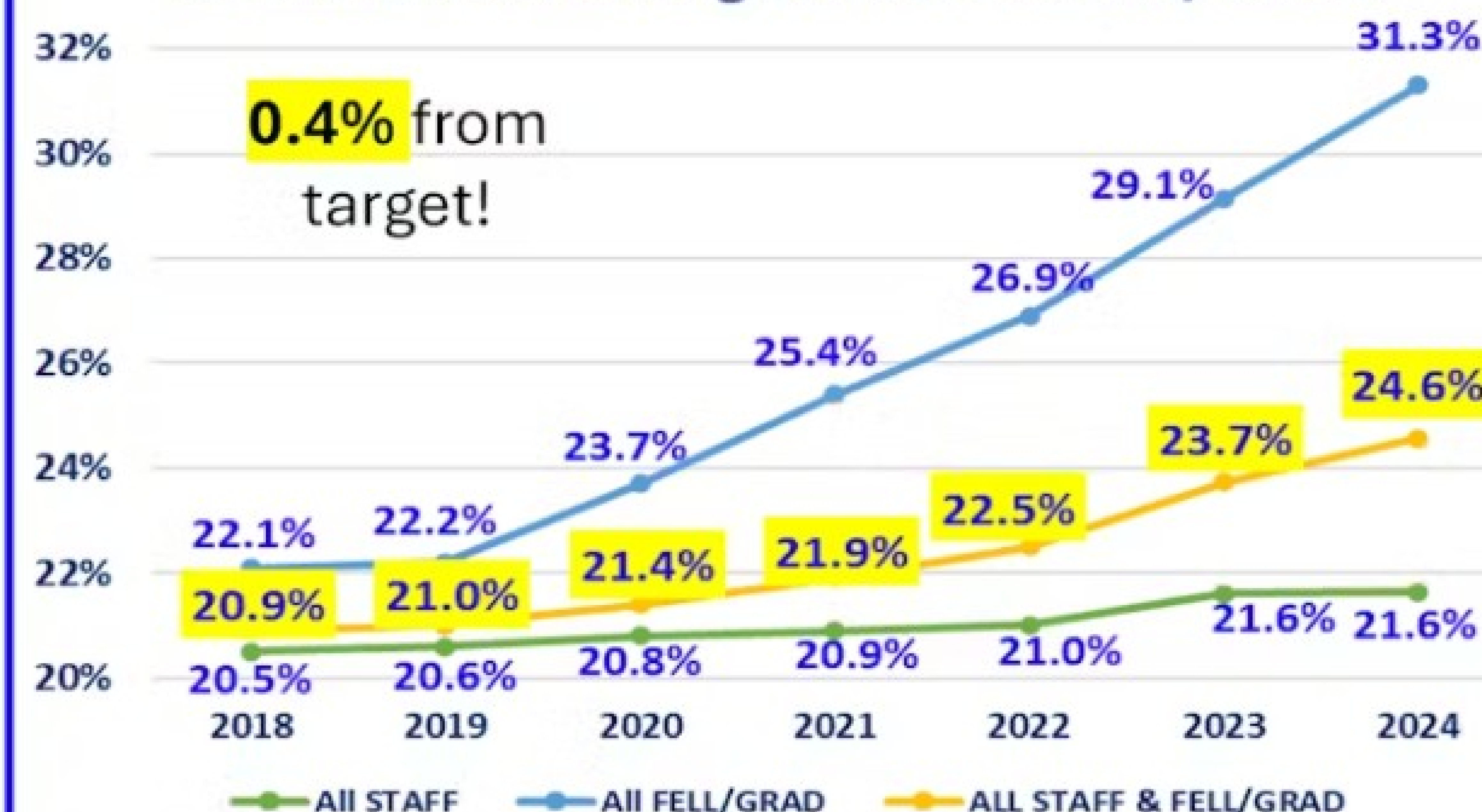
### HR

- Developed Nat / Gen Population Dashboards
- Developed Recruitment Dashboard
- Developed Conscious Hiring Dashboard
- Rolled out “Active Bystander” training
- Ensures inclusive Vacancy Notices
- Target sourcing diverse candidates
- Carries out MPE Exit Survey

### DIOs

- DIO monthly meetings
- DIOs engage Management Boards
- Publish newsletters & Dept webpages
- Organise newcomer welcome sessions
- Initiate new D&I actions

### % of Women Among Staff & Fellows/Grads



### % of Women Among **New Arrivals**

Staff & Fellows/Grads

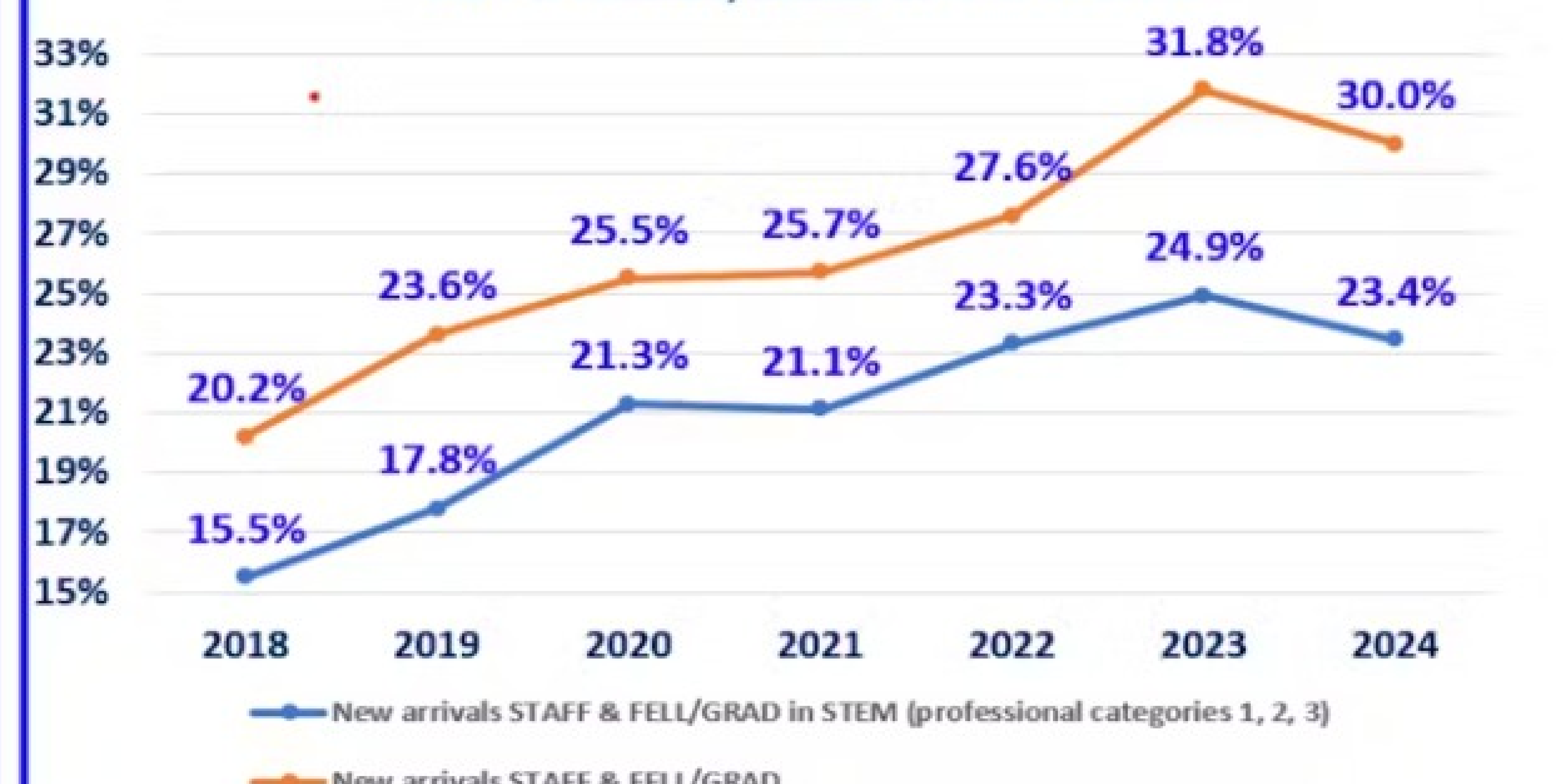


### % of Women Among Staff & Fellows/Grads **in STEM**



### % of Women Among **New Arrivals**

Staff & Fellows/Grads: all and in STEM





# Resistance & Myth Busting

« Positive discrimination »

**Response:**

Eliminating systemic barriers

« Target = quota »

**Response:**

Target is aspirational

« Women hired on gender »

**Response:**

Transforming long-standing bias against women in STEM

« Diversity compromises excellence »

**Response:**

Diversity stimulates excellence



# Mentimeter: Invisible Dimensions Poll

Go to: [www.menti.com](https://www.menti.com)

enter code: 5152 7406



- On-line browsing or internet activity requires the IP address of the device in use
- Participation in a Mentimeter (or similar) on-line poll allows the audience to vote directly **via the internet browser** using a mobile phone or computer, and to view the results in live-time.
- **No log-in**, or provision of e-mail address is required to participate.
- Participation is deemed as “**pseudonymous**” (*CERN IT Chief Security officer*)
- Choose the questions you wish to answer

Info on pseudonymous personal data here: [ICO guidance on pseudonymisation](#)

Mentimeter **privacy policy** here : <https://help.mentimeter.com/en/articles/1937769-terms-of-use-gdpr-and-personal-data-protection-in-mentimeter>



# My native language(s) is / are:

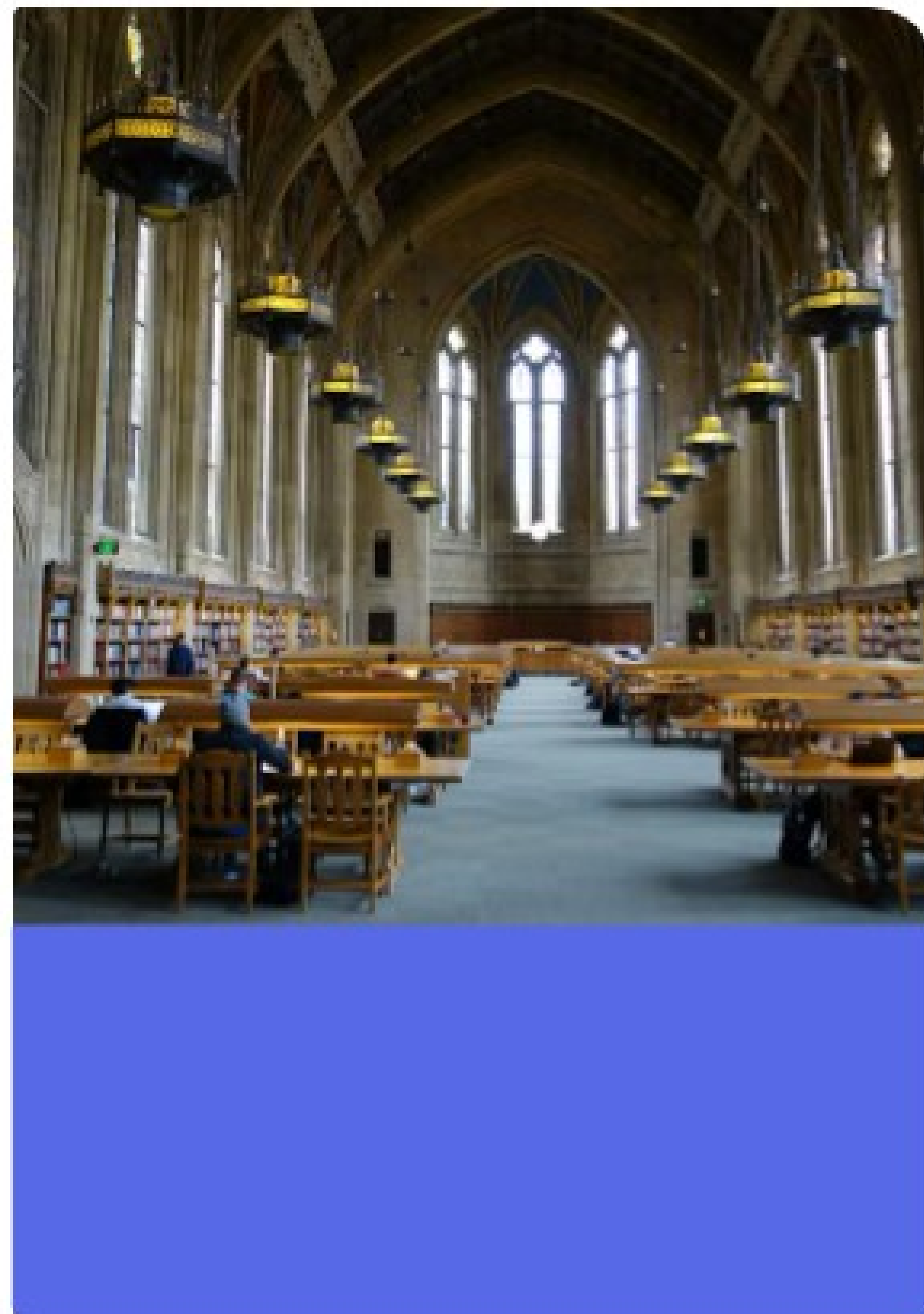
111 responses





I am the first generation in my family with an advanced (university) **education**

44



Yes

55



No

0

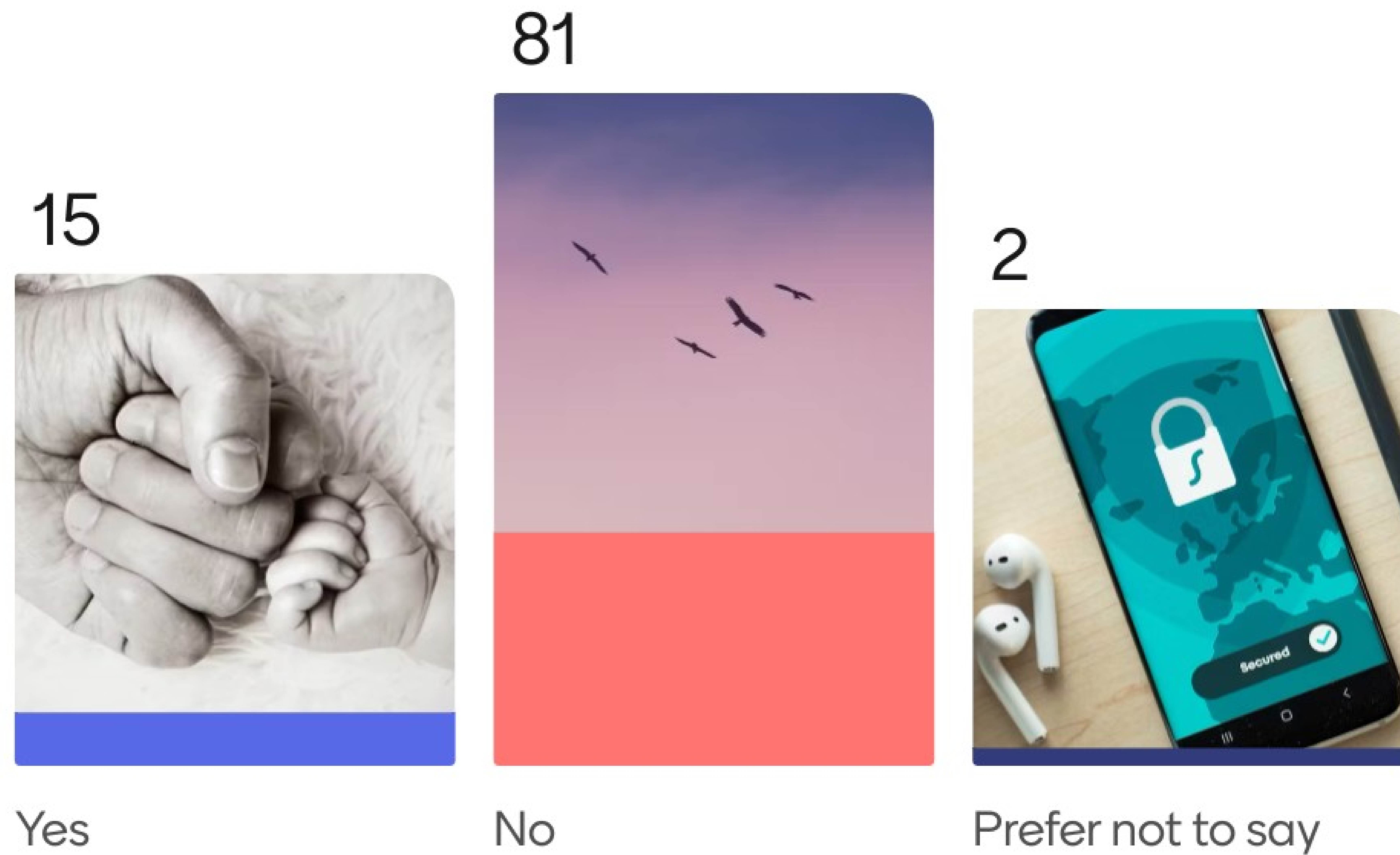


Prefer not to say





I am providing (or will provide) **financial assistance** to my parent(s)



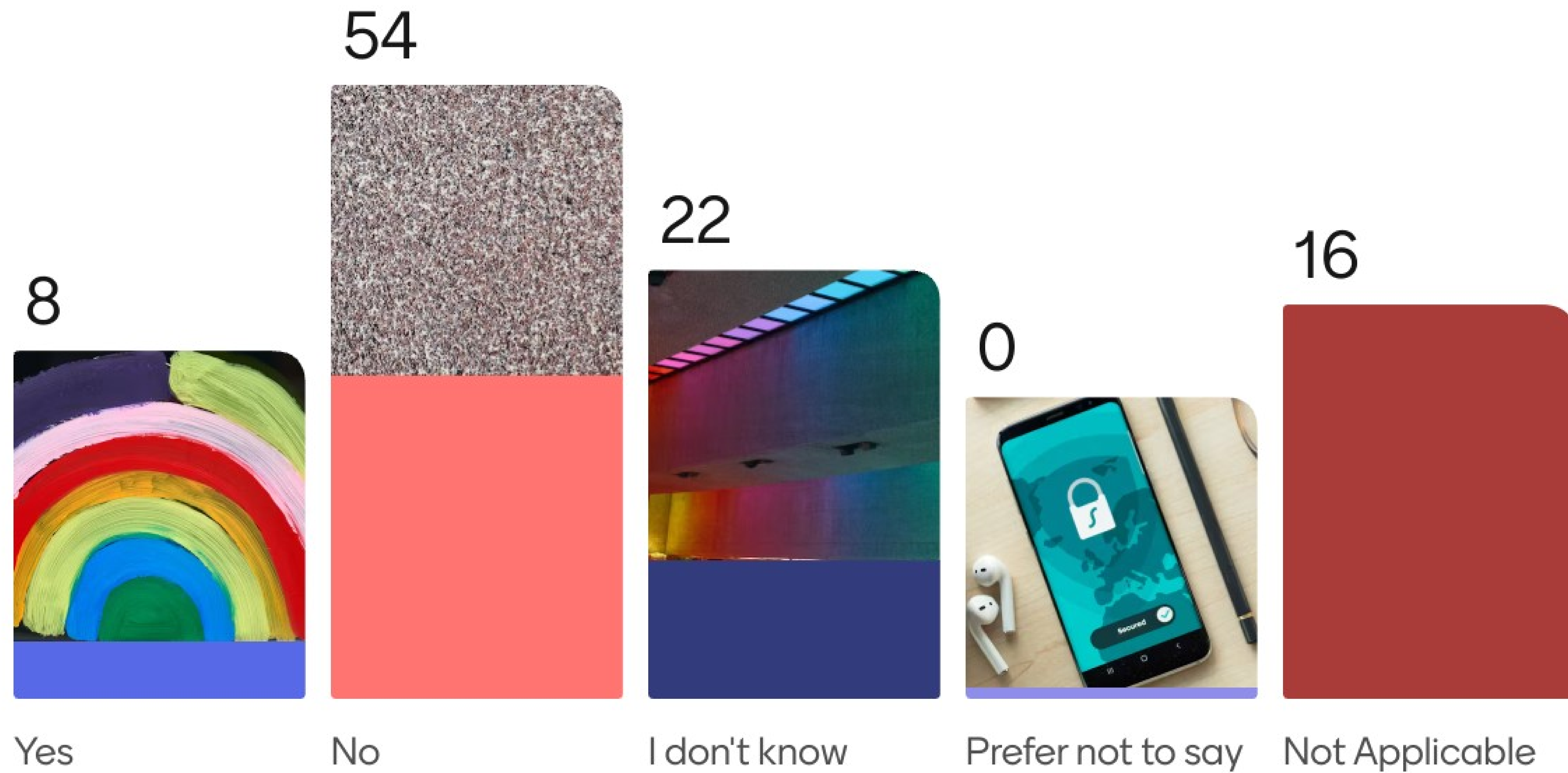


# I identify as LGBTQ+





# My child / sibling identifies as **LGBTQ+**





# LGBTQ+ in STEM Day, 18 Nov 2023

*"My feeling of security, of visibility, of credibility, has greatly improved; it is evident this is the result of shifting priorities and good-willed collaboration...with our network and the other members of the D&I Roundtable"*

– Member, LGBTQ Network



Gender inclusive WC facilities // campus map

**First time Pride flag raised at CERN**  
Attended *ad personam*: Directors, Department Heads, Experiment Spokespersons & Deputy Spokesperson, UNHCR Ambassador, WHO DEI chair, UN Globe, and ~150 personnel

		Impressions	Engagements	Comments	Views
Live		461,156	22,541	2,277	257,152
Flag	LinkedIn	6,464	88	4	2,128
	Twitter	74,785	545	87	0
	Facebook	8,377	378	84	0
	Instagram	143,163	7,709	486	240,163
		693,945	31,261	2,938	499,443

ID 759150

Email louise.carvalho@cern.ch

First name Louise Zelia

Last name Carvalho

Preferred first name Louise

Preferred last name

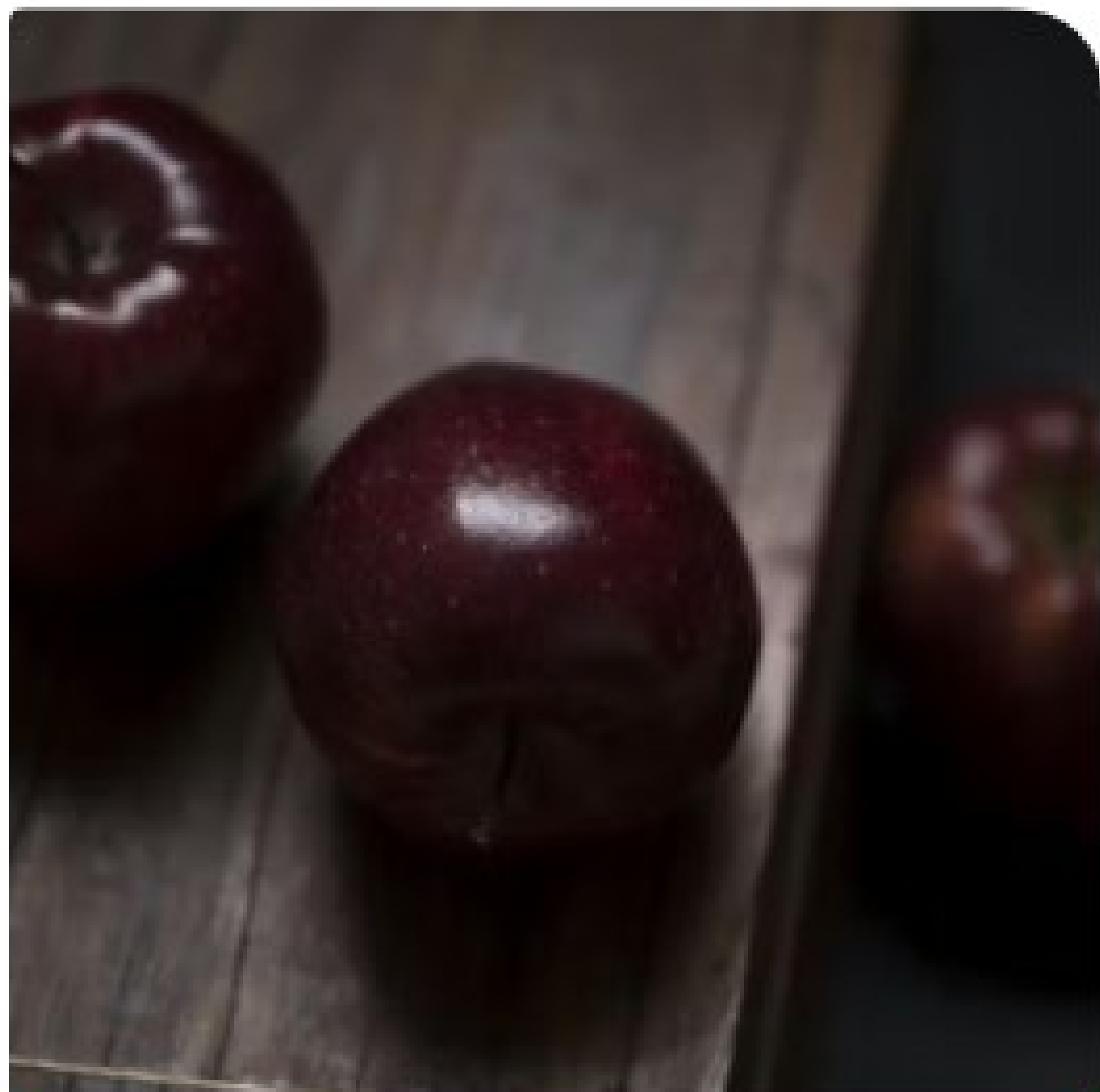
Pronouns She / Her

CERN Phonebook: pronouns



# I see myself being a **parent** as:

33



Likely

36



Very likely // OR, I am  
already a parent

18



Unlikely

17



I prefer not to be a  
parent





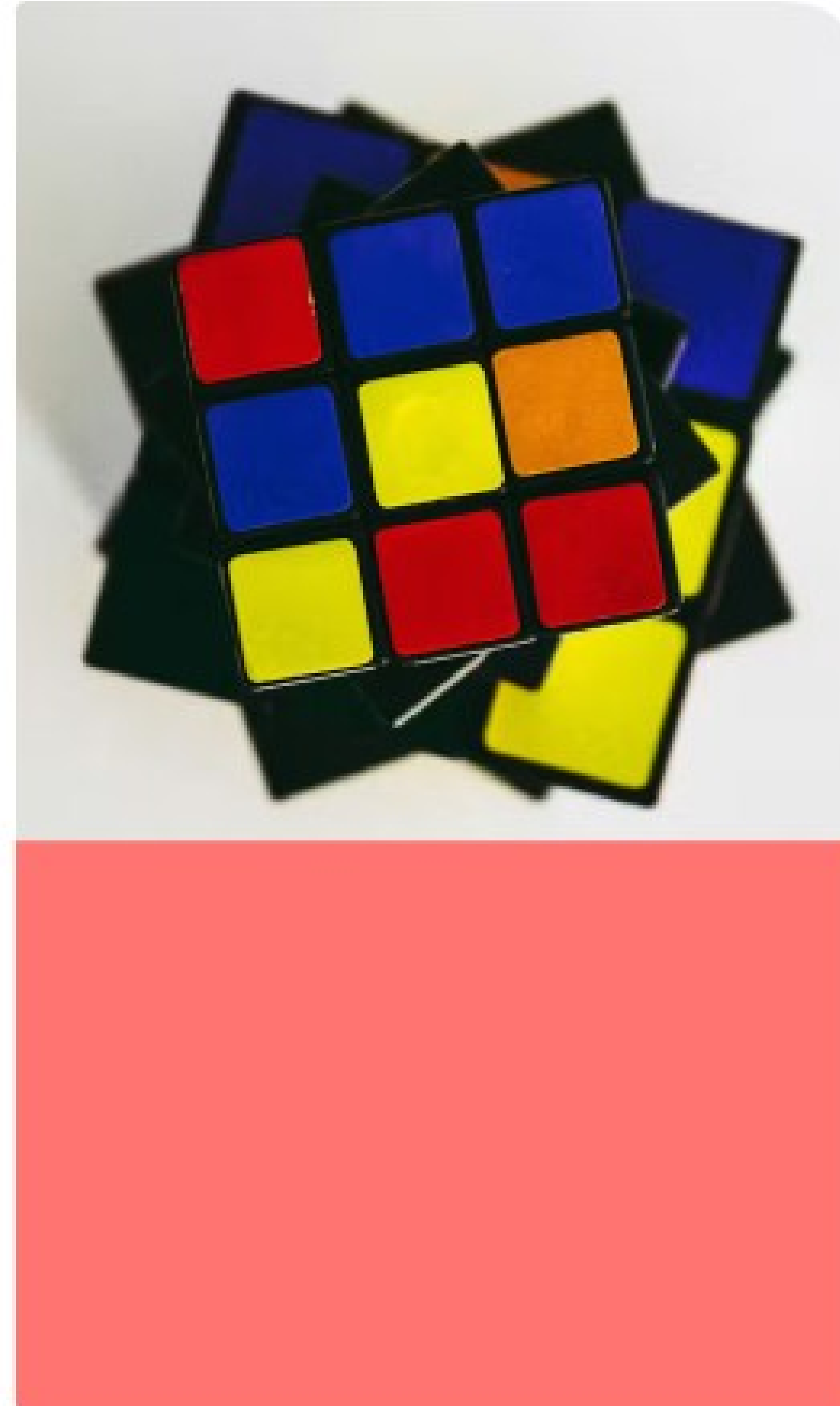
I have **neurodivergent** cognitive processing (e.g. Autism, ADHD, Dyslexia, Dyspraxia etc)

16



Yes

58



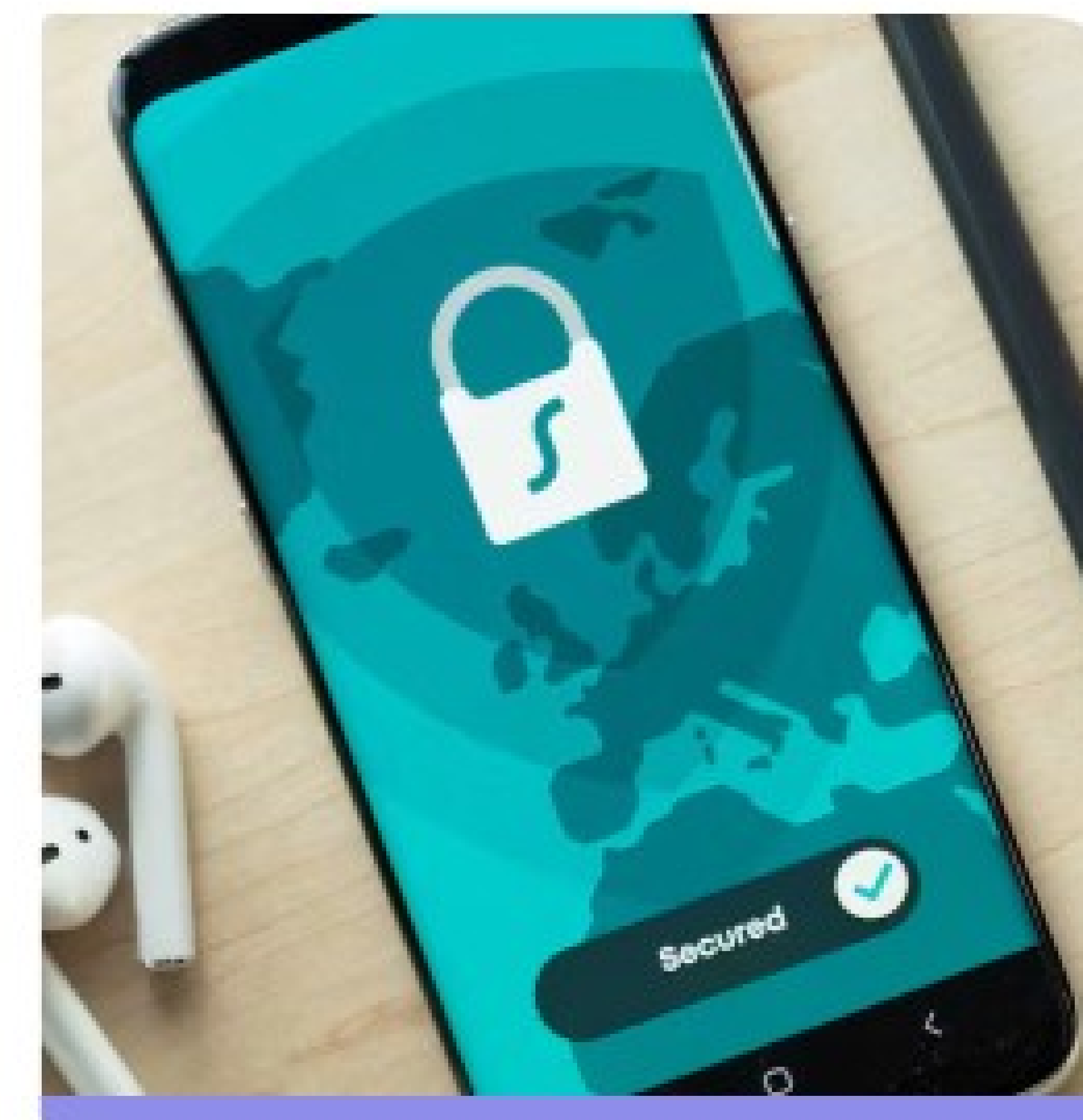
No

37



Maybe / I don't know

0



Prefer not to say





My spouse / partner, sibling, or child has / have **neurodivergent** cognitive processing (e.g. Autism, ADHD, Dyslexia, Dyspraxia)

26



Yes

27



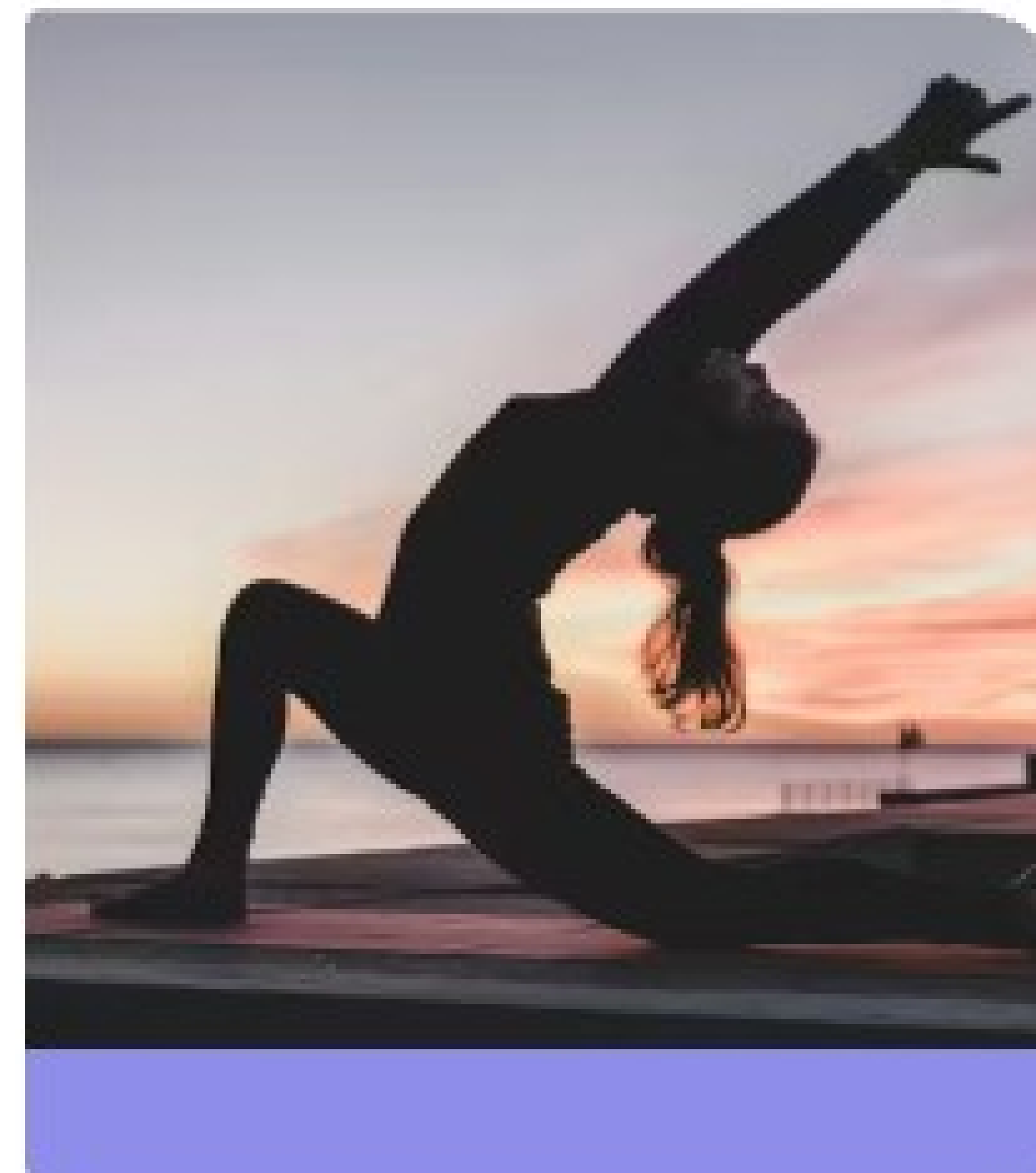
No

47



Maybe / I don't  
know

4

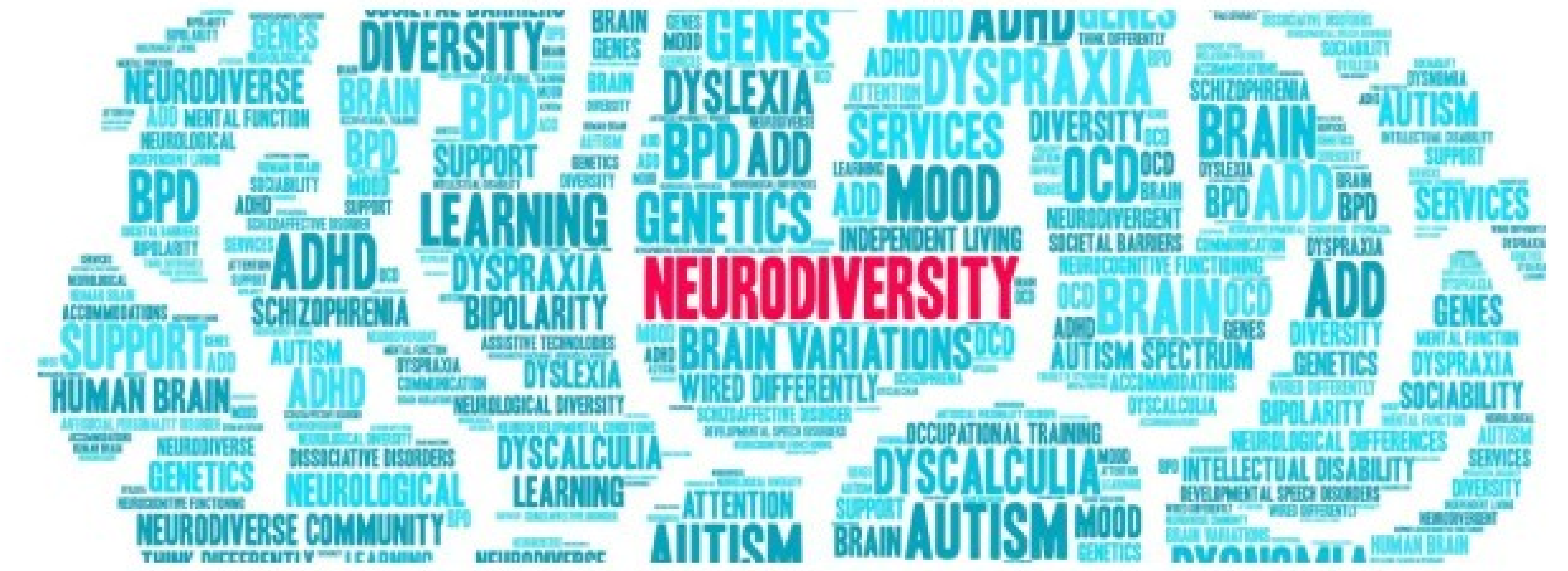


No partner,  
sibling or child

0



Prefer not to say





# "SNAC": Supporting Neurodiversity at CERN

## Learning

- Intro to Neurodiversity Webinar for CERN personnel: > 200 participants
- ND 1 day Webinar for SNAC members

## Networking

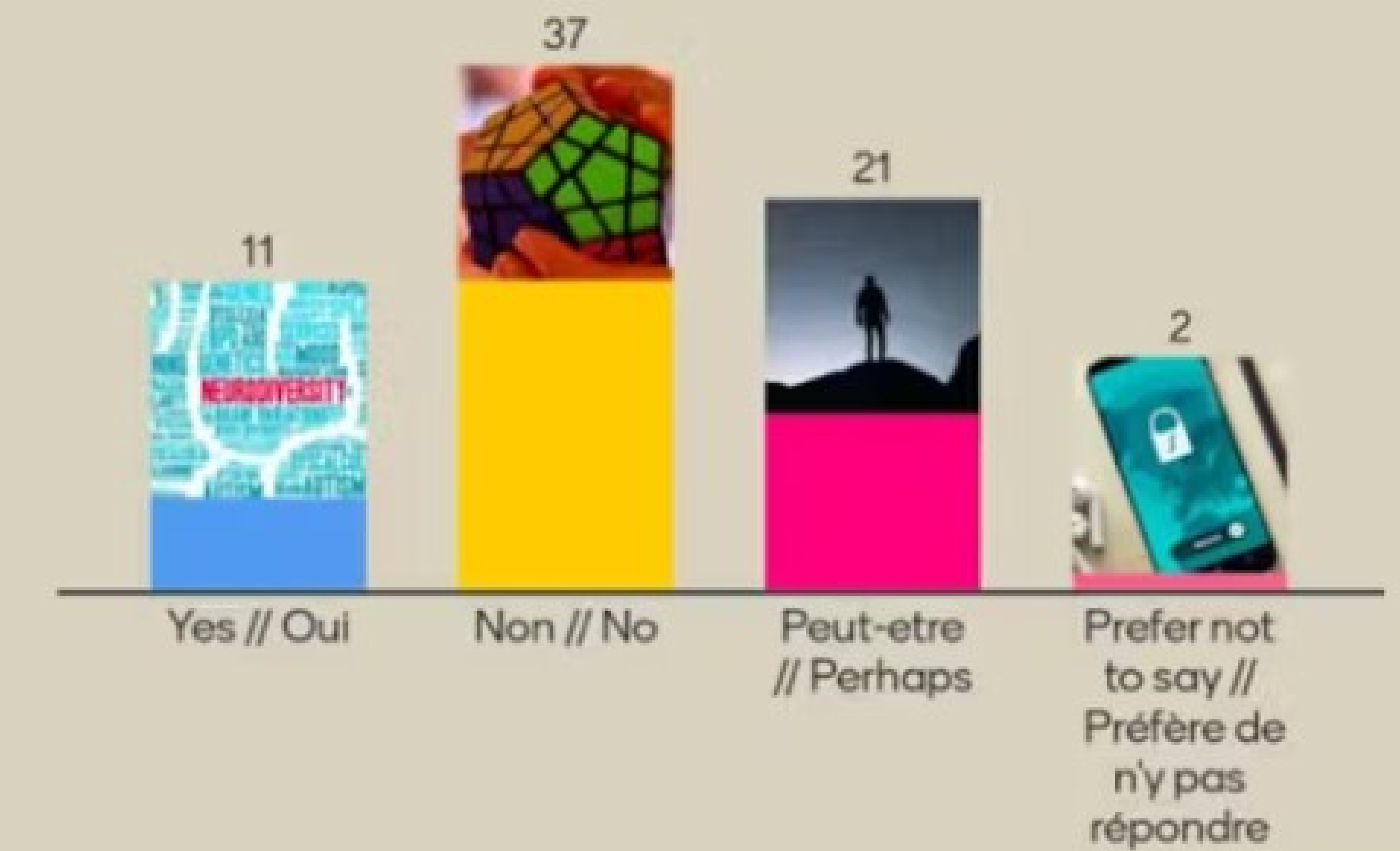
- SNAC «Walkie-Talkie»
- Informal sharing among members

## Resources

- SNAC Confluence page
- «Inclusion Needs» Document (WIP)
- CERN library
- Newsletter – D&I Subscribers



I have "neurodivergent" cognitive abilities (ex. Autism, ADHD, Dyslexia, Dyspraxia etc) //



Results: CERN STEM Department

My child / spouse / sibling has neurodivergent cognitive abilities (ie. Autism, ADHD, Dyslexia, Tourette, etc) //



«cocoon chair»  
CERN library

[click here](#) for more: [SNAC Network - Supporting Neurodiversity at CERN](#)



# How can I support neurodiversity inclusion?

## Communication

- Provide tasks in **written** form, instead of verbal
- Send **agenda** & discussion questions minimum 24hrs ahead
- Use **clear**, direct, unambiguous instructions

15-20% of the general population are neurodivergent

## Focus on growth

- Make clear you value **learning** & growth over perfection
- **Avoid** shaming people for mistakes
- Focus on **strengths**

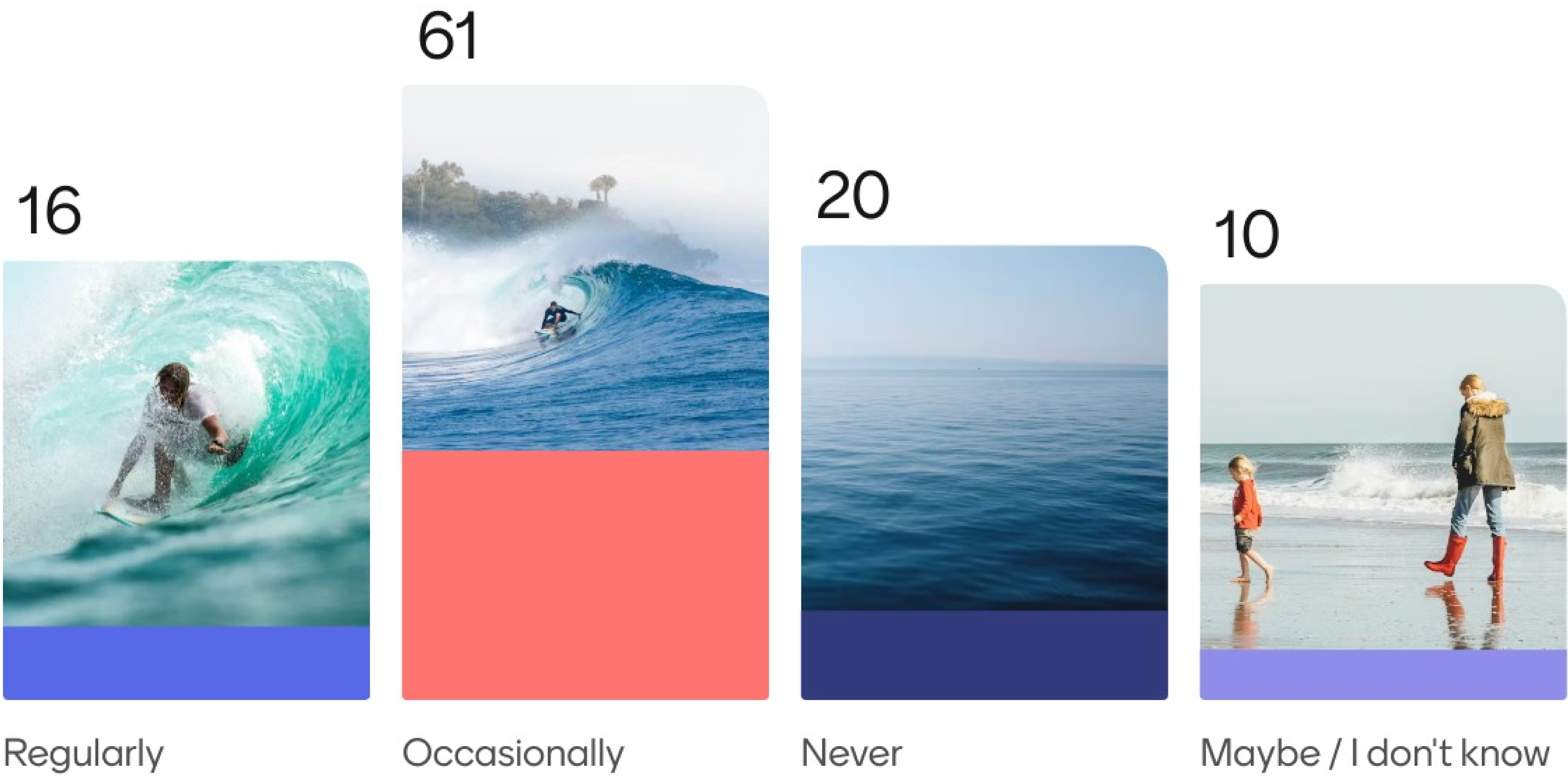
**Read:** [What is Neurodivergent Masking & Why do Professionals do it?](#)

### Typical strengths:

- Memory
- Innovative thinking
- Attention to detail
- Entrepreneur mindset
- Creativity
- Visual Reasoning
- Pattern recognition
- Time keeping
- 3D thinking
- Seeing the big picture
- Structured analysis



I experience one or more of the following: Anxiety, Panic attacks, Migraine, Depression, Hypersensitivity (HSP), difficult peri/menopause symptoms





Concerning my **professional future**, I have a sense of:

29



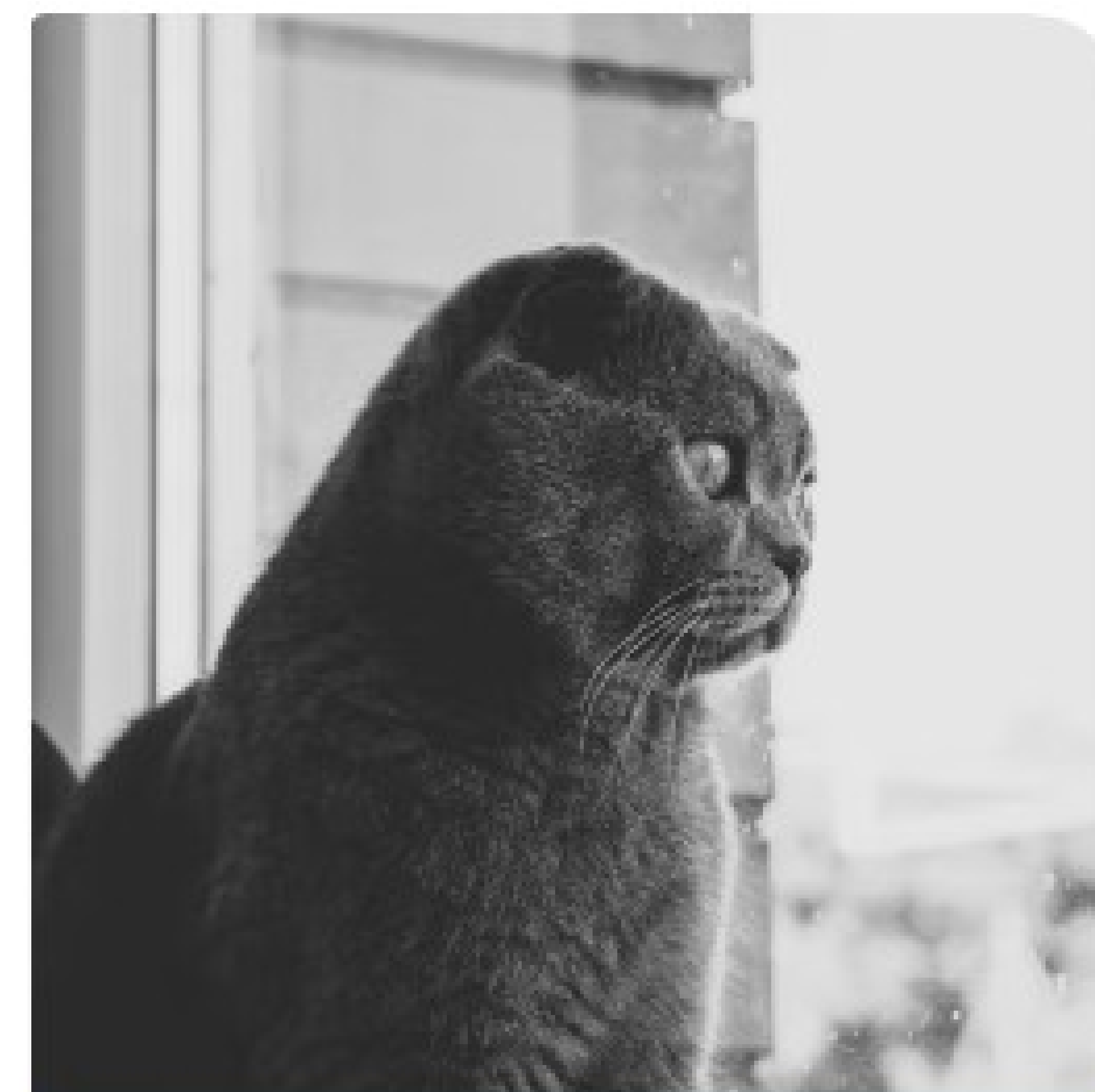
Certainty

35



Uncertainty

28



Great uncertainty

12



Ambivalence





# Invisible Dimensions Poll Results:

## CERN Experiment – Sept 2004

I experience one or more of the following: Anxiety, Panic Attacks, Migraine, Depression, Hypersensitivity (HSP), difficult Menopause symptoms

20



Regularly

39



Occasionally

11



Never

8



Maybe / I don't know

Concerning my **professional future**, I have a sense of:

17



Certainty

33



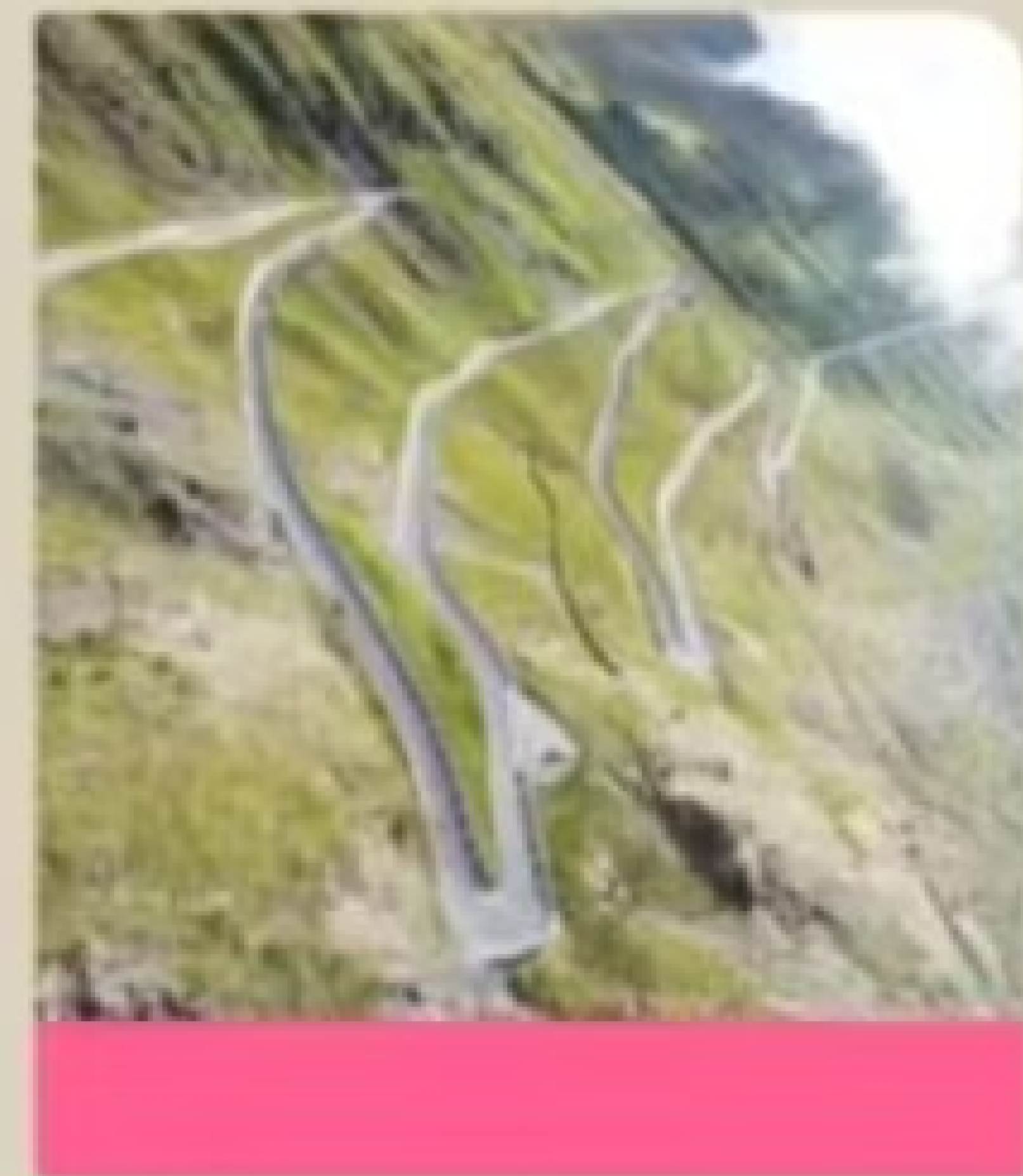
Uncertainty

23



Great uncertainty

8



Ambivalence



Note: visual impairment = 20/200 even with corrective lenses

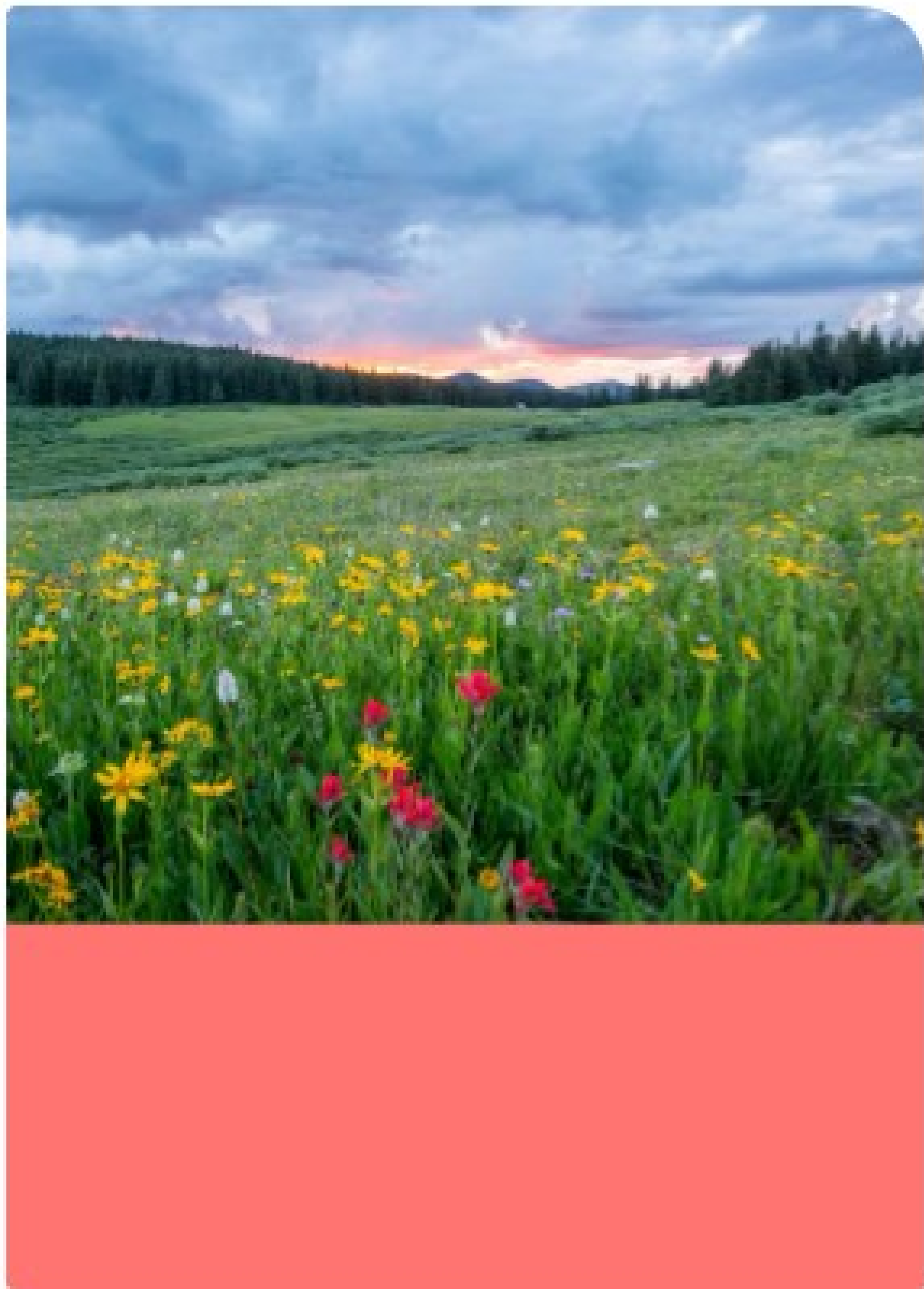
I have a **disability or impairment**, for example: Physical (*visible, invisible*), Sensory (eg. *hearing, visual*), Eating Disorder

11



Yes

87



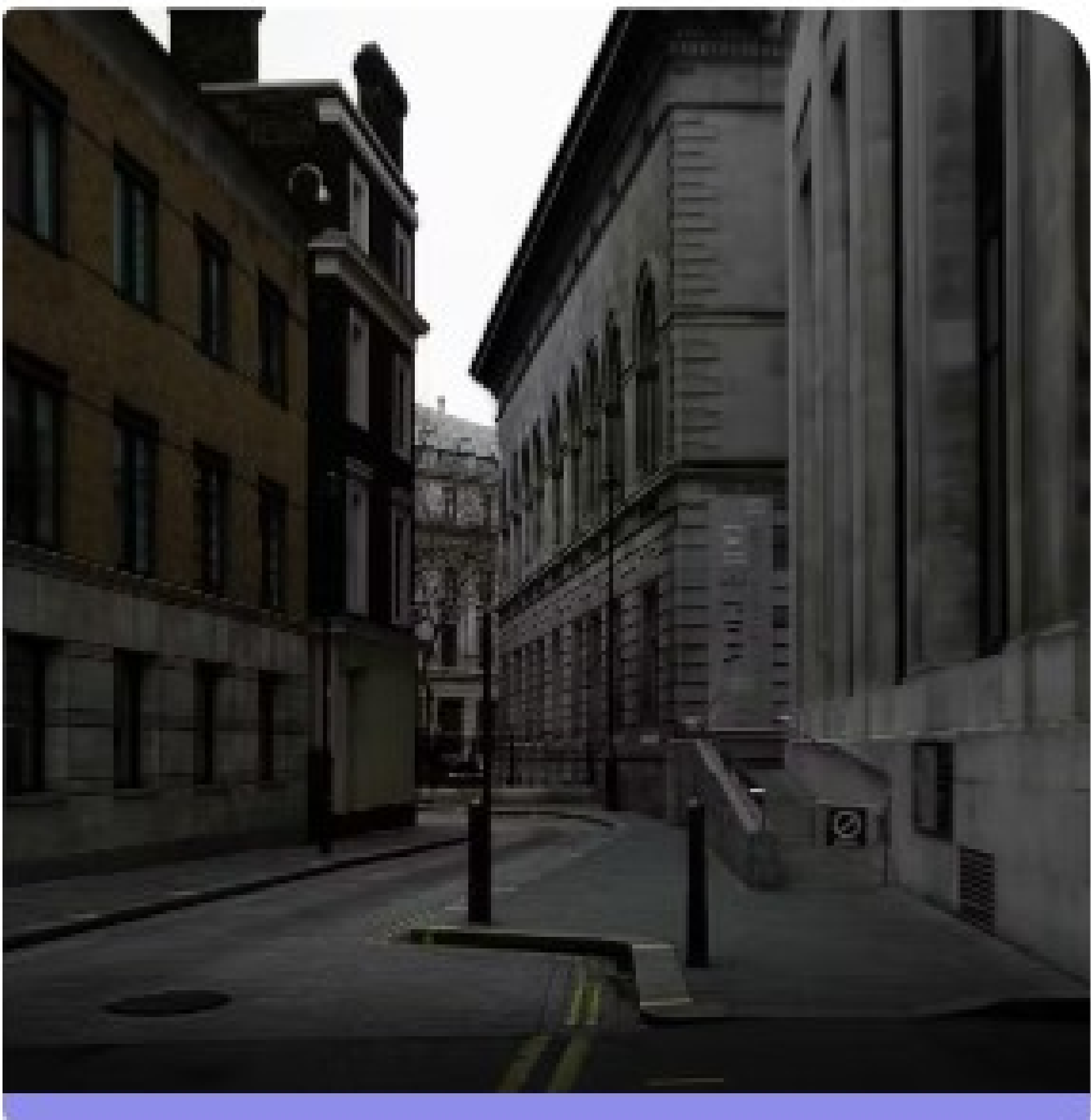
No

5



Temporary disability

0



Prefer not to say





# My dietary practice is:





# Let's pause....

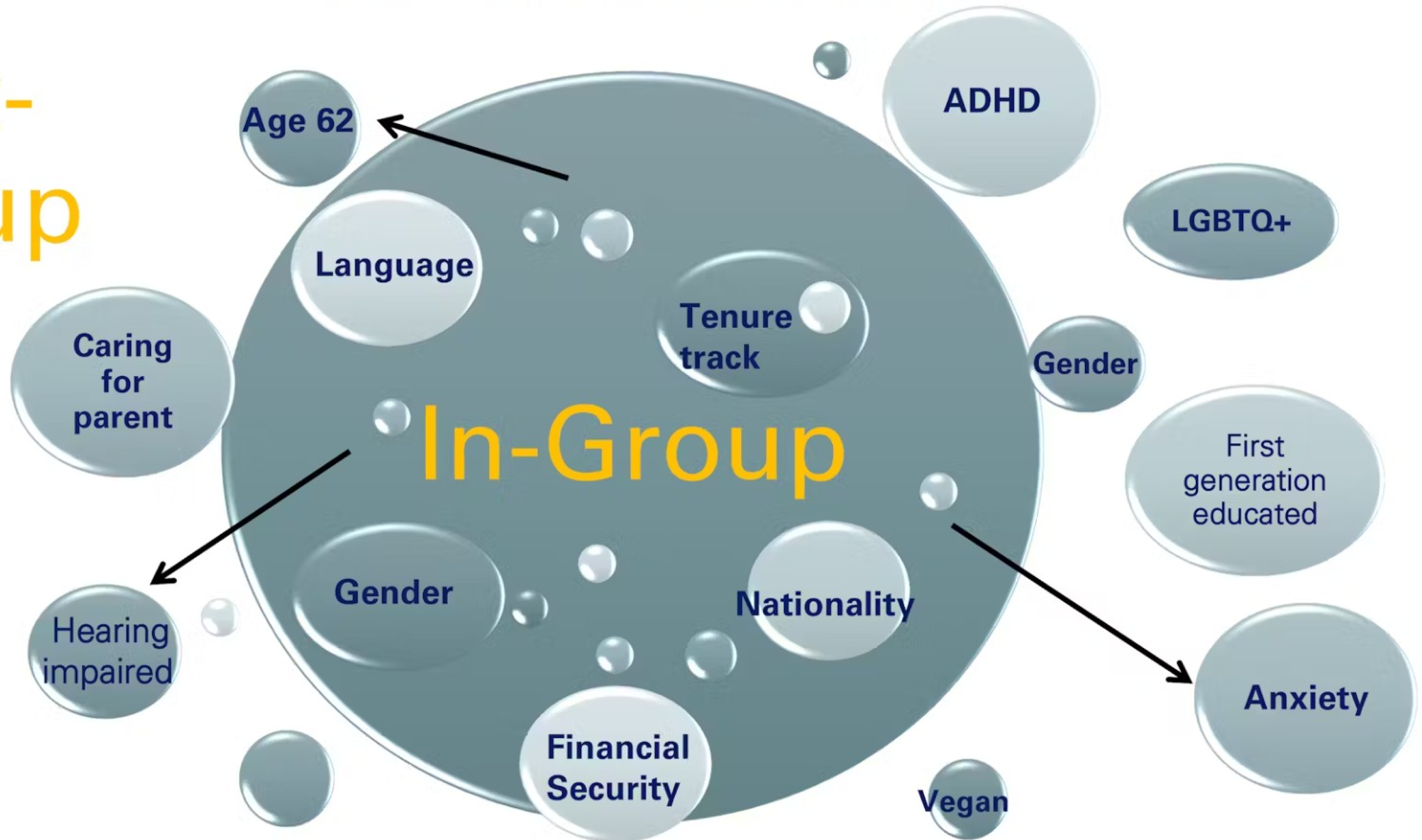


## 3 minutes



# Similar and Different

Out-Group





# (re)defining Excellence . . .

“

*Consider not only a diverse candidate's individual potential... but the potential for **excellence** of a diverse team.*



CERN Code of Conduct



extras



# Recommended Reading ( & listening)

## Celebrate the Small Wins

– by Dekker



Dekker - Small Wins (Lyric Video)

- ***The Neurodiversity Edge***, by Maureen Dunne
- ***Neurodiversity at Work***, by Theo Smith & Amanda Kirby
- ***Inclusion Revolution***, by Daisy Auger-Dominguez
- ***Career and Family***, by Claudia Golding
- ***The Highly Sensitive Person***, by Elaine N Aron
- ***Culture Map: Decoding How People Think, Lead, and Get things Done Across Cultures***, by Erin Meyer
- ***The Inclusion Nudges Guidebook***, ed. 2020, by Lisa Kepinski, Lisa and Tinna C Nielsen
- ***The Authority Gap***, by Mary Ann Sieghart
- ***Neuroscience of Prejudice and Intergroup Relations***, by Derks, Belle, and al.
- ***Performance through Diversity and Inclusion***, by Ruth Bernstein and al.



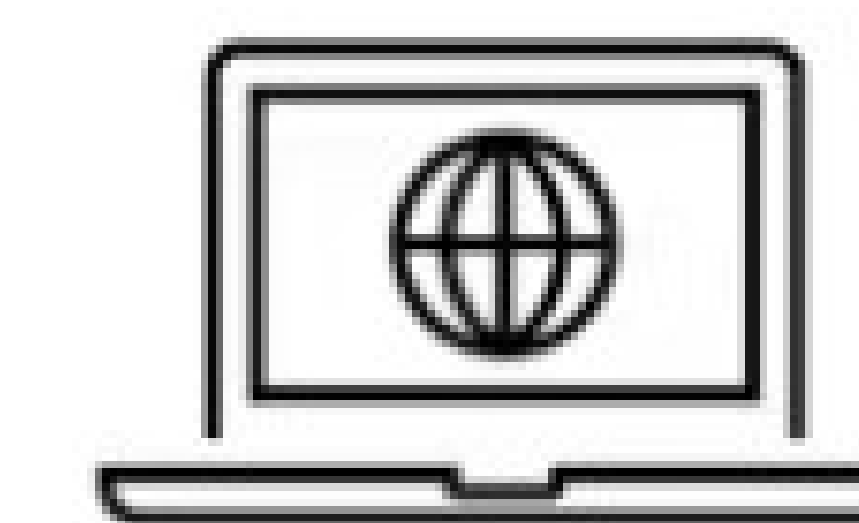


- Visit CERN's Science Gateway @ <https://visit.cern/>
- Inaugurated: 7 October 2023
- Number of visitors to date: >500,000

## Contact us:



[diversity.inclusion@cern.ch](mailto:diversity.inclusion@cern.ch)



[D&I homepage](#)